[Report of the Medical Officer of Health for Woolwich].

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Metropolitan Borough of Woolwich.

ANNUAL REPORT

OF THE

MEDICAL OFFICER of HEALTH

FOR

WOOLWICH.

1905.

Woolwich:

H. Pryce & Son, Steam Printers (T.U. Federation), 33 & 35, Powis Street.

Public Health and Housing Committee :—

Slater, G. (D.Sc., J.P.), 84, Eglinton Road, Plumstead (*Mayor*).
Ross, W. H., 6, Cantwell Road, Plumstead (*Chairman*)
Merritt, W. J., 50, Herbert Road, Plumstead (*Vice-Chairman*)
Broughton, Alderman J., 10, Whitworth Road, Plumstead.
Harper, Alderman J., 18, St. Margaret's Road, Plumstead.
Macnamara, Alderman T., 42, Wilmount Street, Woolwich.
Robson, Alderman E. J., 132, Powis Street, Woolwich.
Baglow, J., 67, Whitworth Road, Plumstead.
Bourne, R. J., 196, Lakedale Road, Plumstead.
Bull, W. J., 280, Plumstead Common Road, Plumstead.
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Hall, A., 98, Vicarage Road, Plumstead.
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Syer, H. S., 45, Plumstead Common Road, Plumstead.
Turner, J., 18, Dairsie Road, Eltham.
Widger, J. O., 113, Chestnut Road, Plumstead.

Medical Officer of Health :—

SIDNEY DAVIES, M.A., M.D., Oxon., D.P.H., Camb.,
Fellow and Member of the Council of the Incorporated
Society of Medical Officers of Health.

Chief Sanitary Inspector :—

Albert G. Duck (Cert. San. Inst.)

District Sanitary Inspectors :—

William Woolley (Cert. King's College), Herbert Ward.

John W. Rance, (Cert. San. Inst.), Dockyard and St. Mary's Ward.

William Little (Cert. San. Inst.), St. Margaret's and part of St. Nicholas Wards.

William Wood (Cert. San. Inst.), Parish of Eltham and St. George's Ward.

Alfred G. Potter (Cert. San. Inst.), River Ward.

William Tedham (Cert. San. Inst.) St. Nicholas Ward.

Thomas W. Dee (Cert. San. Inspectors' Examination Board), Central and Glyndon Wards.

Thomas Powell (Cert. San. Inst.), Burrage Ward. Inspector of Cowsheds and Slaughter-houses (Woolwich and Plumstead), Workshops, Milkshops, Ice Cream Vendors, and Restaurants.

Inspectors Under Food and Drugs Act :—

William Woolley, Parishes of Woolwich and Plumstead.

William Wood, Parish of Eltham.

Lady Sanitary Inspector :—

Alice M. Middlebrooke

(Cert. San. Inst. and San. Insp. Exam. Board).

Public Health and Housing Committee Clerk :—

Charles Ellis.

General Clerks :—

Amyas Britter.

Geo. H. Triggs.

Junior Clerk :—

H. M. Collyer.

Mortuary Keeper :—

Frank Leason.

Summary of Statistics, 1905.

Area of Borough	8276-6 Acres
Population—Census, 1901	117,178
do Estimated to middle of 1905	125,885
Inhabited Houses—Census, 1901	18,086
Total Houses to middle of 1905	21,443
Persons to a House—Census	6·47
Marriages	974
Births	3,549
Birth Rate	28·2
Deaths	1,605
Death Rate	12·7
Infantile Mortality	103 per 1000 births

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PREFACE.

To the Mayor, Aldermen, and Councillors of the Metropolitan Borough of Woolwich.

MR. MAYOR AND GENTLEMEN,

I have pleasure in presenting you with my Fifth Annual Report, which shows an even more satisfactory condition of the health of the Borough than I reported last year.

The General and Infantile Death Rates were the lowest on record, three Metropolitan Boroughs only having a lower death rate than Woolwich.

The incidence of Scarlet Fever and Diphtheria at Elementary Schools and the Sanatorium Treatment of Phthisis are specially dealt with in the body of the Report, and Special Reports on Measles and School Closure and Zymotic Enteritis will be found in Appendices.

I have to acknowledge, with thanks, the loyal assistance of the Chief Sanitary Inspector, and have pleasure in recognising the assistance of the Clerical Staff in preparing this Report.

My thanks are due to the Public Health Committee for the way in which they have received the recommendations I have made on behalf of the Public Health.

I am,
Mr. Mayor and Gentlemen,
Your obedient Servant,
SIDNEY DAVIES.

May, 1906.

FIFTH ANNUAL REPORT.

ON THE

HEALTH OF THE METROPOLITAN BOROUGH OF WOOLWICH.

Year ending 31st December, 1905.

PART I.

Statistics.

1. *Population.*—The population of the Borough to the middle of 1905 has been estimated on the supposition that the increase since 1901 has been proportional to that between the two last decennial censuses, thus giving 125,885. Dividing this number by the number of occupied houses 21,443 we get 5.87 persons per house. The number of persons per house at the census was 6,47. It has been supposed that the number per house in each parish

has diminished proportionally to that in the Borough. This gives the following populations for the three parishes :—

Woolwich Parish	...	40,063
Plumstead ,,	...	74,205
Eltham ,,	...	11,617
		125,885

Estimated increase in the year	94
Natural increase (excess of births over deaths) ...	1,944

2. The following table shows the number of houses in June, 1905, and the yearly increase since the census :—

Houses in Borough at Census, 1901			...	18,086
New Houses to June 30th, 1901			...	257
do.	do.	1902	...	1,292
do.	do.	1903	...	743
do.	do.	1904	...	582
do.	do.	1905	...	483
		Total	...	21,443

3. There will be no Census this year as there has been each five years since 1891. Unless an Act is passed arranging for a Census next year it will become increasingly difficult to estimate the population correctly. I have endeavoured to err, if at all, rather on the side of under-estimating than of over estimating the population.

4. The following table gives for each ward the population and number of inhabited houses at the Census, the number of persons to a house, the number of new houses certified for water certificates, and the present estimated population, which is the same as that calculated for 1904 by multiplying the number of houses in the ward by the number of persons to a house in each parish.

Wards.	Dockyard.	St. Mary's.	River		St. George's	Burrage.	Herbert.	St. Margaret's.	Central.	Glyndon.	St. Nicholas.	Eltham.
			North.	South.								
Population	8,712	10,439	2,991	11,405	8,078	9,837	9,080	9,842	10,118	9,810	19,640	7,226
Number of Inhabited Houses	1,325	1,126	441	1,671	878	1,735	1,612	1,638	1,805	1,697	2,805	1,353
Persons to a House ..	6·57	9·27	6·78	6·83	9·20	5·67	5·63	6·00	5·61	5·78	7·00	5·34
New Houses—												
April to June, 1901..	—	—	4	—	—	—	12	61	7	8	85	80
June, 1901, to June, 1902	—	—	71	—	—	—	79	265	7	8	455	407
June, 1902, to June, 1903	12	—	33	—	—	—	40	153	7	9	239	250
June, 1903, to June, 1904	4	—	89	14	—	8	30	94	7	—	185	151
June, 1904, to June, 1905	5	18	2	—	—	2	33	102	12	—	170	139
Total Houses ..	1,346	1,144	640	1,685	878	1,745	1,806	2,313	1,845	1,722	3,939	2,380
Populations.. ..	8,712	* 9,788	3,991	11,405	8,078	9,726	9,893	12,337	10,228	9,609	21,031	11,153

* Deduction made *re* 101 houses demolished in Artillery Place, &c.

Births.

5. The number of births was 3,549, and the birth rate 28·2 compared with 28·1 in the previous year, and with 30·0 the average for the ten years 1895—1904. The rate for the County of London was 27·0.

6. The following table gives the birth rate of each Parish and Ward during the past five years, and for purposes of comparison the corresponding rates of neighbouring Boroughs, London and England. There has been an increase in Woolwich and Eltham parishes, but a marked decrease in Plumstead. The decrease in the Borough has been practically the same as that in London. The increased birth rate of the Dockyard Ward and the decrease in the Central are striking.

	Birth rate.				
	1901.	1902.	1903.	1904.	1905.
Woolwich Parish ...	28·5	28·8	29·1	28·2	30·3
Wards.					
Dockyard	32·3	32·2	31·5	32·8	37·4
St. Mary's... ...	19·9	21·2	21·3	18·8	17·8
River	28·7	N. 39·1	40·6	38·8	35·3
		S. 25·6	24·2	21·7	21·6
St. George's ...	36·0	34·4	37·5	39·7	36·8
Plumstead Parish ...	31·5	31·5	31·4	28·5	27·5
Wards.					
Burrage	25·7	22·7	23·9	22·5	22·3
Herbert	26·1	26·4	27·0	22·2	24·8
St. Margaret's ...	31·6	37·2	33·7	31·4	34·3
Central	29·3	32·6	26·9	26·1	22·8
Glyndon	32·4	28·5	31·7	30·3	30·2
St. Nicholas ...	36·4	29·8	31·8	32·6	31·7
Eltham...	22·3	23·8	24·1	24·9	25·1
Greenwich Borough ...	29·0	28·1	27·3	27·7	25·9
Lewisham Borough ...	25·8	25·7	26·2	25·6	25·2
West Ham	35·0	34·1	33·6	32·2	30·5
East Ham	36·4	36·4	34·4	31·7	29·9
Erith	30·9	37·3	38·9	33·2	30·3
London...	29·0	28·5	28·4	28·0	27·1
England and Wales ...	—	28·6	28·4	27·9	27·9
Woolwich Borough	**30·0**	**29·9**	**30·0**	**28·1**	**28·2**

7. The following table gives the birth-rate for the Borough and each parish for the three past quinquennia. Except in Eltham the decrease has been progressive in each parish, but greater in Plumstead than in Woolwich. In Eltham, on the other hand, after a decrease in the second quinquennium, there was a marked increase in the third, due no doubt to the building of the Well Hall Estate and its occupation by a large proportion of young married people.

	Average of Years 1891 to 1895.	Average of Years 1896 to 1900.	Average of Years 1901 to 1905.
Woolwich Borough	32·5	30·2	29·2
Woolwich Parish	31·1	30·1	29·0
Plumstead ,,	33·3	31·0	30·1
Eltham ,,	22·8	20·6	24·0

8. *Illegitimate Births* — Sixty-one of the births registered were illegitimate, giving a rate of 17 per 1,000 total births, compared with 13 and 17 in the two preceding years. The illegitimate birth-rate in England and Wales was 40 in 1904.

Marriages.

9. There were 974 marriages, compared with 910 in 1904. The marriage rate was 15·5 compared with 14·5 in 1904 and with 17·0 in London; 379 marriages were performed in the Registry Office and 595 in places of worship.

Deaths.

10. Table 1 gives the gross and net deaths and death rates in 1905 and each of the past ten years, and shows how the nett deaths are arrived at. (For explanation of nett and corrected deathrates see Annual Report, 1904.)

11. The nett death rate was 12·7. This is the lowest rate yet recorded for the Borough of Woolwich, the previous lowest having been 13·3 in 1903.

12. By multiplying by 1·0690, the factor for age distribution, we get the corrected death rate, viz., 13·6, which rate should be used in comparing Woolwich with other places. The following table shows the nett and corrected death rates of Woolwich, compared with England and Wales and other large towns :—

	Nett.	Corrected.
England and Wales... ...	15·2	15·2
76 Large Towns	15·7	16·7
London	15·1	15·9
Greenwich...	13·4	13·7
Lewisham...	11·7	12·2
West Ham...	15·5	16·5
East Ham	12·3	13·2
Erith	9·5	—
Woolwich	12·7	13·6

13. The following table gives the death rate in each parish and ward of the Borough during the past five years, compared with London :--

	1801.	1902.	1963.	1904.	1905.
Woolwich Parish ...	16·8	17·1	16·3	16·5	15·6
Wards					
River	20·1	N 18·7	14·5	17·8	18·0
		S 18·7	17·9	16·9	16·7
Dockyard	15·7	16·4	16·2	18·3	16·1
St. Mary's	11·6	14·0	14·1	12·4	10·6
St. George's... ...	18·5	16·4	16·8	17·7	14·4
Plumstead Parish ...	13·2	14·3	12·3	13·1	11·7
Wards.					
St. Nicholas... ...	13·0	13·3	10·2	15·2	12·2
Central	13·9	13·2	9·6	8·5	9·7
Glyndon	14·2	14·5	14·6	17·2	15·1
St. Margaret's ...	11·7	13·5	14·0	13·0	12·2
Herbert	11·3	13·1	9·7	9·9	10·1
Burrage	13·5	15·4	13·5	12·6	12·2

	1901.	1902.	1903.	1904.	1905.
Eltham Parish ...	13·6	8·5	8·2	10·8	9·7
Woolwich Borough ...	14·6	14·7	13·3	14·0	12·7
London	17·1	17·2	15·2	16·1	15·1

The Parishes of Woolwich and Plumstead have never had so low a death rate as last year. Eltham had a lower rate in 1902 and 1903. Central Ward and Eltham again had the lowest death rates. River North had the highest. The improvement in South River and St. George's Wards since 1901 is noteworthy.

14. The table below gives the death rate of the Borough and each parish during the past four quinquennial periods. It is seen that in Plumstead Parish there has been a progressive improvement, though the last five years show a more marked decline than the previous ones. In Woolwich and Eltham parishes the five years 1896 to 1900 had a higher rate than the previous five years, but the decline in death rate in 1901–5 has been much more marked than in Plumstead.

	Average 1886-1890.	Average 1891-1895.	Average 1896-1900.	Average 1901-1905.
Woolwich Borough ..	..	17·2	16·9	13·9
Woolwich Parish ..	*20·4	19·3	20·1	16·5
Plumstead ,, ..	16·4	16·0	15·1	12·9
Eltham ,, ..	..	13·0	14·6	10·2
London	20·0	19·8	18·5	16·1

* Three years 1888, 1889, 1890.

15. The death rate among males was 14·0 and among females 13·4. These rates are estimated on the numbers of the two sexes found at the Census of 1901, and can only be taken therefore as representing the relative death rates of the two sexes; not the absolute.

16. Table VIIa., from the Annual Summary of the Registrar General gives a summary of the Vital Statistics of the County and Metropolitan Boroughs in the four years 1901—4 and in 1905. Three boroughs only had a lower death rate than Woolwich, viz., Hampstead, Lewisham, and Wandsworth. It will be noted that each of these is a "residential" borough; *i.e*, a district where those who can afford to choose their locality prefer to reside. Such people are, for the most part, of the well-to-do classes, who, being better able to provide against illness and bad health, have normally a lower death rate. Correction can be applied for age distribution but not for class distribution. The wealthier classes probably have a lower death rate at all ages, in proportion to the numbers living at each age, but the actual numbers dying in a well-to-do population are much less between the ages 5 to 55 and greater at ages above 65; *i.e.*, far more persons among the rich survive to die in old age than among the poor. This is shown by the following table taken from the last Annual Report af the Medical Officer of Health, London County Council, giving the number of deaths occurring at several ages in Lewisham and Woolwich in 1904. As the total populations and total deaths of Lewisham and Woolwich are nearly alike, these two Boroughs can be roughly compared:—

	Age Period—Years.											
Parish.	Under 5	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-
Lewisham ..	584	28	13	47	36	71	117	135	151	226	213	70
Woolwich ..	658	53	25	26	44	108	143	159	183	184	170	26

17. *Lives saved.*—Last year I estimated that 302 lives were saved in 1904 owing to the reduction of the death rate from 16.4 (the average death rate of the previous ten years) to 14.0. The average death rate in the year 1895/1904 was 15.8. Such a rate

in 1905 would have meant the death of 1,989 persons instead of the 1,605 who actually died. There was thus a saving of 384 lives in 1904. This is good in itself, for in spite of a temporary depression in the labour market, there is no over population as yet, and experience has shown the erroneousness of Malthus's doctrine as to the limitation of the productiveness of the soil. But each of these 384 lives saved means ten others who have escaped a weakening illness, or have weathered illness with less damaging effects, for a lower death rate means improved health of the surviving population.

Infant Mortality.

18. The Infant Mortality (or deaths under one year per thousand births) was 103. This is the lowest rate recorded in the Borough, the previous lowest rate having been 106 in 1903. The following table gives the infantile mortality in each parish and ward of the Borough during the past five years compared with the neighbouring Boroughs, London and England. Glyndon Ward and Eltham had the lowest infantile mortality and North River the highest. The reduction of infantile mortality in St. George's, Glyndon, and St. Margaret's Wards is very marked. North River has an excess of infantile deaths from Diarrhœa, Premature Birth, Whooping Cough, and Tuberculosis. *Re* the high diarrhœa mortality in this ward, *see* paragraph 68.

	1901.	1902.	1903.	1904.	1905.
Woolwich Parish ...	137	119	132	160	121
Wards.					
River (North) ...	158	192	114	193	220
River (South) ...		109	155	156	134
Dockyard	141	98	102	136	101
St. Mary's	123	133	176	190	121
St. George's ...	118	127	129	150	104

	1901.	1902.	1903.	1904.	1905.
Plumstead Parish ...	122	129	95	124	96
Wards.					
St. Nicholas' ...	143	152	97	166	120
Central	120	135	94	90	86
Glyndon	94	119	105	144	72
St. Margaret's ...	130	112	95	90	73
Herbert	91	107	80	91	78
Burrage	94	123	72	105	78
Eltham	141	95	74	101	72
Greenwich	140	149	137	142	119
West Ham	172	149	148	165	156
East Ham	156	119	113	140	129
Erith...	141	103	93	132	89
London	148	139	130	144	131
76 Towns	—	—	—	—	140
England & Wales ...	—	—	132	146	128
Woolwich Borough	**128**	**124**	**106**	**134**	**103**

19. The County of London had a lower infantile mortality in 1903. Table VII. shows that four Metropolitan Boroughs only had a lower infantile mortality than Woolwich, viz., St. Marylebone, Holborn, Lewisham and Hampstead. The rates for St. Marylebone and Holborn are not corrected for births of non-residents in lying-in institutions. If this were done their infantile mortality would probably be higher than that of Woolwich.

20. The following table gives the infantile mortality during the four past quinquennia in each parish of the Borough:—

	1886-1890.	1891-1895.	1896-1900.	1901-1905.
Woolwich Parish ..	*151	157	170	134
Plumstead ,, ..	121	120	132	113
Eltham ,, ..	—	163	160	97
Woolwich Borough ..	—	140	146	119

*1888, 1889 & 1890.

Comparing the years 1886—90 with 1901—5, it is seen that there is a marked reduction in both Woolwich and Plumstead parishes, but the reduction in Woolwich is much greater than in Plumstead.

21. Table IVc. gives full details as to the ages at death, and cause of death, of all infants dying in 1905 under one year. It shews that over one-third of those who died were under one month, and about one-seventh under one week. Sixty-five, or half the deaths under one month, were from premature birth, and of the remainder 23 were attributed to Atrophy, Debility and Marasmus—indefinite terms often applied to deaths from immaturity.

This appears to be an increasing cause of infantile mortality and its increase is probably the chief reason why the death rate of infants has not diminished concurrently with the general death rate. There are reasons for thinking the increase to be mainly due to growth of alcoholism among women.

22. Compared with 1904 the past year had among infants much fewer deaths from Diarrhœal diseases, and fewer from Measles, Whooping Cough, Convulsions, and Gastric diseases, but more from Bronchitis and Pneumonia. There was a gain of 76 lives by diminished Diarrhœa and of 37 lives by diminution in other diseases.

22A. Last year, for the first time, weekly returns of all births occurring in the Borough were received from the local registrars. These had been asked for in previous years but had been refused by the Registrar-General. On the receipt of the returns, after excluding those houses which do not seem to require a visit, the inspectors call at each house where a birth has occurred, leave a card of instructions—"How to Feed Baby," and enquire whether the child is breast or bottle fed. If the latter, the lady inspector

calls, explains the instructions, learns the reason why the child is not fed at the breast, and gives suitable advice. Every effort is made to encourage breast-feeding, and mothers are advised to seek medical assistance before they decide to discontinue this. Where poverty is found to be a cause of improper feeding, mothers are referred to the Charity Organization Society or other suitable agency.

The Woolwich Board of Guardians were asked to allow sufficient out-door relief to mothers with young infants for whom the Guardians were responsible, so that the mothers would not be obliged to go out to work and leave the baby to be fed with a bottle by some other person.

It was found that births were usually not registered for more than four weeks, so that the advice often came too late. To meet this difficulty your Medical Officer of Health suggested, at a Public Conference, that returns should be obtained from midwives of all births attended by them. The London County Council, which supervises midwives, took up the idea, and now obtain weekly lists of births from midwives and send to each Metropolitan Medical Officer of Health a list of those occurring in his Borough. In this way information of about half the births is obtained within two weeks.

23. *Deaths under 5 years and over 85.*—The total deaths under 5 years were 505, or 36·5 per thousand population under 5 at the Census. The rates in the two preceding years were 40·8 and 47·2. Thirty-six deaths occurred over 85 compared with 35 and 26 in the two preceding years.

24. *Zymotic Death Rate.*—The number of deaths from the seven principal Zymotic diseases was 129, giving a death rate of 1·0 compared with 0·96 and 2·2 in the two preceding years. The following table gives the Zymotic death rate in each parish during the past six years :—

	1900.	1901.	1902.	1903.	1904.	1905.
Woolwich	3·8	1·61	1·74	1·08	2·69	1·32
Plumstead	2·1	1·42	2·20	0·92	2·17	0·92
Eltham	0·33	1·51	0·19	0·84	1·18	0·69
The Borough	—	1·51	1·88	0·96	2·2	1·0

25. *Inquests.*—There were 145 inquests compared with 145, 154, 154, 160, and 141 in the five preceding years. The following table gives particulars as to the cause of death :—

1.	Natural Causes		78
2.	Accidental Causes :—		
	Burns	10	
	Drowning	5	
	Falls	5	
	Fractures	5	
	Run Over	3	
	Suffocation, Overlaying... ...	8	
	Other accidental causes... ...	15	
		—	51
3.	Homicidal Causes :—		
	Suicide	10	
	Murder and Manslaughter ...	1	
		—	11
4.	Found Drowned		5
		Total ...	145

The "Natural Causes" were 90 in 1904. The "Accidental and Homicidal Causes" were 85 and 49 in the two preceding years, compared with 59 last year. The deaths from Suffocation or overlaying have been 2, 5, 10, 8 and 8 respectively in the last five years ; and Homicides 22, 9, 20, 8 and 11 in the same years.

26. *Deaths in Public Institutions.*—Table I. shews the actual number of deaths occurring in the Public Institutions in the Borough, viz., 313, compared with 269, 278, 272 and 261 in the four preceding years. Table Ia. shews the institutions inside and outside the Borough receiving sick and infirm persons belonging to the Borough, and Table IVb. shews the number of deaths from each disease occurring in Public Institutions. The increased number dying in Public Institutions is striking, especially in view of the diminution in total deaths. It is found under the following causes of death :—Old Age, Cancer, Heart Disease, Bronchitis, Pneumonia, and various other diseases ; and probably indicates greater poverty, rendering it impossible for many persons to maintain themselves outside the Workhouse and Infirmary.

Small-pox and Vaccination.

27. Seven cases of Small-pox were notified, compared with 6 in 1904. The first two cases were the last in a series of 7 cases constituting a small outbreak described in my last report. Of the other five two were Arsenal employes, beginning within a week of each other, at the same time as a small outbreak in Lewisham, but no source of infection could be traced. The third was the son of one of them, who began about the same time as his father. The remaining two were found not to be Small-pox after removal to hospital.

28. The case rate (omitting the cases of mistaken diagnosis) was 0·02, compared with 0·02 in the County. There were no deaths.

29. Twenty-five Contacts were kept under observation and 9 were re-vaccinated.

30. The following return, kindly furnished by the Vaccination Officer (Mr. Taylor), gives particulars as to vaccination of children born in Woolwich and Plumstead parishes in 1904 :—

Births	3,265
Vaccinated...	2,733
Insusceptible	16
Conscientious objections	96
Died unvaccinated	280
Medical postponements	19
Removed, Vaccination officer apprised	17
Removed, not found and unaccounted for ...	104

31. In July I reported to the Public Health Committee *re* Vaccine Calves, as follows :—

"A letter has been received from Camberwell Borough Council, asking this Council to support a request that the carcases of calves used at the Government's Vaccine Establishment should be destroyed, instead of being returned to the Contractors to be sold for food.

I am of opinion that there is no justification for this request. The calves used for vaccine lymph are specially selected animals. They are inoculated with a disease so mild that there are usually no general symptoms. They are then killed to make sure from anatomical examination that they have no disease which had not been detected by outward observation. They usually gain weight while they are maintained at the Vaccine Establishment. If any sign of disease is detected in them when slaughtered, such as Tuberculosis, the carcases are destroyed, and the lymph which has been obtained from them is not used. Though they have been inoculated by an exceedingly mild disease, when they are killed even that disease has altogether passed away, so that the calves are in absolute health when killed.

If the Committee have any further doubt as to the safety of using these calves for food, I would recommend that they write and obtain full information from the Local Government Board as to the processes used at the Vaccine Establishment, and the measures taken to secure that no unsound veal is sold.

As the Camberwell letter appears to be a covert attack on vaccination, it is necessary that I should again advise you that vaccination is far the best means at our disposal for combating the disease of Small-pox.

Nearly all medical authorities admit that vaccination is the most powerful provision we possess for dealing with Small-pox.

I am not acquainted with a single anti-vaccinationist, professor, or lecturer in Public Health at any of the Universities or Medical Schools in the Kingdom; a single Medical Officer of Health of any large town in England, Scotland, or Ireland, who is not an advocate for vaccination; or a single standard work on Public Health which decries vaccination.

The Medical Authorities of the Kingdom speak with one voice, and say: 'If you wish to be protected from Small-pox you must be vaccinated.'

In Germany, which must regretfully be allowed to be ahead of England in medical science, the efficacy of vaccination is even more unanimously recognised than in England, with the result that it is so universally and efficiently performed that that country is saved the vast expense of building and maintaining large Small-pox Hospitals.

There may be some moral and political question as to the desirability of compulsory vaccination; also as to the age at which it is desirable to perform infantile and re-vaccination, and as to the duration of the protection

afforded, but there is no question as to the fact that successful vaccination protects from Small-pox, just as one attack of Small-pox protects from subsequent attacks.

The Medical Officer of Health of Leicester has had the courage to advocate the abolition of compulsory vaccination at a large meeting of Medical Officers of Health, where he met with not a single supporter. He stated, however, that he frequently almost went on his knees to implore the inhabitants of Leicester to be vaccinated; and in order to convince them of the efficacy of this slight operation, he had had his own recently-vaccinated children photographed standing by the bed of a patient ill with Small-pox in the Leicester Small-pox Hospital.

If any one wishes to examine into the result of the experience of Small-pox and vaccination in this Borough, and the conclusive evidence which it has afforded of the usefulness of vaccination, I would refer them to the Special Report on Small-pox presented to your Council in 1902."

Measles.

32. There were 13 deaths from Measles, giving a rate of 0·10, compared with 0·18, 0·33, 0·20 and 0·22, in the four preceding years. This is the lowest rate yet recorded in the Borough. The rate in London County was 0.36, which is also lower than in any recent years. Only two Metropolitan Boroughs—Chelsea and Hampstead—had a lower Measles death rate per 1,000 population; and if the rate is reckoned per 1,000 births (which gives more nearly the population liable to die from Measles) only Chelsea had a lower rate than Woolwich.

The death rate in the 76 great towns was 0·39.

33. Of the 13 who died from Measles, 12 were under 5 years of age; 8 were males and 5 females; 4 were in Woolwich Parish, 8 in Plumstead and 1 in Eltham.

34. 465 notifications were received from school teachers, compared with 326, 646, 661 and 1,240 in the four preceding years. The mortality per cent. of notifications was 2·8, compared with 3·8 and 2·3 in the two preceding years.

35. The following table gives the number of deaths and death rate from Measles for the past five years, and two preceding quinquennia, in each parish, (as far as known), and the death rate in London :—

Year.	Woolwich.		Plumstead.		Eltham.		London.
	No.	Rate.	No.	Rate.	No.	Rate.	Rate.
1891-5 (average)	20	0·49	29	0·51	..	..	0·59
1896-1900 (average)	34	0·81	36	0·57	..	..	0·57
1901	11	0·26	9	0·13	1	0·14	0·43
1902	10	0·24	31	0·43	..	..	0·51
1903	8	0·19	14	0·20	3	0·28	0·40
1904	11	0·26	15	0·21	2	0·18	0·49
1905	4	0·10	8	0·11	1	0·09	0·36

36. *A Special Report on Measles and the Results of Early School Closure* will be found in an Appendix. There is given a table showing the remarkable diminution in the Measles death rate in recent years, and the probable cause. If the death rate prevailing in the Borough from 1896—1900 had continued during the past five years, 275 children would have died from Measles who are now living.

Scarlet Fever.

37. There were 513 cases of Scarlet Fever notified, equivalent to a rate of 4·07 per thousand population. This is the highest rate since 1899, but it is lower than the rate in each of the years 1892—1899. (See Table V.)

38. The following table shows the case rates of Scarlet Fever in the Borough and each Parish during the past five years, compared with London :—

	1901.	1902.	1903.	1904.	1905.
Borough	2·64	2·14	3·16	3·75	4·07
Woolwich Parish ..	2·55	2·49	3·05	3·76	3·10
Plumstead ,, ..	2·63	1·88	3·19	4·08	4·42
Eltham ,, ..	3·42	2·45	3·40	1·44	5·34
London County ..	4·1	4·0	2·75	2·89	4·12

39. Table III. gives the age distribution, the number in each ward, and the number of those removed to hospital. The Central, St. Nicholas, and Eltham Wards were most affected.

40. There were 10 deaths, giving a death rate of 0·08 per thousand population, compared with 0·04, 0·06, 0·03, and 0·13 in the four preceding years, and 0·19 in the ten years 1891—1900. The death rate in London was 0·12. It appears from the report of Sir Shirley Murphy that for the three years 1901, 1902, 1903, Woolwich had the lowest Scarlet Fever death rate of all the Metropolitan Boroughs.

41. *Hospital Isolation.*—Of the 513 cases, 417, or 81 per cent., were removed to one of the Fever Hospitals, compared with 86 and 84 per cent. in the two preceding years. Eleven cases, or 2 per cent., were reported, after observation at Hospital, not to be Scarlet Fever.

The average duration of stay in Hospital was in 1904 ten weeks, and of isolation of home isolated cases, six weeks. Twenty-four certificates of satisfactory isolation at home were given to enable Arsenal employees to continue work.

42. *Return Cases.*—There were 14 cases in which infection was attributed to a patient recently returned from hospital, compared with 19, 10 and 18 in the three previous years. The interval between return of the infecting case and commencement of illness in 9 cases was from two to seven days, and in 3 cases from 14 to 25 days. Of the infecting cases, 5 had some form of Rhinitis when seen after return; 1 had an ulcer on the cheek; 1 whooping cough, and 1 enlarged tonsils. Three of the infecting cases went to hospital for Diphtheria, the remainder for Scarlet Fever.

A special report was presented on "Return Cases and Fever Hospitals as a Source of Infection," and ordered to be printed by the Public Health Committee. A copy was sent to the Metropolitan Asylums Board and the Borough Councils. I also prepared a summary of, and commentary on, the voluminous report of Dr. Cameron to the Metropolitan Asylums Board on this subject, which was printed in the Council's Minutes of 1st November, 1905.

I am glad to be able to state that the Board has at last adopted the simple plan of sending out instructions with returning patients warning parents as to the danger of infection, and pointing out the desirability of partial isolation. (*Re* action on this point in Woolwich, see Annual Report, 1904, page 32.)

