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REPORT
ON THE
Sanitary Condition
OF THE
County Borough
OF
Birkenhead,
FOR THE YEAR 1918,

R. SYDNEY MARSDEN,

D.Sc., M.B., Mast. Surg., D.P.H., F.R.S.E., M.R.I.C., F. Inst. Chem.
L.A.S., Dublin (Honoris Causa).

Medical Officer of Health.

REPORT COMPILED BY

CYRIL BANKS, M.B. B.S. (Lond.), D.P.H. (Sheff.),
Assistant Medical Officer.

BIRKENHEAD:

WILSON & JONES, 92 HAMILTON STREET.

1919.



REPORT

OF THE

Sanitary Condition

OF THE

County of Durham

for the year 1918

FOR THE YEAR 1918

R. SYDNIE MARRISON

Sanitary Commissioner with the Local Government Board for England

Medical Officer of Health





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1919.



HEALTH COMMITTEE
OF THE
BIRKENHEAD TOWN COUNCIL,
1918-19.

MR. ALDERMAN E. G. MASON, J.P., CHAIRMAN.

MR. ALDERMAN THOMAS SHAW, DEPUTY-CHAIRMAN.

MR. ALDERMAN MICHAEL BYRNE

MR. ALDERMAN FREDERICK NAYLOR, J.P.

MR. COUNCILLOR JAMES ASPINALL.

MR. COUNCILLOR ROBERT FRAME.

MISS HICKEY, T.C.

MRS. HUGH-JONES, T.C.

MR. COUNCILLOR WILLIAM JACKSON, J.P.

MR. COUNCILLOR W. W. KELLY, J.P.

MISS ANNIE LAIRD, T.C.

MR. COUNCILLOR JOHN PLATT.

MR. COUNCILLOR DAVID ROGER ROWLANDS (Mayor).

MR. COUNCILLOR FRANK TWEEDLE, M.M.

No.	
Class.	B.C.V 145
Coll.	H. G.
Vol.	

CHIEF
OFFICIALS
OF THE
PUBLIC HEALTH DEPARTMENT,
1918.

Medical Officer of Health and Supervising Tuberculosis Officer, &c.
DR. R. SYDNEY MARSDEN, F.R.S. (Edin.), F. Inst. Chem.

Tuberculosis Officer and Assistant M.O.H.
CYRIL BANKS, M.B., B.Surg. (Lond.) D.P.H.

Borough Bacteriologist.
PROFESSOR J. M. BEATTIE, M.D., Ch.M. (Edin.), M.A.,
University of Liverpool.

Borough Analyst.
HERBERT E. DAVIES, M.A. (Camb.), B.Sc. (Lond.), F. Inst. Chem.

Chief Inspector and Inspector under the Food and Drugs Acts.
WILLIAM DAWSON, ASSOC SAN. INST.

*Part-time Assistant Medical Officer and Gynaecologist to the Maternity
and Child Welfare Centre,
and Medical Officer under the V.D. Scheme,*
WILLIAM ROBERT DALZELL, M.A. M.B., Ch M. (Edin.)

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*To the Mayor, Aldermen and Council of the
County-Borough of Birkenhead.*

LADIES AND GENTLEMEN,

Owing to the death of Dr. R. Sydney Marsden, which occurred on March 8th, 1919, it becomes my duty to submit the Annual Report to the Health Committee for the year 1918. As I was absent throughout the year on Military Service I am at an obvious disadvantage in compiling the report. I have used the form which Dr. Marsden himself adopted in previous years, and in accordance with instructions issued to Medical Officers by the Local Government Board in January last, the report is brief, consisting chiefly of tabulated statistics of the year.

The work of the Department was carried on under difficulties. Dr. Marsden himself was absent owing to illness for long periods. Inspectors Longstaff, Croshaw, Rackham and Wills were with the Forces, as were also Messrs. Knowles, Jones and Rogers of the Office Staff, and Mr. A. Carnie, of the Meat Inspection Staff. Credit is therefore due to those who remained for the way in which they maintained the efficiency of the Department.

I have to place on record the death of Mr. John R. Knowles, who was killed in action in France on March 28th, 1918. He was a clerk in the Public Health Department from 1st January, 1911, until he joined the 20th Battalion, King's Liverpool Regiment, on November 5th, 1914. He was a conscientious and efficient clerk, and a man of pleasant disposition. His loss is greatly regretted.

I have to thank especially Mr. William Dawson, the Chief Inspector, and Mr. J. Owen, Statistical Clerk, for assistance in preparing this report.

I have the honour to be,

Ladies and Gentlemen,

Your obedient servant,

CYRIL BANKS,

Assistant Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,

TOWN HALL.

17th June, 1919.

COUNTY BOROUGH OF BIRKENHEAD

DURING 1918.

SHORT SUMMARY.

Area in Acres	3,850, or a little more than 6 sq. miles.
Population (at Midsummer)	147,403
No. of Inhabited Houses (Police estimate).....	26,807
Number of Inhabited Houses at time of Census, 1911	24,343
Number of Persons per House at time of Census, 1911	5·3
Rateable Value	£726,972
1d. in the £ yielded for General Purposes	£2,850
1d. in the £ yielded for Sanitary purposes	£2,580
Number of Persons per Acre (Density of Population)	38·2
Birth Rate per 1,000 living	21·1
Death Rate do.	17·6
Zymotic Death Rate per 1,000 living 	4·6
Phthisis Death Rate do.	1·1
Average Death Rate last 10 years	15·2
Deaths of Children under 1 year of age to 1,000 Births	110
Percentage of Uncertified Deaths	0·69
Houses provided with Ashbins (approximately)	19,534
Houses provided with Ashpits do.	7,282

THE SANITARY CONDITION
OF THE
COUNTY BOROUGH OF BIRKENHEAD
DURING 1918.

*Report of the Medical Officer of Health to the
Health Committee.*

ESTIMATE OF THE POPULATION.

For the purposes of this Annual Report an estimate is required of the number of persons living at Midsummer, 1918, and it has been estimated that on the 30th June of that year the population was 147,403, and on this estimate the statistics in this report have been based.

THE REGISTRAR GENERAL'S ESTIMATE OF POPULATION.

A communication has been received from the Registrar General saying that the following estimates of population have been adopted in his Office for the calculation of the death

rate and birth rate in the Borough of Birkenhead for the year 1918, viz:—

For the death rate....135,019

For the birth rate....151,284

The former is an estimate of the civilian population, the latter of the total population based on the assumption that the ratio between the total and the civilian population is the same in the Borough as in England and Wales as a whole. With a view to approximation to the population amongst which the births have occurred, the total population of England and Wales for this purpose has been calculated by adding to the published estimate for 1914 the natural increase up to the middle of the year 1918.

A statement, shewing a summary of the vital statistics for England and Wales and for groups of towns during 1918, is here given (see next page).

In accordance with the Registrar General's request the following return is given, based on the above figures:—

Population as per Registrar General	No. of persons per acre	Birth Rate	Death Rate	Zymotic Death Rate	Pnthisis Death Rate	Infantile Mortality per 1000 Births
135,019	35.0	20.5	19.2	5.0	1.2	110

It will be recollected that for the reasons given in his Report for 1915 (p. 10), Dr. Marsden disagreed with this method of estimation.

Table shewing the Birth-rate, Death-rate and Analysis of Mortality during the Year 1918

(Provisional figures. Populations estimated to the middle of 1918 have been used for the purpose of this Table).

	BIRTH- RATE per 1000 Total Popula- TION	ANNUAL DEATH-RATE PER 1000 CIVILIAN POPULATION*								RATE PER 1000 BIRTHS		PERCENTAGE OF TOTAL DEATHS*			
		All Causes	Enteric Fever	Small-pox	Measles	Scarlet Fever	Whooping- cough	Diphtheria	Violence	Diarrhoea and Enteritis (under 2 Years)	Total Deaths under One Year	Deaths in Public Institutions	Certified Causes	Inquest Cases	Uncertified Causes of Death
England and Wales ..	17.7	17.6	0.03	0.00	0.28	0.03	0.29	0.11	0.49	10.99	97	24.3	93.3	5.4	1.3
96 Great Towns, including London (Census Popula- tions exceeding 50,000) ..	17.6	18.2	0.02	0.00	0.36	0.04	0.34	0.15	0.49	14.46	106	28.1	93.4	5.8	0.8
148 Smaller Towns (Census Populations 20000-50000)	17.9	16.1	0.03	..	0.25	0.02	0.25	0.14	0.38	9.73	94	15.4	94.5	3.9	1.6
London	16.1	18.9	0.02	..	0.42	0.03	0.43	0.17	0.56	15.67	107	45.0	92.5	7.3	0.2

* Non-civilians are included in these figures for England and Wales but not for other areas

This Table has been kindly supplied to me by the Registrar General.