43. *Other Sources of Infection.*—In 57 cases infection was attributed to other inmates of the same house. Some of these were never notified and had no distinct symptoms of Scarlet Fever, but a history of sore throats made it probable that they had had a slight attack of this disease.

One case—a child two years of age—was fondled, seven days before falling ill, by a Fever Hospital nurse.

44. In many cases infection was attributed to friends, neighbours, and schoolfellows. But the number of cases in which it is possible to point to a probable source of infection is small, and will probably remain so until the germ of Scarlet Fever is discovered. It is probable that in this disease, as in Diphtheria, besides many mild and undetected cases, there are numbers of children and some adults who, without any symptoms, carry the infection of Scarlet Fever in their throats and noses. Under ordinary circumstances, such "carriers" would infect others seldom, if at all; but when they get colds and coughs, the germs are more liable to be conveyed from the throat and nose of the carrier to other persons, and they become, perhaps, as infectious as an ordinary case of the disease.

45. If this theory is correct, it follows that there can be no prospect of abolishing Scarlet Fever at present, The diminution of the fatality of the disease by hygienic open-air treatment, and the separate isolation of the severer cases in cubicles, is the end to aim at. Table V. shows that in Woolwich there has been a considerable reduction in death rate.

46. *School infection.*—Table VI. shows the number of cases attending each school, the number on the roll, and the rate per thousand on the roll. The schools which had the highest incidence rate of Scarlet Fever were Pope Street, Elizabeth Street, Timbercroft Road, and Bostal Lane. The lowest rates were at Union Street and Mulgrave Place.

In February and March a very mild epidemic of Scarlet Fever prevailed in New Eltham, where Pope Street School is situated. A number of children complained of nothing but sore throats. At my request, Dr. C. J. Thomas, of the London County Council,

visited the school, and a large number of children found to be suffering from sore throat were excluded.

I also obtained a list of absentees on account of sore throat and other suspicious symptoms, and found several who were probably suffering from a mild form of Scarlet Fever. Some of these were sent to Hospital and others were isolated at home. In one—a distinct but very mild case of Scarlet Fever—the parents, though warned that the child was suffering and must be isolated, allowed her to continue playing in the road. The father was summoned and fined. This child was stated by friends to have nettle rash. The steps taken had the desired result and the epidemic soon ceased.

School Incidence of Scarlet Fever and Diphtheria During the ten years 1896—1905.

47. There is no doubt that infectious diseases such as Scarlet Fever and Diphtheria are communicated from child to child both in school and on the way to and from school. During holidays there is always a drop in the notification rate.

It has been noted, however, that the various schools show a marked difference in their incidence rates, and the question has arisen as to whether this is due to any preventable cause. In order to see to what extent the incidence rate varies, the following tables have been prepared for the two past quinquennial periods, showing the incidence per 1,000 on the roll of Scarlet Fever and Diphtheria on all provided schools of which the average numbers have exceeded 500. They are arranged in the order of the average incidence for each five yearly period, and the dotted line separates those above the average from those below. Only Plumstead schools are given for the first quinquennium, as there are no figures available for Woolwich and Eltham schools :—

Cases notified per 1,000 on Roll.
Five Years, 1896 to 1900.

Scarlet Fever.

School.	1896.	1897.	1898.	1899.	1900.	Average.
Ancona Road ..	27·39	16·94	27·19	85·86	18·99	35 27
Earl Street ..	7·31	16·65	45·57	39·02	21·46	26·00
Purrett Road ..	18·42	36·45	10 77	45·74	11·81	24·64
Burrage Grove ..	20·61	16·14	15·19	40·98	16·39	21·86
The Slade ..	19 25	16·06	12·84	34·78	12·92	19 17
Bloomfield Road ..	24·65	13 97	22 79	29·68	4·68	19·15
Conway Road ..	9 30	24·90	11·79	27 26	19·89	18 62
Vicarage Road ..	13·59	5·22	27·85	21·94	11·45	16·01
High Street ..	10·58	18·04	18·04	16 51	9·91	14 61
Plumstead Road ..	5·88	9·45	21·73	19·29	9·08	13·08
Plum Lane ..	6 78	—	5·69	25·25	15·15	10·57
Eglinton Road ..	5·74	2 30	2·30	10·06	2 32	4 54

Average .. .. .. 18·62

Diphtheria.

School.	1896.	1897.	1898.	1899.	1900.	Average.
Burrage Grove ..	9·35	7·59	6·64	9·22	18·44	10·25
Ancona Road ..	13·69	5·15	2·21	13·67	12·15	9·37
Bloomfield Road ..	17·40	2·20	0·73	7·81	8·33	7·29
Plum Lane ..	6·78	8·57	2·85	7·57	10·10	7·17
Earl Street ..	5·48	1·75	6·13	8 78	7·80	5·99
The Slade ..	4·27	12·85	2·14	6 95	1·98	5 64
Conway Road ..	9·30	1·31	2·62	7·37	5·10	5·14
Vicarage Road ..	1·69	3·48	0·87	7·63	4·77	3·69
Plumstead Road ..	3·36	1·89	8·50	—	4·54	3·66
Purrett Road ..	4·80	0·82	3·31	3·94	3·94	3·36
High Street ..	1·63	5·74	2·46	—	2·47	2·46
Eglinton Road ..	2·15	—	2·30	3·09	—	1·50

Average .. .. .. 5·46

Five years 1901—1905.

Scarlet Fever.

School.	1901.	1902.	1903.	1904.	1905.	Average.
Elizabeth Street ..	3·93	23·03	12·06	30·26	29·40	19·73
Plum Lane	—	4·64	23·98	14·53	13·00	14·04
Bloomfield Road ..	15·51	6·03	7·52	26·36	11·50	13·38
Ancona Road.. ..	8·19	4·69	9·39	10·64	25·70	11·72
Pope Street	6·72	3·23	4·88	5·10	37·30	11·44
Mulgrave Place ..	20·10	3·20	14·75	13·62	3·48	11·03
Slade	5·07	3·12	21·65	12·47	11·60	10·78
Conway Road ..	5·60	3·64	7·19	18·57	14·10	9·82
High Street	9·94	2·26	7·62	13·40	13·30	9·30
Vicarage Road ..	17·37	8·87	3·95	5·92	7·91	8·80
Purrett Road.. ..	6·52	6·58	5·34	2·73	19·30	8·09
Burrage Grove ..	9·95	7·42	3·03	4·15	9·68	6·84
Eglinton Road ..	6·20	4·90	8·33	6·64	7·83	6·78
Union Street	10·77	5·07	6·66	8·14	1·68	6·46
Plumstead Road ..	6·40	4·56	4·26	7·09	7·57	5·97
Earl Street	2·87	5·01	6·93	4·96	9·82	5·92
Wood Street	2·60	6·31	3·53	5·71	6·60	4·95

Average .. .. .. 9·708

Diphtheria.

School.	1901.	1902.	1903.	1904.	1905.	Average.
Ancona Road.. ..	7·37	22·0	6·26	11·46	·83	9·58
Elizabeth Street ..	11·79	12·0	8·04	3·78	6·40	8·40
Conway Road ..	9·80	5·1	12·94	5·20	7·45	8·09
Eglinton Road ..	2·32	2·4	0·83	2·43	29·6	7·51
Union Street	1·79	3·3	—	—	26·8	6·37
Mulgrave Place ..	3·76	9·6	1·05	10·21	—	4·92
Burrage Grove ..	2·98	5·2	6·06	8·3	1·08	4·72
Vicarage Road ..	8·68	3·9	5·92	0·98	2·96	4·48
Earl Street	1·91	10·0	7·92	0·99	—	4·16
Plum Lane	2·52	4·6	—	1·32	11·7	4·02
Plumstead Road ..	3·20	—	7·46	3·54	5·04	3·84
Bloomfield Road ..	3·32	3·6	2·89	3·06	4·24	3·42
Slade	5·92	3·1	—	4·15	3·16	3·26
High Street	3·15	2·2	3·81	1·57	3·92	2·93
Pope Street	6·72	—	3·25	—	3·11	2·61
Wood Street	0·86	1·8	0·88	1·90	5·71	2·23
Purrett Road.. ..	0·72	5·5	1·52	—	3·05	2·15

Average .. .. .. 4·86

48. The tables make it clear that, whereas some schools have maintained for the whole ten years a low rate of infection, others have had a high rate; and between the two extremes there are all degrees of incidence.

Elizabeth Street School for the past five years had far the highest incidence of Scarlet Fever, and the second highest Diphtheria rate. Wood Street had the lowest Scarlet Fever rate and the lowest Diphtheria rate but one. Of the schools for which figures are available for ten years, Ancona Road had the highest rate, both for Scarlet Fever and Diphtheria; Purrett Road, Bloomfield Road, and Earl Street, come next highest for Scarlel Fever; Burrage Grove and Conway Road for Diphtheria. The schools with the lowest Scarlet Fever incidence were Eglinton Road and Plumstead Road; and those with the lowest Diphtheria incidence, Purrett Road and High Street.

49. Although school attendance increases the spread of infection, it does not follow that the higher incidence at one school is due to school influence; it may be due to the fact that the neighbourhood in which the school is situated suffers more from the infection. This is probably the reason of the high incidence at Elizabeth Street School, North Woolwich, being a particularly unhealthy district. Again, a school may have a high incidence because the children attending it have escaped exposure to infection to an exceptional degree *before* commencing their school education, and are consequently less protected by a previous attack than children at other schools. This factor would probably account to a large extent for schools in good class neighbourhoods having a higher incidence than those in poor and crowded districts. In that case we should find that although the school incidence rates were much higher in the better class districts, the district rates were more nearly equal. The following comparison shews that this is actually the case:—

The Scarlet Fever rate for the past five years at Ancona Road School was 11·72, and the Wood Street rate 4·95, or less than half as much. These schools serve Central and Dockyard Wards respectively, and it appears that the Scarlet Fever rate for the Central Ward, during the same five years, was 16·0 per 1,000 population, and that of the Dockyard Ward 13·7. Even this small difference would probably disappear if allowance were made for age distribution, Central Ward having, no doubt, a considerably larger population of children of school age.

If Scarlet Fever must occur, it is better for children to have it in their later than in their earlier years, since it is more fatal to young children. It appears that the number of deaths from Scarlet fever during the five years in Central Ward was two, being only half the number in the Dockyard Ward; and in St. George's Ward, which provides most of the children at Eglinton Road School, there were 6 deaths, more proportionately than in any other Ward. The highest death rate from Diphtheria was in Central, St. Nicholas' and St. Margaret's Wards, but the notification rates in the three chief schools in St. Nicholas and St. Margaret's Wards were among the lowest.

The following are the deaths in the various Wards from Scarlet Fever and Diphtheria during the past five years:—

	Scarlet Fever.	Diphtheria.
River { North	2	4
River { South	4	10
Dockyard	4	4
St. Mary's	1	6
St. George's	6	5
St. Nicholas	6	22
Central	2	12
Glyndon	3	8
St. Margaret's	6	17
Herbert	3	6
Burrage	3	6
Eltham	3	2

Again, there is no doubt that many mild cases of both Scarlet Fever and Diphtheria are never notified, and naturally there would would be more unnotified cases in a poor district than in a well-to-do one.

There are thus, it is seen, several considerations quite apart from school influence which would cause one school to have a higher incidence than another.

50. School conditions may, and no doubt do, affect the spread of infection in certain ways. The drainage and general structure of buildings of the permanent Provided Schools may be taken as equally satisfactory at all of them. The drains at these schools are tested every year and flushed several times a year. There are few, if any, open manholes in the vicinity of any schools, and none I believe near Ancona Road School. Cubic and square space are the same at all the schools.

All these matters may, therefore, be disregarded in considering why one school has more infectious disease than another.

Ventilation of class-rooms is, at most schools, of the natural kind by open windows, and is therefore necessarily variable; it depends both on the head mistress's vigilance and on the predilection of each individual teacher. At a school recently visited the air in three class-rooms was found perfectly sweet; in two, decidedly close.

Lastly, school infection must be markedly affected by the diligence with which school teachers watch for and exclude children showing the early indications of infectious disease; some teachers I have found not only diligent in this way but particularly talented in diagnosing the signs of infection.

All teachers, however, cannot be so gifted. The London County Council has laid down strict regulations on these matters, and my enquiries show that teachers generally recognise the importance of both these means of preventing infection, viz., ventilation, and early detection and exclusion of infective children.

51. To sum up—it has been shown that although there is very great difference between schools as to the amount of infectious disease incidence, a high notification rate may be altogether independent of any special conditions of the school, and may be consistent with an average amount of infectious disease in the neighbourhood, and with a low mortality.

It has been further seen that the only conditions, affecting the London County Council Schools, which are variable and likely to influence the prevalence of infection, are the maintenance of ventilation, and ability and energy in detecting early cases of infectious disease and excluding the same; and that there is reason to think that the importance of these measures is generally realised by teachers.

It is satisfactory to note that there was a great reduction of school incidence in the past five years as compared with the previous quinqennium, and that the reduction is especially marked at the schools which had the highest incidence during the first five years. It is still more satisfactory to find, from the Registrar General's Annual Returns, (See table VIIA.) that the Scarlet Fever and Diphtheria death rates in Woolwich were much less than in London during the past five years. Of the ten South-Eastern Boroughs only one—Greenwich—had a lower Scarlet Fever mortality than Woolwich.

Diphtheria.

52. 273 cases of Diphtheria were notified, compared with 216, 233, 186 and 163 in the four preceding years. The case rate (No. of cases per 1,000 population) corrected for mistaken diagnosis—of which 20 were noted—was 2.01; this is the highest rate since 1900.

53. There were only 18 deaths, compared with 23, 13 and 29 in the three preceding years. The death rate was 0·14; the rate has only been lower in the past 15 years on two occasions, 1891

and 1903. The London death rate was lower still, viz., 0·12. The death rate in the 76 great towns was 0·16.

54. Ninety-eight cases were in Woolwich Parish, 165 in Plumstead, and 10 in Eltham. The following table shows the case rate in each parish (not corrected for mistaken diagnosis) in the past five years compared with London and the Borough :—

	1901.	1902.	1903.	1904.	1905.	Avg. 5 Years. 1901-1905.
The Borough ..	1·84	1·87	1·51	1·30	2·01	1·71
Woolwich Parish	1·56	1·67	1·27	1·22	2·45	1·63
Plumstead ,,	1·90	2·09	1·67	1·47	2·22	1·87
Eltham ,,	2·33	1·08	1·40	0·45	0·86	1·62
London	2·70	2·30	1·64	1·52	1·36	1·90

It is seen that in London there has been a steady progressive decline in Diphtheria Notifications since 1901. In Woolwich this decline lasted only till 1904.

55. 218 cases—or 80 per cent. of notifications—were removed to hospital. Certificates of efficient home isolation were given in eight cases. The case mortality was only 6·6 per cent., compared with 8·8, 9·9, 7·0 and 17·8 in the four preceding years, and with 8·6 in London. This is the lowest case mortality recorded in the Borough. Fourteen of the 18 deaths occurred in the Fever Hospitals.

56. The reason that the number of cases was so large and the number of deaths so small was that, owing to school outbreaks of the disease in January, special efforts were made by personal inspection and bacteriological examination to discover the source of infection, and to prevent any persons from infected houses continuing to act as carriers of infection. The result of these efforts was to discover a large number of persons who were carriers of infection, and either had no symptoms of illness what-

ever, or very slight symptoms, which might or might not be actually attributable to Diphtheria. Twenty such cases were discovered by myself, or by Dr. A. E. Thomas, whom your Council appointed temporarily to assist in this work, and 15 were discovered by Dr. C. J. Thomas, Assistant Medical Officer of the London County Council, who examined the children in several schools on my request.

The Medical Officers of the Royal Arsenal also examined employees from infected houses before allowing them to return to work, and discovered several bacteriological carrier cases. Altogether 22 cases, found to be carriers of the Diphtheria bacillus, without having any symptoms, were notified. Twelve cases were reported as nasal.

In addition to the notified cases a number of bacteriological cases were discovered by myself and were not notified, but isolation precautions were advised and carried out at home.

57. *Source of Infection.*—In 123 cases a probable source of infection was noted, viz., in 50—other inmates of the same houses were considered the source; 50 were attributed to school infection; 11 to infection by neighbours and friends; 11 were "return cases," and one was employed at the Brook Fever Hospital.

All but one of the return cases occurred in the first half of the year and full details are given in the special report already referred to.

58. *Mistaken Diagnosis.*—Twenty cases, or 7 per cent. of notifications, were stated not to be Diphtheria after removal to Hospital. The percentage in the two preceding years was 12 and 7 respectively.

59. *School Infection.*—Table VI. shews the way in which the Schools were affected with Diphtheria. The highest incidence was

on Church Manorway, Eglinton Road and Union Street. In the case of the two latter, certain classes were specially affected. A large number of cases occurred about the same time, and there is no doubt that the school was a means of spreading the infection. As soon as there was any evidence of school infection, the Medical Officer (Education) of the London County Council was informed, the affected classes examined bacteriologically, and those found to be carriers of the Diphtheria bacillus were excluded. At Eglinton Road School cases continued to occur in spite of these steps; and after a further examination of the children, the School was temporarily closed. This had the desired effect. At Union Street School examination and exclusion of infected children were found sufficient to stop the recurrence of cases.

60. Of the larger schools those least affected were Mulgrave Place, Ancona Road, Burrage Grove and Bostal Lane.

The incidence of Scarlet Fever and Diphtheria in the large schools during the past years has been fully described in paragraphs 49, 50 and 51.

61. *Bacteriological Diagnosis.*—712 swabs were sent to the Lister Institute to be examined for the presence of diphtheria bacillus. In 102 the true Klebs Loffler bacillus was found; in 172 Hoffman's bacillus was found; and 438 were found free from either the Klebs Loffler or Hoffman's bacillus.

Of the 712 swabs examined, 412 were taken by Dr. A. E. Thomas (my assistant) or by myself. Of these, 46 contained the true Klebs Loffler bacillus and 103 Hoffman's bacillus.

Special notes were kept as to 78 contacts examined and swabbed by myself; most of these were seen about 10 days after notification of the primary case, for the purpose of giving certificates to enable pupils to return to school. (N.B.—No children were allowed to resume school from infected houses until they were

certified by myself free from infection after bacteriological examination.) Others were examined with the object of finding possible sources of infection, *e.g.*, where the first case notified in a house was a child not attending school.

Of the 78 contacts, 44 had no noteworthy abnormal symptoms, while 34 had symptoms, viz.: 2 had tonsillitis, 3 congestion or exudation of fauces, 2 enlarged tonsils, and 27 some form of rhinitis. Of the 78 contacts diphtheria bacilli was found in 14, or 18 per cent, and Hoffman's bacillus in 30, or 38 per cent. Both the true bacillus and Hoffman's were found about equally in those who had symptoms and those found normal, indicating that the symptoms were neither a result nor a cause of the presence of the bacilli. Some exception to this rule must be made where the nasal symptoms are something more than common mucuous catarrh. Of 5 cases with mucosanguinolent discharge, encrustation and soreness of the nostrils, 3 gave a positive result, 1 shewed Hoffman's, and 1 was negative.

The fact that both Klebs Loffler and Hoffman's bacillus were found more frequently in contacts than in all cases with symptoms of throat affection, seems to indicate some connection between the two bacilli. If not modifications of the same bacterium they seem both to flourish under the same conditions.

Enteric Fever.

62. There were 22 cases of Enteric Fever, not including 5 cases of mistaken diagnosis, notified as Enteric. The case rate was 0·17 compared with 0·34 and 0·19 in the two preceding years; and for the third year in succession the lowest rate recorded in the Borough. For the ten years 1892—1901 the rate never fell below 0·41. The case rate in London was 0·33. Only Stoke Newington, the City and Battersea, had a lower rate, of the Metropolitan Boroughs.

Out of 27 cases notified, 17 went to hospital.

63. There were seven deaths, giving a death rate of 0·06, which is slightly higher than in the two preceding years, but much below the average of the past ten years. The death rate in London was 0·05, and in the 76 great towns 0·08.

64. The following are the cases occurring in each parish during the past six years. The number of cases has progressively diminished in Woolwich Parish, and it is satisfactory to be able to report for the first time that Eltham was exceptionally free from Enteric.

	1900.	1901.	1902.	1903.	1904.	1905.
Woolwich ..	23	21	17	10	8	7
Plumstead ..	39	32	24	22	9	19
Eltham ..	4	15	9	10	8	1

65. *Source of infection.*—Three cases apparently contracted the infection while training at the Canterbury Barracks, and one while at Worcester Barracks; and one each brought the infection from Liverpool, and Ash in East Kent. In one the disease was attributed to oysters from Emsworth; in one, to cockles eaten at Southend; one, periwinkles; and one, mussels; one, lobster; one, watercress from Littlehampton; and one, watercress, source unknown. The case whose infection was attributable to lobster had eaten the body of a lobster about a fortnight before the illness began. It is possible the lobster may have been contaminated at the fish shop after boiling, as has been suggested when infection has been traced to fried fish.

66. *Bacteriological diagnosis.*—Twenty samples of blood were sent to the Lister Institute to be examined for Widal's reaction. A positive result was obtained in nine. One of these was found aftewards to be a case of Phthysis; she had, however, had Enteric Fever some ten years previously.

This instance shows the importance of always inquiring as to a previous attack before deciding that a case is Enteric on the strength of a positive Widal reaction.

Diarrhœa or Zymotic Enteritis.

67. The deaths from Diarrhœa, Dysentery, and Epidemic or Zymotic Enteritis were 65, or 0·52 per 1,000 population, compared with 0·82, 0·48, 0·36, and 1·19, in the four preceding years. The rate for the 76 Great Towns was 0·83, and for London 0·72.

There were in addition 16 deaths from Enteritis and Gastro-Enteritis, making a total of 81 deaths (or 23 per 1,000 births), most of them due to the same disease. 62 of the 81 were under one year of age.

68. The following table shows the death rate from all the diarrhœal diseases per 1,000 births in each ward and parish during the past five years :—

Diarrhœal Diseases per 1,000 births.

	1901.	1902.	1903.	1904.	1905.
Woolwich Parish ...	37	19	22	57	31
Wards.					
River (North) }	62	37	35	103	85
River (South) }		23	28	46	32
Dockyard	32	17	18	42	28
St. Mary's	19	18	31	76	29
St. George's... ...	20	7	6	44	13
Plumstead Parish ...	31	23	13	48	18
Wards.					
St. Nicholas... ...	43	29	21	69	22
Central	20	12	7	26	17
Glyndon	34	31	9	79	21
St. Margaret's ...	22	25	12	33	7
Herbert	21	11	11	32	24
Burrage	23	22	0	9	9
Eltham...	39	9	11	11	24
The Borough	...	21	16	47	23
London County... ...	...	...	...	41	35

North Woolwich had far the highest death rate, and St. Margaret's the lowest. The continued high diarrhœal death rate of North Woolwich requires careful consideration. I have previously attributed it to some extent to defective sewers and high level of the ground water; the sewers are being improved, and it is to be hoped that this cause may soon no longer exist. The average level of the streets is 6ft. below Trinity high water mark. This must mean that the ground is to a large extent waterlogged, and that ground air is forced into those houses not sufficiently protected with concrete, twice daily. A large part of the ground, too, was made up with house refuse, and consequently the soil and ground air is impure. Owing to the existence of large factories employing female labour in the Borough, and in the adjoining part of West Ham, it is probable that the number of married women employed away from home exceeds that in the whole Borough. This would mean more hand-fed children and more Diarrhœa. The Lady Inspector is giving special attention to this district, and an improvement is to be anticipated before long.

69. The rate in Eltham exceeded that in the Borough, for the first time since 1901.

70. Voluntary Notification of Zymotic Enteritis was instituted during the summer quarter, and a full report on the results obtained is found in an appendix, with the method adopted and action taken in notified cases.

The following leaflet is given to the mother of each notified patient: —

INFECTIOUS DIARRHŒA.

Summer diarrhœa being an infectious disease and very fatal to infants, mothers and others having the care of children are strongly advised to attend to the following rules:—

1. The infection is contained in what passes from the body.
2. It is usually taken in by the mouth with the food, which is contaminated by flies, dust and dirt conveyed by fingers.
3. Children under two years are most affected, especially those fed with bottles. The directions, "How to Feed Baby," should be carefully studied and carried out under the directions of the medical attendant; a copy can be obtained at the Public Health Office, Maxey Road.
4. Babies nursed entirely at the breast seldom have diarrhœa. Children should be always nursed at the breast, if possible, till they are nine months old. Mother's milk is far the best, and prevents diarrhœa and other diseases.
5. If, however, this is impossible, and baby is fed on fresh cows' milk (which is usually the next best food), the milk should be boiled as soon as it comes, and then stood, in a clean jug with a piece of wet muslin over it, in a cool place.
6. All moist and liquid food should be kept covered with a wet cloth, or wet muslin, in a cool, clean, well-ventilated place.
7. Bottles with tubes should never be used; in France they are called baby-killers.
8. Medical attendance should be at once obtained for children affected with diarrhœa, however slight.
9. Any person suffering from Summer diarrhœa should occupy a separate bed, and be nursed with all possible care and cleanliness.
10. All that passes from the body should be immediately covered with disinfectants (to be obtained at the Public Health Office) and emptied down the W.C.

Soiled napkins and clothes should be at once soaked in water containing a disinfectant, and left there till they are washed.

11. The mother's or nurse's hands should be always washed every time they are soiled, and especially before preparing baby's bottle or any other food. If you neglect to take this trouble you are risking your children's lives.
12. Infants, their clothes, utensils, living rooms, and back yards, must be kept scrupulously clean.
13. All animal and vegetable refuse, waste food, and dirt of all kinds should be quickly removed from the house and covered up in the dustpail, and slops must be immediately emptied down the drains.

(Signed) SIDNEY DAVIES, M.D.
Medical Officer of Health.

Erysipelas.

71. There were 83 cases of Erysipelas notified, compared with 98, 58 and 74, in the three preceding years. There were 5 deaths. The case rate was 0·66, and the death rate 0·04.

Puerperal Fever.

72. There were 12 cases of Puerperal Fever notified, compared with 11, 2 and 5, in the three preceding years. There were 6 deaths. The case rate was 0·10, and the death rate 0·05, both rates being above the average of the past ten years. Four cases were attended in confinement by qualified medical men and eight by midwives.

73. In only one case was there any ground to suppose that infection was conveyed by the professional attendant from a previous case, and here there was an alternate source of infection, viz., the patient was confined in the same room as a case that

occurred three months before, and was visited by the mother of that case who wore—without disinfection—the same dress she had worn when nursing her daughter.

74. One case was probably Gonorrhoeal, one Scarlet Fever, and one—the wife of a potman—had Erysipelas of the face at the same time. In one case the medical practitioner was in attendance on a case of Erysipelas when the Puerperal Fever occurred. One case was apparently due solely to retained blood clot. One patient, who lived in a dirty house, and was personally unclean, had sore throat and diarrhœa—evidence of septic poisoning—when confined.

Influenza, Bronchitis, and Pneumonia.

75. Influenza caused 19 deaths, compared with 62, 22, 60, 27, and 23 in the five preceding years. Bronchitis and Pneumonia caused 255 deaths, compared with 407, 245, 299, 258, and 278 in the five preceding years.

Tuberculosis,

76. There were 230 deaths from Tuberculous disease, giving a death rate of 1·83, compared with 2·29, 1·86, 1·92, and 2·06, in the four preceding years. This is the lowest rate recorded.

77. The following table gives the number of deaths from each of the various forms of Tuberculosis in the past five years, and also the deaths from simple Meningitis:—

	1901.	1902.	1903.	1904.	1905.
Tuberculous Meningitis ..	17	20	28	16	19
Simple Meningitis ..	26	19	24	16	25
Tuberculosis intestines and Peritoneum	37	29	14	12	12
" Other forms			24	25	14
Phthisis	215	183	171	206	185

78. The deaths from Phthisis were 185, giving a death rate of 1·47, compared with 1·79, 1·80, 1·49, 1·39, and 1·64 in the five preceding years. Thus the death rate has only once been lower than last year, viz., in 1903.

The following table gives the death rate from Phthisis in each parish during the past five years, compared with London. The rate in Woolwich and Plumstead exceeded that in 1902 and 1903, but the Eltham rate was the lowest recorded. The River Ward had the highest number of cases since 1901. The London death rate was much the lowest recorded.

	1901.		1902.		1903.		1904.		1905.	
	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.
Woolwich Parish	105	2·52	83	1·99	81	1·94	93	2·23	83	2·07
Plumstead ..	104	1·49	94	1·30	84	1·18	104	1·43	97	1·31
Eltham ..	6	0·77	6	0·59	6	0·56	9	0·81	5	0·43
The Borough ..	215	1·80	183	1·49	171	1·39	206	1·64	185	1·47
London ..	..	1·66	..	1·60	..	1·55	..	1·62	..	1·41

79. The following table shows the death rate from Phthisis, in Woolwich and Plumstead Parishes, in each of the three past quinquennia :—

	1891—5.	1896—1900.	1901—5.
Woolwich	2·8	2·16	2·15
Plumstead	1·78	1·40	1·35

80. It appears that in each parish there has been a progressive reduction, but the diminution in the past quinquennium is much less than in the preceding one. In view of the special efforts made in recent years to deal with Tuberculosis by notification,

education, disinfection and sanatorium treatment, the result is at first somewhat surprising. But when we recognise that Phthisis is bound to follow alcoholic excess, and to accompany poverty, it is seen at once that years of war, which were also years of intemperance, and produced years of poverty, could not be expected to be years of diminished Phthisis mortality. No doubt, but for the preventive measures mentioned, there would have been a considerable increase in Consumption instead of a slight reduction. Woolwich, as a garrison town, was specially affected by the intemperance during the war ; and, as an arsenal, by the poverty caused by the cessation of work succeeding the war.

81. 110 of those who died were males and 75 females. Thus the decrease compared with the previous year was all among males.

82. Out of 26 who died, as to whom information on this point was obtained, 2 were stated to be teetotallers, 16 temperate, and 8 intemperate.

83. The source of infection was attributed in 96 deaths, with more or less probability, as follows :—

Family or personal—Father	... ...	13
Husband	... ...	2
Mother	... ...	17
Wife	... ...	4
Brother	... ...	3
Sister	... ...	2
Son...	... ...	2
Daughter	... ...	1
Mistress	... ...	1
Undecided	... ...	5
		50

Brought forward		50
Workplace	14	
School	2	
Workhouse	2	
Ship	1	
Nursing	1	
Public House or licensed restaurant ...	25	
Military Canteen	1	
	—	46
Total		96

Occupation.—Three who died were engaged in the liquor traffic, and four were, or had been, soldiers. Loss of work was spoken of in several cases as contributing to illness and death.

84. *Notifications.*—Voluntary notification of Phthisis has now been in force in the Borough for four years. 145 cases were notified, compared with 186, 189, and 167 in the three preceding years. 16 of these were in the Poor Law Infirmary, 21 others were notified by the District Medical Officers of the Woolwich Union, 11 by Medical Officers of the Royal Arsenal, 51 by clergymen, philanthropic societies, or by applicants for admission to the Peppard Sanatorium, and the remainder, 46, by private medical practitioners. £7 18s. 6d. was paid during the year for the notification of phthisis.

Duration.—Of the 145 cases notified during 1905, at least 52 have since died, and of 186 notified during 1904, at least 73 have since died. (March 1906.)

85. The source of infection of the notified cases was probably as follows :—

Family or personal, 44 viz. :—Father 11, Mother 15, Brother 3, Sister 9, Husband 2, Wife 2, Brother-in-law 1, Grandfather 1, Undefined 1, Employer 1.

Workshop 14	...	...	Ship 1.
Public House 13	...	...	School 1.
India 1	...	...	Home 1.
Army 4	...	...	Employer 1.
Restaurant 1...	...	...	Office 3.
			Undetermined 61.

86. Of the 51 adults as to whom information was obtained, 3 were stated to be teetotallers, 32 temperate, and 6 intemperate.

Of the houses of notified consumptives, 9 were to some extent dirty, 3 had damp walls, and 3 had dark rooms.

Age distribution: The following table gives the age of notified cases :—

0—1	1—5	5—15	15—25	25—45	45—65	over 65
0	1	19	25	82	16	2

Sex: 92 were males and 53 females.

87. *Occupation.*—Of the 92 notified males, 36 were Arsenal employees, of whom 11 were labourers. The departments and workshops affected are as follows :—

Royal Laboratory	...	...	...	10
Danger Buildings	...	...	...	6
Royal Carriage Dept.	...	...	...	6
Royal Gun Factory	...	...	...	1
Army Ordnance Dept.	...	...	...	4
Building Works' Dept.	...	...	...	4
Torpedo Factory	...	...	...	3
Central Office ...	...	...	...	2
Naval Ordnance Dept.	...	...	...	1
Royal Dockyard ...	...	...	...	1

Eleven outside the Arsenal were labourers, three soldiers, three clerks, three fishmongers, two carmen; the remainder included a potman, house decorator, tailor, policeman, milk carrier, errand

boy, stone mason, waiter, plasterer, bill distributor, meat porter, shop assistant, cabinet maker, bricklayer, gas fitter, fitter, costermonger, furniture salesman, mineral water employee, and a secretary, making a total of 43 employed outside the Arsenal.

The 53 females included 2 servants, a barmaid, a telephonist, a bath attendant, a needlewoman, a housemaid, a clerk, a laundry dresser, and a factory hand.

88. *Bacteriological Diagnosis.*—Sputum from 130 cases of suspected phthisis was examined at the Lister Institute, and tubercle bacilli were found in 36 cases. The number of examinations for the three previous years were 36, 144, and 116 respectively.

89. In my Annual Report for 1904 some figures were given as to the "Public House as a Source of Infection," and "Chronic Tuberculosis in Children." (See page 50.)

90. Disinfection was performed by the Public Health Department at 142 premises, compared with 18, 86, 89, 108 and 192 in the five preceding years. Of these 109 were disinfected after the death of the patient, and 33 after removal to hospital, sanatorium, or on other opportunity.

91. *Sanatorium Treatment.*—In August, 1903, your Council commenced to maintain two beds at the Peppard Common Sanatorium, and in May, 1904, increased the number to three. To begin with, patients were kept in the Sanatorium for three months. In my last report I pointed out that for educational purposes it was desirable that a large number of patients should spend a short time at the Sanatorium, and that for a limited number who might be expected to make a complete recovery a longer stay was necessary. In consequence, it was decided to use the three existing beds for two months' treatment, and to maintain three more beds for four months' further treatment for

such patients as required it, and were likely to be permanently benefited. (See Annual Report, 1904, p. 51, and Council's Minutes for April 13, 1905, para. 17.) The three additional beds were occupied first in October, 1905, since which time the six beds maintained by the Council have been in continuous occupation.

92. During the year 21 patients were admitted to the Council's beds and 18 discharged; three beds were already occupied at the beginning of the year and six were occupied at the end.

93. Up to June 30th, 1905, twenty patients had passed through the Council's beds at the Sanatorium, of whom eight have since died and twelve are still living. Two of the eight who died proved to be very acute cases, and were sent home after a few weeks stay, as they were seen to be getting worse. The others were all temporally improved by the open air treatment but soon relapsed after returning home. One went to another Sanatorium.

94. Of the twelve patients supposed to be alive, one was last heard of in March, 1905, and one in August, but the other ten have all been heard from this year (1906). All but one were at work; he was "feeling excellent" but out of employment. Two have gone to Canada and are doing well. One is employed at the Peppard Sanatorium. Two women are in service, and one is performing her household duties at home. One states that "Cough got worse after leaving Sanatorium, but having found work in the country, it is again disappearing; otherwise have enjoyed good health." Five appear to be temporarily cured, and have no symptoms; the other seven are all in improved health. The results may be summarized as follows:—

5 Apparently cured.
7 Much improved and able to resume work.
8 Died.

95. As it is possible that some of the seven improved will presently relapse, it is a question whether the curative results can be considered quite satisfactory, but the educational results have been found altogether good. Those who have returned from the Sanatorium have always been found to continue to carry out open air treatment at home, and to take the other precautions, such as sleeping in a separate room, necessary to prevent their infecting others. These precautions can only be very partially taught by the distribution of printed instructions and by visits to the home. It is a question whether it would not be better to further reduce the period of stay at Peppard for all but selected cases to six weeks or a month, in order to educate a larger number of consumptives.

96. The names of 50 applicants were entered on the register for Sanatorium treatment. Many of these were found too far advanced for a Sanatorium, but several could have gone away with advantage, if there had been more accommodation.

The following are the Regulations approved by the Public Health Committee for admission to the Sanatorium.

Open-Air Treatment of Consumption at the Maitland Cottage Sanatorium, Peppard, Oxon.

The Maitland Cottage Sanatorium was established in October, 1902, to provide open-air treatment for consumptive patients of the working classes. Dr. Esther Carling is the Medical Superintendent.

The buildings consist of sleeping pavilions, shelters, and administrative quarters, and accommodate from 20 to 30 patients.

The Sanatorium has a south-west aspect, and is surrounded by fields and distant woods; the air is bracing. Kingwood Common, which adjoins the property, and the surrounding woods, provide delightful walks.

The Woolwich Borough Council maintains six beds; three of these are intended to provide two months' rest and open-air treatment, and to teach patients how they may avoid infecting others, and how they may be able to continue the treatment on their return home. The other three beds are for the further treatment of such patients as require it, and are likely to derive permanent benefit during a period not exceeding four months.

Regulations and Conditions of Admission.

(1) All applications for admission must be sent to the Medical Officer of Health, Public Health Department, Woolwich.

(2) Applicants must have resided at least twelve months in the Borough of Woolwich, and must be persons who are not in a position to pay the fees required at self-supporting Sanatoria. Only cases in an early stage of consumption are admitted.

(3) Forms of Application can be obtained from the Medical Officer of Health; these must be filled up by the applicant's medical attendant, and presented to the Medical Officer of Health, who will decide as to the suitability of the applicant for admission.

(4) Patients will be supplied at the Sanatorium with a thermometer, for which a charge of 1s. 6d. will be made, and must be provided with a pocket spitting flask. This can be obtained at the Public Health Department, price 5d.

(5) The station for the Sanatorium is Reading, which is reached from Waterloo Station (S.W. Railway). A conveyance is sent to meet patients, for which the charge is 4s. open or 6s. 6d. closed. Only light luggage allowed.

(6) Patients must take with them a pair of warm slippers, strong walking boots (goloshes or snow boots in winter are desirable), a mackintosh or strong overcoat, a rubber hot-water bottle, and a rug.

(7) Before patients go to the Sanatorium they must clearly understand that they cannot have visitors except under special circumstances.

(8) Patients will be expected to make themselves useful in any way required by the Medical Superintendent.

(9) The Medical Superintendent reserves the right to discharge any patient who is, in her opinion, unsuitable. Strict obedience will be required from all. Any patient who is wilfully or carelessly disobedient will be liable to immediate dismissal from the Sanatorium.

By order of the Public Health Committee.

SIDNEY DAVIES, M.D.,
Medical Officer of Health.

97. I regret to say that no further steps have yet been taken to provide for the isolation of advanced cases of Phthisis. The Woolwich Guardians are, however, considering the provision of improved means for isolating and treating consumptives at the Infirmary.

98. Fourteen spitting flasks were supplied at cost price (5d.) compared with 23 and 35 in the two previous years.

Cancer.

99. There were 86 cases of Cancer (malignant tumours) giving a death rate of 0·70 compared with 0·70, 0·83, 0·75, and 0.74 in the four preceding years. Forty-two of the deaths were in males and 44 in females. Sixty of the deaths were between the ages of 45 and 75. The highest mortality was in Burrage and Dockyard Wards, probably because these wards contain a large proportion of elderly persons.

100. The following table shows the sex and region affected of all the cases of malignant disease.

CARCINOMA.

Seat of primary disease :—	*Male.*	*Female.*
Head and face	4	1
Mouth and tongue ...	4	—
Pharynx, oesophagus, larynx and neck	7	1
Pleura	—	1
Stomach and Pylorus ...	5	1
Intestines (excluding rectum) ...	3	—
Rectum	2	3
Liver	12	9
Peritoneum and Omentum ...	—	1
Glands	—	2
Female genital organs ...	—	11
,, breast	—	10
Undefined	—	1
	37	41

SARCOMA.

Bones	1	—
Humerus	1	—
Femur	1	1
Kidney	—	1
Skin	1	—
Undefined	1	1
	5	3

ALCOHOLISM.

101. There were 7 deaths from Alcoholism and 17 from Cirrhosis of the Liver, making a total of 24 deaths definitely attributed to alcohol, compared with 52, 40, 42 and 27 in the four preceding years. In addition to these, there were 336 deaths from disease of the brain and nervous system (excluding Meningitis) heart,

blood-vessels, and kidneys, of which a large proportion were certainly caused directly or indirectly by alcohol. The deaths from these causes in the two preceding years were 313 and 335 respectively.

102. The following table shows the death rates from Alcoholism and Cirrhosis of the Liver in the past three years in various divisions of the Borough compared with London. The table shows a further reduction in mortality from this cause.

	Public Houses per cent. of total houses.	1901.	1902.	1903.	1904.	1905.	5yrs.
The Borough ...	1·0	0·44	0·32	0·34	0·21	0·19	0.30
Woolwich Parish	2·0	0·74	0·61	0·41	0·24	0·32	0·46
River Ward, South	2·9	1·10	0·94	0·70	0·35	0·44	0·80
Plumstead Parish	0·5	0·27	0·19	0·35	0·23	0·15	0·24
St. Nicholas Ward	0·2	0·49	0·17	0·26	0·33	nil	0·25
Eltham .	0·6	0·25	nil	nil	nil	nil	0.04
London County...	—	0·31	0·30	0·28	0.27	0·25	0·28

Physical Deterioration and Alcoholism.

102A. The Report of the Inter-Departmental Committee on Physical Deterioration called special attention to the close connection between ill-health and the abuse of alcohol, and recommended that the general public should be educated as to the evils of indulgence in stimulants.

A poster on this subject had recently been issued by the Government in France. A similar poster was prepared by your Medical Officer of Health and presented to the Public Health Committee. Before issuing it locally, your Council invited the London County Council to take action in the matter for the whole of London ; but that body having decided that it had no power to do this, your Health Committee decided to print and post the bill prepared by me. A copy of the bill is printed in an appendix to this report.

The example of Woolwich has since been followed in 12 Metropolitan and 35 provincial Boroughs, or Urban areas.

Syphilis.

103. There were 14 deaths from Syphilis, compared with 8 and 14 in the two preceding years. Seven of these occurred in the Workhouse Infirmary, and two in outlying Institutions. Five were males and nine females, and six were infants under five years. There were in addition 19 deaths from general paralysis and tabes dorsalis (loco-motor ataxy) diseases, which are now considered to be usually due to Syphilis.

Meteorology.—See Table VIII.)

104. The first or winter quarter of the year was comparatively warm, and therefore favourable to health; it had nine weeks with an average temperature above normal and four below. The spring and summer each had six weeks above the normal temperature, and seven below. The autumn quarter was cold, having five weeks above and eight weeks below normal. October and November were specially cold months. In the first two weeks of December, there were seven days of fog, and in each of these weeks the number af deaths exceeded the number in any week of the year, with two exceptions; the number of deaths from Bronchitis and Pneumonia in these weeks of fog, and the two following weeks was 56, which is nearly one-fourth of the total deaths from these diseases during the whole year, or nearly thrice the monthly average.

The highest number of deaths was in the fourth week of April and the lowest in the third week of October.

The lowest temperature 19·7, occurred in the first week of January, and the highest 87·2 in the fourth week of July.

The Rainfall of the year, 23 inches, was a little below the average. Most rain fell in the second quarter.

N.B.—For further remarks on the temperature of the summer quarter, see special report on Zymotic Enteritis.

PART II.

ADMINISTRATION.

Water Supply.

1. The general water supply of the Kent Company, which is the source of water for the chief part of the Borough, was reported to be as usual of excellent quality, and only contained, according to the last report, three microbes per cubic centimetre. The water of the Plumstead well (Park Road) was found, however, to contain in October and November a number of microbes per cubic centimetre varying from 14 to 140; it also contained an unusually large amount of chlorides. It was inferred that, owing to excessive pumping, water had been drawn from the bed of the river through into the chalk. The use of the water from this well was discontinued for a time, and on resuming pumping a smaller amount of water was drawn. Recent examinations have shown that the water has returned to its original pure condition.

The supply is constant throughout the Borough with the exception of houses on Shooters' Hill (including Eglinton Road above Genesta Road; Brent Road, Dallin Road, Plum Lane above Dallin Road; and all houses above Red Lion Lane), which have an intermittent supply only.

2. Seven tenement houses were found to have an insufficient water supply for each of the families occupying them (see Annual Report, 1904, Page 59 and Appendix II). An additional tap and sink was supplied on at least one upper floor at each of these houses.

3. Defective and foul storage cisterns were found and remedied at 106 houres, compared with 70 and 90 in the two preceding years. At 70 houses the supply was found insufficient

or temporarily cut off. In one house, on Shooters' Hill, the insufficiency was due to the storage tank provided not being sufficiently large, the water supply being intermittent.

Food and Drugs Act.

4. 517 samples were submitted to the Public Analyst, and 38, or 7·4 per cent., were found to be adulterated, compared with 5·5, 4·1, 5·7 and 8·4 in the four preceding years.

5. Proceedings were taken in 38 cases; 2 were dismissed on proof of warranty; 4 were withdrawn, and a conviction was obtained in 29. (These figures refer to proceedings actually taken during the year, and consequently do not correspond with the figures in the preceding paragraph.)

6. A total of £66 10s. was imposed in fines, and £27 9s. 6d. in costs.

7. 403 of the samples were milk (including 3 separated, 1 skimmed and 2 condensed), and 26 of these, or 6·5 per cent., were adulterated, compared with 4·8, 6·1 and 9·3 in the three preceding years.

100 Samples were bought as butter, and 12 were found to be adulterated.

Table XVIII. shews the other 14 articles analysed, all of which were found genuine.

8. Of the 29 adulterated milk samples for which proceedings were undertaken, 4 were for abstraction of fat, 17 for addition of water, and 7 for addition of a preservative, viz., Formalin.

One sample was adultered with 31 per cent. of water and one had 33 per cent. fat abstracted; these were the most serious adulterations and the fine inflicted was £3 in each case.

The heaviest fine inflicted was £10 for 3 per cent. of added water; this was a second offence, the previous one having been in 1904.

9. Of the 403 milk samples, 97 were taken on Sunday and 11 or 11 per cent. were found adultered, compared with 5 per cent. adulterations of the samples taken on week days.

Food Inspection.

10. Messrs. Rance, Tedham & Dee continued to act as special food and meat inspectors on Friday and Saturday. There was one seizure—a liver with Echinococcus Cysts, and 32 surrenders. There were no prosecutions, all the owners having acted in good faith. Of the surrenders, 16 were for Tuberculosis, 15 Unsound, and one a liver with Echinococcus Cysts. The meat affected with Tuberculosis was pork in 15 cases and the lungs of an ox in one case.

The food surrendered as being unsound was mainly fish and fruit.

Dairies, Cowsheds and Milkshops.

11. On January 1st there were 196 milkshops on the register; 24 were added and 34 removed during the year, leaving 186 on the register at the close of 1905. There were 305 inspections made, and 29 notices served. One occupier of a milkshop was prosecuted under regulation 25, made under Section 13 of the Dairies and Cowsheds Order, 1885, which requires that a milkshop shall at all times be kept in a cleanly condition. This was a small general shop in which the occupier insisted on selling milk in spite of warning, and contained the usual amount of dust and dirt. The case was not defended, and a fine of 20/- and 25/- costs was imposed for this offence and failure to register. He has now discontinued selling milk.

Several other persons have either discontinued selling milk or have not commenced to sell as proposed, owing to representations made to them that the regulations did not allow of milk being sold in a general shop which could not be kept clean.

These small dealers are often induced to sell milk by a wholesale milk vendor, who undertakes to indemnify them should prosecution for adulteration ensue.

12. The number of cowsheds remained as before—18. These were all inspected four times, and 11 notices were served for dirty conditions, &c. Mr. M. Heaslip was prosecuted for keeping cows without a licence at No. 12, Drew Road, North Woolwich, and fined £3.

The general condition of the cows and cowsheds in the Borough is fairly good; probably much better than exists in the provincial districts, from which the great bulk of the milk sold in the Borough is derived. Some attempts at grooming the cows is now made, and the hands of the milkers are said to be washed; in these respects, however, there is much ground for improvement, but until the Sanitary Authority has power to do something more than advise, there is not likely to be much advance.

Slaughterhouses.

13. The 11 Slaughterhouses were each inspected six times, and three notices were served and complied with.

The chief part of the meat sold and eaten in the Borough is slaughtered outside of the Borough, and the number of animals killed in Woolwich slaughterhouses is continually decreasing. A special report on the existing provisions against the sale of unsound aud diseased meat was presented and printed in your Council's minutes of 25th January, 1906. The conclusion and recommendations were as follows:—

"*Conclusion.*—In London there is no complete or satisfactory system of preventing the introduction of diseased meat, whether from the country or abroad. The great bulk of the meat sold in London is killed elsewhere, is not guaranteed as passed by experts, and cannot be efficiently inspected in London.

On the other hand, many local sanitary authorities, including your Council, are active in inspecting and seizing diseased meat, and the resulting loss to traders acts as a deterrent to the sale of such meat. The final line of resistance to the consumption of the germs of disease is also generally applied, viz., such cooking of meat as would destroy the germs.

Recommendation.—I cannot do better than endorse the following recommendations made by Sir Shirley F. Murphy in his report on Slaughterhouses in 1898:—

'For the purpose of complete inspection of London meat it would be necessary (*a*) to provide public slaughterhouses in substitution for private slaughterhouses, and to inspect the meat killed in these public slaughterhouses; (*b*) for a more thorough system of inspection to be organised at the Deptford slaughterhouse and at the slaughterhouses in the Islington Cattle Market; (*c*) to provide in London a small number of stations at which meat, sent up dead from the country to meat vendors' shops (without passing through the Smithfield Market) could be taken for the purpose of inspection. Any public slaughterhouses provided in London might be utilised for this purpose, and additional stations provided where necessary. Meat killed in a public slaughterhouse, under the control of other municipal authorities, and bearing evidences of inspection, might be taken direct to meat vendors' shops without further inspection in London.

Inspection should be accompanied by the stamping of meat which was approved as fit for human food, and the inpectors of the sanitary authorities should, by sufficient inspection of meat exposed for sale, ensure that it has been duly examined.' "

Nuisances (See Table XVa.).

14. 380 complaints of sanitary defects were received and investigated, compared with 623, 458, 493 and 457, in the four preceding years.

It is reasonable to suppose that the diminution of complaints corresponds with the reduction of nuisances; it may therefore be taken as proof of efficient inspection and improved sanitary conditions.

Forty complaints of non-removal of dust were made and attended to, compared with 160, 114, 70 and 42, in the four preceding years. Here also we notice a satisfactory improvement. Seven of the dust complaints came from Woolwich Parish; 28 from Plumstead, and 5 from Eltham.

The dust in Woolwich is collected by your Council's employees, but that in Plumstead and Eltham by two different contractors. A proposal to collect the house refuse throughout the Borough by direct labour is now under consideration.

15. Although the complaints of non-removal of dust are very few, it is unfortunately true that there are many instances where the whole of the house refuse is not regularly removed owing to the carelessness of the householders, and the neglect of the dustmen to remove anything not placed in the proper receptacles. The littered and dirty condition of back yards and gardens is a matter which requires and receives the constant attention of the sanitary inspectors, but where the dust is removed by the Council's employees it is to be expected that they should see that there is no removable house refuse left unremoved.

16. *Drains and Water-closets.*—Twenty-six defective combined drains were investigated and reported on by the Chief Sanitary Inspector. In the four preceding years the numbers were 52, 29, 28, and 22, respectively. These drains affected 169 houses.

590 private drains found choked and defective were examined, cleared, and re-laid, compared with 786, 693, 722, and 573 in the four preceding years. The majority were found in the River Ward.

1,278 water-closets and w.c. cisterns were repaired, compared with 1.864, 1,444, 1,532, and 1,498 in the four preceding years.

247 foul w.c. pans were cleansed by tenants, compared with 120, 54, 179, and 231 in the four preceding years.

17. *Sewers.*—Defective sewers were re-laid by the Works Department in Plumstead Common Road and Ann Street, Plumstead; and in Dock Street, Godfrey Street, and Station Road, Woolwich.

18. *Public House Urinals.*—The urinals attached to Public Houses and accessible to the Public have been regularly inspected during the year, and several improvements have been made both in the arrangements and lighting. Regular cleansing has been required, and an improvement in the general condition has resulted from systematic inspection.

Three urinals have been closed in consequence of being so situated that improvement in construction was impossible. The Public Houses in question have urinals for customers not open to the public.

One offensive urinal has been abolished in the demolition of the Public House.

One new urinal has been constructed in compliance with a notice to abate a nuisance adjoining the Public House.

Ten urinals have been improved.

19. *House Inspection.*—6,160 houses were inspected house to house, compared with 4,797, 4,526, 6,223, and 6,604, in the four preceding years. 9,604 were inspected *re*-infectious diseases and complaints, compared with 7,123, 10,956, 7,791, and 7,673.

In addition to these the 265 registered houses were each inspected several times.

20. Table XVI. shows the streets inspected and number of houses found defective in each.

At 2,693 houses interiors were cleansed or defective roofs repaired, compared with 3,082, 2,318, 2,711, and 2,917, in the four preceding years. 442 houses with damp walls were remedied, compared with 608, 369, 580, and 885, in the four preceding years. 150 of these were in Central and Glyndon wards.

Through ventilation was provided in 135 houses. 444 new dust pails were supplied, compared with 269, 1008, 708 and 679, in the four preceding years.

21. *Medical Officer's Inspections.* These amounted to a total of 564. Special inspections were made of Cock Yard, Salutation Alley, Prospect Cottages, Pottery Cottages, the cowsheds, milk-shops, ice cream shops, bakehouses, and many of the houses registered under the bye-laws. The other inspections were chiefly on account of Tuberculosis, Diphtheria and Zymotic Enteritis.

22. *Overcrowding.* 154 cases of overcrowding were found and remedied, compared with 145, 137, 126 and 178 in the four preceding years, or 2·5 per cent. of house to house inspections. Most of the cases of overcrowding are found in house to house inspections. Many complaints of overcrowding are received but investigation usually proves them to be unfounded.

23. *Smoke Nuisance.* 184 observations on smoke nuisances were made and 24 nuisances from black smoke observed. Letters

of caution were addressed to the offenders in all cases of nuisance, but no prosecutions were undertaken last year. Observations were also made on smoke nuisances occurring at the Electric Light Station, Globe Lane; this was stated to be due to the use of inferior coal, and the nuisance was remedied by burning an improved fuel.

24. The usual amount of nuisance was caused by the *Arsenal chimneys*, and a copy of observations made by the Sanitary Inspector and the Inspector of the Coal Smoke Abatement Society forwarded to the Chief Superintendent. One shaft emitted black smoke continuously for 60 minutes. A letter was received from the Chief Superintendent in February stating that "steps were being taken to remedy the defects to which the smoke nuisance complained of is ascribed, though some time must necessarily elapse before the alterations involved could be completed." Meanwhile the Arsenal police evidently judge it to be superfluous to report nuisances, for in reply to the letter forwarding observations received from the Coal Smoke Abatement Society, the Chief Superintendent stated that "no report was received from the police on duty of smoke nuisance on 19th October, 1905" (the day to which the complaint referred), "from any shafts in the Royal Arsenal, although the usual watch was kept." This day being neither Sunday nor a holiday, it would only have been necessary for the Arsenal police to have opened their eyes at any time during working hours to have seen plentiful smoke nuisance.

25. Your Medical Officer of Health attended, as your representative, a *Conference on Smoke Abatement*, arranged jointly by the Sanitary Institute and the Coal Smoke Abatement Society. A full report was presented and printed in your minutes of the 25th January, 1906, p. 228.

The principal lessons of the Conference were (1) that the law against smoke nuisance should be strictly enforced, being both to the pecuniary interest of manufacturers and the sanitary interest of the public, and (2) that gas, coke, and other smokeless forms of fuel should replace the use of bituminous coal.

26. *Defective Light.*—At 90 houses new windows were supplied or existing windows enlarged, or other work done to improve the lighting by daylight. The dark rooms found are usually situated in the basements; whitewashing the area often improves the light for a short time, but the whitewashing needs to be done very frequently. Enlargement, or raising the window, often has the desired effect. In certain cases where the ground at the back of the house is below the floor level, the wall between the front and back basement rooms has been removed, the front room thus obtaining light from the back.

27. *Verminous Rooms.*—53 verminous rooms were cleansed under the London County Council General Powers Act of 1904. Numerous others were dealt with as dirty rooms under the Nuisance Section.

Dust Removal.

28. In Woolwich Parish 6,959 loads of house and trade refuse, weighing 8,204 tons, were removed by direct labour and destroyed at the Woolwich destructor. The cost of removal was £1,732 6s. 10d., and of destruction £1,192 14s. 5d., from which should be deducted £272 10s. 1d., received for sale of clinkers, &c. In the two preceding years, 9,291 and 7,352 loads respectively were removed.

In Plumstead 12,674 loads, weighing 11,534 tons, were removed by the contractors, Messrs. Tuff & Hoar, and destroyed by the Plumstead destructor. £2,775 4s. 5d. was paid for collection·

In Eltham the sum of £698 9s. 6d. was paid to the contractor, Mr. Tucker, for removal of Eltham dust, which was deposited on fields in the parish.

Notices were distributed warning house occupiers that dustpails must be kept covered, and there has been a great improvement in this respect.

Trade Refuse.

During the past year there have been 9,021 receptacles of offensive refuse removed, for which a sum of £109 0s. 3d. has been paid. There are now 64 tradesmen on the books from whom offensive trade refuse is collected. There were no complaints of nuisance arising from the collection. Chloride of lime is used as a deodorant.

1,195 loads and 338 bushels of inoffensive refuse were collected in Woolwich Parish and destroyed, for which the sum of £92 8s. 10d. was paid by tradesmen, etc. This is included in the figures of the Woolwich dust collection. The charge made for inoffensive refuse is 1s. 6d. a load and 2d. a bushel, and for offensive refuse at the rate of 3d. a receptacle, charged per quarter in advance on the amount collected in the previous quarter.

Housing of the Working Classes.

29. The following 10 houses were represented as unfit for human habitation under Section 32, of the Housing of the Working Classes Act:—

6, High Street, Woolwich
1, 2, and 3, South Cottages, Footscray Road
6, and 7, Nile Street
41, Woolwich Road
3, Pelham Terrace
14, Milward Street
3D, George Street.

Notices (Form A) were served in each case, and the work required done at five houses. South Cottages, and 6 and 7, Nile Street were closed after Police Court proceedings, and the Nile Street houses have been demolished at the instance of the owner. Very considerable structural improvements were carried out at 6, High Street, and 3, Pelham Terrace.

14, Milward Street and 3D, George Street are still in hand.

No penalties were inflicted, but costs to the amount of £2 3s. 6d. were paid by owners.

30. *Unoccupied Houses and New Houses.*—Owing to reduction of work in the Royal Arsenal and trade depression, there have been in recent years a large number of empty houses or unoccupied rooms, as compared with previous years. For the year ending 30th September, 1904, the unrated empties were 2·1 per cent. of total houses.

On the other hand, 560 new houses were passed for water certificates in 1905 and 418 in 1904, and observation shows that new houses are usually occupied as soon as they are completed. This apparent anomaly is partly explained by the fact that the great majority of the new houses are four or five-roomed dwellings, or consist of two flats of separately contained three or four-roomed tenements, whereas four-fifths of the empties in 1904 were rented over 10s. a week, a rent beyond the means of the majority of the population. The general demand is for a small separate house.

31. *Council's North Woolwich Houses.*—On the 1st April 21 of the Council's 25 houses were occupied ; 9 were vacated during the year ending 31st March, 1906, and 10 re-let ; 3 were unoccupied on the latter date. The number of persons at present housed is 73 adults and 34 children—total 107, or about 5 to a house. For particulars as to rent and cubic space of these houses, see last year's Annual Report, page 70.

Houses Registered under the By-Laws.

32. At the commencement of the year 235 houses were on the register; 41 were newly registered and 11 were taken off the register, leaving 265 on the register at the close of the year, compared with 88, 103, 132, 123 and 235 in each of the five preceding years. 189 of the houses are in Woolwich Parish and 76 in Plumstead.

33. These houses were inspected, some quarterly and others half-yearly. 594 inspections were made in all and 320 notices served. Proceedings were taken against a landlord (Mr. Berry) for failing to fill in a registration form and refusal to admit the Lady Inspector and Chief Inspector. He was fined in all £8 and £3 9s. costs.

34. The registered houses were under the care of Miss Middlebrooke, and further particulars will be found in the report of her work given in paragraph 51.

New Bye-Laws.

35. The new Bye-Laws are again under consideration by the Local Government Board. Having been provisionally approved and advertised in the Borough previous to adoption, as provided by Sect. 184 of The Public Health Act, 1875, certain ratepayers petitioned the Local Government Board not to confirm the Bye-Laws, and the Board as a result held a local inquiry, and subsequently proposed several alterations. Most of these were verbal and unimportant, and your Council had no difficulty in agreeing with them. The Local Government Board, however, proposed to limit the application of the Bye-Laws to houses where the sub-letting was to one family only and to a limited number of persons. This limitation your Council were unwilling to agree to, and there the matter at present rests.

Common Lodging-Houses.

36. There are 24 common lodging-houses in the Borough—19 for men, 4 for women, and 1 for couples. Total accommodation for 597 persons are available. The following is the list :—

Common Lodging Houses in Woolwich.

Common Lodging House.	Accommodation.			Total.
	Men.	Women.	Couples	
60 Beresford Street	58	..	..	58
5 High Street	40	..	..	40
52 ,, ...	22	..	..	22
56 ,, ...	15	..	..	15
56A ,, ...	18	..	..	18
76 ,, ...	..	16	..	16
77 ,, ...	..	13	..	13
81 ,, ...	..	5	..	5
82 ,, ...	..	14	..	14
93 ,, ...	30	..	..	30
102 ,, ...	28	..	..	28
1 Rope Yard Rails	14	..	..	14
2 ,, ...	17	..	..	17
4 ,, ...	17	..	..	17
7 ,, ...	..	..	11*	22
9 ,, ...	32	..	..	32
10 ,, ...	51	..	..	51
10A ,, ...	32	..	..	32
11 ,, ...	30	..	..	30
21 ,, ...	21	..	..	21
21A ,, ...	21	..	..	21
4 Warren Lane	31	..	..	31
11 & 12 ,, ...	39	..	..	39
13 ,, ...	11	..	..	11
Totals.	527	48	11*	597

* *i.e.*, 22 persons.

Underground Rooms.

37. Only three underground rooms separately occupied were found not in accordance with the Act, viz.: 2, High Street,

Woolwich ; 177, Powis Street ; and 10, Market Hill. The occupation of each of these was discontinued on service of notice.

Factories, Workshops, and Workplaces.