HOUSING OF THE WORKING CLASSES.

A full description of proposed Housing Schemes was given in the Annual Report for 1917 on page 12, et. seq.

During the year the Committee continued its deliberations on the schemes, and made considerable progress, but no actual building operations were commenced.

MATERNITY AND CHILD WELFARE.

The work carried out in relation to this matter has been described in previous reports ; the activities comprise :—

1. Administration of Notification of Births Act, 1907.
2. The Inspection of Midwives.
3. Maternity and Child Welfare Centre, at No. 9 Hamilton Square.
4. Health Visiting.
5. Provision of 4 Beds at the Birkenhead Borough Hospital for cases referred from the Hamilton Square Centre.
6. 3 Beds at the Leasowe Hospital Baby Annexe for wasting infants.
7. Financial support of certain Institutions engaged in work in the interests of mothers and infants belonging to the Borough.

In addition to the above, the Maternity and Child Welfare Committee, together with the Officials, were engaged throughout the year in the consideration of further steps to be taken to extend this work, and useful decisions were arrived at; the results of which will be manifest later.

The Staff engaged in Maternity and Child Welfare is as follows :—

- The Medical Officer of Health—Supervising Officer.
- The Medical Officer to the Hamilton Square Centre.
- The Charge Nurse (Superintendent Health Visitor).
- One Woman Inspector of Midwives.
- One Clinic Nurse and Health Visitor.

Four Women Health Visitors.

Certain structural alterations were made to the Hamilton Square Centre during the year.

The following work was carried out during the year :--

AT THE CENTRE.

43 expectant mothers paid first visits and

31 re-visits were made.

256 Mothers paid first visits in connection with post-natal trouble and

334 re-visits were made.

793 Infants were seen for the first time, and

1591 re-visits were made.

224 Infants received treatment at the Centre, and

2132 re-visits were made in connection therewith.

Supplies of milk, under the provisions of The Milk (Mothers and Children) Order, 1918, were made to 4 Nursing Mothers and 2 Children.

NOTIFICATION OF BIRTHS ACT, 1907.

No. of births notified during the year	...	...	3229
No. of births attended by medical practitioners	...	...	441
" " by midwives...	...	...	2448
" " in Maternity Hospital	...	...	309
" " in Union Infirmary...	...	...	27
" " in Borough Hospital	...	...	4
Total number of stillbirths for the year	...	...	120
Of these Medical Practitioners notified	...	...	11
Maternity Hospital	..	...	27
Union Infirmary	..	...	2
Borough Hospital	..	...	2
Midwives	..	...	78

The following is a record of the cases visited by the women Health Visitors during 1918, viz. :—

2486 first visits were paid to the homes.

7851 re-visits were made to infants under 1 year.

2154 visits were paid in relation to cases of measles.

2181 visits were made to children over 1 year and under 5 years.

16 cases of Ophthalmia Neonatorum and 26 cases of slight inflammation of the eyes were carefully watched and recovery resulted in each case.

15 cases where death from diarrhœa had occurred were enquired into.

27 special enquiries were made for the Medical Officer of Health.

19 cases of nuisances were reported to the Public Health Department, 2 cases were referred to the Charity Organisation Society, 6 cases were reported to the Society for the Prevention of Cruelty to Children, 42 cases were referred to the Invalid Children's Association, and 2 cases were reported to the Education Department.

42 cases were sent to the Naval and Military War Pensions Committee, and 27 cases were visited for this Committee.

164 visits were paid to Mental Defectives.

THE MIDWIVES ACT, 1902.

In connection with the carrying out of the provisions of this Act, the usual routine was carried out during the year, viz: visiting the homes of midwives, interviewing them in connection with their work, and explaining the provisions of the Act and the rules laid down for their guidance by the Central Midwives Board.

During the year 1918, 74 midwives entered their names on the local register as practising in the Borough. Of these, 4 subsequently left the district, and their names have been removed from the register accordingly. 4 midwives gave notice of change of address, and one had her name removed from the Roll at her own request. One midwife died during the year.

4 complaints against midwives were received. These were carefully investigated and the midwives interviewed by the Medical Officer of Health. 4 complaints were investigated by the Inspector of Midwives. The inspector also interviewed 10 midwives on minor matters where no complaints had been made.

The number of premises occupied by and in connection with the troops and carefully inspected by us is ... 17

i.e., Hospitals ... 8

Barracks and Billets ... 3

Officers and Nurses Hostels 6

The number of visits paid by the District Sanitary Inspectors to the above premises was 879, and a number of visits of inspection have also been made by the Chief Inspector of Nuisances and myself.

The total number of articles of bedding, clothing, etc., disinfected for the Military Authorities during 1918 was 9,571. A large proportion of these being in a verminous condition.

There were also 12 soldiers cleansed for vermin at the Disinfecting Station.

DETAILED STATEMENT OF THE WORK OF THE PUBLIC HEALTH DEPARTMENT DURING 1918.

Ordinary Sanitary Operations.—The ordinary sanitary operations of the Department have continued to receive unremitting attention. House-to-house inspections of the cottage property in the Borough have been regularly made. Public fountains, &c., have been scoured and kept in order, and the systematic removal of ashpit and house refuse at stated intervals is now carried out by the Borough Surveyor's Department.

Summary of Nuisances, &c.—The summary of nuisances investigated and dealt with during 1918 is as follows:—

	1918.
Number of nuisances reported	6405
Number of formal notices given	2832
Number abated after formal notice and without proceedings	2832

Number of cases in which proceedings had to be taken for ordinary nuisances	...	...	nil
Number abated after proceedings...	...	...	nil
House disinfecting notices...	...	...	792
Nuisances at houses let in lodgings	...	...	305
Nuisances at common lodging houses	...	...	58
Notices for cleansing of filthy houses	...	...	7

A brief statement of the other measures taken in 1918 for correcting or getting rid of whatever appeared to be prejudicial to health is subjoined.

Sanitary defects reported by the Inspectors and referred for the action of the Borough Surveyor	...	...	...	...	608
Matters reported to Water Engineer	...	...	...	...	305
Matters reported to Borough Treasurer	...	...	...	...	68
Houses or parts of houses specially disinfected by formalin or other disinfectants	...	...	...	...	996
Notice to whitewash and efficiently cleanse milk- houses, cowsheds and dairies, given and complied with	...	...	...	...	389
Offensive privies abolished	...	...	...	...	nil
Collections of infected bedding and clothes disin- fected at the Disinfecting Station ..	...	...	...	...	1555
Collections of infected or discarded bedding and clothes destroyed	...	...	...	...	186
Carcases of dogs and cats &c. removed from pools or waste land and buried	...	...	...	...	29
Total					4136

HOME WORK.

NATURE OF WORK.*	OUTWORKERS' LISTS, SECTION 107.						OUTWORK IN UNWHOLE-SOME PREMISES, SECTION 108.					OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.													
	Lists received from Employers.						Prosecutions.					Instances.	Notices served.	Prosecutions.	Orders made (s. 110).	Prosecutions (s. 110).									
	Sending twice in the year. Sending once in the year.						Failing to keep or permit inspection of lists.	Failing to send lists.	Instances.	Notices served.	Prosecutions.						Orders made (s. 110).	Prosecutions (s. 110).							
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INSTRUCTIONS.—*If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class only, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3 and 4 are the total number of the lists received from those employers who comply strictly with the statutory duty of sending two lists each year and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be even numbers, as there will be two lists for each employer—in some previous returns odd numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Bakehouses	59
Confectioners	48
Laundries	52
Other Workshops	321
Total number of workshops on Register ..	480

Important classes of workshops, such as houses may be enumerated here.

OTHER MATTERS.

Class.	Number
1.	2
Matters notified to H.M. Inspector of Factories:— Failure to affix Abstract of the Factory and Workshop Act, (s. 133) Notified by H.M. Inspector	—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act, (s. 5)	—
Other	—
Underground Bakehouses (s. 101) :— Certificates granted during the year ..	—
These matters were attended to at the time.	None
None	None

CLEANSING OF PERSONS ACT, 1897.