38. There were at the close of the year 145 workshops and workplaces on the Register ; 304 inspections were made, and 13 notices served and complied with ; 10 factories were inspected re the sanitary accommodation and two notices served and complied with ; 308 homeworkers' premises were visited and 14 notices sent and attended to.

Miss Middlebrooke's time being fully occupied with other duties, she was unable to continue inspecting workshops and homeworkers' premises ; and those where females are employed were inspected after January by Mr. Tedham and the others by Mr. Powell. Fifty-six premises where food is prepared, chiefly restaurant kitchens, were inspected by Mr. Powell, and many dirty and insanitary conditions removed.

Bakehouses.

39. The number of bakehouses, 62, remained the same as in 1904. They were all inspected twice. In my personal inspections I found all but nine satisfactory ; in these the defects were, chiefly, dirty floors, walls, and mixing boards. These were remedied on service of notice.

Ice Cream Shops.

40. Eighty-seven Ice Cream shops were on the register at the close of the year, compared with 64 and 83 in the two previous years. There were 212 inspections made, and eight notices served. Regulations embodying the provisions for ice cream shops contained in the London County Council General Powers Act, were drawn up, printed on cards, and distributed at every shop on the register.

Disinfection.

41. The mode of disinfection, cost of appliances, staff, etc., were fully described in my Annual Report 1903, page 73—76.

Rooms at 910 houses were disinfected, compared with 687, 945, 744, and 842 in the four preceding years. The disinfecting apparatus was used 777 times for 8,513 articles from 732 houses.

137 books from the Free Library were disinfected.

The sum of £2 8s. 6d. was received for disinfection of rooms in special cases on request of the occupier.

Health Shelter.

42. The Health Shelter was not used once. This has been the case for more than three years. Owing to its proximity to the mortuary there has always been a prejudice against it; and now that Formalin is used for disinfection, it is only necessary to close rooms for two or three hours, so that no one need be prevented from occupying their sleeping room at night on account of disinfection. It was found useful for sheltering and observing smallpox contacts during the epidemic of 1902, and may not improbably be needed for the purpose again in a few years' time.

The Mortuaries.

43. The Sun Street Mortuary was used for 170 bodies, compared with 156, 164, 183 and 164 in the four preceding years. 157 were deposited for inquest, and 13 for custody. Ninety-two post-mortem examinations were made. One body was deposited in the infectious mortuary, compared with two in 1904.

The Eltham Mortuary was used for three bodies brought for custody only.

Cemeteries.

44. The two Borough Cemeteries were well maintained as usual.

611 bodies were buried in the Woolwich Cemetery compared with 691, 695, 663, and 690 in the four previous years.

There were 705 interments in the Plumstead Cemetery compared with 788, 817, 694, and 789 in the four preceding years.

Sixty-two burials took place in the Plumstead Churchyard compared with 146, 164, 144, 125, 115, and 123 in the six preceding years.

This marked reduction is satisfactory, and would indicate that at last the regulation as to burying only near relatives of those already interred in the Churchyard is being carried out.

Cleansing of Persons Act.

45. As stated in my last Report, your Council last year decided to erect a bathing station, under the "Cleansing of Persons Act," adjoining the Plumstead disinfecting station, White Hart Lane. Only one bath is to be provided in the first place, but the station has been arranged so that it can be duplicated and a bath allotted to each sex as soon as need arises. The station is now approaching completion.

Tents, Vans, and Sheds.

46. During the year 38 tents, vans, and sheds were inspected, and two notices served. Both of these were to provide closet accommodation.

Infants' Milk Depot.

47. In the Special Report on "Summer Diarrhœa," presented to your Council in 1904, one of my recommendations was that an Infants' Milk Depot should be established. Your Council accordingly sought and obtained powers to do this; the powers are contained in Sections 22 and 23 of the Woolwich Borough Council's Act, 1905.

Section 22 states that "The Council may establish, maintain, "manage and carry on a depot for the sale of sterilised "milk and humanised milk, and may appropriate and "use such lands as may be necessary or expedient for "that purpose, and may provide laboratories, plant and "machinery, and may buy, sterilise, humanise and sell "milk for infants under two years of age. Such depot "shall be subject to the medical supervision of the "medical officer of health of the borough and shall be "carried on in accordance with regulations to be ap- "proved by the Local Government Board.

"In this Section, the expression 'humanised milk' means "milk specially treated, so as to be suitable for "consumption by infants under two years of age."

Section 23 limits the amount that may be borrowed for the purpose to £500.

During the summer and Autumn your Medical Officer of Health visited the principal infant Milk Depots in Normandy and in this country. In visiting the latter he was accompanied by Councillor Dr. Slater (now Mayor) and by Chief Inspector Duck. A report on the work of these depots and others, as to which particulars were obtained, was presented and printed in your Council's Minutes of the 16th November, 1905, page 36. On the same day you resolved to establish an Infant Milk Depot, and a plan has now been obtained for adopting part of the Maxey Road Offices to this purpose.

Public Ambulance.

48. The public ambulance for accidents and non-infectious illness was used 110 times compared with 90 and 97 times in the two preceding years. The following were the journeys made.

To Guy's Hospital ...	37	To London Hospital ...	10
„ Cottage „ ...	13	„ Charing Cross ...	8

To Seamen's and Miller...	3	To Union Infirmary ...	4
„ King's Hospital ...	11	„ Other Hospitals ...	8
„ St. Thomas's ...	10	„ Private Houses ...	6

Particulars as to this Ambulance were given in my Annual Report 1903, page 78. The Ambulance is still in good repair. The London County Council are now proposing to provide a public ambulance service for London, but in the first place it is only intended to serve the more central districts, so that the Woolwich Ambulance will probably be needed for some years to come.

Public Playgrounds.

49. The Public Health Committee requested me to inquire and report as to the local facilities for carrying out the recommendations of the Inter-Departmental Committee on Physical Deterioration concerning the provision of playgrounds. My Report was printed in the Council's minutes of the 13th April, page 438, and contained the following recommendations :—

1. "That the County Council be asked to arrange for their "School playgrounds to be *bonâ fide* open in the "holidays at the specified hours which have been laid "down, and that steps be taken to make known the "fact that the playgrounds are open.
2. "That the County Council be asked to open all the "playgrounds on Saturdays and at certain times on "Sundays. It should be pointed out that though "Plumstead and Woolwich Commons offer certain "facilities for recreation, many children living in the "immediate neighbourhood of the schools would "frequently play in the School Playgrounds at times "when they would not make an expedition to the "Commons.
3. "That the Council be asked to fit up some of the School "Playgrounds with gymnastic apparatus, to be used

"under the same arrangements as the gymnasiums at "present provided on Plumstead Common and in "certain parks.

4. "That a Sub-Committee be appointed to inquire as to "what grounds can be secured in the Western part of "the Borough for public playgrounds.
5. "That the Works Committee be asked to provide "gymnastic apparatus on part of the playground "which is being laid out adjoining the Electricity "Station, and to set apart a certain part to form a "playground for young children, like that in Sun "Street."

A reply was received from the London County Council stating that the Education Committee do not at present propose to open any further playgrounds on Saturdays and Sundays. This is much to be regretted.

Your Council has taken a wise step in opening a playground for younger children with swings and sandpit in Sun Street. Similar grounds are wanted in other parts of the Borough.

A letter was received from the London County Council, dated June 21st, 1905, with respect to children suffering from notifiable diseases visiting Parks and Open Spaces under the control of the Council, and asking this Council to co-operate with them in their endeavour to prevent the spread of disease.

Your Medical Officer reported as follows on the subject :—

"A letter has been received from the London County Council, stating that children suffering from notifiable diseases are frequently allowed to visit Parks and Open Spaces under the control of the Council. The County Council has instructed the Chief Officer of the Parks Department to report to the Borough Council concerned all such cases as may come to his knowledge. Such exposure of infected persons is a distinct breach of the Public

Health (London) Act. I cannot think that it is a frequent occurrence in this Borough, but of course if any information is obtained of any such exposure, the Public Health Committee will, no doubt, order that proceedings be taken.

The County Council goes on to speak of a subject which cannot be so easily dealt with, namely, the fact that children not themselves suffering from infectious disease, but inhabiting houses in which there are such cases, are allowed to visit Parks and Open Spaces. The County Council states that, in many instances, the disease has been spread in this way.

I shall be glad, in the first place, to have particulars of the cases which have come to the knowledge of the Council, in which disease has been thus spread. I have never come across any such myself during fourteen years' experience as Medical Officer of Health. There is no power under the Public Health Act to interfere with the movements of any persons who are not themselves suffering from infectious disease, and I very much doubt the necessity or advisability of any such power being conferred in the case of any of the common infectious diseases, except small-pox.

Take a case of Measles or Scarlet Fever in a family, say, where there are six children, father and mother, in five rooms. In Measles, the patient is required to be isolated for four weeks; in Scarlet Fever, usually for at least six weeks. Would the County Council propose that in such a case the five children, who are not themselves suffering from the disease, should be absolutely confined to the house? Of course, if there were a garden, the hardship would not be so great; but, to many houses, there is no garden, and I consider confinement to the house would not only be impracticable, but most inju-

rious to the health of the children. But if the children are allowed to go into the street, why should they not also go to the parks and open spaces? Surely it would be better for them to be playing on Plumstead or Woolwich Common than in the street.

There is some reason for suggesting that they should be excluded from gymnasiums, since in these places children often congregate more closely, and come into closer contact with each other than they do in either the streets, or the parks, or open spaces. I consider, however, that even apart from the absence of any legal power. it would be very difficult to carry out any system by which the children could be excluded from all open spaces, and I very much doubt that any material benefit would be derived from the attempt. Every year it is better recognized that the infection of Measles, Whooping Cough, Scarlet Fever, and Diphtheria is spread by mild undetected, and unsuspected cases of the disease. These cannot be dealt with by any wholesale measure of isolation or quarantine. They can only be dealt with by careful inspection directed to their detection."

Notices and Prosecutions under Public Health (London) Act, 1901.

50. 3,804 written intimation notices were served and 687 statutory notices; 111 of the latter not having been complied with in the time specified, were referred to the Town Clerk. who, before taking proceedings, wrote a warning letter in each case. Finally, 24 defaulters were summoned at the Police-court, and convictions obtained in every case but one. Fines amounting to £23 8s. were inflicted and £10 3s. costs. One case was withdrawn owing to the work being done.

Bacteriological Examinations.

51. 843 Bacteriological Examinations were made for the department by the Lister Institute—694 for Diphtheria, 131 for Phthisis, and 18 for Enteric Fever. The cost for examinations and telegrams was £115 15s. 3d., and for specimen boxes and outfits £20 2s.

Female Sanitary Inspector's Work.

52. The following is a summary of the Lady Inspector's work for the 12 months:—

Houses Let in Lodgings.

Total number on Register	265
Number of inspections	594
Do. of re-inspections (estimated)	1,521
Do. found satisfactory	187
Do. of notices served	320
Do. of defects remedied	738
Do. of newly registered houses measured...	54
Do. of cases of overcrowding remedied by redistribution without notice ...	8
Do. of cases referred to District Inspectors	48

Notices.	Served.	Remedied.
On Landlords for Cleansing	177	177
,, Tenants ,, ,, ...	69	69
,, Landlords ,, Overcrowding ..	8	8
,, Tenants ,, ,, ...	41	41
,, Landlords and Tenants for other defects	365	365
,, Landlords to provide Dustbins ..	78	78

Number of houses revisited *re* Phthisis ...	276
Do. do. visited *re* infant feeding ...	856
Do. do. revisited *re* do. ...	482
Do. do. visited *re* Measles	16

Number of houses visited *re* Zymotic Enteritis	210
Do. do. revisited do. ...	180
Do. do. visited for other causes ...	18

Workshops.

Number of Inspections (January)	49
Do. notices served	6
Do. cases referred to District Inspectors	2
Do. new workrooms measured	14

Homeworkers, Premises.

Number of Inspections	105
Do. Cases referred to District Inspectors...	14

DISINFECTANTS.

53. Disinfectants are not used by this Department in the wholesale manner that has been the fashion in some places. It is useless to attempt to disinfect the air, for impure air can be more easily be exchanged for pure air. It is impracticable to disinfect waterclosets, drains and sewers. Defects, and smells from these are to be remedied not by disinfectants, but by reconstruction and flushing. But when infection is actually known to exist disinfectants should be used unsparingly. They are supplied by the Department for disinfecting infected soiled linen, infected stools, sputa in phthisis, for personal use in infectious disease, and for disinfecting rooms after infectious disease. They are dispensed at the Maxey Road Offices, the Sun Street Mortuary, 18, Barge House Road, North Woolwich, and the Eltham Office, 112, High Street. The cost of the disinfectants used by the Department in 1905 was £28 6s. 9d.

The disinfectants used were Jeyes' Soap, Corrosive Sublimate, Formalin Tablets (for fumigation), Formaldehyde (for spraying and disinfecting books), Cyllin (for sputa in phthisis) Perman-

ganate of Potash, Sulphur, coarse Carbolic (for dust pails), and Chloride of Lime (for offal tins, &c.).

Public Conferences.

54. You appointed me your representative at two public Conferences—that of the Royal Institute of Public Health and the Conference held at York in connection with the Milk Supply. Reports were presented on the work done at both of these.

Sanitary Staff.

55. No change took place in the Sanitary Staff during the year. I have to record, however, with much regret, the resignation of two able and valued officers since the termination of the year.

Mr. F. H. Deans, Clerk, has left to take up the post of Secretary and Editor of the Journal of the Society of Sanitary Inspectors. Mr. Dee, Sanitary Inspector, has resigned, having been appointed to a better paid post in Stepney.

I am, Gentlemen,

Your obedient Servant,

SIDNEY DAVIES.

TABLE I.

Borough of Woolwich.

Vital Statistics of whole District during 1905 and previous Years.

Year.	Population estimated to middle of each year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-Residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births Registd.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1895	105265	3321	31·5	476	143	...	...	...	...	...	1757	16·7
1896	106840	3363	31·5	508	151	...	...	...	...	...	1878	17·5
1897	108611	3406	31·3	455	133	...	...	...	...	...	1642	15·1
1898	110273	3269	29·6	472	144	...	...	...	...	...	1935	17·5
1899	113148	3367	29·8	534	158	...	...	...	...	...	1889	16·6
1900	115498	3303	28·6	469	142	...	...	...	...	...	2057	17·8
1901	117740	3535	30·0	455	128	1600	13·6	433	42	164	1722	14·6
1902	122505	3730	29·9	462	124	1678	13·7	278	43	208	1843	14·7
1903	123172	3691	30·0	390	106	1511	12·3	272	41	175	1637	13·3
1904	125791	3531	28·1	466	132	1636	13·0	261	40	169	1765	14·0
Averages for years 1895—1904	114884	3452	30·0	468	136	...	...	...	...	...	1813	15·8
1905	125885	3549	28·2	364	103	1463	...	313	50	192	1605	12·7

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

Note.—The deaths included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Area of District in acres (exclusive of area covered by water)	8239·7	Total Population at all ages ...	117,178 (At Census of 1901.)
		Number of inhabited houses ...	18,086 (At Census of 1901.)
		Average number of persons per house	6·47 (At Census of 1901.)

TABLE 1A.

I. Institutions within the District receiving Sick and Infirm Persons from outside the District.	II. Institutions outside the District receiving Sick and Infirm Persons from the District.
Woolwich Union Infirmary	Lewisham Infirmary
Royal Arsenal Hospital	Herbert Hospital
Auxiliary Hospital	Blackheath Cottage Hospital
Woolwich & Plumstead Cottage Hospital	Seamen's Hospital
	Brook do
	Park do
	Gore Farm do
	Guy's do
	King's College Hospital
	London do
	St. Bartholomew's Hospital
	Charing Cross Hospital
	Westminster do
	St. Thomas's do
	East London do
	Poplar do
	St. Peter's do
	St. John's, Lewisham, Hospital
	Children's do
	West London do
	Fulham Road Consumption do
	Ear and Nose Hospital
	Brompton do
	Bethnal Green Hospital
	Cane Hill Asylum
	Dartford Heath Asylum
	Colney Hatch do
	Claybury do
	Tooting Bec do
	Darenth do
	Caterham do
	Stone do
	Banstead do
	Horton do
	Hostel of God do

TABLE 1B

Deaths of Persons belonging to the Borough of Woolwich occurring in various Institutions, 1905.

Names of Institutions, &c.	Number of Deaths.			Grand Totals.
	M.	F.	Total.	
Woolwich Union Infirmary	137	107	244	
Lewisham do	13	9	22	
Total Poor Law Infirmaries ...	...	...		266
Herbert Hospital	15	...	15	
Female do	3	3	6	
Royal Arsenal do	3	...	3	
	...	...		24
Cottage Hospital, Woolwich	1	5	6	
do Eltham	2	5	7	
do Blackheath & Charlton ...	1	...	1	
				14
Fever Hospitals	16	13	29	29
Seamen's Hospital	3	...	3	
Guy's do	12	13	25	
King's College do	1	2	3	
London do	8	4	12	
St. Bartholomew's do	...	2	2	
Charing Cross do	1	3	4	
St. Thomas's do	2	1	3	
Westminster do	...	2	2	
West London do	1	...	1	
East London do	1	2	3	
Poplar do	...	2	2	
St. Peter's do	...	1	1	
Soho Square, Heart do	...	1	1	
Ear, Nose and Throat do	1	...	1	
Total in General Hospitals ...	...	...		63
Children's Hospitals	5	2	7	7
Brompton Chest Hospital	...	2	2	
Bethnal Green do	...	1	1	
Total in Chest Hospitals ...	...	...		3
Lunatic Asylums	23	15	38	38
Five other Institutions	4	2	6	6
Totals	253	197	450	450

TABLE II.

Vital Statistics of Separate Localities, 1901-2-3-4-5.

Increase of Population since 1901 Census, estimated by number of new houses occupied, and number of persons to a house in the Parish.

Wards.	1901.				1902.				1903.				1904.				1905.			
	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year.	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year.	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year.	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year.	Population estimated to middle of year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year.
Dockyard ...	8712	282	137	40	8712	286	146	28	8712	275	141	28	8712	286	159	39	8712	326	140	33
St. Mary's ...	10439	203	122	25	10439	226	149	30	10439	222	147	39	9788	184	121	35	9788	174	104	21
River { N.	14504	416	292	66	N. 3450	135	66	26	3450	140	50	16	3991	155	71	30	3991	141	72	31
River { S.					S. 11444	293	219	32	11444	277	205	43	11405	237	193	37	11405	247	190	33
St. George's ...	8078	298	151	35	8078	284	135	36	8078	303	136	39	8078	321	143	48	8078	297	116	31
Burrage ...	9837	253	133	24	9837	228	154	28	9837	235	133	17	9726	219	123	23	9726	217	119	17
Herbert ...	9195	240	104	22	9679	261	129	28	9679	261	94	21	9893	220	98	20	9893	245	100	19
St. Margaret's	10193	325	120	42	11826	448	163	50	11826	399	166	38	12337	388	161	35	12337	423	151	31
Central ...	10220	299	142	36	10263	341	138	46	10263	276	99	26	10228	267	87	24	10228	233	99	20
Glyndon ...	9829	319	140	30	9882	287	146	34	9882	313	144	33	9609	291	165	42	9609	290	145	21
St. Nicholas ...	20239	737	265	106	22985	698	312	106	22985	731	235	71	21031	685	319	114	21031	667	257	80
Eltham ...	7787	177	108	26	10002	243	85	23	10669	258	87	19	11153	278	123	28	11617	291	112	23

TABLE III.

Cases of Infectious Diseases Notified during the Year 1905.

Notifiable Diseases.	Cases Notified in whole District.							Total Cases Notified in each Locality.												No. of Cases of Mistaken Diagnosis (included in preceding figures).	Cases Removed to Hospital.
	All Ages.	Age Periods.						River.		Dockyard	St. Mary's.	St. George's.	Burrage.	St. Margaret's.	Herbert.	Glyndon.	Central.	St. Nicholas'.	Eltham.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards	North.	South.												
Small Pox ..	7	..	..	1	2	4	..	..	1	1	..	..	1	..	2	1	1	..	..	2	7
Cholera ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ..	273	7	81	130	28	27	..	7	24	13	17	37	8	44	27	10	31	45	10	20	218
Membranous Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	83	8	2	7	10	47	9	5	8	3	2	6	3	11	3	13	9	16	4	..	..
Scarlet Fever	513	5	165	274	44	25	..	39	16	19	15	35	26	61	32	32	56	120	62	10	417
Typhus ,,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric ,,	27	..	1	4	9	13	..	1	..	1	..	5	4	2	2	1	2	8	1	5	17
Relapsing ,,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued ,,	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Puerperal ,,	12	..	..	..	3	9	..	..	..	3	..	2	..	1	1	1	1	2	1	..	..
Plague ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phthisis ..	145	..	1	19	25	98	2	2	14	9	7	7	14	17	15	14	17	24	5	..	..
Totals ..	1061	20	250	435	122	223	11	54	63	49	41	92	56	137	82	72	117	215	83	37	659

TABLE IV.—Causes of, and Ages at Death during the Year 1905.

Disease.	Deaths in or belonging to whole District at subjoined ages.															
	All Ages.	Males.	Females.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	Over 85.
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	13	8	5	3	9	1	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	10	6	4	...	7	2	...	1	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	19	11	8	1	1	1	1	1	...	4	2	1	...	6	1	...
Whooping Cough	16	8	8	3	11	2	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup ...	18	6	12	...	11	6	1	...	...	...	...	...	...	...	...	...
Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	7	5	2	...	...	...	...	1	1	2	1	1	1	...	...	...
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Dysentery ...	16	7	9	11	2	...	...	...	...	...	...	...	1	...	2	...
Epidemic or Zymotic Enteritis ...	49	28	21	43	6	...	...	...	...	...	...	...	...	...	...	...
Enteritis	16	5	11	8	...	...	...	1	1	1	...	2	2	1	...	...
Other Continued Fevers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	5	2	3	5	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	6	...	6	...	...	...	...	...	3	2	1	...	...	...	...	...
Syphilis	14	5	9	5	1	...	...	...	...	2	3	1	2	...	...	...
Rheumatism	11	6	5	...	...	3	1	1	...	2	...	...	2	1	1	...
Gout	2	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...
Other Septic Diseases	19	10	9	3	1	1	...	3	1	3	3	...	2	2	...	...
Intermittent Fever and Malarial Cachexia ...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Tuberculosis of Meninges	19	10	9	6	7	1	4	...	1	...	...	...	...	...	...	...
Tuberculosis of Lungs (Phthisis)	185	110	75	1	...	7	6	11	14	44	30	38	20	13	1	...
Tuberculosis of Intestines and Peritoneum ...	12	9	3	3	3	3	1	1	...	...	1	...	...	...	...	...
Other forms of Tuberculosis	14	7	7	3	3	1	2	...	1	4	...	...	...	...	...	...
Alcoholism	7	3	4	...	...	...	...	...	...	...	3	3	1	...	...	...
Cancer	86	42	44	...	...	...	2	1	2	4	12	19	18	23	4	1
Diabetes	13	8	5	...	...	1	...	1	3	2	2	...	1	2	1	...
Premature Birth	74	38	36	74	...	...	...	...	...	...	...	...	...	...	...	...
Developmental Diseases	84	53	31	78	6	...	...	...	...	...	...	...	...	...	...	...
Old Age	76	26	50	...	...	...	...	...	...	...	...	...	...	16	42	18
Meningitis	25	16	9	6	14	2	...	...	1	1	...	...	1	...	...	...
Inflammation and Softening of Brain ...	5	4	1	...	...	...	...	...	...	...	...	1	...	1	2	1
Epilepsy	9	7	2	...	...	...	...	1	2	1	3	2	...	...	...	...
General Paralysis	14	12	2	...	...	...	...	1	...	6	4	3	...	...	...	...
Tabes Dorsalis and Locomotor-Ataxia ...	5	4	1	...	...	...	...	...	...	...	1	2	1	...	1	...
Peripheral Neuritis	3	1	2	...	...	...	...	...	...	...	2	1	...	...	...	...
Other Diseases of Brain and Nervous System	27	14	13	9	2	3	1	3	...	2	1	3	2	1	...	...
Organic Diseases of the Heart	114	53	61	...	1	2	4	4	...	10	18	13	20	26	15	1
Cerebral Hæmorrhage, Embolism and Thrombosis	55	28	27	...	...	...	...	...	...	...	5	6	9	23	9	3
Apoplexy and Hemiplegia	26	14	12	...	...	...	...	...	...	1	1	2	8	5	7	2
Other Diseases of Blood Vessels and Heart ...	32	18	14	...	...	...	...	...	1	2	4	6	5	10	3	1
Acute Bronchitis	75	44	31	40	13	1	...	...	...	1	...	3	6	5	5	1
Chronic Bronchitis	63	24	39	...	...	...	...	...	...	2	2	7	8	23	15	6
Lobar (Croupous) Pneumonia ...	7	6	1	...	1	...	...	...	...	...	3	1	1	1	...	...
Lobular (Broncho) Pneumonia ...	63	38	25	23	24	2	1	...	...	...	1	1	3	4	4	...
Pneumonia	47	27	20	4	4	2	...	2	5	4	8	8	3	5	2	...
Other Diseases of Respiratory System ...	9	5	4	1	...	1	...	1	...	1	...	4	1	...	...	...
Diseases of Stomach	7	2	5	3	...	...	...	...	...	1	...	1	...	1	1	...
Obstruction of Intestines	4	2	2	1	1	...	...	...	...	...	...	1	1	...	...	...
Cirrhosis of Liver	17	11	6	...	...	...	...	...	...	1	2	7	4	3	...	...
Other Diseases of the Digestive System ...	20	10	10	1	1	...	2	3	...	2	4	1	5	...	1	...
Nephritis and Bright's Diseases	46	24	22	...	2	...	2	...	1	2	7	8	5	14	5	...
Tumours and other Affections of Female Genital Organs	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Accidents and Diseases of Parturition ...	5	...	5	...	...	...	...	...	1	2	2	...	...	...	...	...
Deaths by Accidents or Negligence ...	51	28	23	11	6	3	2	...	1	2	5	6	6	6	1	2
Deaths by Suicide or Homicide	10	9	1	1	...	...	...	...	...	5	1	1	1	1	...	...
Deaths from ill-defined causes	24	11	13	5	1	1	...	...	...	3	3	1	2	6	2	...
All other Diseases	49	30	19	14	1	1	2	1	1	2	5	1	11	7	3	...
Totals	1605	856	749	366	139	47	32	38	40	121	140	156	154	206	130	36

TABLE IVB.

Disease.	Deaths in or belonging to Localities, at all Ages in Wards.												Deaths in Public Institutions in the District.	Deaths in Outlying Institutions.
	River.		Dockyard.	St. Mary's	St. George's	St. Nicholas.	Central.	Glyndon.	St. Margaret's	Herbert.	Burrage.	Eltham.		
	North.	South.												
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	2	1	...	1	2	...	5	...	...	1	1	3	1
Scarlet Fever	...	...	...	...	1	3	1	...	3	1	...	1	...	9
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	...	1	1	1	1	4	2	4	2	...	...	3	1	1
Whooping Cough	3	2	...	...	2	2	1	...	2	2	2	...	...	1
Diphtheria and Membranous Croup	1	2	...	2	2	3	1	...	5	1	1	...	...	14
Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	...	...	1	...	...	2	1	1	...	...	1	1	...	4
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Dysentery	1	...	1	2	3	1	1	3	1	1	1	1	3	1
Epidemic or Zymotic Enteritis	10	7	5	3	1	11	2	1	2	2	1	4	...	2
Enteritis	1	1	3	...	...	3	1	2	...	3	...	2	2	1
Other continued Fevers	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	1	1	1	...	1	...	1	...	...	...
Puerperal Fever	...	...	2	1	...	...	1	...	2	...	...	...	...	2
Syphilis	...	3	1	1	...	2	...	2	1	1	2	1	7	2
Rheumatism	...	1	...	1	1	1	1	2	2	2	...	...	4	1
Gout	...	...	...	...	...	1	...	...	1	...	...	...	1	1
Other Septic Diseases	1	2	3	2	2	3	...	1	1	...	3	...	1	8
Intermittent Fever and Malaria Cachexia	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Tuberculosis of Meninges	4	1	2	...	6	2	...	...	1	1	2	...	3	1
Tuberculosis of Lungs (Phthisis)	10	34	17	7	15	26	12	14	17	14	14	5	71	10
Tuberculosis of Intestines and Peritoneum	1	...	2	...	...	4	...	...	2	1	1	1	...	5
Other forms of Tuberculosis	2	2	2	...	...	3	1	...	3	...	1	...	1	1
Alcoholism	...	1	...	...	2	...	...	...	3	...	1	...	4	1
Cancer	3	5	8	7	7	12	6	6	9	5	10	8	18	15
Diabetes	1	3	...	2	...	2	...	...	3	2	...	...	2	2
Premature Births	9	8	7	4	7	11	6	4	5	3	5	5	7	...
Developmental Diseases	2	5	8	3	4	27	6	6	8	5	4	6	4	2
Old Age	1	8	9	8	4	9	5	8	1	7	7	9	32	6
Meningitis	1	3	2	1	1	5	1	4	2	2	1	2	...	...
Inflamation and Softening of Brain	...	2	1	...	...	...	...	...	1	1	...	...	1	1
Epilepsy	1	1	2	1	1	...	...	...	...	...	2	1	1	2
General Paralysis	...	1	...	1	3	3	1	...	3	...	...	2	...	13
Tabes Dorsalis (Locomotor Ataxia	...	1	...	...	...	...	...	1	...	1	1	1	3	...
Peripheral Neuritis	...	2	...	...	...	...	...	1	...	...	...	...	1	...
Other Diseases of Brain and Nervous System	1	2	1	2	...	4	1	3	5	2	2	4	3	6
Organic Diseases of the Heart	1	15	13	7	10	14	4	12	10	6	12	10	21	10
Cerebral Hæmorrhage, Embolism and Thrombosis	1	7	3	2	...	14	5	7	3	2	6	5	9	...
Apoplexy and Hemiplegia	...	3	2	3	3	1	1	1	2	7	2	1	4	2
Other Diseases of Blood Vessels and Heart	1	2	1	2	1	8	5	5	1	1	4	1	3	6
Acute Bronchitis	2	10	6	2	3	18	6	9	6	7	3	3	1	5
Chronic Bronchitis	2	6	6	6	1	12	5	8	5	1	5	6	16	3
Lobar (Croupous) Pneumonia	...	2	1	1	1	...	...	...	...	...	1	1	...	2
Lobular (Broncho) Pneumonia	1	6	3	5	6	16	3	6	8	2	3	4	4	5
Pneumonia	...	8	3	7	8	2	1	4	4	4	1	5	5	9
Other Diseases of Respiratory System	...	3	...	...	1	2	...	1	1	1	...	...	...	3
Diseases of Stomach	...	...	1	...	1	...	1	1	1	1	...	1	...	...
Obstruction of Intestines	...	...	...	...	1	1	1	...	...	...	...	1	1	1
Cirrhosis of Liver	...	4	4	2	...	...	...	4	...	1	2	...	6	2
Other Diseases of Digestive System	...	2	2	...	3	3	4	2	...	...	1	4	2	9
Nephritis and Bright's Disease	2	5	6	2	2	6	2	3	7	3	6	2	12	7
Tumours and other Affections of Female Genital Organs	...	...	...	...	...	...	...	...	...	...	...	1	1	...
Accidents and Diseases of Parturition	...	1	...	...	...	1	...	1	1	...	1	...	...	1
Deaths by Accidents or Negligence	2	8	5	7	1	4	5	6	4	1	4	4	16	3
Deaths by Suicide or Homicide	1	...	1	1	3	3	...	...	...	1	...	...	1	2
Deaths from Ill-Defined Causes	1	4	...	3	2	...	1	3	4	3	...	3	1	1
All other Diseases	5	4	4	5	4	5	3	4	8	2	3	2	9	10
Totals	72	190	140	104	116	257	99	145	151	100	119	112	285	194

TABLE IVc.

Borough of Woolwich.

Infantile Mortality During the Year 1905, Corrected for Public Institutions.

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

Cause of Death.	Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–2 Months.	2–3 Months.	3–4 Months.	4–5 Months.	5–6 Months.	6–7 Months.	7–8 Months.	8–9 Months.	9–10 Months.	10–11 Months.	11–12 Months.	Total Deaths under 1 Year.
All Causes—																	
Certified	70	24	13	23	130	46	23	32	17	30	17	17	20	17	6	10	365
Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Common Infectious Diseases—																	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	1	1	1	...	1	...	...	...	...	...	...	4
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria: Croup ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	3
Diarrhœal Diseases—																	
Diarrhœa, all forms ...	...	...	...	1	1	4	3	5	4	9	6	5	4	6	1	5	53
Enteritis (not Tuberculous)	...	...	1	...	1	1	...	...	...	...	1	...	...	...	...	...	3
Gastritis, Gastro-intestinal Catarrh	...	...	...	1	1	1	...	1	...	1	...	...	3	...	...	...	7
Wasting Diseases—																	
Premature Birth	45	12	5	3	65	4	1	2	...	...	...	...	...	...	...	...	72
Congenital Defects	2	...	1	2	5	2	...	...	...	...	...	2	...	...	...	...	9
Injury at Birth	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
Want of Breast-milk ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Atrophy, Debility, Marasmus	12	3	3	5	23	15	7	7	3	2	1	1	1	...	2	...	62
Tuberculous Diseases—																	
Tuberculous Meningitis ...	...	...	...	...	...	...	1	...	...	2	...	2	...	...	...	...	5
Tuberculous Peritonitis: Tabes Mesenterica	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	3
Other Tuberculous Diseases	...	...	...	...	...	1	...	1	1	...	...	...	1	...	1	...	5
Erysipelas	...	...	...	1	1	2	...	...	...	...	...	...	1	...	...	1	5
Syphilis	...	...	...	1	1	1	...	1	1	...	...	...	1	...	...	...	5
Rickets	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	2
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	1	1	...	...	2	2	...	...	6
Convulsions	4	1	2	...	7	...	1	1	...	3	...	2	...	3	...	1	18
Bronchitis	...	1	1	4	6	7	4	6	1	3	4	2	1	2	2	1	39
Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	...	2	...	...	2	2	2	3	4	2	2	2	3	4	...	1	27
Suffocation (overlaying) ...	3	...	...	2	5	4	...	...	...	1	1	...	...	...	...	...	11
Other Causes	3	4	...	3	10	1	3	1	2	2	1	...	2	...	...	1	23
	70	24	13	23	130	46	23	32	17	30	17	17	20	17	6	10	365

Births in the year :—Legitimate, 3488 ; illegitimate, 61. Population (estimated to middle of 1905) :—125,885.
Deaths from all causes at all ages :—1605.

TABLE V.

Rates per 1,000 Persons on the Population, estimated to the Middle of the Year.

Year	Small Pox.		Cholera.		Erysipelas.		Diphtheria and Membranous Croup.		Scarlet Fever.		Typhus Fever.		Enteric and Continued Fevers.		Relapsing Fever.		Puerperal Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1891	0·01	..	..	..	0·58	0·05	0·51	0·08	1·52	0·04	0·01	..	0·37	0·06	..	..	0·15	0·03
1892	0·04	..	..	..	1·00	0·07	1·3	0.41	9·4	0·33	..	..	0·41	0·13	..	..	0·09	0·02
1893	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1894	0·35	0·03	..	..	0·96	0·04	1·7	0·56	7·8	0·42	..	..	0·47	0·11	..	..	0·04	0·03
1895	0·19	0·01	..	..	0·93	0·02	2·0	0·47	5·5	0·20	..	..	2·5	0·38	..	..	0·08	0·03
1896	0·03	..	..	..	1·03	0·04	2·8	0·87	5·0	0·24	..	..	0·62	0·07	..	..	0·03	0·01
1897	0·01	..	0·03	..	0·83	0·04	2·6	0·58	6·0	0·12	..	..	0·45	0·05	..	..	0·04	0·02
1898	..	..	0·02	..	0·86	0·02	2·2	0·31	5·7	0·16	..	..	0·52	0·11	..	..	0·09	0·08
1899	..	..	..	..	0·83	0·06	3·0	0·36	7·8	0·09	..	..	0·52	0·09	..	..	0·09	0·07
1900	0·01	..	..	..	0·91	0·05	3·1	0·27	3·9	0 09	..	..	0·59	0·10	..	..	0·06	0·01
1901	0·18	..	..	..	0·61	..	1·8	0·16	2·6	0·04	..	..	0·58	0·11	..	..	0·06	0·02
1902	1·82	0·30	..	..	0·78	0·01	1·87	0·18	2·14	0·06	..	..	0·40	0·10	..	..	0·09	0·05
1903	0·05	..	..	..	0·47	..	1·51	0·11	3·16	0·03	..	..	0·34	0·05	..	..	0·02	0·01
1904	0·05	..	..	..	0·59	0·03	1·30	0·23	3·75	0·13	..	..	0·19	0·05	..	..	0·04	0·02
1905	0·04	..	..	..	0·66	0·04	2·08	0·14	4·08	0·08	..	..	0·17	0·06	..	..	0·10	0·05

NOTE.—Data for 1893 could not be obtained.

TABLE VI.

SCARLET FEVER AND DIPHTHERIA.

Number of patients attending each school, and rates per 1,000 on roll.

School.	On roll	Scarlet Fever	Rate	Diphtheria	Rate
Wood Street	1128	7	6·21	6	5·32
Mulgrave Place	862	3	3·48	...	...
Union Street	596	1	1·68	16	26·8
Elizabeth Street	781	23	29·4	5	6·40
Eglinton Road	1150	9	7·83	24	29·6
Fox Hill	224	1	4·46	...	...
Bloomfield Road	1651	19	11·5	7	4·24
Burrage Grove	930	9	9·68	1	1·08
Vicarage Road	1012	8	7·91	3	2·96
Plum Lane	768	10	13·0	9	11·7
Earl Street	1018	10	9·82	...	...
Ancona Road	1206	31	25·7	1	·83
Plumstead Road	793	6	7·57	4	5·04
Slade	949	11	11·6	3	3·16
High Street	1274	17	13·3	5	3·92
Conway Road	1343	19	14·1	10	7·45
Purrett Road	983	19	19·3	3	3·05
Timbercroft Road	415	11	26·5	1	2·43
Wickham Lane	513	3	5·85	1	1·95
Bostall Lane	973	26	26·7	1	1·03
Church Manorway	606	3	4·95	18	29·7
Gordon	582	15	25·8	1	1·72
Pope Street	643	24	37·3	2	3·11
Deansfield Road	230	5	21·7	...	...
St. Mary's	651	4	6·14	6	9·22
St. Peter's	635	1	1·57	1	1·57
St. Thomas's	...	...	...	...	...
Central	561	3	5·35	10	17.83
Christchurch	92	...	...	...	...
St. Patrick's	160	2	12·50	...	...
St. Michael's	607	3	4·94	4	6·59
All Saints	398	6	15·08	1	2.51
Eltham N. S.	342	...	...	...	...
All other Schools	...	8	...	2	...
	24076	317	13·17	145	6·02

TABLE VII.

LONDON and the METROPOLITAN BOROUGHS.—BIRTH RATES (based upon Births registered in each Borough) and DEATH RATES (after distribution of Deaths in Public Institu'ions) during the 52 weeks of 1905.

BOROUGHS.	PER 1,000 PERSONS LIVING.													Deaths under 1 year to 1,000 Births registered.
		Deaths from												
	Births.	ALL CAUSES.	Principal Epidemic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	*Pyrexia*† (Origin uncertain).	Diarrhœa.	Phthisis.	
COUNTY OF LONDON	27·1	15·1	1·70	0·00	0·37	0·12	0.12	0·32	—	0·05	0.00	0·72	1·42	129
WEST.														
Paddington ...	21·6	13·3	1·39	—	0·42	0·05	0·02	0·34	—	0·03	—	0·53	0·96	123
Kensington ...	19·3	14·0	1·39	—	0·31	0·12	0·05	0·33	—	0·07	—	0·51	1·14	144
Hammersmith ...	26·2	13·9	1·70	—	0·24	0·09	0·18	0·48	—	0·04	—	0·67	1·16	135
Fulham	30·4	15·1	2·71	—	0·54	0·14	0·15	0·53	—	0·06	—	1·29	1·22	145
Chelsea	21·3	14·8	1·03	—	0·07	0·12	0·07	0·30	—	0·05	—	0·42	1·51	117
City of Westminster	16·8	13·5	0·81	—	0·22	0·09	0·03	0·16	—	0·02	—	0·29	1·51	114
NORTH.														
St. Marylebone ...	30·0	15·5	1·12	—	0·29	0·12	0·04	0·19	—	0·05	0·01	0·42	1·46	88
Hampstead	16·2	9·3	0·53	—	0·09	0·07	0·03	0·19	—	0·02	—	0·13	0·83	94
St. Pancras ...	24·7	15·8	1·50	—	0·33	0·11	0·11	0·35	—	0·03	—	0·57	1·52	135
Islington	25·2	14·5	1·47	0·00	0·36	0·11	0·10	0·33	—	0·05	—	0·52	1·26	125
Stoke Newington ...	20·5	12·9	1·14	—	0·23	0·06	0·09	0·19	—	—	—	0·57	1·33	122
Hackney	25·8	14·0	1·98	0·01	0·36	0·08	0·11	0·29	—	0·12	—	1·01	1·15	129
CENTRAL.														
Holborn	28·5	17·5	1·12	—	0·20	0·07	0·07	0·30	—	0·07	—	0·41	2·84	92
Finsbury	34·7	19·0	2·17	—	0·42	0·21	0·12	0·33	—	0·09	—	1·00	2·02	127
City of London ...	13·5	17·4	0·57	—	0·04	0·04	0·09	0·09	—	—	—	0·31	1·34	149
EAST.														
Shoreditch	33·5	19·7	2·96	0·02	0·54	0·24	0·15	0·76	—	0·03	—	1·22	1·96	167
Bethnal Green ...	33·2	18·6	2·27	—	0·36	0·20	0·24	0·42	—	0·06	0·01	0·98	2·04	151
Stepney	35·3	17·7	2·58	0·00	0·52	0·19	0·20	0·45	—	0·07	0·00	1·15	1·72	141
Poplar	32·1	17·6	2·65	—	0·47	0·17	0·24	0·47	—	0·06	—	1·24	1·53	153
SOUTH.														
Southwark	30·0	18·5	2·39	—	0·74	0·13	0·21	0·38	—	0·05	—	0·88	2·13	148
Bermondsey ...	33·3	18·7	2·21	—	0·48	0·13	0·14	0·29	—	0·06	—	1·11	1·79	148
Lambeth	28·3	14·9	1·50	—	0·31	0·10	0·12	0·26	—	0·03	—	0·68	1·38	115
Battersea	27·4	14·5	1·99	—	0·71	0·14	0·07	0.29	—	0·03	—	0·75	1·34	131
Wandsworth ...	26·0	12·6	1·46	—	0·34	0·11	0·11	0·29	—	0·04	—	0·57	1·02	119
Camberwell ...	25·6	13·7	1·30	—	0·30	0·11	0·07	0·25	—	0·03	—	0·54	1·21	124
Deptford	28·9	14·3	1·19	—	0·14	0·09	0·08	0·17	—	0·05	—	0·66	1·22	122
Greenwich	25·9	13·4	1·30	—	0·17	0·05	0·16	0·14	—	0·05	—	0·73	1·26	119
Lewisham	25·2	11·7	0·95	0·03	0·28	0·03	0·06	0·18	—	0·04	—	0·33	0·85	92
Woolwich	**28·4**	**12·8**	**1·02**	—	**0·10**	**0·08**	**0·14**	**0·13**	—	**0·06**	—	**0·51**	**1·52**	**102**

In this Table 0·00 indicates that the deaths were too few to give a rate of 0·005 ; where no death occurred, — is inserted.

*The rates for the County of London do not in all cases agree with those in some of the other Tables.

†Originally described as Simple Continued Fever.

TABLE VIIa.

LONDON and the METROPOLITAN BOROUGHS.—DEATH RATES per 1000 persons living, and INFANTILE MORTALITY, after Distribution of Deaths in Public Institutions in the Four Years 1901-4, and in 1905.*

BOROUGHS.	All Causes.		Small-pox.		Measles.		Scarlet Fever.		Diphtheria.		Whooping Cough.		Typhus.		Enteric Fever.		Pyrexia.		Diarrhœa.		Phthisis.		Deaths under One Year to 1000 Births.	
	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.	1901-1904.	1905.
County of London ..	16·4	15·1	0·09	0·00	0·47	0·37	0·10	0·12	0·22	0·12	0·36	0·32	0·00	—	0·09	0·05	0·00	0·00	0·76	0·72	1·61	1·42	140	129
Paddington	14·0	13·3	0·04	—	0·29	0·42	0·07	0·05	0·19	0·02	0·25	0·34	—	—	0·08	0·03	—	—	0·67	0·53	1·10	0·96	131	123
Kensington	14·7	14·0	0·02	—	0·38	0·31	0·08	0·12	0·14	0·05	0·27	0·33	0·00	—	0·06	0·07	0·00	—	0·62	0·51	1·34	1·14	152	144
Hammersmith ..	15·8	13·9	0·06	—	0·56	0·24	0·08	0·09	0·22	0·18	0·38	0·48	—	—	0·09	0·04	0·00	—	0·85	0·67	1·43	1·16	151	135
Fulham	15·6	15·1	0·03	—	0·57	0·54	0·09	0·14	0·25	0·15	0·43	0·53	—	—	0·09	0·06	0·00	—	1·21	1·29	1·39	1·22	145	145
Chelsea	16·6	14·8	0·03	—	0·39	0·07	0·07	0·12	0·10	0·07	0·33	0·30	—	—	0·06	0·05	—	—	0·52	0·42	1·63	1·51	145	117
City of Westminster ..	14·8	13·5	0·08	—	0·24	0·22	0·06	0·09	0·10	0·03	0·19	0·16	—	—	0·09	0·02	0·01	—	0·37	0·29	1·72	1·51	130	114
St. Marylebone ..	16·9	15·5	0·06	—	0·36	0·29	0·11	0·12	0·19	0·04	0·25	0·19	—	—	0·07	0·05	0·01	0·01	0·64	0·42	1·83	1·46	101	88
Hampstead	10·4	9·3	0·02	—	0·12	0·09	0·05	0·07	0·13	0·03	0·17	0·19	—	—	0·08	0·02	—	—	0·20	0·13	0·83	0·83	98	94
St. Pancras	17·6	15·8	0·13	—	0·53	0·33	0·14	0·11	0·31	0·11	0·40	0·35	—	—	0·11	0·03	—	—	0·59	0·57	1·86	1·52	146	135
Islington	15·5	14·5	0·05	0·00	0·43	0·36	0·10	0·11	0·23	0·10	0·36	0·33	—	—	0·10	0·05	0·00	—	0·49	0·52	1·49	1·26	132	125
Stoke Newington ..	13·1	12·9	0·05	—	0·21	0·23	0·06	0·06	0·17	0·09	0·25	0·19	—	—	0·09	—	0·01	—	0·43	0·57	1·39	1·33	116	122
Hackney	14·9	14·0	0·08	0·01	0·41	0·36	0·09	0·08	0·29	0·11	0·30	0·29	—	—	0·13	0·12	—	—	0·71	1·01	1·41	1·15	129	129
Holborn	19·6	17·5	0·33	—	0·49	0·20	0·07	0·07	0·16	0·07	0·27	0·30	—	—	0·12	0·07	—	—	0·56	0·41	2·96	2·84	114	92
Finsbury	21·5	19·0	0·11	—	0·64	0·42	0·15	0·21	0·25	0·12	0·48	0·33	—	—	0·10	0·09	—	—	0·97	1·00	2·29	2·02	143	127
City of London ..	18·0	17·4	0·09	—	0·14	0·04	0·07	0·04	0·21	0·09	0·17	0·09	—	—	0·08	—	—	—	0·22	0·31	1·79	1·34	135	149
Shoreditch	20·6	19·7	0·17	0·02	0.73	0·54	0·10	0·24	0·20	0·15	0·52	0·76	—	—	0·11	0·03	—	—	1·33	1·22	2·14	1·96	183	167
Bethnal Green ..	19·7	18·6	0·14	—	0·62	0·36	0·18	0·20	0·33	0·24	0·42	0·42	—	—	0·10	0·06	0·01	0·01	0·87	0·98	2·10	2·04	152	151
Stepney	19·7	17·7	0·24	0·00	0·57	0·52	0·11	0·19	0·26	0·20	0·44	0·45	0·00	—	0·11	0·07	—	0·00	1·05	1·15	2·05	1·72	151	141
Poplar	19·0	17·6	0·16	—	0·61	0·47	0·11	0·17	0·42	0·24	0·50	0·47	—	—	0·12	0·06	—	—	1·12	1·24	1·74	1·53	157	153
Southwark	20.3	18·5	0·11	—	0·72	0·74	0·15	0·13	0·20	0·21	0·48	0·38	—	—	0·10	0·05	0·00	—	1·05	0·88	2·47	2·13	164	148
Bermondsey	20·0	18·7	0·09	—	0·81	0·48	0·20	0·13	0·19	0·14	0·45	0·29	0·01	—	0·12	0·06	0·00	—	1·01	1·11	1·88	1·79	164	148
Lambeth	16·4	14·9	0·05	—	0·41	0·31	0·10	0·10	0·14	0·12	0·38	0·26	—	—	0·08	0·03	0·00	—	0·80	0·68	1·55	1·38	132	115
Battersea	15·0	14·5	0·04	—	0·58	0·71	0·08	0·14	0·12	0·07	0·41	0·29	—	—	0·09	0·03	—	—	0·87	0·75	1·37	1·34	143	131
Wandsworth	13·2	12·6	0·03	—	0·38	0·34	0·07	0·11	0·20	0·11	0·27	0·29	—	—	0·08	0·04	0·00	—	0·61	0·57	1·03	1·02	123	119
Camberwell	15·4	13·7	0·07	—	0·44	0·30	0·11	0·11	0·24	0·07	0·34	0·25	—	—	0·09	0·03	—	—	0·70	0·54	1·40	1·21	137	124
Deptford	16·0	14·3	0·08	—	0·59	0·14	0·14	0·09	0·27	0·08	0·41	0·17	0·01	—	0·07	0·05	0·00	—	0·84	0·66	1·27	1·22	141	122
Greenwich	14·6	13·4	0·06	—	0·41	0·17	0·06	0·05	0·19	0·16	0·38	0·14	—	—	0·07	0·05	—	—	0·76	0·73	1·20	1·26	124	119
Lewisham	12·4	11·7	0·02	0·03	0·22	0·28	0·09	0·03	0·19	0·06	0·25	0·18	—	—	0·06	0·04	—	—	0·62	0·33	0·93	0·85	117	92
Woolwich	**14·4**	**12·8**	**0·08**	–	**0·24**	**0·10**	**0·07**	**0·08**	**0·18**	**0·14**	**0·32**	**0·13**	—	—	**0·08**	**0·06**	—	—	**0·78**	**0·51**	**1·59**	**1·52**	**124**	**102**

TABLE VIII.

Meteorology and Registered Deaths from all Causes, and from Certain Prevalent Diseases in each week of the year 1905.

Week. Date of ending.	Temperature of the Air. Highest during week.	Lowest during week.	Mean Temperature.	Temperature three feet below ground.	Mean Humidity complete Saturation = 100.	No. of days' rainfall.	Rainfall in inches.	Deaths Corrected for Public Institutions. All Causes	Diarrhœa.	Six other Zymotic Diseases.	Bronchitis and Pneumonia.	Tubercle.
January 7 ..	54·0	19·7	41·0 +	43·33	83	4	0·42	41	0	3	9	6
,, 14 ..	50·8	24·5	40·5 +	44·15	79	1	0·08	37	0	1	6	4
,, 21 ..	43·6	20·6	33·1 —	41·68	78	2	0·47	37	0	2	5	9
,, 28 ..	48·1	24·7	37·4 —	40·51	85	0	0·00	33	0	2	9	5
February 4 ..	53·1	33·1	43·1 +	40·56	79	2	0·03	26	0	0	4	5
,, 11 ..	51·0	34·1	44·7 +	42·37	84	1	0·12	27	0	1	7	2
,, 18 ..	53·5	32·4	44·3 +	42·85	76	3	0·12	33	0	1	7	6
,, 25 ..	48·0	31·2	37·6 —	42·77	81	6	0·25	43	1	2	5	5
March 4 ..	45·7	27·1	38·4 —	41·61	83	5	0·30	32	0	2	8	2
,, 11 ..	52·9	35·5	44·3 +	42·03	80	7	1·08	36	0	2	10	2
,, 18 ..	55·7	38·5	46·2 +	43·20	81	7	2·25	30	1	0	8	4
,, 25 ..	61·4	31·9	46·5 +	44·13	79	2	0·09	21	0	0	5	3
April 1 ..	60·0	37·3	47·3 +	44·95	74	3	0·06	28	0	0	5	7
Averages & Totals (1st Qrtr.)	61·4	19·7	(9 +) (4 —)	42·63	80	43	5·27	424	2	16	88	60
April 8 ..	56·0	32·6	43·2 —	45·86	76	3	0·27	26	0	1	6	3
,, 15 ..	64·9	31·1	49·5 +	45·63	81	4	0·83	37	0	3	7	6
,, 22 ..	59·9	35·4	43·1 —	47·01	74	5	0·25	34	0	0	3	7
,, 29 ..	59·3	36·3	48·5 —	46·46	74	4	0·15	48	0	2	6	4
May 6 ..	64·6	38·2	49·4 —	47·99	71	3	0·85	25	0	2	6	2
,, 13 ..	70·0	40·8	53·6 +	49·49	60	0	0·00	30	0	0	5	3
,, 20 ..	70·2	39·5	53·3 —	51·23	67	4	0·22	35	2	0	6	5
,, 27 ..	73·5	34·3	51·2 —	51·57	61	0	0·00	34	0	2	6	5
June 3 ..	82·3	46·4	62·7 +	54·00	64	3	0·50	30	0	0	4	8
,, 10 ..	69·7	46·1	53·7 —	55·46	87	6	2·86	30	0	2	4	7
,, 17 ..	77·2	48·3	59·5 +	55·18	81	4	0·95	22	0	1	0	3
,, 24 ..	78·0	47·4	60·9 +	57·72	73	2	0·02	23	0	0	3	5
July 1 ..	80·1	51·1	63·2 +	59·54	79	5	0·54	22	1	0	3	3
Averages & Totals (2nd Qrtt.)	82·3	31·1	(6 +) (7 —)	51·32	73	43	7·44	396	3	13	59	61
July 8 ..	81·9	48·2	64·0 +	60·68	69	2	0·03	31	0	1	3	3
,, 15 ..	84·3	57·3	68·9 +	62·17	71	2	0·26	28	0	2	1	8
,, 22 ..	84·0	48·8	65·2 +	63·59	75	1	0·02	21	1	0	2	4
,, 29 ..	87·2	52·2	66·3 +	64·21	77	2	0·53	28	3	1	2	4
August 5 ..	76·4	48·9	62·2 —	64·19	71	2	0·65	34	7	2	2	4
,, 12 ..	76·9	48·0	60·3 —	63·04	76	3	0·16	38	9	0	2	3
,, 19 ..	75·8	50·3	62·1 +	62·62	69	1	0·03	30	5	4	1	4
,, 26 ..	74·0	44·6	60·2 —	62·37	71	4	0·48	29	9	1	1	4
September 2 ..	69·4	47·2	56·7 —	61·33	82	4	1·21	28	6	1	2	2
,, 9 ..	75·1	52·3	61·0 +	60·97	84	3	0·68	36	6	1	2	5
,, 16 ..	68·6	41·4	54·2 —	59·96	76	3	0·32	25	3	1	3	3
,, 23 ..	65·3	43·1	54·3 —	58·47	76	1	0·01	33	6	2	0	5
,, 30 ..	64·6	44·7	53·0 —	57·43	83	5	1·27	31	0	0	3	4
Averages & Totals (3rd Qrtr.)	87·2	41·4	(6 +) (7 —)	61·62	75	33	5·65	392	55	16	24	53
October 7 ..	57·2	38·9	48·8 —	56·10	73	4	0·16	25	0	2	1	6
,, 14 ..	58·7	36·3	48·6 —	54·45	81	3	0·16	22	1	0	7	4
,, 21 ..	56·0	26·1	41·0 —	52·35	75	2	0·13	19	0	0	3	2
,, 28 ..	53·7	26·5	41·5 —	49·30	81	4	0·05	25	0	0	2	2
November 4 ..	56·4	39·2	47·3 +	49·14	86	7	1·60	35	0	4	5	6
,, 11 ..	53·0	28·2	43·1 —	48·48	91	4	0·65	29	0	1	1	6
,, 18 ..	50·5	30·2	39·1 —	47·65	87	5	0·64	26	1	5	1	3
,, 25 ..	51·6	23·1	38·5 —	45·17	84	2	0·17	25	0	0	5	2
December 2 ..	54·9	27·5	42 9 +	45·16	87	5	0·61	33	0	2	5	4
,, 9 .. (2 days' fog)	57·3	30·1	43·8 +	45·08	90	3	0·31	42	0	2	9	8
,, 16 .. (5 days' fog)	44·6	25·4	36·6 —	44·69	92	1	0·02	42	0	1	9	7
,, 23 ..	50·2	33·1	43·2 +	44·15	82	0	0·00	33	0	2	16	1
,, 30 ..	46·6	28·3	39·5 +	44·35	92	3	0·24	33	0	0	12	5
Averages & Totals (4th Qrtr.)	58.7	23·1	(5 +) (8 —)	48·16	85	43	4·74	392	2	19	76	56
Averages & Totals for Whole Year	87·2	19·7	(26 +) (26 —)	50·93	78	162	23·10	1604	62	64	247	230

Note. + Means higher and — means lower than the average of 50 years.

Table VIIIa.

Weekly Averages.

	Temperature of the air.			Temperature 3 feet below ground.	Mean Humidity Complete Saturation = 100	No. of days Rainfall	Rainfall in inches.	Deaths corrected for Public Institutions.				
	Average of weekly maxima.	Average of weekly minima	Average of weekly means.					All Causes.	Diarrhœa.	Six other Zymotic Diseases.	Bronchitis and Pneumonia.	Tubercle.
1st Quarter ..	51·2	30·0	41·9	42·63	80	3	0·41	33	·15	1	7	5
2nd Quarter ..	69·7	40·58	53·2	51·32	73	3	0·57	30	·23	1	5	5
3rd Quarter ..	75·7	48·2	60·6	61·62	75	3	0·43	30	4·2	1	2	4
4th Quarter .	53·1	30·2	42·6	48·16	85	3	0·36	30	·15	1	6	4

TABLE IX.

Summary of Statistics for the 1st Quarter (13 weeks) ended 1st April, 1905, corrected for Public Institutions.

A. Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 Population.

Population estimated to middle of Year.	Births.		Deaths under one year of age.		Deaths at all ages—Gross.	Deaths in Public Institutions.	Deaths of Non-Residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages corrected for Public Institutions.	
	Number.	Rate.	Number.	Rate per 1,000 Births Registered.	Number.				Number.	Rate.
125,791	900	28·6	98	109	403	90	17	39	425	13·5

B. Birth and Death Rates for each Parish.

Woolwich.				Plumstead.				Eltham.			
Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
41,765	27·5	15·7	112	72,873	29·3	12·7	111	11,153	28·7	10·0	88

C. Notifications of Infectious Disease.

Disease.	Woolwich.	Plumstead.	Eltham.	Total.
Small Pox	2	—	—	2
Scarlet Fever	39	91	29	159
Diphtheria	37	65	4	106
Enteric Fever...	1	5	—	6
Erysipelas	9	15	2	26
Puerperal Fever	2	2	—	4
Phthisis	11	25	3	39
Measles	8	25	34	67
(Notified by School Teachers)				

TABLE X.

Summary of Statistics for the 2nd Quarter (13 weeks) ended 1st July, 1905, corrected for Public Institutions.

A. Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 Population.

Population estimated to middle of Year.	Births.		Deaths under one year of age.		Deaths at all ages—Gross.	Deaths in Public Institutions.	Deaths of Non-Residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages corrected for Public Institutions.	
	Number.	Rate.	Number.	Rate per 1,000 Births Registered.	Number.				Number.	Rate.
126,604	883	27·9	62	70·2	361	83	13	48	396	12·5

B. Birth and Death Rate for each Parish.

Woolwich.				Plumstead.				Eltham.			
Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
41,765	29·8	14·6	64	72,873	27·3	11·6	78	11,966	24·7	10·7	41

C. Notifications of Infectious Diseases.

	Woolwich.	Plumstead.	Eltham.	Total.
Small Pox	—	3	—	3
Scarlet Fever	39	61	15	115
Diphtheria	14	39	4	57
Enteric Fever	1	5	1	7
Erysipelas	3	8	2	13
Puerperal Fever	1	—	1	2
Phthisis	15	38	2	55
Measles .. .. .. (Notified by School Teachers)	14	257	59	330

TABLE XI.

Summary of Statistics for the Third Quarter (13 weeks) ending 30th September, 1905.

A.—Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 Population.

Population estimated to middle of Year.	Births.		Deaths under one year of age.		Deaths at all ages—Gross.	Deaths in Public Institutions.	Deaths of Non-Residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages corrected for Public Institutions.	
	Number.	Rate.	Number.	Rate per 1,000 Births Registered.	Number.				Number.	Rate.
126,604	888	28·1	107	120	334	60	4	62	392	12·4

B.—Birth and Death Rates for each Parish.

Woolwich.				Plumstead.				Eltham.			
Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
41,765	28·7	14·7	170	72,873	27·7	11·4	93	11,966	27·7	10·7	109

C.—Notifications of Infectious Disease.

	Woolwich.	Plumstead.	Eltham.	Total.	Average total for 3rd Quarters, 1902-3-4.
Small Pox	—	—	—	—	1
Scarlet Fever	20	58	10	88	91
Diphtheria	18	25	1	44	42
Enteric Fever	3	3	—	6	16
Erysipelas	3	13	—	16	19
Puerperal Fever	1	2	—	3	2
Phthisis	5	19	—	24	43
Measles ... ... (Notified by School Teachers)	—	52	1	53	43
Zymotic Enteritis	108	81	25	214	—

TABLE XII.

Summary of Statistics for the 4th Quarter (13 weeks) ending 30th December, 1905, corrected for Public Institutions.

A.—Birth and Death Statistics for the Borough of Woolwich. Rates calculated per 1,000 Population.

	Births.		Deaths under one year of age.		Deaths at all ages—Gross.	Deaths in Public Institutions.	Deaths of Non-Residents in District.	Deaths of Residents Registered beyond District.	Deaths at all ages corrected for Public Institutions.	
Population estimated to middle of Year.	Number.	Rate.	Number.	Rate per 1,000 Births Registered.	Number.				Number.	Rate.
125,885	878	27·9	97	110	365	80	16	43	392	12·5

B.—Birth and Death Rates for each Parish.