12 soldiers were cleansed under the provisions of this Act, at the special bath provided for this purpose at the Disinfecting Station in Corporation Road, and their clothing disinfected.

SHOPS ACTS, 1912 and 1913.

(Which repeal the Shops Regulations Acts, 1892—1911.)

The total number of visits paid to the various shops under the provisions of the above Acts and orders made thereunder during the year was 6292.

The particulars respecting the various proceedings and prosecutions taken under these Acts and Orders during the year are as follows, viz:—

34 infringements were reported and 17 letters of warning sent in connection therewith, prosecutions being taken in 2 cases, with the following results:—

For failing to close the shops for the sale of certain articles on Weekly Half-holiday.

Ditto	Ditto	Fine. Including
Ditto	Ditto	20/- Costs.
		10/- „

An Order was made on the 24th day of October, 1916, by the Secretary of State under Regulation 10 B of the Defence of the Realm (Consolidation) Regulations, 1914, for the early Closing of Shops during the Winter months.

The Order came into operation on the 30th day of October, 1916, and expired on the 30th day of April, 1917, but was subsequently extended and is in force at the present time.

THE RETAIL BUSINESS (LICENSING) ORDER, 1918.

The number of visits in connection with this Order was 116.

INSPECTION OF MEAT, &c.

The Meat and Food Inspector has supplied the following particulars respecting the above work carried out during the year 1918,

The total number of animals killed was as follows, viz:

AT WOODSIDE LAIRAGE.

	Oxen	Sheep
Irish	117751	...

AT WALLASEY LANDING STAGE AND NO. 4 SHED, WALLASEY LAIRAGE.

	Oxen	Sheep
Irish	544	1820

AT THE BIRKENHEAD ABATTOIR, NEW CHESTER ROAD.

Oxen, 1002; Sheep, 2120; Lambs, 1159; Calves, 508; Pigs, 1659; the total number of animals killed being 6,448

Statement of Total Seizures during the year 1918.

	Tons	Cwts.	Qrs.	Lbs.
The total weight of meat destroyed was	407	10	—	27

The total number of carcasses seized was:—

At Woodside	987	weighing	398467 lbs.
At Wallasey Stage ...	527	„	119127 lbs.
At No. 4 Shed, Wallasey	57	„	1825 lbs.
At Tranmere Abattoir ...	25	„	4553 lbs.
Total ...	1596	„	523972 lbs.

The number of parts of carcasses seized was:—

At Woodside	589	weighing	49229 lbs.
At Wallasey Stage ...	10	„	269 lbs.
At No. 4 Shed, Wallasey	—	„	—
At Tranmere Abattoir ...	3	„	191 lbs.
Total ...	602	„	49689 lbs.

The total weight of offal seized was 336743 lbs.

The total weight of articles of food seized in shops in the Borough was 2423 lbs.

PROCEEDINGS TAKEN UNDER THE "SALE OF FOOD AND DRUGS ACTS, 1875 to 1907."

The Chief Inspector (Mr. William Dawson) gives the following summary of proceedings taken under these Acts during 1918.

During the twelve months ending the 31st December, 1918, the following samples were taken and analysed, viz. :—

Article	Number Samples taken formally	Number Samples taken informally	Article	Number Samples taken formally	Number Samples taken informally
Milk ...	129	1	Cornflour ...	3	... —
Sausages ...	12	—	Epsom Salts	3	.. —
Self-raising Flour	10	—	Borax ...	2	... —
Vinegar ...	9	—	Calcined Magnesia	2	... —
White Pepper	9	—	Camphorated Oil	2	... —
Arrowroot ...	7	—	Dessci'd Cocoanut	2	... —
Bi-Carb. of Soda	7	—	Flour ...	2	... —
Custard Powder	7	—	Honey ...	2	... —
Dripping ...	7	—	Seidlitz Powders	2	... —
Ground Rice	7	—	Blanc Mange P'dr	1	... —
Butter ...	6	4	Cake Flour...	—	... 1
Jam ...	6	—	Calves Feet Jelly	—	... 1
Sweets ...	6	—	Castor Oil ...	1	... —
Baking Powder	5	—	Chicken and Ham		
Margarine ...	5	—	Paste ...	1	... —
Mustard ...	5	—	Condensed Milk	1	... —
Cream of Tartar	4	—	Dried Milk...	—	... —
Cocoa ...	4	—	Egg Substitute	1	... —
Comp. Liquorice P.	4	—	Fruit Syrup	—	... 1
Sugar ...	4	—	Lemon Cream	1	... —
Tea ...	4	—	Treacle ...	1	... —
Coffee ...	3	—			

Samples taken formally...287. Informally...9.

Total number of Samples analysed during the year...296

Out of the above, 22 samples of Milk,

5	„	Sausages
3	„	White Pepper
2	„	Vinegar
2	„	Butter
1	„	Egg Powder
1	„	Dripping
1	„	Compound Liquorice Powder
1	„	Self-raising Flour

were reported adulterated, and proceedings were taken in respect of :

17 samples of Milk

5	„	Sausages
2	„	Vinegar
1	„	Egg Powder
1	„	White Pepper
1	„	Dripping
1	„	Self-raising Flour

With reference to the remaining samples reported adulterated the Health Committee, after consideration and hearing the Vendors' explanation, decided it was inadvisable to institute proceedings, and the Vendors were subsequently cautioned.

Informal Samples.

All the samples taken informally for analysis during the year were found pure, with two exceptions, viz :—Butter Sample No 179 and Milk Sample No. 290.

The particulars respecting the samples in which proceedings were taken are as follows :—

Quarter Ending	Article.	No.	Amount of Adulteration.	Fine Inflicted.	Costs Imposed.
1918.				£ s. d.	£ s. d.
March 31 ..	Vinegar..	14	10 % added water ..	2 0 0	including costs
	Vinegar..	15	18 % added water ..	1 0 0	including costs
	Milk ..	34	Deficient in fat to the extent of 14 % ..	1 0 0	including costs
	Milk ..	46	7 % added water ..	2 0 0	including costs
	White Pepper	51	4.76 % added husk ..	10 0	2 2 0 costs
	Milk ..	54	Deficient in fat to the extent of 10 % ..	1 0 0	including costs
	Sausages	58	Deficient in meat 19.52 % ..	3 0 0	including costs
	Sausages	62	Excess of water 8.16 % .. Deficient in meat 26.14 % ..	5 0 0	including costs
	Sausages	63	Excess of water 13.33 % .. Deficient in meat 25.78 % ..	3 0 0	including costs
June 30 ..	Milk ..	112	Excess of water 14.58 % .. 8 % added water ..	2 0 0	including costs
	Milk ..	130	Deficient in fat to the extent of 10 % ..	2 0 0	including costs
	Milk ..	140	Deficient in fat to the extent of 4 % ..	1 0 0	including costs
September 30 ..	Milk ..	160	4 % added water ..	1 0 0	including costs
	Milk ..	165	Deficient in fat to the extent of 12 % ..	1 0 0	including costs
	Milk ..	166	3 % added water ..	2 0 0	including costs
	Milk ..	187	3 % added water ..	3 0 0	including costs
	Milk ..	188	Dirt, 9 grains per gal	2 0 0	including costs
	Egg Powder	210	Deficient in fat to the extent of 12 % .. Sulphate of Lime 41.29 % ..	3 0 0	including costs
	Milk ..	220	11 % added water ..	2 0 0	including costs
December 31 ..	Milk ..	238	Dirt, 15 grains per gal	1 0 0	including costs
	Milk ..	240	Dirt, 10 grains per gal	1 10 0	including costs
	Dripping	247	Free fatty acids 3.63 % ..	1 0 0	including costs
	Sausage	249	Deficient in meat 22 % ..	1 0 0	including costs
	Milk ..	250	48 % added water ..	2 0 0	including costs
	Self-raising flour	257	8 % added water .. Sulphate of Lime 0.73 % ..	3 0 0	including costs
	Milk ..	273	Dirt, 12 grains per gal	2 0 0	including costs
	Sausages	275	Dirt, 12 grains per gal	10 0 0	including costs
	Milk	297	Deficient in meat 21 % .. 46 % added water .. Dirt, 14 grains per gal	2 0 0	including costs

Composition of Milk Samples.

The following Schedule shews the composition of each sample of milk analysed during the year ending, 31st December, 1918.