Woolwich.				Plumstead.				Eltham.			
Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.	Population estimated to middle of year.	Birth Rate.	Death Rate at all ages.	Deaths under 1 year, per 1000 Births.
A	B	C	D	A	B	C	D	A	B	C	D
40,063	30·3	15·0	139	74,205	27·8	11·5	101	11,167	19·7	7·0	36

C.—Notifications of Infectious Disease.

	Woolwich.	Plumstead.	Eltham.	Total.	Average total for 4th Quarters, 1902-3-4.
Small Pox	—	—	—	—	2
Scarlet Fever	30	108	9	147	108
Diphtheria	23	36	—	59	77
Enteric Fever	1	4	—	5	11
Erysipelas	8	20	—	28	23
Puerperal Fever	1	2	—	3	1
Phthisis	9	21	—	30	43
Measles	21	9	4	34	116
(Notified by School Teachers) ...					

TABLE XIII.

Deaths from Various Causes for the Whole Borough, 1905, corrected for Public Institutions.

Week ending.	Small Pox.	Measles.	Scarlet Fever.	Epidemic Influenza.	Whooping Cough.	Diphtheria and Membranous Croup.	Enteric Fever.	Diarrhœa and Dysentery.	Erysipelas.	Puerperal Fever.	Rheumatism.	Tubercle.	Alcoholism.	Cancer.	Bronchitis.	Pneumonia.	Accidents.	Suicide and Homicide.
January 7	..	..	..	..	..	3	..	..	..	..	1	6	2	1	5	4	..	..
,, 14	..	1	..	4	..	..	..	..	..	1	..	4	..	2	5	1	2	..
,, 21	..	..	..	2	..	1	1	..	..	..	..	9	2	3	2	3	..	..
,, 28	..	1	..	..	1	..	..	..	..	1	..	5	..	1	5	4	2	..
February 4	..	..	..	..	..	..	..	..	..	1	..	5	..	..	3	1	1	..
,, 11	..	..	..	..	1	..	..	..	..	..	..	2	..	..	4	3	2	..
,, 18	..	..	1	1	..	..	..	..	..	..	..	6	1	2	3	4	..	..
,, 25	..	..	..	2	1	..	1	1	1	..	..	5	..	2	2	3	4	..
March 4	..	..	1	..	..	1	..	..	..	..	..	2	..	2	7	1	2	..
,, 11	..	..	..	..	..	2	..	..	..	..	..	2	1	3	6	4	..	..
,, 18	..	..	..	..	..	..	..	1	..	..	..	4	..	..	4	4	1	..
,, 25	..	..	..	..	..	..	..	..	..	..	..	3	..	1	2	3	..	..
April 1	..	..	..	..	..	..	..	..	..	..	..	7	..	3	4	1	1	1
1st Quarter ..	..	2	2	9	3	7	2	2	1	3	1	60	6	20	52	36	15	1
April 8	..	..	..	..	..	1	..	..	..	..	..	3	2	3	2	4	..	..
,, 15	..	..	1	..	1	1	..	..	..	..	1	6	..	1	4	3	..	1
,, 22	..	..	..	..	..	..	..	..	..	..	1	7	..	1	2	1	..	..
,, 29	..	..	1	..	..	1	..	..	..	..	1	4	..	3	2	4	3	3
May 6	..	..	..	1	..	..	2	..	..	..	..	2	1	3	1	5	..	..
,, 13	..	..	..	..	..	..	..	..	..	..	..	3	..	4	1	4	2	..
,, 20	..	..	..	..	..	..	..	2	1	..	..	5	..	2	3	3	1	..
,, 27	..	..	..	..	..	1	1	..	..	..	..	5	..	2	1	5	..	..
June 3	..	..	..	1	..	..	..	..	..	..	1	8	1	2	1	3	..	..
,, 10	..	2	..	..	..	..	..	..	..	..	..	7	1	2	1	3	2	..
,, 17	..	..	..	..	1	..	..	..	1	..	..	3	..	2	..	..	..	1
,, 24	..	..	..	..	..	..	..	..	..	..	..	5	..	1	2	1	..	1
July 1	..	..	..	..	..	..	..	1	..	..	..	3	..	..	..	3	..	..
2nd Quarter ..	..	2	2	2	2	4	3	3	2	..	4	61	5	26	20	39	8	6
July 8	..	1	..	..	..	..	..	..	..	..	..	3	1	1	2	1	2	..
,, 15	..	1	..	..	1	..	..	..	..	..	..	8	..	1	..	1	1	..
,, 22	..	..	..	..	..	..	..	1	..	..	..	4	1	1	..	2	2	..
,, 29	..	..	1	..	..	..	..	3	..	..	2	4	1	1	1	1	1	..
August 5	..	1	..	..	..	1	..	7	..	..	..	4	..	4	..	2	2	..
,, 12	..	..	..	..	..	..	..	9	..	..	..	3	..	3	2	..	1	1
,, 19	..	..	1	..	1	1	1	6	..	..	..	4	1	1	1	..	1	..
,, 26	..	..	1	..	..	..	..	9	..	..	..	4	..	..	..	1	2	..
September 2	..	1	..	..	..	..	..	6	1	..	..	2	..	1	2	..	..	..
,, 9	..	1	..	..	..	..	..	6	..	..	..	5	3	2	..	2	..	..
,, 16	..	..	1	..	..	..	..	3	..	..	..	3	..	2	3	..	..	..
,, 23	..	..	1	2	1	..	..	6	..	..	..	5	..	3	..	..	1	..
,, 30	..	..	..	..	..	..	..	..	..	..	..	4	1	2	1	2	..	..
3rd Quarter ..	..	5	5	2	3	2	1	56	1	..	2	53	8	22	12	12	13	1
October 7	..	1	..	..	1	..	..	..	1	..	..	6	..	1	..	1	1	..
,, 14	..	..	..	..	..	..	..	2	..	..	..	4	..	1	4	3	..	..
,, 21	..	..	..	..	..	..	..	..	..	..	..	2	..	2	2	1	1	..
,, 28	..	..	..	..	..	..	..	..	..	..	..	2	2	1	1	1	1	..
November 4	..	..	..	1	2	1	1	..	..	..	..	6	1	1	1	4	1	..
,, 11	..	..	..	1	1	..	..	..	..	..	..	6	..	3	5	..	1	1
,, 18	..	2	1	..	..	1	..	1	..	..	1	3	2	1	2	1	..	..
,, 25	..	..	..	..	..	..	..	..	..	..	2	2	..	2	5	..	1	..
December 2	..	..	..	..	2	..	..	..	..	..	..	4	..	1	4	1	1	..
,, 9	..	..	..	1	..	2	..	..	..	1	..	8	2	2	5	4	..	..
,, 16	..	1	..	..	..	..	..	..	..	..	..	7	..	..	7	2	1	..
,, 23	..	..	..	1	1	1	..	..	..	..	..	1	..	..	7	9	1	..
,, 30	..	..	..	..	..	..	..	..	..	..	..	5	..	1	7	5	2	..
4th Quarter ..	..	4	1	4	7	5	1	3	1	1	3	56	7	16	50	32	11	1

TABLE XIV.

Total Deaths of Persons belonging to the County of London and Registered in the 52 weeks ending 30th December, 1905.

	All Causes.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Typhus.	Enteric Fever.	Pyrexia. (origin uncertain).	Diarrhœa.	Phthisis.	Deaths of Infants under 1 year of age.	Deaths under 1 year to 1,000 Births Registered.
1st Quarter ..	18,968	5	352	134	162	433	..	49	..	151	1816	3793	114
2nd Quarter ..	16,075	5	549	119	117	521	..	47	1	216	1554	3241	103
3rd Quarter ..	16,425	..	255	126	109	254	..	75	2	2665	1428	5341	171
4th Quarter ..	18,974	..	553	170	158	279	..	63	..	324	1824	3949	130
Whole year ..	70,442	10	1709	549	546	1487		254	3	3356	6622	16324	..
Death Rates ..	15·0	0·00	0·36	0·12	0·12	0·32	..	0·05	0·00	0·72	1·41	..	129

Summary of Nuisances Abated, Notices Served and General Work of Public Heath Department, 1905.

	Sanitary Inspectors' Districts.									
	St. Mary's and Dockyard.	River.	Herbert.	Central and Glyndon.	St. Margaret's and part of St. Nicholas.	St. Nicholas.	Burrage.	Eltham.	St. George's.	Total.
PREMISES INSPECTED.										
No. of Houses inspected, house to house ...	837	747	767	657	1030	747	539	396	440	6160
„ Re-inspections after service of notice —estimated	1973	2285	2180	2005	1380	2055	1536	765	1116	15295
„ Houses and premises specially inspected including infectious diseases and complaints	1308	1132	666	1464	1380	1507	1181	714	252	9604
„ Houses where drains have been tested by smoke test	35	31	32	34	30	33	14	11	8	228
„ Houses where drains have been tested by water test	35	36	33	19	8	12	21	14	6	184
„ New houses inspected for Water Certificates.	7	1	15	18	96	182	1	140	...	560
NUISANCES ABATED—DRAINS.										
Waste pipes from baths, lavatories and wash-house sinks, repaired or disconnected.	36	41	31	63	30	30	5	4	9	249
Choked and defective drains	80	122	56	90	91	39	44	44	24	590
Defective traps	24	28	9	61	5	17	14	2	6	166
Defective and unventilated soil pipes ...	5	11	...	7	5	6	3	7	7	51
Cesspools abolished	...	...	...	...	...	...	...	...	...	...
W.C.'s.										


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TABLE XVB.

SUMMARY OF WORK OF CHIEF INSPECTOR.

emises Inspected	1113
ew Buildings Inspected	173
efective Combined Drains Investigated and Reported on ...	26
umber of Houses referred to in such Combined Drains ...	169
owhouses and Slaughterhouses Inspections...	19
mplaints Investigated	121
tendances at Police Court	23

ISCELLANEOUS, INCLUDING WORK OF CHIEF INSPECTOR, DISTRICT INSPECTORS, AND CLERKS.

umber of Cases of Inattention to Notices reported to Town Clerk for Proceedings	111
ummonses at Police Court	30
akehouses Inspected and Cleansed twice during the year ...	63
umber of Houses Disinfected after infectious Disease ...	910
etters received	4122
„ written	3955
otifications received	931
ertificates issued after Disinfection	2730
„ of Infectious Disease forwarded to Schools ...	1250
omplaints of Sanitary Defects	380
„ of Non-removal of Dust, viz.:—	
Woolwich	7
Plumstead	28
Eltham	5
ritten Intimation Notices	3504
tatutory Notices	687

TABLE XVc.

Factories, Workshops, Laundries, Workplaces, and Homeworker's Premises.

1.—*Inspection.*

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of	
	Inspections.	Written Notices.
Factories .. .. (Including Factory Laundries)	10	2
Workshops .. .. (Including Workshop Laundries)	304	13
Workplaces	..	..
Homeworkers' Premises	308	14
Total ..	622	29

2.—*Defects found.*

Description.	Number of Defects.	
	Found.	Remedied.
Nuisances under the Public Health Acts:—		
Want of Cleanliness	16	16
Want of Ventilation	11	11
Overcrowding	3	3
Want of drainage of floors	1	1
Other nuisances	12	12
Sanitary accommodation — insufficient, unsuitable, or defective	8	8
Sanitary accommodation — not separate for sexes	2	2
Total ..	53	53

TABLE XVc. *(continued).*

3.—*Other Matters.*

Class.		Number
tters notified to H.M. Inspectors of Factories.—		
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		0
Action taken in matters remediable under the Public Health Acts, but not under the Factory Act (S. 5)	Notified by H. M. Inspectors ..	3
	Reports (of action taken) sent to H.M.Inspectors	2
derground Bakehouses (S. 101) :—		
In use during 1903		24
Certificates granted	in 1903	24
	in 1904	0
	in 1905	0
In use at the end of 1905		24

mework :—	Lists	Out-workers
List of Outworkers (S. 101) :—		
Lists received	76	308

Addresses of outworkers	forwarded to other Authorities	31
	received from other Authorities	97

orkshops on the Register (S. 131) at the end of 1905 :—	
Workshop Laundries	15
,, Bakehouses	62
Other Workshops	130
Total Number of Workshops on Register ..	207

TABLE XVd.

Proceedings during 1905.

Premises.	Number of Places.				Number of inspections, 1905.	Number of notices, 1905.	Number of Prosecutions, 1905.
	On Register at end of 1904.	Added in 1905.	Removed in 1905.	On Register at end of 1905.			
Milk Premises	196	24	34	186	305	29	1
Cowsheds	18	—	—	18	72	11	1
Slaughter-houses ..	11	—	—	11	66	3	—
Ice Cream premises ..	83	5	1	87	212	8	—
Registered Houses let in Lodgings	235	41	11	265	594	*49 †271	— † 1

* For overcrowding. † For other conditions.

Overcrowding, 1905—

Number of Dwelling Rooms overcrowded	154
Number remedied	154

Underground Rooms—

Illegal occupation dealt with during year	3
Number of rooms closed	2

Insanitary Houses—

Number closed under the Housing of the Working Classes Act	5

Number of Prosecutions under By-laws under Public Health Act, 1891—

With respect to water closets, earth closets, etc. .	1
With respect to sufficiency of water supply to water closets	1
With respect to drainage, etc. (Metropolis Management Act, section 202)	—

Mortuaries—

Total number of Bodies removed	170
Total number of Infectious Bodies removed	—
Inspections of premises where food is prepared for sale ..	56
Number of Public Sanitary Conveniences removed or altered ..	9
Number of fixed ashpits removed	6

TABLE XVI.

Details of House to House Inspection.

Name of Street.	Number of Houses Inspected.	Number where Defects were Found.
St. MARY'S AND DOCKYARD WARDS.		
amuel Street	15	11
rinity Street	15	11
orth Kent Grove	19	12
„ Place	4	...
Iorris Street	28	25
„ Place	6	4
imms Buildings	7	5
imbrey Buildings... ...	7	5
ustace Place	11	4
arah Street	77	41
corn Street	24	12
ak Street	19	12
elina Place	12	10
ower Harden Street ...	20	14
Iarden Street	15	7
oseph Street	25	19
Ilenalvon Street	8	7
Vick Cottages	10	6
nn Street	23	18
rospect Place	54	28
rospect Row	52	44
Cingsman Street	129	89
t. Mary's Street	69	39
un Street	25	18
Iill Street	44	18
Vood Street	55	21
Voodville Street	9	4
ellipar Road	26	21
ower Pellipar Road ...	20	10
ellipar Place	4	3
arah Place	5	5
Total ...	837	523
RIVER WARD.		
eresford Street	81	47
ollingwood Street ...	13	11
lobe Lane	14	14
ock Yard, High Street ...	8	7
High Street	88	52

TABLE XVI—Continued.

Details of House to House Inspection.

Name of Street.	Number of Houses Inspected.	Number where Defects were Found.
RIVER WARD—Cont.		
Haverlock Place	3	2
New Street	8	8
Nile Street	7	7
„ Cottages	6	5
Market Hill	10	5
Myrtle Street	10	6
Meeting House Lane ...	11	9
Salutation Alley	11	11
Surgeon Street	4	3
Walpole Place	29	24
Warren Lane	24	14
Wilmount Street	45	31
Taylor Street	27	20
Rectory Place	19	14
Anglesea Road	46	20
Brookhill Road	32	16
Auberon Street, N. Woolwich...	49	28
Davey Place „ ...	6	4
Dock Street „ ...	26	15
Drew Road „ ...	10	10
Fernhill Street „ ...	10	2
Elizabeth Street „ ...	77	35
High Street (part of) „ ...	4	3
Mary Ann Street „ ...	9	8
Winifred Street „ ...	60	31
	747	462
HERBERT WARD.		
Vambery Road	33	10
Isla Road	35	8
Plum Lane	44	8
Princes Road	69	37
Portland Place	17	9
Brookhill Row	6	6
St. Thomas' Cottages ...	8	2
Barnfield Road	63	31
Graydon Street	16	9
May Place	4	2
Westdale Road	53	34

TABLE XVI—Continued.

Details of House to House Inspection.

Name of Street.	Number of Houses Inspected.	Number where Defects were Found.
HERBERT WARD—Cont.		
Cambridge Place	2	1
Eglinton Road	112	20
Red Lion Lane	59	26
Shooters Hill	19	6
Llanover Road	59	21
Whitworth Road	81	31
Paget Road	50	18
Paget Terrace	15	6
Ripon Road	22	5
	767	290
CENTRAL AND GLYNDON WARDS.		
Ann Street	28	25
Sandbach Place	16	13
Dawson Street	24	18
Swetenham Place	27	17
Robert Street	101	86
Earl Street	102	77
Elm Street	115	76
Station Road	114	68
Glyndon Road	91	47
Conway Road	39	18
	657	445
ST. MARGARET'S AND PART OF ST. NICHOLAS WARDS.		
The Slade	22	14
Winns Cottages	8	5
Garland Street	44	25
Pendrell Street	36	24
Purrett Road	90	52
Hull Place	9	7
Speranza Street	45	33
Upper Garland Street ...	10	5
Tewson Road	114	73
Wickham Lane	75	40
Rippolson Road	53	30

TABLE XVI—Continued.

Details of House to House Inspection.

Name of Street.	Number of Houses Inspected.	Number where Defects were Found.
St. Margaret's and part of St. Nicholas Ward—Continued.		
Bassant Road	30	24
Swingate Lane	12	8
Raglan Road	38	19
Palmerston Road	72	40
Scotch Flats	14	7
Viewland Road	35	24
Kirkham Street	55	16
Wernbrook Street	77	12
Flaxton Road	106	40
Heavitree Road	63	31
Macoma Terrace	16	1
Macoma Road	6	3
	1030	553
ST. NICHOLAS WARD.		
Wickham Lane	19	2
Grove Road	20	5
Station Road, Abbey Wood ...	18	3
Ceres Road	97	12
Woodhurst Road	13	2
Cordite Street	20	13
Harrow Manor Way ...	15	2
Bostall Hill	36	12
Gatling Road	31	6
Bastion Road	25	9
Bostall Lane (Jubilee Cottages)	6	3
High Street	24	4
Abbey Wood Road... ...	91	28
Bostall Lane and Stratton Terrace	35	7
Acacia Terrace, Abbey Wood...	56	24
Balgowan Street	38	22
Brookdene Road	41	32
Hylton Street	45	25
Benares Road	117	25
	747	236

TABLE XVI.

Details of House to House Inspection.

Name of Street.	Number of Houses Inspected.	Number where Defects were Found.
BURRAGE WARD.		
·thur Street	39	31
gnell Road	15	11
oomfield Road	107	51
·escent Road	81	39
ıarles Street	18	13
ımbridge Place	9	4
ıester Place	12	8
ıurch Terrace	3	1
ton Road	32	24
aglan Road	58	36
. James's Place	66	26
ndy Hill Road	75	36
he Avenue	24	20
	539	300
ST. GEORGE'S WARD.		
rookhill Road	69	38
ndy Hill Road	10	6
ildersome Street	56	26
anover Terrace	9	6
ightingale Vale	46	30
ngineer Road	32	11
eemor Street	27	14
enwick Street	44	23
glinton Road	11	8
itter Street	28	20
Ianor Street	31	20
Iillward Street	50	19
ackson Street	27	17
	440	238
ELTHAM WARD.		
lanmerle Road	36	24
lainault Street	5	3
Reventlow Road	23	9
annoy Road	25	6

TABLE XVI—Continued.

Details of House to House Inspection.

Name of Street.	Number of Houses Inspected.	Number where Defects were Found.
ELTHAM WARD—Cont.		
Gaitskill Road	19	10
Pope Street	42	20
Green Lane	18	5
Frith's Buildings	13	9
Elm Terrace	26	11
Elizabeth Terrace	22	5
Cooper's Place	17	6
Pound Place	18	7
Jubilee Cottages	29	6
Roper Street	20	9
Blunt's Road	24	13
Deansfield Road	59	6
	396	149

TABLE XVII.

Prosecutions under the Public Health and Housing of the Working Classes Act.

No.	Date of Final Hearing.	Offence.	Situation.	Result.
1	24/2/05	Failing to fill in Registration Form	3c, George Street ...	Fine £1, and 3/- costs
2	24/2/05	Refusal to admit Chief Sanitary Inspector	3c, George Street ...	Fine £2, and 3/- costs
3	24/2/05	Refusal to admit Miss Middlebrooke	3c, George Street ...	Fine £5, and £3 3s. costs
4	10/3/05	House unfit for habitation ...	1, South Cottages, Southwood Road	Costs 7/8, Closing Order
5	10/3/05	House unfit for habitation ...	2, South Cottages, Southwood Road	Costs 3/-, Closing Order
6	10/3/05	House unfit for habitation ...	3, South Cottages, Southwood Road	Costs 6/-, Closing Order
7	12/4/05	Exposure in a Public Place of a patient suffering from Scarlet Fever	1, Merchland Road ...	Fine 10/-, and 2/- costs
8	12/4/05	House unfit for habitation ...	6, Nile Street	Costs 4/6, Closing Order
9	12/4/05	House unfit for habitation ...	7, Nile Street	Costs 3/-, Closing Order
10	30/6/05	Defective Paving	1, Charlotte Street ...	Fine 5/-, and 3/- costs
11	30/6/05	Defective Guttering	1, Charlotte Street ...	Fine 10/-, and 27/- costs

TABLE XVIII.

ımmary of Articles Analysed, under the Sale of Food and Drugs Act, during the Year ending 31st December, 1905.

Article.	Number Analysed.	Number Adulterated.
:	397	25
:—Separated	3	1
:—Skimmed	1	—
:—Condensed	2	—
ter	100	12
l	2	—
Liver Oil	1	—
ee	1	—
.. ..	2	—
mon. Tinc. Quinine	1	—
nphorated Oil	1	—
oa	1	—
ese	2	—
k of Sulphur	1	—
stard	2	—
Total ..	517	38

TABLE XVIIIA.

Proceedings under the Food and Drugs Act for the Year 1905.

No.	Article.	Nature of Adulteration.	Name and Address of Vendor.	Result of Proceedings.
1	Milk ...	6 % added water ...	T. Bassett, 61, Bannockburn Road, Plumstead	Fine £2 and 12/6 costs
2	Milk ...	33 % fat abstracted ...	M. Heaslip, 12, Drew Road, North Woolwich	Fine £3 and 23/- costs
3	Milk ...	Formalin	J. Earl, 24a, Glyndon Road, Plumstead	Fine £1 and 12/6 costs
4	Milk ...	Formalin	F. Grant, 102, Ann Street, Plumstead	Fine £1 and 12/6 costs
5	Milk ...	Formalin	J. Tye, 102, Raglan Road, Plumstead	Fine £1 and 12/6 costs
6	Milk ...	Formalin	J. Hoare, 28, Heverham Road, Plumstead	Fine £1 and 12/6 costs
7	Milk ...	6 % fat abstracted ...	J. Hoare, 28, Heverham Road, Plumstead	Fine £1 and 12/6 costs
8	Milk ...	Formalin	F. Corp, 3, Wellington Street, Woolwich	Fine 10/- and £2 2s. costs
9	Butter ...	Margarine	J. Finnimore, 83, Park Road, Plumstead	Fine £5 and 23/- costs
10	Milk ...	5 % added water ...	F. Webb, 16, Lakedale Road, Plumstead	Warranty proved
11	Milk ...	10 % added water ...	A. Handsley, 2, Stannary Street, S.E.	Dismissed—23/- costs
12	Milk ...	10 % added water (the Defendant was working for Handsley, and sold this Milk on his own account)	A. Bartrum, 80, St. Mary Street, Woolwich	Fine £1 and 2/- costs

No.	Article.	Nature of Adulteration.	Name and Address of Vendor.	Result of Proceedings.
13	Milk ...	Formalin	E. Wait, 53a, High Street, Plumstead	Fine 10/- and 12/6 costs
14	Milk ...	Formalin	H. Creed, 1, Park Lane, Charlton	Fine £3 and 12/6 costs
15	Milk ...	24 % added water ...	H. Brooks, 2, Richmond Place, Plumstead	Fine £4 and 12/6 costs
16	Milk ...	5 % added water ...	E. Abbott, 2, James Street, Woolwich	Fine £1 and 12/6 costs
17	Brandy ...	Not wholly Grape Spirit	G. Wyndham, 43, Hare Street, Woolwich	Withdrawn
18	Brandy ...	Not wholly Grape Spirit	W. Ramsay, "Old Mill," Plumstead Common	Withdrawn
19	Brandy ...	Not wholly Grape Spirit	R. Sawer, 120, High Street, Woolwich	Withdrawn
20	Brandy ...	Not wholly Grape Spirit	Fletcher, 158 Plumstead Common Road	Withdrawn
21	Milk ...	7 % added water ...	C. Goodfellow, 14, Dicey Street, Woolwich	Fine £2 and 12/6 costs
22	Butter ...	Margarine	J. Hampton, 228, High Street, Plumstead	Fine £5 and 23/- costs
23	Milk ...	6 % fat abstracted ...	E. Jones, 375, Wandsworth Road,	Fine £2 and 23/- costs
24	Milk ...	17 % added water ...	R. Pearce, 177, Plumstead Common Road	Dismissed
25	Butter ...	Foreign fat	J. Callaghan, 228, Albert Road, North Woolwich	Fine £3 and 12/6 costs
26	Milk ...	10 % added water ...	W. Woolsey, 118, Swingate Lane, Plumstead	Fine £3 and 23/- costs

TABLE XVIIIA.—*continued.*

No.	Article.	Nature of Adulteration.	Name and Address of Vendor.	Result of Proceedings.
27	Milk ...	31 % added water ...	A. Jemini, 50, Beresford Street, Woolwich	Fine £3 and 23/- costs
28	Milk ...	10 % fat abstracted ...	D. Large, 6, Herbert Road, Plumstead	Dismissed—warranty proved
29	Separated Milk	3 % added water ...	H. West, 31, Benares Road, Plumstead	Fine £10 and 23/- costs
30	Milk ...	10 % added water, 5 % fat abstracted	C. Jones, 6, Florence Terrace, Plumstead	Fine £5 and 23/- costs
31	Milk ...	7 % added water and ·3 % of Borates	D. Large, 6, Herbert Road, Plumstead	Dismissed—warranty proved
32	Milk ...	7 % added water and ·7 % Boric Acid	M. Bayley, Middle Park Farm, Eltham	Fine 10/- and £3 3s. costs
33	Butter ...	5·3 % excess of water ...	C. Longstaffe, 16, Stratton Terrace, Plumstead	Fine 10/- and 12/6 costs
34	Butter ...	Margarine	G. Williams, 125, Abbey Wood Road, Plumstead	Fine £1 and 23/- costs
35	Milk ...	5 % added water ...	J. Johnson, 2, Delvan Street, Woolwich	Fine 10/- and 12/6 costs
36	Milk ...	13 % added water ...	J. Jones, 34, Durham Road, Plumstead	Fine £2 and 12/6 costs
37	Milk ...	7 % added water ...	F. Thurston, 24b, Glyndon Road, Plumstead	Fine £3 and 12/6 costs
38	Milk ...	9 % added water ...	J. Wyatt, 141, Albert Road, North Woolwich	Fine £1 and 12/6 costs

TABLE XIX.

Food Seized or Surrendered by Owners as unfit for consumption.

Articles.	Quantity of Seizure.	Date of Seizure.	Remarks.	Reason.
ork	24 lbs. ...	13th Jan....	Surrendered	Tuberculosis
ork	9 lbs. ...	13th Jan....	,,	,,
ork	26 lbs. ...	13th Jan....	,,	,,
ork	69 lbs. ...	20th Jan....	,,	,,
ork	68 lbs. ...	14th Feb....	,,	,,
ork	30 lbs. ...	7th March	,,	,,
ork	74 lbs. ...	10th March	,,	,,
ork	52 lbs. ...	25th March	,,	,,
ork	22¾ lbs. ...	19th April	,,	,,
igs' Kidneys	16 lbs. ...	22nd April	,,	Tainted
ork	93 lbs. ...	22nd April	,,	Tuberculosis
ork	65¼ lbs. ...	26th April	,,	,,
ork	90 lbs. ...	11th May...	,,	Tuberculosis and Pleurisy
lackerel ...	2 baskets ...	19th May...	,,	Unsound
lackerel ...	5 baskets ...	30th May...	,,	,,
addocks ...	1 barrel ...	22nd June	,,	,,
igs' Plucks ...	10	28th July...	,,	,,
ork	24 lbs. ...	9th Oct. ...	,,	Tuberculosis
iver	8½ lbs. ...	13th Oct....	Seized ...	Echinococcus Cysts
pples ...	3 barrels ...	28th Oct....	Surrendered	Unsound
pples ...	1 barrel ...	28th Oct....	,,	,,
ears	2 boxes ...	30th Oct....	,,	,,
addocks ...	1 trunk ...	6th Nov. ...	,,	,,
addocks ...	1 box ...	9th Nov. ...	,,	,,
ork	208 lbs. ...	11th Nov....	,,	Tuberculosis
ananas ...	1 crate ...	13th Nov....	,,	Unsound
errings ...	1 trunk ...	13th Nov....	,,	,,
addocks ...	1 trunk ...	16th Nov....	,,	,,
prats ...	1 Barrel ...	25th Nov....	,,	,,
prats ...	4 Barrels ...	28th Nov....	,,	,,
ungs of Ox ...	10 lbs. ...	14th Dec....	,,	Tuberculosis
ork	Head, 4½ lbs.	22nd Dec....	,,	,,
igs' Livers ...	12 lbs. ...	22nd Dec....	,,	Echinococcus Cysts

TABLE XX.

List of Level Bakehouses.

Name.	Address.
Mrs. S. Fuller ...	48, Princes Road, Plumstead
Chadwell Bros. ...	60, Plumstead Common Road
C. Pullen	105, Plumstead Common Road
J. R. Allway ...	126, High Street, Plumstead
J. E. Porter ...	1, Riverdale Road do.
F. Bohmer ...	307, High Street, do.
A. E. Paine ...	14, Gunning Street, do.
A. Jewiss	68, Glyndon Road do.
E. Goodsell ...	102, Ann Street do.
A. Chapman ...	2, High Street, do.
J. Fletcher ...	92, Plumstead Road, do.
C. Letchford ...	109, do. do.
J. Clark	136, do. do.
J. Clark	152, do. do.
W. C. Hill	82, Bannockburn Road do.
— Tucker	2, Stratton Terrace, Bostal Lane, Plumstead.
L. Smith	122, Benares Road, Plumstead.
W. Jeffery	123, Burrage Road, do.
P. H. Mack ...	111, High Street, Woolwich
T. Newman ...	94, Wellington Street, Woolwich
A. Kutcher ...	100, High Street, do.
A. Bradshaw ...	3, Green's End, do.
F. W. Jackson ...	184, Elizabeth Street, North Woolwich
C. Haas	122, Albert Road do.
H. Myers	33, Samuel Street, Woolwich
Mrs. Dennis ...	90, Brookhill Road, do.
E. Ewell	36, Chapel Street, do.
F. Holcombe ...	45, Warwick Street, do.
G. West	10, Kingsman Street, do.
C. H. Wyatt ...	94, High Street, Eltham
E. Scriven ...	114, do. do.
F. Cook	142, do. do.
C. Worboys ...	5, The Parade, New Eltham
F. A. Finch ...	13, do. do.
E. Hobbs	6, Well Hall Parade, Eltham
R. Mosked ...	53, Cordite Street
J. H. Cocks ...	53, Lakedale Road

TABLE XXa.

List of Certified Underground Bakehouses.