Date of Sample	Identif'n Number given in Quarterly Report	Percentage of Fat	Percentage of Solids not Fat	Date of Sample	Identif'n Number given in Quarterly Report	Percentage of Fat	Percentage of Solids not Fat
Jan. 11	1	3.33	8.07	Mar. 15	72	3.45	9.08
	2	4.09	9.24	Apr. 9	85	3.12	8.69
	3	3.58	9.21		86	3.09	8.76
	4	4.77	8.56		87	3.53	9.01
	5	3.80	9.21		88	3.80	8.91
	6	6.69	8.45		89	3.39	8.59
16	7	3.69	8.98		90	4.00	8.16
19	8	3.34	8.07	24	96	3.41	8.77
22	9	4.13	9.01		97	3.80	8.74
	10	3.33	8.74		98	3.62	8.63
	11	4.09	8.68		99	3.20	8.59
	12	3.35	8.65		100	3.17	8.55
	13	5.60	8.66		101	3.09	8.80
Feb. 13	33	4.04	8.74	May 8	108	3.31	9.03
	34	2.58	8.90		109	3.94	9.01
	35	3.00	8.59		110	3.40	9.11
	36	4.20	8.56		111	3.80	8.85
	37	3.33	8.66		112	3.12	7.82
	38	4.45	8.71	13	117	2.98	8.85
16	39	3.21	9.29	23	125	3.33	9.36
26	46	3.88	7.90		126	3.64	9.17
	47	3.64	8.55		127	3.07	9.26
	48	3.21	8.50		128	3.42	9.08
	49	3.43	8.59		129	2.94	8.36
	50	4.32	9.35		130	2.70	8.65
Mar. 4	52	3.43	8.81	28	131	3.07	8.49
	53	3.42	9.42	June 4	137	3.14	8.46
	54	2.70	8.50		138	3.41	9.15
	55	3.65	8.35		139	3.35	9.11
	56	3.67	8.81		140	2.88	9.40
	57	3.55	8.73		141	4.00	9.31
9	60	3.15	8.78		142	2.99	8.90
	61	3.30	8.67	8	143	4.10	9.16
15	68	4.24	8.76		144	3.89	9.03
	69	3.55	8.72		145	3.45	9.29
	70	3.20	8.91		146	3.40	9.31
	71	8.80	9.08	11	147	3.32	8.80

Date of Sample	Identifi'n Number given in Quart'ly Report	Percentage of Fat	Percentage of Solids not Fat	Date of Sample	Identifi'n Number given in Quart'ly Report	Percentage of Fat	Percentage of Solids not Fat
June 11	148	3.22	9.07	Sep. 19	219	3.52	8.82
	150	3.44	8.43		220	2.96	7.56
	151	3.21	8.97		221	3.68	9.02
	152	4.30	9.10		222	3.85	8.81
July 11	159	4.35	9.04	27	227	3.45	8.53
	160	3.22	8.64		228	3.48	8.75
	161	3.81	8.62	Oct. 8	236	4.40	9.43
	162	3.08	8.16		237	4.00	9.02
	163	3.10	9.11		238	2.97	8.54
	164	3.00	8.59		239	4.30	8.67
16	165	2.45	8.24		240	3.85	9.14
	166	2.90	8.23		241	3.80	9.29
17	167	2.96	8.78	14	242	3.60	8.65
	168	3.35	8.95		243	4.62	9.03
24	169	3.52	8.62		244	3.08	9.15
	170	3.25	8.65	18	250	4.02	7.82
	171	3.38	8.73	23	251	5.00	8.91
	172	3.25	8.80		252	4.49	8.44
	173	3.28	9.36		253	4.10	8.82
Aug. 19	183	2.70	8.83		254	3.85	9.09
	184	3.05	8.54	Nov. 18	263	5.15	9.09
	185	3.62	8.73	27	273	4.60	9.12
	186	3.83	8.54		274	3.90	8.83
	187	2.90	8.50	Dec. 11	284	3.10	8.80
	188	2.64	9.13		285	3.65	8.89
24	193	3.92	8.62	13	290	2.00	5.44
Sep. 18	216	3.25	8.59	31	297	4.10	9.15
	217	4.00	8.78				
	218	3.60	9.09				

AVERAGE PERCENTAGE:—Fat, 3.61; Solids not Fat, 8.76

PUBLIC HEALTH (Milk and Cream) REGULATIONS, 1912.

Report for the year ended 31st December, 1918.

1. Milk, and Cream not sold as Preserved Cream.

		(a) Number of sam- ples examined for the presence of a preservative.	(b) Number in which a preservative was reported to be present.
Milk	..	130	—
Cream	...	—	—

The Contagious Diseases (Animals) Act, 1886.

The Milkhouses.—The regulation of dairies, cowsheds, and milk-shops, and the supervision of milk-sellers, has had systematic attention for a number of years. Special care is taken that the ventilation, lighting, cleansing, draining, and water supply of premises used for the milk-trade are thoroughly efficient. The register of milk-sellers is revised week by week. The total number of milk-shops is 179, in addition there are 23 purveyors of milk, 9 cowsheds, and 37 farmers resident outside the Borough, registered to purvey milk inside the Borough.

Meteorological Results.

I am indebted to W. E. Plummer, Esq., M.A., F.R.A.S., the Director, for the following return from the

LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

1918				Mean Tempera- ture	Mean Barometer	Rainfall 1 ft. above ground
				° F	Inches	Inches
January	..	..	..	6		1.69
February	..	..	..	2	30.062	1.931
March	..	..	..	29	30.032	0.922
April	..	..	..	45.1	29.976	1.218
May	..	..	..	54.8	30.041	2.306
June	..	..	..	56.7	30.079	1.694
July	..	..	..	59.4	29.894	4.118
August	..	..	..	61.2	29.967	1.980
September	..	..	..	3.4	29.655	6.394
October	..	..	..	49.5	29.943	2.097
November	..	..	..	42.8	29.999	1.538
December	..	..	..	45.6	29.742	6.142

Mean Barometer for the whole year 1918=29.941 inches.

Mean Barometer for the past 50 years=29.920 inches.

Number of wet days in 1918=200.

Total amount of rainfall at Bidston. 1918=31.930 inches.

Average rainfall for last 50 years=28.354 inches

Mean Temperature for 1918=49°·6

INFECTIOUS DISEASES (PREVENTION) ACT, 1890.

357 Public Library and 14 School Library books were collected from infected houses and disinfected, and 2 books were destroyed.

PREVALENCES OF ZYMOTIC SICKNESS DURING 1918.

Notification of Cases of Dangerous Infectious Diseases.—The Infectious Disease (Notification) Act, 1889, requires householders and medical men in attendance to notify cases of dangerous infectious diseases to the Sanitary Authority, and gives facilities for supplementing the statement of the mortality from zymotic diseases, month by month, as they were reported. The diseases which require to be notified to the Authority as “dangerous infectious diseases” are:—

Small-pox.	Fevers	Typhus.
Scarlatina.		Typhoid.
Diphtheria.		Continued.
Membranous Croup.		Relapsing.
Erysipelas.		Puerperal Septicæmia.
Cerebro Spinal		Acute Poliomyelitis.
Meningitis.		Cholera.
Measles and German Measles.		

The cases notified appear in the following return, showing that 1135 cases were notified during the year, being 630 more than the number notified last year, excluding Measles and German Measles.

The following Table gives the number of Notifications of Dangerous Infectious Diseases in each month of the year.

1918.	Smallpox	Scarlatina	Diphtheria & Mem. Croup	Typhus	Typhoid	Puerperal Fever	Fever	Erysipelas	Poliomyelitis	Cerebro Spinal Men.	Cholera	Measles	German Measles	TOTAL
January ...	46	20	..	..	..	..	..	5	..	..	..	44	20	135
February	25	14	..	1	1	..	..	6	..	1	..	51	20	119
March	38	19	..	1	1	..	..	4	..	1	..	97	56	217
April	46	20	..	..	..	..	..	3	..	..	..	288	68	425
May	40	24	..	1	..	..	..	5	..	..	..	518	66	654
June	35	12	..	..	..	..	..	3	..	..	..	359	30	439
July	33	10	..	..	..	2	..	1	..	..	..	148	11	205
August	79	14	..	4	..	..	..	6	..	..	..	48	5	156
September ..	114	17	..	1	..	..	..	3	..	..	..	30	..	165
October	160	14	..	1	3	..	..	3	..	..	..	32	..	213
November....	128	13	..	5	..	..	..	6	..	..	..	8	2	162
December....	131	10	..	..	1	..	..	4	..	..	..	5	2	153
Total..	875	187	..	13	9	..	..	49	..	2	..	1628	280	3043

MILITARY & NAVAL CASES OF INFECTIOUS DISEASES

notified during the year ended 31st December, 1918.

Diphtheria	...	...	...	...	1
Scarlet Fever	..	...	.	...	2
Erysipelas	...	...	...	...	2
Measles	...	...	...	...	4
Tuberculosis (Pulmonary)	...	...	...	...	21
Do. (other Forms)	...	...	...	...	1

THE PUBLIC HEALTH (OPHTHALMIA NEONATORUM) REGULATIONS 1914.

50 cases of Ophthalmia Neonatorum were notified during the year.

THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

312 cases of Pulmonary Tuberculosis and 86 of other forms of Tuberculosis were notified during the year.

SMALLPOX

No cases were notified during the year.

INFLUENZA.

The accompanying table shows the number of deaths which occurred weekly throughout the year from (a) all causes, (b) influenza, (c) pneumonia—all forms.

Of the two epidemic periods, the earlier reached its maximum fatality during July, but the number of deaths was not nearly as great as in the later epidemic which ran its course during October,

November and December. In October and November the number of deaths from Influenza and Pneumonia (much of which was of influenzal origin) reached a very high figure, and showed that the epidemic in Birkenhead, as in other centres, had become one of the most terrible visitations of epidemic disease that the Country had ever suffered.

Unfortunately so little is known as to the natural history of the disease that medical science has not, as yet, provided successful methods of curing the illness, or of limiting its spread. In Birkenhead the public were informed, by notices in the newspapers, of certain principles of hygiene calculated to protect against infection. The tramcars and ferry-boats were frequently treated with disinfectants in the hope of destroying infective agents present in the dust. For a time children were excluded from cinemas and theatres, and the hours of performance were restricted with a view to securing adequate ventilation of the buildings.

Most probably the infective micro-organisms are carried into the atmosphere in the tiny (and often, invisible) drops of moisture expelled from the mouth during the acts of talking, laughing and coughing, and from the nose in sneezing, as well as from the handkerchiefs of persons suffering. The problem is therefore much the same as occurs when dealing with epidemics of the common "cold in the head" and in view of the unhealthy overcrowding and atmospheric vitiation in buildings, public vehicles and ships which seems inseparable from life in communities, the outlook, as regards limiting the spread of future epidemics, is not, at the moment, promising. Hope lies in the elaboration of methods of conferring personal immunity by means of inoculation, such as has been successfully done in several other diseases.

**Statement shewing Total No. of Deaths, No. of Deaths from
Influenza and No. of Deaths from Pneumonia registered
during each week of the year 1918 in the
County-Borough of Birkenhead.**

Week Ending 1918	Total No. of Deaths Registered	Deaths from Influenza	Deaths from Pneumonia (all forms)	Week Ending 1918	Total No. of Deaths Registered	Deaths from Influenza	Deaths from Pneumonia (all forms)
Jan. 7	34	—	6	July 8	32	9	3
14	46	—	9	15	44	8	6
21	55	—	7	22	45	4	8
28	43	—	4	29	45	6	3
Feb. 4	36	—	1	Aug. 5	22	1	2
11	28	—	4	12	41	2	6
18	42	—	4	19	37	2	6
25	41	—	6	26	42	1	—
Mar. 4	50	1	5	Sept. 2	31	—	2
11	40	—	7	9	34	—	1
18	43	—	6	16	43	—	1
25	49	—	4	23	26	—	3
Apr. 1	26	—	3	30	23	1	4
8	40	—	4	Oct. 7	49	9	5
15	37	—	4	14	98	37	16
22	44	—	5	21	126	64	22
29	42	1	5	28	195	98	50
May 6	38	—	3	Nov. 4	132	74	19
13	44	1	8	11	103	54	15
20	32	1	4	18	79	20	12
27	52	—	9	25	61	6	10
June 3	32	—	5	Dec. 2	69	10	11
10	34	—	—	9	52	13	5
17	35	1	6	16	36	2	5
24	41	1	2	23	37	4	4
July 1	36	—	5	31	63	6	9
				(8 days)			

The age and sex distribution of the deaths from influenza will be found with other diseases in the tables in the appendix.

VITAL AND MORTAL STATISTICS FOR THE YEAR.

Area.—The Borough has an area of 3850 acres, or a little more than six square miles.

Population—The Census was taken in England and Wales on April 2nd, 1911, and showed the number of persons in Birkenhead to be 130,794, being 19,879 more than the number shown in the Census taken on April 1st, 1901.

At the time of the 1901 Census the number of inhabited houses was 19,744, giving an average number of persons per house of 5·6; the number of houses in the Borough at the time of the 1911 Census was 24,343 giving an average number of persons per house of 5·3.

The estimated population in 1918 was 147,403.

I am indebted to the Borough Surveyor for the following information relating to the

Number of New Houses erected and demolished in the Borough.

			Erected.	Demolished.
January 1st to December 31st, 1914	..		246	18
" " 1915	...		136	32
" " 1916	...		28	1
" " 1917	...		1	18
" " 1918	...		Nil	36
			<hr/> 411	<hr/> 105

The Chief Constable has supplied me with the following Return of uninhabited property in the Borough of Birkenhead for the half year ending 31st December, 1918 :—

District	Half-year ended 31st Dec., 1918.					Half-year ended 30th June, 1918.				
	Private Houses	Shops	Cot-tages.	Dock Cot-tages	Total	Private Houses	Shops	Cot-tages	Dock Cot-tages	Total
Birkenhead ..	3	28	..	..	31	15	22	1	..	38
Claughton and Oxtou ...	38	32	..	70	140	62	12	..	70	144
Tranmere and Bebington..	9	27	..	..	36	7	41	3	..	51
Totals	50	87	.	70	207	84	75	4	70	233

Total uninhabited and unoccupied property, 31st December, 1917, was 287, so there was a decrease of 80 at the end of 1918, as compared with the previous year.

DWELLING HOUSES, &c.

The approximate estimate of dwelling-houses
of all descriptions within the Borough,
including Institutions, at 31st December,

1918 26,807

The approximate estimate of schoolrooms,
warehouses, &c.

1280

Births and Deaths in Birkenhead.—During the year 1918 there were recorded 3113 births and 2605 deaths in the Borough of Birkenhead. The natural increase in the population in 1918 was therefore 508. Of the births 1605 were males and 1508 were females; of the deaths 1314 were males and 1291 were females.

The following table shows the revised estimated population of Birkenhead, the density of population and the number of births, deaths and zymotic deaths, and also the birth and death rates deducible from these figures for the years 1911 to 1918.

Year	Revised Estimated Population at Midsummer	Persons per acre.	BIRTHS.		DEATHS.		ZYMOTIC DEATHS.	
			Number of Births	Birth rate per 1000 per annum	Number of Deaths	Death rate per 1000 per annum	Number of Deaths	Death rate per 1000 per annum
1911	131,377	34.1	3732	28.4	2107	16.0	304	2.3
1912	133,521	34.6	3774	28.2	1964	14.7	197	1.4
1913	135,740	35.2	3907	28.7	2032	14.9	205	1.5
1914	137,996	35.8	3772	27.3	2153	15.6	244	1.7
1915	140,291	36.4	3844	27.4	2193	15.6	211	1.5
1916	142,622	37.0	3848	26.9	2034	14.2	196	1.3
1917	144,993	37.6	3261	22.4	1932	13.3	117	0.8
1918	147,403	38.2	3113	21.1	2605	17.6	680	4.6

**Infantile Mortality during 8 years,
1911 to 1918.**

Year.	No. of Births.	Total Deaths of Infants under 1 year.	Deaths from Diarrhoea under 1 year.	Total Deaths of Infants per 1000 Births.	Deaths of Infants from Diarrhoea per 1000 Births.
1911	3732	509	134	136	35.9
1912	3774	371	20	98	5.2
1913	3907	458	68	117	17.4
1914	3772	462	36	122	9.5
1915	3844	469	68	122	17.6
1916	3848	407	55	105	14.2
1917	3261	313	20	95	6.1
1918	3113	344	30	110	9.6