Name.	Address.
S. Betchley	33, Eglinton Road, Plumstead
Merritt & Co.	50, Herbert Road, do
H. Gilder	14, Westdale Road, do
H. Percival	223, High Street, do
J. Werner	1, Park Road, do
S. Collin	58, Pattison Road, do
E. Phillips	53, Ann Street, do
F. Cox	46, Hudson Road, do
O. Degen	14, Conway Road, do
F. Farrier	30, Burrage Road, do
W. T. Akers	16, Armstrong Place, do
Dalton & Sons	13, Eton Road, do
W. Arnold	57, Plumstead Road, do
R. C. Davis	2, Crescent Road, do
A. E. Sims	24, St. James's Place, do
J. Colver	165, Sandy Hill Road, do
E. Fairbrother	16, Woolwich Common, Woolwich
B. Flood..	31, Beresford Street, do
L. Wilkenning	72, Henry Street, do
F. Ginger	8, Hill Street, do
W. C. Clothier	51, Albion Road, do
A. E. Smith	23, George Street, do
J. Franklin	21, Albion Road, do
A. Hills	32, Church Street, do
Mrs. Attenborough	60, Sand Street, do

TABLE XXB.

List of Factory BAKEHOUSES.

Name.	Address.
J. Fletcher	57, Burrage Road, Plumstead
J. Fletcher	92, Plumstead Road, Plumstead
T. Newman	94, Wellington Street, Woolwich
Royal Arsenal Co-operative Society	127 to 153, Powis Street, Woolwich
J. Alderton	16, Swingate Lane, Plumstead
G. Mackintosh	Warwick Terrace, Plumstead Common
J. Werner	1, Park Road, Plumstead

TABLE XXI.

List of Slaughterhouses.

No.	Name of Owner.	Situation.
1	Eliza Biggs	168, High Street, Eltham
2	Joseph Leech	78, Frederick Place, Plumstead
3	H. T. J. Reed & J. W. Funnell ..	25, Parry Place, Plumstead
4	Do.	6, High Street, Plumstead
5	Hedley Vicars..	41, Church Street, Woolwich
6	Walter Monk	14, Church Street, Woolwich
7	Frederick Bucknell	Love Lane (near Wellington Street), Woolwich
8	James and George Mitchell ..	25, Hare Street, Woolwich
9	Hedley Vicars..	30, Hare Street, Woolwich
10	H. T. J. Reed & J. W. Funnell ..	38, Plumstead Common Road, Plumstead
11	Henry Fretter	33, Herbert Road, Plumstead

TABLE XXII.

List of Cowhouses.

No.	Name and Address of Owner.	Situation.
1	William J. Miller	Keightley House Farm, Southwood Road, Eltham
2	Richard Higgs	Coldharbour Farm, Chislehurst
3	John and Alfred Low, Avery Hill Farm, Eltham	Park Farm, Eltham
4	W. F. Corp	Lyme Farm, Eltham
5	E. Fisher & Sons Crescent Farm, Sidcup	Belmont Park Farm, Eltham
6	John Grace	Pippinhall Farm, Eltham
7	William Ridewood	Chapel Farm, Eltham
8	George Keen	Clay Farm, New Eltham
9	Maurice Bayley	Middle Park Farm, Eltham
10	Harry Furber	Victoria Road Farm, Southend, Eltham
11	William Killick	52, St. James's Place, Plumstead
12	W. F. Corp, Lyme Farm, Eltham	13, Princes Road, Plumstead
13	Henry Woolsey	50, Francis Street, Plumstead
14	F. W. Webb	16, Lakedale Road, Plumstead
15	W. Ridewood, Chapel Farm, Eltham	3, Ripon Road, Plumstead
16	F. G. Cock	13, Raglan Road, Plumstead
17	Lambeth Bros.	1, Griffin Road, Plumstead
18	John Charles Terrington, 117, Shooters' Hill Road, Blackheath	Rear of 14, 15 and 16, Pellipar Road, Woolwich

TABLE XXIII.

List of Milk Sellers.

No.	Name.	Address.
1	Morley, Ernest	12, Villas Road
2	Perrett, E. N.	2, The Parade, New Eltham
3	Wilson, F.	13, Ripon Road
4	James, J. R. W.	26, Parry Place
5	Webb, F. W.	58, Brewery Road
6	Balster, H.	97. Plumstead Common Road
7	Carr, Emma	46, King Street
8	Hutchford, J.	61, High Street, Woolwich
9	Finnimore, J. A.	83, Park Road
10	Steel, J. C.	23, King Street
11	Palmer, W. C.	127, Plumstead Road
12	Jeffery, A.	147, Plumstead Road
13	Jennings, F.	52, Plumstead Road
14	Jeal, W. H.	139, Plumstead Road
15	Handsley, A.	68½, Bloomfield Road
16	Squirrell, C.	57, Church Street
17	Ferdinand, J.	102, Raglan Road
18	Cock, F. G.	
19	Sheggs, E.	54, High Street, Woolwich
20	Espline, G.	48, High Street, Woolwich
21	Morris, E.	2, James Street
22	Royal Arsenal Co-operative Society	15, Brewery Road
23	Do.	Lakedale Road
24	Do.	143, Powis Street
25	Do.	Herbert Road
26	Do.	147, 151, Powis Street
27	Fletcher, J.	92, Plumstead Road
28	Brooks, H.	2, Richmond Place
29	Dalton & Son	13, Eton Road
30	Smith, H.	30, High Street, Eltham
31	Miller, Mr.	Southwood Road, New Eltham
32	Woolsey, H.	50, Francis Street, Plumstead
83	Howe, J. H.	82, High Street, Eltham
34	Brett, T.	1, Ordnance Road
35	Russell, N.	96, Macona Road
36	Pearce, Robert	Sydwin Dairy, The Slade
37	Gammon, ...	106, Sandy Hill Road
38	Crouch, F. C.	31, Riverdale Road
39	Dorgan, T. C.	59, Woolwich Road, Charlton
40	Hawkins, E. M.	2, St. Nicholas Road
41	Furber, Harry	"Southend," Eltham
42	Dickins, George	67, Reidhaven Road
43	Betchley, Sidney	38, Eglinton Road

TABLE XXIII.—*(continued).*

No.	Name.	Address.
44	Bailey, F. Henry	32, Durham Road
45	Large, John	6, Herbert Road
46	Hiscock, C.	315, HighStreet, Plumstead
47	Concepris, A.	282A, High Street, Plumstead
48	Dalton, G.	55, Eglinton Road
49	Jones, William	87, Plumstead Road
50	Buckley, Mary	28, Conway Road
51	Bamford, A.	
52	Jones, A. C.	6, Florence Terrace
53	Vaughan, J. C.	36, Armstrong Street
54	Green, Robert	13, Saunders Road
55	Butter & Sons	49, The Common
56	Budery, Isaac	106, Bloomfield Road
57	Reed, Ruth	120A, Plumstead Road
58	Moran, S. A.	42, Mulgrave Place
59	Holcombe, T.	45, Warwick Street
60	Ward, Samuel	1, Nightingale Vale
61	Read, H. G.	
62	Mack, P. H.	111, High Street, Woolwich
63	Surman, M. A.	68, Beresford Street
64	Webb, Younger	10, Beresford Square
65	Morgan, E.	17, Lakedale Road
66	Dennis, Ellen	90, Brookhill Road
67	Barkham, E.	13, St. Mary's Street
68	Prowett, John	25, Plum Lane
69	Nicholls, Daniel	25A, Garland Street
70	Newman, F.	1, Orchard Terrace
71	Bayley, M.	Middle Park Farm, Eltham
72	Higgs & Son	Cold Harbour Farm, Eltham
73	Overton, W. E.	42, Glyndon Road
74	Coppen, W. H.	St. James's Place
75	Bassett, Thomas	61, Bannockburn Road
76	Yelland, W.	2, Westdale Road
77	Keen, George	Clay Farm, New Eltham
78	Godder, A.	229, High Street, Plumstead
79	Gray, S. H.	24, Ceres Road
80	Williamson, A. E.	46, Church Street
81	Wilton, M.	77, Powis Street
82	Avon Valley Dairy Co. ...	80, Dalwood Street, Camberwell
83	Corp, Fred....	Lyme Farm
84	Corp, Fred....	3, Wellington Street
85	Wilson, G. P.	22, Willmount Street
86	Pearce, R.	177, Plumstead Common Road
87	Christmas, H.	18, Wellhall Parade
88	Johnson, C. L.	2, Admaston Road
89	Collagham, ...	25, Brookhill Road
90	Dodson, Walter	138, Plumstead Common Road

TABLE XXIII.—*(continued).*

o.	Name.	Address.
1	Dowsett, James	105, Crescent Road
2	Wyatt, John	141, Albert Road, North Woolwich
3	Miller, W. J.	Southwood Road, Eltham
4	Davie, B.	67, Hanover Road
5	Baxter, H.	47, Artillery Place
6	Williams, J.	2, Ritter Street
7	Boston, Thomas	4, Francis Street
8	Payne, John	9, Parson's Hill
9	Dolphin, G.	89, Maxey Road
0	Rumsey, E.	186, Powis Street
1	Tyler, C. W.	142, High Street, Woolwich
2	Ludlow, D.	2A, Brewery Road
3	Woolsey, W.	118, Swingate Lane
4	Harrington, H.	187, Powis Street
5	Conolly, Denis	13, Beresford Street
6	Wilde, Ernest	13, New Road
7	Jenkins, John	28, High Street, Woolwich
8	Clements, E. J.	2, Cross Street
9	Goodsell, E.	307, High Street
0	Green, G.	17, Kashgar Road
1	Couzens, Jesse	10, Chapel Street
2	Oliver, Clara	101, Sand Street
3	Earl, J. P.	24A, Glyndon Road
4	Bollen, W.	1, Warwick Terrace
5	Brown, C.	317, High Street, Plumstead
6	Cross, C.	100, Roydene Road
7	Britton, H.	65, Maxey Road
8	Curtis, E.	10, Eltham Cottages, Abbey Wood
9	Ridewood, W.	116, High Street, Eltham
0	Radbourne, A.	48, Lower Woolwich Road
1	Rose, C.	64, Hargor Road
2	Cameron, Rose	22, Sand Street
3	Wright, G.	10, Vicarage Road
4	Paine, A. E.	14, Gunning Street
5	Corp, W. F....	13, Princes Road
6	Evans, P.	16, Albion Road
7	Hawkes, George	94, King Street
8	Kellerman, C.	65, Wellington Street
9	Hoskins, J.	29, Wilmount Street
0	Trodd, W. J.	113A, High Street, Woolwich
1	Green, Sidney	6, Samuel Street
2	Rantom, E....	3, Rope Yard Rails
3	Hillyer, E. J.	27, Church Street
4	Tye, William	102, Raglan Road
5	Gammon, W.	106, Sandy Hill Road
6	Brittle, Marie	9, Parson's Hill
7	Hamer, Thomas	17, Lakedale Road

TABLE XXIII.—*(continued).*

No.	Name.	Address.
138	Squirrell, John	57, Church Street
139	Butter & Sons	10, Jackson Street
140	Hassan, Fred.	182, Elizabeth Street
141	Ames, Arthur	52, Raglan Road
142	Holmes, Blanche	22, Glyndon Road
143	Hobbs, E. J.	6, The Parade, Well Hall
144	Howard, E....	80, Benares Road
145	Moss, Albert	7, Hinstock Road
146	Ranger, F.	89, Brookhill Road
147	Needham, E.	94, High Street, Woolwich
148	Hill, Mary	82, Bannockburn Road
149	Flood, F. A.	31, Beresford Street
150	Webb & Co.	16, Lakedale Road
151	Rowland, G.	2, Wickham Lane
152	Finch, G.	13, The Parade, New Eltham
153	Millar, John	"Temba," New Eltham
154	Young, Lily	11, Armstrong Street
155	Wilson, J.	1, Ordnance Road
156	Evans, P.	16, Albion Road
157	Cooke, S.	23, George Street
158	Palmer, D.	46, Church Street
159	Davis, H.	170, Albert Road
160	Willis, H.	2, Ritter Street
161	Weat, W. H.	49, Lakedale Road (rear of)
162	Heaslip, M.	12, Drew Road, North Woolwich
163	Hoare, J.	28, Heverham Road
164	Phipps, H.	15A, Sand Street
165	Higgs, J.	31A, Plumstead Road
166		24B, 26B, Glyndon Road
167	Jemini, A.	50, Beresford Street
168	Hutchins, H.	"Ashurst," Shooters Hill
169	Campion, James	54, High Street, Eltham
170	Day, W.	147, Plumstead Road
171	Davies, W.	153, High Street, Plumstead
172	Wright, C.	82, Plumstead Road
173	Bennett, Rose	22, Glyndon Road
174	Hiscock, E....	14, Blenheim Terrace
175	Weston, E.	83, Station Road
176	Johnson, A....	26, Prospect Row
177	Boasden, L.	1, Walmer Road
178	Jones, John	34, Durham Road
179	Hudson, C.	68, Wellington Street
180	Williams, E.	12, Thomas Street
181	Campion, H.	105, Pattison Road
182	Reynolds, C.	10, Basildon Terrace
183	Goodsell, R.	102, Ann Street

Appendix I.

Measles.

Results of Early Closure of School Classes.

Measles is an infectious disease very fatal to children, and consequently special efforts have been made to prevent the spread of the infection and lessen the mortality.

Difficulty in dealing with Measles. Owing to the fact that the disease usually begins like a common cold, that the rash does not appear till the fourth day, and that Measles is very infectious in the early stage before the rash comes out, the usual methods of isolation generally fail to arrest the spread of infection, being adopted too late to be of benefit.

Object of closure.—Like other infectious diseases the spread of Measles is greatly assisted by the aggregation of children in elementary schools, and it has generally been held by Medical Officers of Health that if on the appearance of Measles in a school, steps were taken not only to exclude the patients, but all contacts with the patient who might be incubating the disease, its further progress would be arrested. For this purpose, notifications have been obtained from school teachers of children absent on account of Measles, and when several cases were notified, indicating a decided outbreak, steps have been taken to close the whole school, or the affected classes. It was soon found however, that if closure was not effected until several cases had occurred, it was practically valueless, because all the susceptible children were infected before the class was closed. The only way to make closure successful appeared to be to close a class directly the first case was notified and so exclude the children, who had already been infected by the first case, from attending school when they were beginning to sicken.

System of closure adopted.—It was consequently arranged between Dr. Kerr, the Medical Officer of the London School Board (now M.O. for schools under L.C.C.) and myself, with the approval of the London School Board and your Council, to divide this Borough into two nearly equal districts, and in one of these to close any class in the infant department of an elementary school immediately a case of Measles was notified, and in the other only to adopt the ordinary measures of excluding children from infected homes.

The investigation began in January 1903, and it was decided to close in the following wards in the East District of the Borough; Glyndon, Central, St. Margaret's, St. Nicholas and Eltham, and not to close in the remaining wards in the western half.

On receiving a notification that a child was absent from school on account of Measles, the Sanitary Inspector straightway visits the house and enquires as to the grounds for thinking it is a case of Measles, and obtains particulars. If the information as to the diagnosis is not conclusive and no medical man is in attendance I

have myself called to see the patient. When satisfied that the case is one of Measles, a letter is written to the school Medical Officer asking him to close the class for a certain period varying from six to fifteen working days (ten to 21 days interval) according to circumstances. The average total period of closure in 1904 was under 13 days (including only about 9 working days). When it was known that a large proportion of the children in a class had had Measles, only those children have been excluded who were stated not to have already suffered from the disease.

Results of investigation.—The appended tables summarise the results of the investigation. They compare notifications and deaths in the West or non-closure district with those in the East or closure district, both for the period January 1903, to September 1905 inclusive and for the two preceding years 1901 and 1902, when early closure was not enforced at all.

Tables 1 and 2 shew the age incidence of notifications and deaths in each district and during each period. Table 3 shews the wards and their populations in each district together with the total cases notified in each district and the deaths in each ward during 1903 to 1905 (September). Table 4 shews the schools in each district, with the numbers on the roll and the cases notified during 1903-5 (Sept.). Table 5 shews the same items for 1901-2. The notifications for the schools only include children attending school. The notifications of each ward include children not attending school who have been notified by school teachers, owing to brothers or sisters being excluded on their account, and also a few cases notified by parents or others. Table 6 shews the notifications and death rates for each district in each period of time i.e., before and after closure was commenced.

The following facts appear from the investigation :—

1. The largest number of cases notified was between the ages of five and six years, and the next largest number between four and five.
2. Over three-fourths of the cases notified were between three and seven years of age.
3. Closure appears to have no appreciable effect on the age incidence.
4. More than half the deaths were in children under two years of age, and only two out of 123 were in children over seven.
5. During the two years (1901 and 1902) preceding closure, the notification rate was much higher in the east or closure district than in the west or non-closure district, viz., as 21·5 to 15·4.
6. There was a great increase of notifications during the second period, 1903-5. In the west or non-closure district the notification rate increased from 15·4 to 29·6, and in the east or closure district from 21·3 to 31·4.
7. During 1903-5 there was a higher rate of notifications in the closure district than in the non-closure (31·4 compared with 29·6).
8. Comparing the two periods of time before and after closure commenced, in the latter period there was an increase of

notifications of nearly 100 per cent. in the non-closure district, but the increase in the closure district was only 50 per cent.

The death rates in the two districts during 1901-2 were nearly equal. There has been a marked reduction in the death rate during 1903-5, but this reduction has been somewhat less in the closure district than in the non-closure. The number of deaths, however, in each district is too small to draw from them reliable comparisons.

There has been a striking reduction in the death rate from Measles in the Borough during the last five years, both as compared with the preceding years and with London during the same period. This is shown by the following table :—

	Death rates from Measles per 1000 population.	
	Woolwich Borough.	London.
1891–5 ...	0·51 ...	0·59
1896–1900 ...	0·67 ...	0·57
1901 ...	0·18 ...	0·43
1902 ...	0·33 ...	0·51
1903 ...	0·20 ...	0·40
1904 ...	0·22 ...	0·49
1905 ...	0·10 ...	0·36

The figures previous to 1901 are exclusive of Eltham, but the Eltham figures could not appreciably diminish the rate, though they might possibly increase it, as the Eltham population was then less than one-fifteenth that of Woolwich and Plumstead.

This remarkable reduction of deaths certainly is in no way related to school closure having commenced before early closure was begun. The death rate was naturally low in 1901, which succeeded a year of high death rate. In January, 1902, was commenced the practice of taking a card of instructions as to the hygienic treatment of Measles to every house when a case was notified. The usual biennial rise in the Measles death rate in 1902 was slight, and the subsequent years have shown a continued low mortality. It seems reasonable to conclude that the reduced mortality is a result of more hygienic treatment of children suffering from Measles, resulting from the instructions given by card distribution.

Why Closure has not been more successful.—Although closure of classes appears to have had the effect of greatly limiting the increase of Measles in the eastern district compared with the western, it must be admitted that the total result of closure has been much less than might have been hoped for. The reasons for this are not far to seek. There is no satisfactory system by which a teacher becomes aware of the cause of the absence of a pupil. If no note is received from a parent, she is not allowed to send a child to the house, but is usually dependent on a hearsay report from any child who lives near. The result is that, even when the cause of illness in a child is known at home, it is frequently not known at the school till the expiration of the ten days incubation period, during which closure should take effect to be of value. The obtaining of early information depends to a large extent on the interest and diligence of the head teacher in

excluding cases af infectious disease, whereas some teachers, even without closure, have been most successful in checking the spread of infection, from others information is seldom obtained until several cases have commenced.

In addition to this, parents do not call in medical attendance in about half of the cases of Measles that occur, and consequently are often ignorant of the existence of the infection, and probably in many cases are willingly ignorant.

It is no wonder then that early and satisfactory information of the occurrence of cases is often not received. In many instances the first case in a class is not heard of at all, and more often still it is not notified until too late to be of service. viz., until the first crop of cases has begun to sicken, and have attended school in an infectious state.

What is required to make closure more successful is improved means of gaining early information of the occurrence of cases of infection. The school teachers have not the time to do this satisfactorily. Probably it could best be done by making a notification of all infectious diseases compulsory on parents, and throwing upon them the onus of becoming aware that the disease was infectious. This would no doubt involve the provision of medical attendance free of charge for diagnosis purposes. But, a useful, if less complete means of gaining the necessary information would be the provision of trained nurses to visit immediately any children absent from school and to report any suspicious cases, which could then be visited by the School or Borough Medical Officer. Such a staff would be beneficial in many ways as health visitors.

Difference of incidence on the east and west districts.—It has been seen that in the two years preceding the enforcement of early closing, Measles was much more prevalent in the east district than in the west, viz., as 21·3 to 15·4. Whether this was the normal condition of things before closure began in the east district I have no means of knowing, as there are no records of the notification of Measles in Woolwich and Eltham parishes prior to 1901. Certainly it does appear as though there was a less tendency for Measles to spread when it occurs in some of the schools in Woolwich parish (which is included in the west district) than in Plumstead parish (which comprises the chief part of the east district).

Conclusion.—Before finally deciding that early closure has succeeded or failed, it seems desirable to pursue the investigation yet farther. As the great majority of children excluded are under six years, the interference with school attendance is not of a serious nature. Indeed, it would probably diminish the mortality from Measles if children were not allowed to attend school at all until they were at least five years of age. There is no doubt that in a large proportion of cases the infection of measles is contracted at school and brought by children attending school to the younger members of the family not attending, among whom Measles is so fatal. Now, obviously, if the age of school attendance were raised by one or two years, the number of families of young children, none of whom attended school, would be increased in proportion, and a large number of young children who are now exposed to the risk of infection would be comparatively safe.

Non-Closure on West District.								Closure on East District.							
Ages.	1901	1902	Total.	1903	1904	1905 to Sept.	Total.	Ages.	1901	1902	Total.	1903	1904	1905 to Sept.	Total.
0—1	1	—	1	2	6	3	11	0—1	6	2	8	4	14	4	22
1—2	4	8	12	3	19	7	29	1—2	6	16	22	12	33	8	53
2—3	3	2	5	3	29	9	41	2—3	4	14	18	19	38	9	66
3—4	11	17	28	21	82	13	116	3—4	23	37	60	50	84	32	166
4—5	27	33	60	52	153	32	237	4—5	26	73	99	97	176	59	332
5—6	21	37	58	77	139	75	291	5—6	24	94	118	101	171	75	347
6—7	8	24	32	40	75	31	146	6—7	13	50	63	71	89	45	205
7—8	9	7	16	7	30	13	50	7—8	4	23	27	33	34	14	81
8—9	3	3	6	9	10	2	21	8—9	3	14	17	10	3	4	17
9—10	2	—	2	—	8	—	8	9—10	1	2	3	4	6	1	11
10 & over	1	5	6	3	13	1	17	10 & over	2	7	9	8	14	5	27
	90	136	226	217	564	186	967		112	332	444	409	662	256	1327

N.B.—A few cases included in Table III. are excluded in Table I. owing to their ages not being given.

TABLE II.

DEATHS, 1901—1905 (TO SEPTEMBER).

Non-Closure District.								Closure District.							
Ages.	1901	1902	Total	1903	1904	1905 to Sept.	Total	Ages.	1901	1902	Total	1903	1904	1905 to Sept.	Total
0-1	2	3	5	1	5	..	6	0-1	1	10	11	2	4	2	8
1-2	6	5	11	6	4	2	12	1-2	2	5	7	5	2	3	10
2-3	2	3	5	..	2	1	3	2-3	1	4	5	2	..	..	2
3-4	1	2	3	1	1	..	2	3-4	2	1	3	4	2	..	6
4-5	2	1	3	1	1	..	2	4-5	..	4	4	1	1	..	2
5-6	..	1	1	1	1	..	2	5-6	1	1	2	..	1	..	1
6-7	1	..	1	..	..	..	..	6-7	..	..	..	..	3	1	4
7-8	..	..	..	..	..	..	..	7-8	..	..	..	1	..	..	1
8-9	..	..	..	..	..	..	..	8-9	..	..	..	..	..	..	..
9-10	..	..	..	..	..	..	..	9-10	..	..	..	..	..	..	..
10 & over	..	..	..	..	..	..	..	10 & over	..	..	..	1	..	..	1
	14	15	29	10	14	3	27		7	25	32	16	13	6	35

TABLE III.

Wards, Population, Notifications, and Deaths in each District during 1903/4/5 (to Sept.)

Wards.	Population, 1904.	Total Notifications, 1903/4/5 (to Sept.)	Deaths, 1903/4/5.
ɔsing District.			
t. Margaret's ..	12,337	..	15
Hyndon	9,609	..	6
Central	10,228	..	—
St. Nicholas ..	21,031	..	8
Eltham	11,153	..	6
	64,358	1,382	35
n-Closing District.			
Herbert	9,893	..	2
Burrage	9,726	..	4
St. George's ..	8,078	..	3
River	15,396	..	9
Dockyard	8,712	..	5
St. Mary's	9,788	..	4
	61,593	955	27

TABLE IV.

Schools, Numbers on Roll, and Cases Notified in each District, 1903/4/5 (to Sept.)

Non-Closure Schools.	Av. No. on Roll, 1903/4.	Cases Notified, 1903/4/5 (to Sept.)	Closure Schools.	Av. No. on Roll, 1903/4.	Cases Notified, 1903/4/5 (to Sept.)
Union Street .	589	62	Slade	962	155
St. Mary's	752	26	Earl Street ..	1008	99
Bloomfield Road ..	1631	209	Vicarage Road ..	1012	80
Elizabeth Street ..	793	74	Church Manorway ..	388	14
Plum Lane ..	757	102	Bostall Lane ..	894	49
Eglinton Road ..	1234	56	Conway Road ..	1346	60
Burrage Grove ..	963	133	Ancona Road ..	1221	67
All Saints' .. .	452	8	Ancona Road .. (Mentally defective)	33	—
Mulgrave Place ..	881	69	Timbercroft Road ..	403	79
Wood Street ..	1050	54	Central	585	63
St. Michael's ..	638	60	Purrett Road ..	1098	93
St. Peter's	638	2	High Street ..	1268	50
Fox Hill	227	2	Wickham Lane ..	485	34
Powis Street .. (Blind and Deaf)	27	—	Plumstead Road ..	846	45
Union Street .. (Mentally defective)	28	—	Deansfield Road ..	214	31
			Gordon	569	103
			Pope Street ..	588	60
			Roper Street ..	400	88
			Christchurch ..	110	--
			St. Patrick's ..	182	1
	10660	857		13612	1171

TABLE V.

Schools, Number on Roll, and Cases Notified in each District, 1901 and 1902.

Schools.	On Roll.	Cases.		Total
		1901.	1902.	
Union Street	557	7	1	8
St. Mary's	752	1	20	21
Bloomfield Road	1805	29	28	57
Elizabeth Street	763	3	33	36
Burrage Grove	1005	13	16	29
All Saints'	452	1	..	1
Plum Lane	396	1	36	37
Eglinton Road	1290	10	3	13
Mulgrave Place	796	..	37	37
Wood Street	1152	25	10	35
St. Michael's	638	43	..	43
St. Peter's	638	1	..	1
Fox Hill	89	..	..	..
Powis Street	322	13	..	13
Union Street (Ment. Defect.)	28	..	..	..
	10683	147	184	331

Schools.	On Roll.	Cases.		Total
		1901.	1902.	
Slade	1182	43	26	69
Earl Street	1045	3	59	62
Vicarage Road	1036	23	41	64
Conway Road	1428	2	16	18
Ancona Road	1221	1	69	70
Timbercroft Road ..	433	..	..	..
Central	585	2	33	35
Purrett Road	1380	9	79	88
High Street	1269	45	8	53
Wickham Lane	485	..	11	11
Plumstead Road	937	8	45	53
Gordon	389	..	2	2
Pope Street	595	..	10	10
Christchurch	110	..	7	7
Roper Street	400	..	..	..
St. Patrick's	182	..	..	..
Ancona Road (Ment. Defect.)	33	..	..	..
	12710	136	406	542

TABLE VI.

Summary of Report.

Schools in West District.

Cases Notified 1901/2	.. 331 ..	Rate 15·4
,, ,, 1903/4/5 (to September)	.. 857 ..	,, 29·3

Schools in East Distrtct.

Cases Notified 1901/2	.. 542 ..	Rate 21·3
,, ,, 1903/4/5 (to September)	.. 1171 ..	,, 31·3

Notification Rates are calculated per 1,000 on Roll per year.

West District.

Deaths 1901/2	.. 29 ..	Rate 8·5
,, 1903/4/5 (to September) ..	.. 27 ..	,, 6·1

East District.

Deaths 1901/2	.. 32 ..	Rate 8·3
,, 1903/4/5 (to September) ..	.. 35 ..	,, 6·7

Death Rates are calculated per 1,000 average annual Births.

APPENDIX II.

Report of Medical Officer of Health presented to the Public Health Committee on Wednesday, 10th January, 1906.

Result of Voluntary Notification of Zymotic Enteritis, July 1st to 30th September, 1905.

Zymotic Enteritis may be defined as a communicable disease of which the prominent symptoms are diarrhœa, vomiting, and general depression, and which occurs mainly in the latter part of the summer and early autumn. Every case of Zymotic Enteritis is no doubt a source of infection to others, but it is not yet settled whether horse dung, the soil of the ground, and any collection of filth is not also a possible source of infection. It is undecided what is the specific germ of the disease, and whether, indeed, it is not caused by several different germs. In a Report made to your Council on Summer Diarrhœa in 1904, I recommended that the same precautions should be taken with every case of Zymotic Enteritis as with Enteric Fever. For this purpose it was necessary to know of the existence of cases, so that the houses might be visited, and the necessary directions given as to isolation, cleanliness, and disinfection. The Council accordingly decided to pay for voluntary notifications of the first case of Zymotic Enteritis occurring in a family during the months of July, August, and September, and the Tables I. to VI. summarise the notifications received, and the results of the enquiries made.

Altogether 212 cases were notified, of whom 38 died, giving a case death rate of 18 per cent. 56 deaths occurring during the quarter were certified to be from diarrhœa or Zymotic Enteritis, so that 18 children died of this disease who were not notified. It appears therefore that about two-thirds of the cases for which medical attendance was called in were notified. Most cases were notified within three or four days of commencement of illness.

Age Distribution. Table I. shows that nearly half the cases notified were between 3 and 12 months of age. The largest number in any three months being between 3 and 6 months of age. 11 cases were notified over 5 years of age. From inquiries made, I have no doubt that the disease affects persons at all ages, but is much more serious under the age of 2, and again in extreme old age.

Local Distribution. As notification was voluntary, it was to be expected that some doctors would be more inclined to notify than others, and this will necessarily affect the local distribution as indicated by notification, and consequently too much reliance must not be placed on the figures given for the Wards.

The highest number of cases proportional to population were in the North River, Dockyard, and St. George's Wards, and the lowest in the Central, Herbert, and Burrage Wards. North Woolwich has for the past five years had a specially high incidence of diarrhœa.

Table 3 shows the condition of the houses affected as regards crowding and cleanliness. Only 11 houses were found to have more than 2 persons to a room, but 45 more were found to have more than 1½ persons to a room, 39, or 18 per cent. were found more or less dirty.

Table IV. shows the manner of feeding of all cases under one year of age. Only 15, or 12 per cent. were fed on the breast alone, and 10, or 8 per cent. on breast, and other food. The remaining 82 per cent. were fed on fresh cow's, or Nestle's condensed milk, one only having milk bought as sterilized milk. Thus 20 per cent. were fed wholly or partially on the breast. In an inquiry made last year, it appeared that of average children, 82 per cent. were fed wholly or partially on the breast. It follows that an artificially fed child is 18 times more likely to be affected with diarrhœa than a child fed only or partially at the breast. In my report on summer diarrhœa previously referred to, I estimated that an artificially fed child was 45 times more likely to die of diarrhœa than a breast fed child.

Table V. shows the cause of weaning of 120 cases which were weaned under the age of six months. It appears from this Table that only 7 children were weaned on account of the mother going to work. 98 children were weaned owing to the failure of the milk, from death, or illness of the mother, or from other cause.