**Causes of Infantile Mortality during the past eight years
(1911—1918).**

Cause of Death.	YEARS.							
	1911	1912	1913	1914	1915	1916	1917	1918
Chicken-pox .....	..	..	..	4	1	..	1	—
Measles	5	7	2	12	2	7	4	4
Scarlet Fever	1	..	..	..	..	..	1	2
Diphtheria and Mem. Croup..	1	2	4	1	2	..	..	2
Whooping Cough	13	20	15	16	21	14	8	18
Diarrhoea	134	20	68	36	68	55	20	30
Enteritis	24	19	64	58	56	35	30	13
Gastritis	7	5	12	2	8	5	3	13
Premature Birth	53	60	50	67	64	64	35	48
Congenital Defects	24	17	15	17	23	22	17	9
Teething	7	4	6	4	2	6	8	2
Debility	65	70	81	80	92	70	78	66
Tabes Mesenterica.....	5	1	2	2	1	1	..	1
Other Tubercular Diseases...	14	8	10	8	7	14	13	8
Erysipelas .....	..	2	..	3	..	1	1	—
Syphilis	1	2	6	7	2	6	6	5
Rickets	1	..	1	1	..	..	..	1
Meningitis (not tuberculous)..	7	6	5	5	2	5	5	3
Convulsions.....	18	9	14	14	11	11	10	13
Bronchitis	41	24	27	26	27	14	16	31
Pneumonia	40	31	33	64	49	49	35	56
Heart Disease.....	2	9	1	1	..	..	1	3
Suffocation, overlaying, etc.,	7	13	8	10	8	3	4	2
Other Causes	39	42	34	24	23	25	17	14
Total Deaths per annum....	509	371	458	462	469	407	313	344
No. of Births per annum....	3732	3774	3907	3772	3844	3848	3261	3113
Death Rate per 1000 per annum per 1000 Births	136	98	117	122	122	105	95	110

The relative proportion of deaths in 1918 among the infants, children and young persons, adults and old people, to the whole number of deaths, in certain sub-divisions of the borough, in the premises controlled by the Guardians of the Poor, and in the entire incorporated area, is readily shown in tabular form, thus:—

Percentage of Deaths at certain ages to Total Deaths.	Under 1 Year	Age between														85 years and upwards.
		1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65-75	75-85	
Birkenhead and Claughton	8.98	4.29	2.11	1.88	1.72	2.80	1.22	1.80	1.45	4.83	3.45	5.25	4.29	5.45	2.99	0.95
Tinere & Oxtan	3.68	2.18	0.72	0.72	0.38	1.22	0.72	0.88	1.26	3.57	2.18	3.07	3.33	3.49	2.41	0.34
Bebington	0.11	0.03	..	0.03	0.03	..	..	0.03	..	0.11	0.03	0.15	0.26	0.34	0.26	..
Union Hospital and W'house	0.42	0.26	0.11	0.03	0.11	0.15	0.30	0.38	0.49	1.57	1.91	1.61	2.53	2.91	1.68	0.19
Birkenhead Borough	13.20	6.79	2.95	2.68	2.26	4.18	2.26	3.10	3.22	10.09	7.60	10.00	10.44	12.20	7.37	1.49

The following Table shows the Mortality of the different Wards:—

1918	Estimated Population at Midsummer 1918.	Deaths from All Causes		Deaths from Zymotic Diseases		Death rate per annum.	Infantile Death Rates per 1000 Living	No. of Deaths under 1 year
		M.	F.	M.	F.			
Cleveland Ward	26738	254	249	70	81	18.8	3.0	82
Claughton ..	9020	64	44	15	13	11.9	1.6	15
Grange ..	29614	229	263	54	81	16.6	2.7	81
Argyle ..	17007	153	139	29	36	17.1	3.2	56
Oxtan ..	5396	20	24	..	6	8.1	..	..
Egerton ..	19374	126	128	27	36	13.1	1.4	28
Clifton ..	26948	178	165	59	44	12.7	1.6	45
Mersey ..	9301	65	82	19	31	15.8	2.4	23
Bebington ..	4005	14	21	2	2	9.4	0.7	3
Union Hospital	..	211	173	39	45	..	..	11
Birkenhead Borough	147403	1314	1291	305	375	17.6	2.3	344

The Registrar General states that the factor for correcting the general death rate for Birkenhead for the intercensal period, 1912—1921, is 1.0324.

The Classification of Death Causes.—The causes of death, as they appear in Table I. in the appendix, are systematically classified according to the principles laid down by the late Dr. W. Farr, the nosology being that adopted by the Registrar-General until within the last few years, which experience has shown to be well suited for statistical purposes.

Deaths from Zymotic Diseases. The deaths from zymotic diseases include 136 by what have been termed the chief zymotics

(certain diseases belonging to the miasmatic order), viz., measles 39, scarlatina 53, diphtheria 35, membranous croup 1, fevers 3, and puerperal septicæmia 5. The remaining 544 were entered to what have been called minor zymotics (diseases less prevalent, less fatal, or less obviously zymotic in character), viz., whooping cough 50, erysipelas 4, influenza 437, diarrhœa 39, syphilis 8, and other zymotic diseases 6. Unfortunately, Influenza proved to be by no means a "minor" zymotic during 1918.

Relative Fatality of Chief Zymotic Diseases.

The following table shows at a glance the relative fatality of the chief zymotic diseases for the year on the corrected estimate of population.

Year	Deaths from Zymotic Disease							Death rate per 1000 living.						
	Smallpox	Measles	Scarlatina	Diphtheria	Whooping Cough	Typhoid Fever	Diarrhœa	Smallpox	Measles	Scarlatina	Diphtheria	Whooping Cough	Typhoid Fever	Diarrhœa
1911	...	23	5	21	31	8	194	...	0.17	0.03	0.15	0.23	0.06	1.47
1912	...	52	10	17	49	5	33	...	0.38	0.07	0.12	0.36	0.03	0.24
1913	...	8	4	20	41	1	100	...	0.05	0.02	0.14	0.30	0.007	0.73
1914	...	67	6	16	49	4	48	...	0.48	0.04	0.11	0.35	0.02	0.34
1915	...	7	4	16	42	1	92	...	0.04	0.02	0.11	0.29	0.007	0.65
1916	...	28	5	10	30	5	70	...	0.19	0.03	0.07	0.21	0.03	0.49
1917	...	17	1	10	26	3	32	...	0.11	0.006	0.06	0.17	0.02	0.22
1918	...	39	53	10	50	3	39	...	0.26	0.35	0.06	0.33	0.02	0.26

Vaccination.—Mr. S. R. Carter, Clerk to the Board of Guardians of the Birkenhead Poor Law Union, has kindly supplied me with the following information relative to vaccination in the Borough during the year 1918, viz. :—

No. of Births	...	...	...	...	...	...	...	3328
Successfully Vaccinated	...	...	...	...	...	...	...	2563
Insusceptible	...	...	...	...	...	...	...	34
Had Smallpox	...	...	...	...	...	...	...	—
Number in respect of whom Statutory Declarations of conscientious objection have been received	...	...	...	...	...	...	...	409
Died Unvaccinated	...	...	...	...	...	...	...	224
Postponed by Medical Certificate	...	...	...	...	...	...	...	28
Removed to Districts the Vaccination Officers of which were duly notified	...	...	...	...	...	...	...	20
Removed to places unknown or which cannot be traced	...	...	...	...	...	...	...	22
In Abeyance, up to 31st December, 1918	...	...	...	...	...	...	...	28

Inquests.—The number of inquests held during 1918 was 137, thus 5·2 per cent. of the sum of the deaths in the Borough formed the subject of official enquiries. There were no deaths due to overlaying during the year.

Deaths not certified.—Not all the death causes which are classified represent diseases or symptoms observed and certified by medical men in attendance during the last illness, or verdicts following official investigation. A significant proportion of the death causes are entered in the register on the doubtful testimony of deceased persons' relatives or friends, or fellow lodgers. The registrars have, therefore, been required to mark in the returns furnished, every death not certified by a registered practitioner, or made the subject of a coroner's inquest. In 1918, out of the 2605 deaths registered, 18 were marked "not certified," that is 0·69 per cent. The causes of the 18 deaths were entered in accordance with the statements of persons giving information to the registrars, viz:—

Heart Disease	...	...	...	...	...	4
Premature Birth	...	...	...	...	...	3
Influenza	...	...	...	...	...	3
Debility	...	...	...	...	...	2
Senile Decay	...	...	...	...	...	2
Bronchitis	...	...	...	...	...	2
Pneumonia	...	...	...	...	...	1
Brain Disease	...	...	...	...	...	1

Illegitimate Births and Deaths, 1918.

The following table gives the total number of legitimate and illegitimate births, with the rates per 1000 of births and per 1000 living, and statistics relative to the deaths of such children under one year of age.