Action taken. All the cases notified were visited—most by the Lady Inspector, and a large number also by myself. A leaflet of instructions was left and explained. This leaflet is appended to the Report. On it instructions are given as to cleanliness, feeding of infants, disinfection, and other matters. Mothers were particularly directed to wash their hands before preparing baby's food. If any insanitary conditions were found at the house the usual steps were taken for remedying them.

Source of Infection. Some probable source of infection was discovered in 41 cases, viz.: mother in 2 ; sister, 2 ; brother, 3 ; wife, 1 ; lodger, 6 ; neighbour, 19 ; visitor, 1 ; imported from outside the Borough, 1. Flies were specially complained of in 2 cases.

Duration of Illness. The average duration of illness in the cases that recovered was six and one-third days, and in those that died eleven and one-half.

Results of Notification. It is always difficult to estimate the results of a sanitary measure taken. Improvement may be due to many causes, and not necessarily to the one under consideration. Failure to obtain improvement, on the other hand, may occur through opposing conditions, in spite of the particular sanitary measure having had its due effect. As far as can be judged, however, the effect of notification, and the accompanying steps, have been decidedly

satisfactory in diminishing the mortality from diarrhœa in Woolwich. This is shown in Table VII., which gives death rates from diarrhœal diseases in the summer quarter, and infantile death rates for the year in London and Woolwich during the past five years. With this is also given the maximum temperature of the 3 ft. ground thermometer, and the average temperature of the same thermometer for the 13 weeks of each summer quarter of the years 1901 to 1905.

It is well known that diarrhœa is much more prevalent during warm summers than cool ones, and it has been shown that the greatest prevalence follows the highest point reached by the 3 ft. ground thermometor. It would appear that the maximum height of the 3 ft. thermometer is a more important point to consider than the average temperature during the quarter. The summer quarter of 1904 had the highest maximum of the past 5 years, although the average temperature was highest in 1901. Both in London and Woolwich the diarrhœal mortality was much higher in 1904 than in any year since 1900. The maximum temperature in 1905 was a little lower than in 1904, but otherwise the highest in the past five years. The average temperature was higher than in 1904, but lower than in 1901. It was therefore to be expected that the diarrhœal mortality would nearly have reached that of 1904. As a fact, however, in Woolwich it was less than half of 1904 and less than that of 1901. In London there was also a reduction, but not so great as in Woolwich. It is a striking fact that in spite of the high summer temperature, the infantile mortality during the past year has been lower than that of any year on record. This I attribute partly to the notification of summer diarrhœa, but even more to the systematic education on infant feeding of all mothers of children requiring it who were born during the year. This has been possible on account of the receipt from the Registrars of weekly returns of births registered during the week.

Diagnosis. One objection made to the desirability of notifying this disease, was that as diarrhœa is a common symptom of other diseases, and also a result of errors of diet, drugs, etc., many cases of diarrhœa would probably be notified which were certainly not of an infectious nature. Experience has shown that little, if anything of this kind took place.

Only 11 cases over 5 years of age were notified. Probably a few cases were notified which were not Zymotic Enteritis, but this is necessarily the case in every system of notification.

Conclusion. I consider that the results of the experiment justify its repetition for three more years, and would therefore recommend that the payment for notification of Zymotic Enteritis be continued during the three ensuing summer quarters.

Notified Cases of Zymotic Enteritis.

(July 1st to September 30th, 1905.)

TABLE I.

Age and Sex.

Total.	Males.	Females.	Under 3 months.	3—6 months.	6—9 months.	9—12 months.	Total under 1 year.	1—2 years.	2—5 years.	Over 5 years.
212	112	100	18	39	34	29	120	56	25	11

TABLE II.

Distribution in Wards and Parishes.

Woolwich Parish		111
River Ward—North	22	
,, ,, South	14	
Dockyard Ward	33	
St. Mary's ,, ...	14	
St. George's ,, ...	28	
Plumstead Parish		76
St, Nicholas Ward	26	
Central ,, ...	9	
Glyndon ,, ...	11	
St. Margaret's ,, ...	16	
Herbert ,, ...	5	
Burrage ,, ...	9	
Eltham Parish		25
Total for Borough		212

TABLE III.

Houses Affected.

Total.	Number under 1½ to a room.	Number with over 1½ and under 2 to a room.	Number with over 2 to a room.	Number Clean.	Number Dirty.	Not stated.
212	156	45	11	166	39	7

TABLE IV.

Principal Diet of Cases under 1 year.

Total cases		122
Breast only	15	
Breast and other food	10	
Fresh Cows' Milk	54	
Nestle's Condensed Milk	34	
Dried Milk	3	
Sterilized Milk	1	
Other Food	2	
Not Stated	3	

TABLE V.

Cause of Weaning of Cases under 6 months of age.

Total cases weaned under 6 months.	Death of Mother.	Illness of Mother	Failure of Milk.	Mother at Work.	Other Causes.
120	2	14	82	7	15

TABLE VI.

No. of Cases notified each week, with mean temperature of 3 ft. ground thermometer during week.

			July.			
Week ending	8th	15th	22nd	29th		
Cases	3	3	10	8		
Temperature	60·68	62·17	63·59	64·21		
		August.				
Week ending	5th	12th	19th	26th		
Cases	24	34	27	36		
Temperature	64·19	63·04	62·62	62·37		
		September.				
Week ending	2nd	9th	16th	23rd	30th	
Cases	30	12	11	9	4	
Temperature	61·33	60·97	59·96	58·47	57·43	

TABLE VII.

Diarrhœa, Infantile Mortality, and Temperature of Summer Quarter in London and Woolwich.

	District.	1901.	1902.	1903.	1904.	1905.
Deaths from Diarrhœal Diseases in Summer Quarter per 1,000 living	London ..	2·77	1·42	1·49	3·39	2·28
	Woolwich ..	2·76	0·97	0·96	4·52	1·72
Infantile Death Rate for Year (deaths under one year per 1,000 births)	London ..	148	139	130	144	—
	Woolwich ..	129	125	108	135	103
Maximum Average Temperature of 3 ft. ground thermometer in 13 weeks of Summer Quarter ..	.. ..	63·54	61·09	61·64	64·62	64·11
Average Temperature of 3 ft. ground thermometer in Summer Quarter..	.. ..	62·06	59·68	60·18	61·45	61·62

Appendix III.

Physical Deterioration and Alcoholism.

The Report of the Committee, presented to Parliament by command of His Majesty, states that :—

The abuse of Alcoholic Stimulants is a most potent and deadly agent of physical deterioration.

Alcoholic persons are specially liable to Syphilis, Tuberculosis and all inflammatory disorders.

Evidence was placed before the Committee showing that in abstinence is to be sought the source of muscular vigour and activity.

The lunacy figures show a large and increasing number of admissions of both sexes which are due to drink.

The following facts, recognised by the medical profession and placarded all over France by order of the Government, are published in order to carry out the recommendation of the Committee, and to bring home to men and women the fatal effects of alcohol on physical efficiency.

(1). Alcoholism is a chronic poisoning, resulting from the habitual use of alcohol (whether as spirits, wine or beer), which may never go as far as drunkenness.

(9). It is a mistake to say that those doing hard work require stimulants. As a fact, no one requires alcohol as either food or tonic.

(3). Alcohol is really a narcotic, dulling the nerves like laudanum or opium ; but is more dangerous than either, in that often its first effect is to weaken a man's self control whilst his passions are excited ; hence, the number of crimes which occur under its influence.

(4). Spirits, as usually taken, rapidly produce alcoholism, but milder alcoholic drinks, as beer, and even cider, drunk repeatedly every day produce, after a time, alcoholic poisoning with equal certainty.

(5). The habit of drinking leads to the ruin of families, the neglect of social duties, disgust for work, misery, theft and crime. It leads also to the hospital, for alcohol produces the most various and most fatal diseases, including Paralysis, Insanity, diseases of the stomach and liver and and Dropsy. It also paves the way to Consumption, and frequenters of public houses furnish a large proportion of the victims of this disease. It complicates and aggravates all acute diseases ; Typhoid Fever, Pneumonia and Erysipelas are rapidly fatal in the subject of alcoholism.

(6). The sins of alcoholic parents are visited on the children ; if these survive infancy they are threatened with Idiocy or Epilepsy and many are carried away by Tuberculous Meningitis or Phthisis (Consumption).

(7). In short, alcoholism is the most terrible enemy to personal health, to family happiness, and to national prosperity.

By order of the Borough Council,

L. JENKINS JONES, Mayor,
SIDNEY DAVIES, M.D., Medical Officer of Health.

Appendix IV.

Duties of the Clerks and Sanitary Inspectors re Infectious Diseases.

1. On receipt of notification of an infectious disease, the case is to be entered by the responsible Clerk in the proper register.

2. The Clerk will also arrange for removal to Hospital of such cases as are received by the Asylums Board, and whose removal is desired.

3. The Inspector of the district, or any other Inspector available will take a copy of the certificate to the home, and find out if removal is desired.

4. The Inspector will at the same time obtain full particulars as to the patient, family, house, and source of infection, on the special form provided, and at once give them to the Clerk for entry in the register.

5. In such cases as are removed to Hospital, the Clerk will see that the necessary directions are at once given for disinfection.

6. The responsible Clerk will send copies of the notification certificate to the Asylums Board, to the Head Teachers of the Schools affected, and to the P.M.O. of the Royal Arsenal, when Arsenal employees live in the home of the patient.

7. After disinfection the Clerk will give a certificate to Arsenal employees stating that the rooms affected with Scarlet Fever or Diphtheria have been disinfected. A disinfection certificate will also be issued to be presented by children, from a house infected with Scarlet Fever, stating that they may attend school after the lapse of one week. In cases of Diphtheria the Medical Officer of Health will give a special certificate of freedom from infection to children returning to school from infected houses.

8. As soon as intimation is received from the Isolation Hospital as to the return of a patient, the Clerk will send a copy of instructions as to precautions to be taken with respect to children returning from Hospital. He will also send word to the Head Teacher of the School affected, stating that the child may return to school a fortnight after return from Hospital.

9. When patients are not removed to Hospital, disinfection will not be performed until a certificate has been received from the medical practitioner in attendance that the patient is free from infection. After such certificate has been received, the Clerk will intimate to the Head Teacher of any school affected that the child may return a fortnight after disinfection has been performed.

10. Sanitary inspectors should insist on removal to Hospital of all such patients as cannot be properly isolated at their own homes. But whenever it is considered that effectual isolation can be obtained at home, and where the number of people in the house does not exceed the number of rooms, and the cleanliness and sanitary conditions are in all respects satisfactory, the Inspector should encourage home isolation, and the Medical Officer of Health will give a certificate to any Arsenal employee living in the house, for the P.M.O. of the Arsenal, that the patient can be effectually isolated at home; the employee will then be allowed to attend his work.

11. Special forms for information to be obtained are provided for the following diseases:--

(1) Scarlet Fever and Diphtheria;
(2) Enteric Fever;
(3) Puerperal Fever;
(4) Small Pox.

SIDNEY DAVIES,

Medical Officer of Health.

April, 1906.

H. Pryce & Son, Printers (T.U. Fed.), 33 & 35, Powis Street, Woolwich.

METROPOLITAN BOROUGH OF WOOLWICH.

AN ACCOUNT

OF THE

Infants' Milk Depot,

MAXEY ROAD,

BY THE

MEDICAL OFFICER OF HEALTH.

WOOLWICH:

H. PRYCE & SON, Printers (T.U. Federation), 33-35, Powis Street.

METROPOLITAN BOROUGH OF WOOLWICH.

INFANTS' MILK DEPOT.

The Infants' Milk Depôt has been established to diminish the high Infant Mortality which is due to improper feeding of Infants. In Woolwich during the past five years 119 out of every 1000 children born have died before the completion of their first year.

In Derby the Infant Mortality is about 150 per 1000, and from an enquiry, extending over 3 years, it has been found that while the mortality of the breast-fed children was only 70 per 1000, that of the children brought up by hand was 198, or nearly three times as great.

In Woolwich about 3,500 children are born every year and about 400 of these die in the first year.

An enquiry has shown that the great majority, 80 per cent., are fed at the breast for at least six months. About one-fifth, or 700 per year are brought up by hand, and the experience in Derby, as well as that in Woolwich, shows that the mortality amongst these hand-fed children is tremendous. If it is the same in Woolwich as in Derby, one-fifth of the hand-fed children, or 140, die every year before they are 12 months old, of whom it may be reasonably said 92 might have lived if they had been properly fed. The Infants' Milk Depôt will, it is hoped, go a long way towards obviating this yearly sacrifice of infant life. It must be remembered too, that for every child that dies in its first year there are probably about 9 children who live and grow up with injured health and diminished strength. The same means which it is hoped may ultimately save 90 lives every year, will also increase the health and strength of some 800 children, and enable them to become useful citizens instead of a burden upon the community.

Diligent enquiry by the Medical Officer of Health has shown that of 700 children who are every year brought up by hand in the Borough, the vast majority are *necessarily* so fed, the reason of this being the death, weakness or illness of the mother, making it impossible to suckle.

Now it is well recognised, and the above figures clearly show, that mothers' milk is far the best food for infants, and, if it were possible, the most satisfactory way of diminishing infant mortality from hand-feeding would be some means which would enable mothers to nurse their own children. Though by advice and instruction something may be done in this direction, no practical means are known which are likely to materially increase the ability of the mother to perform her natural function. Meanwhile the only alternative seems to be to provide a substitute which shall be "second best" to mothers' milk. The milk which is going to be prepared at this Depôt is the best substitute at present known.

For many years people who had the means have used specially

modified cows' milk as a substitute for breast feeding- Cows' milk differs materially from human milk. The principal difference is that cows' milk contains more proteids and less sugar, and the proteids or nitrogenous (tissue building) constituents are present in cows' milk in a different and more indigestible form. It is found by practical experience that diluting cows' milk with water, until the proteids are present in the same or less proportion than in human milk, is the best means of overcoming the latter difficulty; but in this way the strength of the fat and sugar is so much reduced that it is necessary to add additional cream and sugar. Thus a modification is produced whose composition agrees quite closely enough with that of human milk, and which is found by experience to be very well digested by infants.

As milk, after delivery, always contains a large number of germs, and frequently some of these are disease germs, it is necessary to heat the milk to such a temperature as to destroy the germs. This process is called sterilization or Pasteurization; sterilization being the heating to such a temperature as to absolutely kill all germs and other spores, and Pasteurization the heating to a temperature which kills germs of the common infectious diseases which are not spore-bearing, and the great majority of all germs present. It is obvious that the above processes cannot be carried out without considerable expense, and the provision of modified or humanized milk has, until recently, only been practicable for the richer classes.

It was at Fécamp, in France, some 12 years ago, that the first attempt was made to provide humanized milk for the poor, and the example was quickly followed in that country, so that now about 100 milk depôts exist there. In August, 1899, the first English depôt was opened at St. Helen's, Lancashire, and in June, 1902, the first London depôt at Battersea. The example is being slowly followed, chiefly in the North of England and Scotland. Woolwich is the fourth Municipal Milk Depôt to be opened in the County of London, but it has the honour of being the first to obtain Statutory Powers for that purpose, the other London Milk Depôts being carried on without statutory sanction.

In 1905, Woolwich promoted a Bill, which, among other things, authorised the Borough Council to establish, maintain, manage and carry on a depôt for the sale of sterilised and humanized milk for infants under 2 years of age; the depôt to be subject to the medical supervision of the Medical Officer of Health, and carried on in accordance with regulations to be approved by the Local Government Board. The Council have lost little time in using the powers thus conferred upon them, and, as soon as the offices used by the Council in Maxey Road were vacated on the opening of the new Town Hall, a part of them was set apart for a Milk Depôt.

The object of the Infants' Milk Depôt is not to supplant natural feeding, but to provide the only satisfactory substitute for this to children who cannot be fed by their own mothers. Every effort will be made to encourage breast-feeding and prevent the Depôt

The motto of the Fécamp Depôt is "Faute de Mieux;" that of the Woolwich Depôt is "Second Best" to mother's milk.

Further, the object of the Depôt is not to compete with the milk trade. The Act under which the Depôt is established prevents the sale of milk for use by any but children under 2 years of age, and the milk is chiefly intended for children under 12 months of age, though, no doubt, many children from 1 to 2 may use it with advantage. The working classes, of whom the great bulk of the population consists, are entirely unable to pay the trade charges for modified milk. At present, about half the infants in the Borough, who do not have the breast, are fed on condensed milk. It is thus seen there will be practically no competition with the trade in fresh milk. The Depôt seeks to supply pure modified milk free from germs, at the same price as ordinary milk; no trader can do this.

It follows that the Depôt will not and cannot be a paying concern, but as the number of its customers is necessarily limited, it cannot, on the other hand, appreciably increase the Borough Rates, and the small additional charge on these will be amply compensated by the gain in human life.

The Depôt consists of a small shop with counter where the customers will be supplied with the milk; a large room in which are carried out the processes of Pasteurization, cooling and bottle washing; and a dairy where the milk will be tested and modified and the bottles filled. The boiler is situated in a small separate room, and another room will be used for weighing babies, in order to see if they are making satisfactory progress, and if the milk supplied is suitable for them. All these rooms are on the ground floor and communicate with each other. The walls and floor of the shop, working room and dairy consist throughout either of cement, concrete, or tiles, and are thus capable of being thoroughly washed at any time with water. The walls of the dairy are tiled throughout, but in the other rooms the tiles only reach to a height of about 6 feet, the upper part of the walls being of cement, painted over. Any water falling on the floor passes swiftly, by channels, to the outside, where it discharges over a properly disconnected gully. The rooms are well lighted and ventilated, but at the same time are carefully protected from the entrance of dust.

The Sterilizer will allow 576 bottles to be Pasteurized at one time; it consists of a circular wrought iron chamber, 4 ft. long and 4 ft. in diameter, insulated and fitted with a door held in position by screw dogs, and with a suitable joint, which makes it steam tight. It has an iron trolley on which the bottles are placed; this runs on rails. The sterilizer is fitted with a sparge pipe discharging the steam at the bottom along the whole length; it is also fitted with a steam pressure gauge, safety valve, and two thermometers.

The Cooling Tank is made of one-eighth plate galvanized iron, all corners rounded, without any sharp angles. The plates are fused together by a special process, there being no rivets used. A perforated copper coil is fixed at the bottom underneath a movable rack by which the steam and water enter, and three

separate overflows fixed at various levels permit of cooling different quantities of bottles without unnecessary consumption of steam and water.

The Washing Tank is made in two divisions of one-eighth galvanized iron plate, without rivets, and has no sharp angles, all corners being rounded. A light iron rack is fixed in the bottom of one division to save breaking the bottles. On a small platform above this tank there is a turbine bottle-washer, driven by steam, to which brushes are attached. The other division of the tank is fitted with thirty-six jets which are connected with the water main. These are for spraying the bottles out after having been washed. Both divisions are fitted with a plug and overflow.

The tank, known as the Soaking Tank, is used for soaking dirty bottles when they first arrive in the Depôt. This is also fitted with a light iron rack to prevent breakages, made of one-eighth plate, all joints being fused, there being no square corners.

The Boiler is in a separate apartment cut off from the working part of the Depôt by a door. It is fitted with a donkey pump and supply tank. All the walls of this apartment are rendered hard and smooth. The benches used in the working rooms are covered with zinc. An apparatus has been fixed in one corner of the Depôt for cleansing churns and cans by a steam jet, and by hose pipes delivering either steam or water into the vessels.

The Dairy has marble benches. An "Alfa-Laval" separator is used for separating the additional cream required. Milk on arrival will be carefully strained through a "Ulex" strainer, which is so constructed that the milk passes through a fine wire gauze and cotton wool. All milk on receipt is tested by a "Gerber" tester.

There are two kinds of bottles in use, holding 8 oz. and 5 oz. These are inscribed with the Borough monogram, and fitted with necks to take the "Alu" stopper. These stoppers are small aluminium discs with an indiarubber band, expanded by a special machine; the stoppers are thrown away each time they are used.

The milk is brought from the farm in a special form of churn which protects it from contamination during transit.

The wire baskets used for the delivery of the bottles are smaller than those generally used in Milk Depôts. They hold either 6 or 9 bottles.

The indiarubber teats are made to fit the neck of the bottles sent out from the Depôt.

The Milk is to be obtained from a Farm in the Borough, situated on high ground, near Chislehurst, which is frequently inspected by the Council's Inspectors.

The Cows are out in the fields most of the year; the cow-sheds are supplied with Kent water; ventilated and lighted; well paved and carefully cleansed; the cows' udders and the men's hands are always washed before milking.

The Farm has been recently redrained under the supervision of the Public Health Department.

Arrangements have been made to have the produce of 3 Jersey cows giving milk with a high percentage of cream.

The cows are inspected twice yearly by a Veterinary Inspector employed by the London County Council. In this and other ways precautions will be taken to insure the milk being as pure as possible. But as, in spite of all precautions, milk occasionally conveys the germs of disease from cows suffering from very mild forms of illness, it is necessary to adopt the further precaution of heating the milk to a temperature that will destroy these germs. The milk will not be sterilized unless during hot weather. It will be Pasteurised *i.e.*, it will be raised to a temperature of 170 deg. for 15 minutes. Such a temperature kills harmful microbes and yet the physical changes in the milk are practically nil, and the temperature remains far below boiling point. Sterilized milk *may* occasionally cause scurvy. There is no evidence that Pasteurized milk ever does this.

Arrangements have been made for delivering the milk, which will constitute a new departure in municipal milk depôts. The Public Health Committee considered that the large extent of the Borough, stretching as it does 7 miles in one direction and 3½ in another, made it necessary either to have several distributing stations or to deliver the milk house to house. For various reasons distributing stations are unsatisfactory, so it was decided to provide a horse and cart to take the milk round to all who are willing to pay a small extra charge.

WEIGHING OF BABIES.—At the French Depôts, Gouttes de Lait, all the children fed by the Depôt are seen, weighed, and if necessary prescribed for by one of the medical staff. This practice is unfortunately impracticable with a Municipal Milk Depôt, except as regards weighing the children. It is hoped that at the Woolwich Depôt all children will be brought fortnightly to be weighed, their progress tested and the suitability of the milk confirmed or otherwise.

It now only remains to describe briefly the Process through which the milk goes from the time it arrives at the Depôt till its delivery. The milk will arrive about 7 a.m. The churn will be brought into the dairy and the milk tested by the "Gerber" apparatus to see how much cream it contains. A certain part of it will then be taken and the cream separated. The remainder will be strained through a "Ulax" filter and modified by the addition of milk-sugar for the younger ages, and cane-sugar for the older children, and by the further addition of water and as much of the separated cream as is necessary to bring the proportion of fat up to a fixed scale. The milk will then be passed into a special automatic bottle-filling apparatus, by which 4 bottles can be filled at one time. Three different modifications suitable for three different ages will be prepared, and the bottles will be filled with six varying amounts suitable for each of these ages. The bottles, when filled, will be closed with the "Alu" stopper, placed in baskets, and conveyed on the trolley to the sterilizer; the door will be shut, the steam turned on and the milk Pasteurized as described above; the

time having expired, the door will be opened and the bottles removed to the cooling tank and placed in water of about 120° F; cold water will then be turned on, which will gradually reduce the temperature of the bottles to about 53°. The bottles will then be ready for delivery. Some will be taken by the Depôt Assistant and delivered by cart, and the others will be kept in the cooling tank until they are fetched by messengers from the homes.

Full particulars will be obtained by one of the Lady Sanitary Inspectors as to every child to whom the milk is supplied, and all children will be frequently visited by the same Inspector. A fortnightly record of the progress of each child will be kept in a register.

The Staff consists of a Manageress, and a Male and Female Assistant.

MODIFICATIONS OF THE MILK.

Standard of Modification.	Age of Infant.	No. of Bottles per day.	Amount per Bottle in ounces.	Amount per day in ounces.
A ...	Under 1 month old ...	9	2	18
	1—2 months old ...	9	3	27
	2—3 months old ...	8	4	32
B ...	3—6 months old ...	7	5	35
C ...	6—9 months old ...	6	6	36
	9—12 months old ...	6	7	42

The following table, published by Dr. Newman, gives approximately the per centage composition of each modification compared with average human milk :—

	Human Milk.	Modification. A.	Modification. B.	Modification C.
Total Solids	12·50	9·53	11·05	12·49
Fat ...	3·70	2·51	3·28	3·86
Proteids ...	2.30	1·24	1·91	2·48
Lactose ...	6·20	5·49	5·45	5·56
Ash ...	0·30	0·29	0·41	0·59

CONDITIONS OF CONTRACT FOR MILK SUPPLY.

. The Contractor must be prepared to increase or diminish the supply within reasonable limits, at one day's notice from the Medical Officer of Health.

. All pails, strainers, railway churns, refrigerators, fittings and other vessels and implements brought into contact with the Milk shall be thoroughly inspected before being used, be properly cleansed, scalded, and dried immediately after being used.

. The cows shall be subject, if required, to a periodical veterinary inspection by a veterinary surgeon duly appointed by the Council, and the Contractor shall undertake not to supply Milk or Cream from any cow which is diseased, newly calved, or under physic.

. The udders and teats of the cows shall be carefully cleansed before milking, and the milkers shall wear clean, washable smocks, and wash their hands immediately before milking; and the utmost cleanliness shall be observed at every point connected with the cows, cow-houses, utensils and attendants.

. The Milk shall be carefully strained and cooled to at least 56° Fah. immediately after milking, over a Lawrence or other cooler of approved design.

. The Contractor shall undertake that the refrigerators and the in-flow and out-flow pipes, &c., are examined daily in order to see that everything is in thorough repair, and that there is no leakage.

. The Contractor shall at all times, in the management of the Cow-shed and Dairy, and the supply of the Milk, comply with any reasonable request of the Medical Officer of Health.

. Subject to these conditions being complied with, a certificate of approval will be given every month by the Medical Officer of Health.

NSTRUCTIONS AS TO THE USE OF THE DEPOT MILK—"SECOND BEST."

The Depôt Milk is intended only for infants who cannot be fed entirely at the breast, and WILL NOT BE SUPPLIED TO MOTHERS WHO WILLINGLY NEGLECT TO SUCKLE THEIR INFANTS. The breast is the best. Mothers who cannot feed their infants entirely should give the Depôt Milk in turn with the breast, or the milk by day and the breast by night. In this case a reduction in the ordinary charges will be made.

2. The Milk will be supplied in bottles in a basket, each bottle containing sufficient milk for one meal. For children under two months, nine bottles are sent; for other children, fewer bottles, but more milk in each.

3. The following are the charges for a full supply of the milk :—

For children under 6 months old 3d. per day, 1s. 6d. per week.
„ from 6 to 12 „ 4d. „ 2s. 0d. „
„ over 12 „ 5d. „ 2s. 6d. „

For children living outside the Borough an extra charge of 9d. per week will be made.

The Milk will be delivered at the house on payment of an additional sum of 3d. within and 1s. outside the Borough per week.

All payments must be made in advance.

4. The Depôt is open from 12 to 2 daily, Sundays excepted. On Saturday two days' supply is given.

5. Children sent for the Milk must be warned not to tamper with the stoppers of the bottles. On no account must a bottle be opened until the infant is ready to be fed.

6. Keep the Milk in a cool place.

7. Baby must be fed regularly by the clock, as follows : —

Infants under two months: Every two hours by day, and every four hours by night, *if awake* (6.0, 8.0, 10.0, 12.0 a.m., 2.0, 4.0, 6.0, 10.0 p.m., 2.0 a.m.—9 bottles).

Infants between two and three months: Every $2\frac{1}{2}$ hours by day, and once in the middle of the night if he wakes (7.0, 9.30, 12.0 a.m., 2.30, 5.0, 7.30, 10.0 p.m., 4.30 a.m.—8 bottles).

Infants between three and six months: Every three hours by day, and once at night if awake (7.0, 10.0 a.m., 1.0, 7.0, 10.0 p.m., 3.0 a.m.—7 bottles).

After six months gradually increase the interval between the bottles until they are only given every four hours by day, and not at all between 10.0 p.m. and 6.0 a.m. (6.0, 10.0 a.m., 2.0, 6.0, 10.0 p.m.—5 bottles).

8. When the hour for feeding arrives, place the bottle *unopened* in a basin of hot water (not hotter than the hand can bear) for five minutes. Then open and put a clean teat on the Depôt bottle; no other feeding bottle must be used. Feed slowly. Shake the bottle to distribute the cream.

9. When the Milk in a bottle is not finished at a meal, the remainder must *not* be kept for baby; a fresh bottle must

10. No other food should be given unless ordered by a doctor.

11. Immediately after use the bottle should be rinsed in cold water, and the teat should be thoroughly washed inside and out with soda and hot water, then rinsed in cold water, and kept in a cup of clean water till the next meal. The teat must be returned each day with the empty bottles.

12. All Depôt bottles, baskets and teats are the property of the Borough of Woolwich, and if not returned to the Depôt will be charged for at their full value. One penny each must be paid for broken bottles, and damage to baskets made good. Extra teats will be supplied if required for 3d. each.

13. In order to see if it is thriving, bring your baby to be weighed at the Depôt once a fortnight, on Tuesday or Thursday afternoon, from 3 to 4.

14. The presence of infectious disease in a house must be at once notified to the Medical Officer of Health at the Depôt.

15. If the above instructions are wilfully disregarded, or the Milk misused, the supply will be stopped.

SIDNEY DAVIES, M.D..

Medical Officer of Health.

Public Health and Housing Committee—

Slater, G. (D.Sc., J.P.), 84, Eglinton Road, Plumstead (*Mayor*).
Ross, W. H., 6, Cantwell Road, Plumstead (*Chairman*).
Merritt, W. J., 50, Herbert Road, Plumstead (*Vice-Chai man*).
Broughton, Alderman J., 10, Whitworth Road, Plumstead.
Harper, Alderman J., 18, St. Margaret's Road, Plumstead.
Macnamara, Alderman T., 42, Wilmount Street, Woolwich.
Robson, Alderman E. J., 132, Powis Street, Woolwich.
Baglow, J., 67, Whitworth Road, Plumstead.
Bourne, R. J., 196, Lakedale Road, Plumstead.
Bull, W. J., 280, Plumstead Common Road, Plumstead.
Doubleday, Arthur (Rev.), 103-105, New Road, Woolwich.
Hall, A., 98, Vicarage Road, Plumstead.
Jones, F., 73, Sladedale Road, Plumstead.
Syer, H. S., 45, Plumstead Common Road, Plumstead.
Turner, J., 18, Dairsie Road, Eltham.
Widger, J. O., 113, Chesnut Road, Plumstead.

Town Clerk—

ARTHUR B. BRYCESON.

Medical Officer of Health—

SIDNEY DAVIES, M.A., M.D., Oxon., D.P.H., Camb.

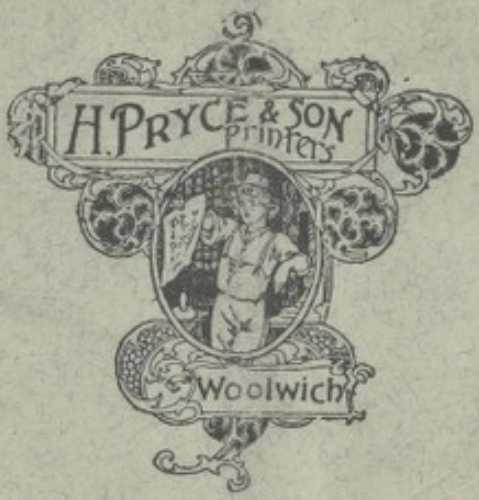
Chief Sanitary Inspector—

ALBERT G. DUCK (Cert. San. Inst.).

Manageress—

MISS F. PETTY.

Town Hall,
October 31st, 1906.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