Registrar's Sub-District	Estimated Population 1918.	BIRTHS		ILLEGITIMATE BIRTHS		Total deaths of children under one year of age	Deaths of illegitimate children under one year of age	Percentage of deaths of illegitimates to totals deaths under one year of age
		Legitimate	Illegitimate	to 1000 living	to 1000 births			
Birkenhead ..	73239	1804	97	1·3	53·7	1219	14	6·3
Tranmere, Oxton, Cloughton, and Bebington and Workhouse ..	74044	1215	50	0·6	41·1	125	4	3·2
Total ..	147403	*3019	147	0·9	48·6	344	18	5·2

*53 births have since been transferred to other places. Hence the difference in total as given on unrevised number.

County Borough of Birkenhead.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

Summary of notifications during the period from 30th Dec., 1917, to the end of the week ending Dec. 28th, 1918.

Age Periods	Number of Notifications on Form A .. 400													Number of Notifications on Form B .. 5					Number of Notifications on Form C.. 69											
	Primary Notifications													Total notifications (i.e., including cases previously notified by other doctors)					Primary Notifications					Total notifications (i.e., including cases previously notified by other doctors)						
	Total													Under 5					5 to 10					10 to 15					Total	
	0 to 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	85 to 95	95 upwards	Under 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	85 to 95	95 upwards			
Pulmonary—Males ..	2	4	12	8	19	11	36	47	36	15	5	195	252	..	1	..	1	1	1	..	..	..	..	..	..	..	..
" Females ..	..	..	2	12	4	8	13	39	24	7	3	119	159	..	1	..	1	1	..	..	..	..	..	..	..	..	..
Non-Pulmonary—Males ..	5	15	10	9	..	..	3	2	4	1	1	50	55	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Females..	1	9	8	10	4	3	1	..	..	..	..	56	39	..	1	2	3	3	..	..	..	..	..	..	..	..	..
Soldiers and Sailors notified not included in above.																														
Pulmonary—Males ..	..	..	..	..	3	6	4	5	2	..	..	20	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Non-Pulmonary—Males ..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..

BIRKENHEAD.—Tuberculosis of the Lung (including Phthisis) and other forms of Tuberculosis.

Year.	Population at Midsummer	Number of Deaths.									
		Total.		Tuberculosis of the Lung (including Phthisis)			Other Forms of Tuberculosis				
				Males (all ages)	Rate per 1000	Females (all ages)	Rate per 1000	Males (all ages)	Rate per 1000	Females (all ages)	Rate per 1000
1911	131377	160	1·21	98	0·74	62	0·47	31	0·23	20	0·15
1912	133521	159	1·12	80	0·59	79	0·52	34	0·25	23	0·17
1913	136749	163	1·23	104	0·76	64	0·47	32	0·23	27	0·19
1914	137595	141*	1·02	75	0·54	66	0·47	23	0·16	23	0·16
1915	140291	173*	1·23	105	0·74	68	0·48	44	0·31	23	0·16
1916	142622	177*	1·24	104	0·72	73	0·51	36	0·25	25	0·17
1917	144933	172*	1·18	89	0·61	83	0·57	36	0·24	33	0·22
1918	147403	167*	1·13	97	0·65	70	0·47	40	0·27	26	0·17

* This includes transferable deaths from other places.

The average Phthisis Death Rate for the last 10 years is 1·16 per 1000, equal to 162 deaths per year.

REPORT

ON THE WORK OF THE

Tuberculosis Dispensary,

6 DUNCAN STREET,

During the year 1918.

Dr. Banks, the Tuberculosis Officer, remained on Military Service throughout the year; Dr. Fountain Browne, who had previously acted as locum tenens, having also joined the Army, the work was carried on by Dr. W. R. Dalzell. Miss Guilfooy and Miss Bradshaw acted as Charge Nurse and Health Visitor respectively.

Cordial relations have continued to exist with the medical practitioners of the Borough, and also with the various agencies dealing with the sick poor.

The extent of the work carried out is indicated in the tables given below.

STATISTICS AS TO NOTIFICATION OF TUBERCULOSIS (all forms) during 1918.

Total Notifications ...	...	...	707
Primary Notifications ...	...	...	435
Duplicates ...	...	...	272

The Notifications were as follows :

Pulmonary ...	...	...	...	...	339
Brain ..	..	...	...	...	13
Glands ...	...	...	...	...	38
Bones and Joints ...	...	...	...	...	16

Peritoneum	18
Abscess	1
Larynx (Primary)	4
Conjunctiva	1
Ovaries	1
Testes	2
General	2
Total Non-Pulmonary	96
	<hr/>
	435
	<hr/>

PULMONARY TUBERCULOSIS.

Number of cases of Pulmonary Tuberculosis remaining
on Register, December 31st, 1918, ... 952

INVESTIGATIONS INTO SOURCES OF INFECTION.

Of the 435 cases notified it was possible to secure information on this point in 419 cases.

Cases in which the diagnosis was subsequently found to be incorrect have been omitted.

	Pulmonary	Brain	Glands	Bones & Joints	Peritoneum	Intestines	Primary Larynx	Conjunctiva	Ovaries	General	Testes
Known to have associated with a person suffering from the disease at home	147	2	8	9	5	0	1	0	0	2	0
Known to have associated with a person suffering from the disease at work	101	0	2	1	0	1	3	0	0	0	0
Family history of Tuberculosis, but patient not actually in contact	39	3	13	2	2	0	0	0	1	0	0
No family history of Tuberculosis, and no contact with any known case	45	5	13	2	3	2	0	1	0	0	2

INCIDENCE OF TUBERCULOSIS ACCORDING TO THE NUMBER OF ROOMS OCCUPIED BY THE FAMILIES.

The investigations detailed below refer to 400 households, at the time of the nurse's first visit.

No. in Family	No. Occupying									
	1 room	2 rooms	3 rooms	4 rooms	5 rooms	6 rooms	7 rooms	8 rooms	9 rooms	10 rooms
1	2	2	...	...	1	...	...	...	...	...
2	6	5	5	13	7	..	3	...	..	...
3	2	7	3	18	39	4	7	4	1	...
4	1	4	9	26	36	6	7	5	..	...
5	...	3	4	18	22	6	1	3	...	..
6	...	3	5	17	19	4	3	1	1	...
7	...	2	4	8	12	6	2	1	1	...
8	...	...	...	2	6	2	2	1	..	...
9	..	...	...	3	5	...	2	...	...	...
10	...	...	1	3	1	...	...	...	...	...
11	...	...	...	...	..	1	..	...	...	...
12	...	...	...	...	...	...	...	1	...	...
13	...	...	...	...	...	1	...	...	...	...

Preventive Work.

The most important part of the preventive work is the home visitation, whereby the patient and his relatives are instructed in the precautions which should be taken to prevent the spread of the disease and encouraged to adopt the modes of life best calculated to preserve good health. The Visitors are, on the whole, well received, and the results of their constant supervision over many of the poorer homes have been gratifying.

Number of visits paid by Nurse Bradshaw...	2125
Sanitary defects notified to the Medical Officer of Health's Department	...
No. of houses where disinfection was carried out after death or removal	...
	202

Handkerchiefs and Spitting Flasks.

To encourage patients to take precautions with infectious sputum, spitting flasks are provided free of charge. During the

year 124 flasks were given. Japanese paper handkerchiefs are supplied at a charge of ninepence halfpenny per hundred, the cost price; the object of this is to encourage the patients to use the handkerchiefs in the manner explained to them at the Dispensary. Many patients availed themselves of the arrangements.

Educational Work.

The personal instructions of the health visitor regarding the prevention of the spread of Consumption are supplemented by the distribution of pamphlets and pictures. Dr. Banks' pamphlet, entitled "Advice to Consumptives and Others," continued to be distributed widely among the patients.

Other Dispensary Work.

Examination of "Contacts."

In view of the fact that Tuberculosis can only be cured when discovered in a moderately early stage of its progress, efforts are made to detect early cases of Tuberculosis occurring in those who have lived in close contact with notified cases of Consumption, and who have thus run the risk of infection. During the year 84 such persons, suffering from suspicious ill-health were medically examined either at the Dispensary or in their own homes, and among them 17 cases of Pulmonary Tuberculosis were found, and 9 other forms of the Disease. Incidentally it may be mentioned that in the course of these investigations other unsuspected illnesses and defects were found and the patients were referred to the appropriate places for treatment. It is regretted that, owing to difficulties arising from the War, this branch of the work could not be extended.

Co-operation with Medical Practitioners.

The Dispensary co-operates with the Practitioners of the Borough concerning diagnosis (including routine observations of doubtful cases as regards weight and temperature variations); also in securing continuity of treatment by acting as intermediary between the various Sanatoria and the practitioners.

Total number of consultations between Acting-Tuberculosis Officer and Practitioners for various purposes during 1918, 386.

Laboratory Work.

The Dispensary undertakes free of charge the microscopic examination of sputum and fluids suspected to contain Tubercle Bacilli, in order to assist Medical Practitioners in diagnosis. During the year 633 specimens were examined, of which 154 were from patients attending the Dispensary, and 313 were sent by Medical Practitioners and 166 by the Army Authorities.

Army Cases.

During the year 109 cases were examined for the Army Authorities, and amongst them 65 cases of Pulmonary Tuberculosis were found.

Treatment

General Treatment is not undertaken, the Dispensary treatment being limited to the application of special methods (*e.g.* Tuberculin) carried on by the Tuberculosis Officer in co-operation with the medical practitioner providing the general treatment of the case. Owing to circumstances arising from the War not much work of this nature was undertaken.

Total Number of Visits to Dispensary.

During the year 632 patients paid 2961 visits to the Dispensary. Of these patients, 492 had not been to the Dispensary before; the remaining 140 had attended during the previous year.

Provision of Garden Shelters.

The open-air treatment of Consumption can be carried on at home where there is sufficient garden or back-yard to allow of the erection of a simple open-air sleeping shelter. Unfortunately in large towns very few of the houses afford convenience for this. The Corporation supplies such shelters to suitable patients, at a small rent, and during the year 1918 two shelters were in use.

The Corkhill Fund.

Under the will of the late Mr. John Lloyd Corkhill, of Oxtou, a sum of money was provided for the assistance of persons suffering from Consumption. An arrangement has been made by which the Trustees, while retaining in every respect their position

as a private body, make use of the facilities provided by the Dispensary for carrying on work among tuberculous patients. Persons applying for help from the Corkhill Charity are passed through the Dispensary for classification, and the Trustees are largely guided by the Tuberculosis Officer's recommendations. This charity is doing a very excellent work in the Borough. Applications for assistance may be made to Mr. J. Carlisle, c/o Mr. Edgar Hosking, 34 Castle Street, Liverpool.

LEASOWE SANATORIUM FOR SURGICAL TUBERCULOSIS IN CHILDREN.

Early in 1914 the Birkenhead Corporation decided to arrange for Birkenhead children to be admitted to the Leasowe Sanatorium. As a result, 12 beds have been available since August 31st, 1914, and the cases admitted are classified below. Since "Surgical Tuberculosis" is so amenable to cure, under proper conditions it is believed that the arrangements made will have a far-reaching effect in decreasing the number of deaths or deformities from this cause.

The following table gives the localisation of the disease in the cases treated :—

Tuberculosis of Spine ..	...	...	...	...	8
" " Hip ...	...	...	...	...	3
" " Knee ...	...	...	...	...	2
" " Elbow ...	...	...	...	...	2
" " Femur...	...	...	...	...	1
" " Ankle ...	...	...	...	...	1
Total	...	...	...	...	17
Discharged	...	...	...	...	5

December 31st, 1918, the number remaining in ... 12

The five cases discharged were as follows :—

1 Spine	...	no improvement
1 Spine	...	cured
1 Hip	...	cured
1 Femur	...	cured
1 Elbow	...	cured

National Health Insurance.

The Tuberculosis Officer is the Medical Adviser to the Birkenhead Health Insurance Committee, and Sanatorium Benefit is administered through the Dispensary.

Notifications and National Health Insurance.

The 435 notified cases (all forms of Tuberculosis) are classified as regards National Health Insurance as follows:—

	Pulmonary	Non-Pulmonary	Total.
Insured men	154	10	164
Insured women	44	4	48
Dependents	108	68	176
Non-insured class	25	5	30
No particulars obtainable	8	9	17
Total	339	96	435

Insured Persons and the Dispensary.

Statistics were kept throughout the year of the position as regards National Health Insurance of all patients attending the Dispensary for all purposes. The 492 persons who paid their first visits to the Dispensary during the year were classified as follows:—

Insured persons and Army Cases ...	250
Dependents	164
Non-insured class	78
Total	492

Treatment provided by the Insurance Committee.

The following statistics refer to the work of the Birkenhead Insurance Committee which was transacted through the Dispensary, and refer to the period January 1st to December 31st, 1918, inclusive,

APPLICANTS FOR SANATORIUM BENEFIT, 1918.

	1918		
	Total	Men	Women
I. Number of			
Applicants	128	102	26
Applicants unsuitable for treatment	...	...	...
Applicants treated			
(a) Pulmonary cases ...	124	99	25
(b) Non-Pulmonary cases ...	4	3	1
II. Forms of Treatment ...			
Residential	53	42	11
Dispensary	2	2	...
Domiciliary	207	162	45
III. Analysis of Residential cases—			
Cases treated	53	42	11
Discharged—Improved ...	32	25	7
Without Improvement	11	9	1
Still under treatment at end of year	10	8	2

HOUSING OF THE WORKING CLASSES ACTS,

1890 to 1909

During the twelve months ending 31st December, 1918, a large amount of work was carried out by the Department under the provisions of the Housing of the Working Classes Acts, 1890 to 1909, and the Regulations made by the Local Government Board dated 2nd September, 1910, the particulars of which are as follows, viz. :—

The number of dwelling houses inspected for the purposes of Section 17 of the Act of 1909, and the Regulations made by the Local Government Board during 1918 605

The number of dwelling-houses, which on inspection, were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation —

During the year no representations were actually made to the Committee, but several reports upon certain blocks of property were in course of preparation for its consideration, but were held over on account of the war	
The number of dwelling-houses dealt with and made fit for human habitation under Sections 14 and 15 of the Act of 1909	77
The number of dwelling-houses inspected under Section 17 of the Act of 1909, and the Housing Regulations 1910, and the defects found therein remedied under the provisions of the Public Health Act, 1875, and the houses put into a proper and satisfactory condition	304
The number of closing orders made	—
The number of dwelling-houses, the defects of which were remedied without the making of closing orders	—
The number of dwelling houses which, after the making of closing orders, were put into a fit state for human habitation	—
The number of demolition orders made	—
The number of dwelling houses demolished	—

I am, Ladies and Gentlemen,

Your obedient servant,

CYRIL BANKS,

Assistant Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
TOWN HALL, BIRKENHEAD.
June 17th, 1919.



Obituary Notice.

ROBERT SYDNEY MARSDEN,

D.Sc., M.B., C.M., D.P.H. (Edin.), L.A.H. Dublin (Hon. Causa.),
F. Inst. Chem., F.R.S. (Edin.), M.R.I.A.

Medical Officer of Health of Birkenhead,
1891—1919.

The present volume records the work of the Birkenhead Health Department during the last complete year of Dr. Marsden's tenure of office. For considerable periods during the year Dr. Marsden was away from duty owing to serious ill-health; he rallied during the later months and resumed work for a time, but a further onset of illness brought his distinguished career to an end on March 8th, 1919.

ROBERT SYDNEY MARSDEN was born on May 10th, 1856, the son of Mr. Robert Marsden, Steel Manufacturer, of Sheffield. His earlier University career was directed towards the study of chemistry and physics, at the University of Edinburgh, where he took the degree of B.Sc., in 1877, gaining the D.Sc., in 1879. Following up these studies, he spent short periods in Berlin, Göttingen and Paris.

Dr. Marsden always claimed to have been the first to produce diamonds artificially, and his discoveries were reported in the Proceedings of the Royal Society of Edinburgh 1881.

Turning his attention to medicine, he took the degrees of M.B., C.M. Edinburgh in 1885 and settled in practice at Malton, Yorkshire, combining with his general work the office of Medical Officer of Health for Malton. In 1891 the Birkenhead Town Council appointed him Medical Officer of Health, and the following year he took the Diploma in Public Health (Edinburgh).

During the years he held office, sanitary reforms were many and extensive, and under Dr. Marsden's guidance the Council were able to establish a very good reputation in all matters

pertaining to the health of the community, Perusal of the annual reports reveals how widely the work of a medical officer of health has extended during, say, the last twenty years; the medical inspection of school children, the campaign against tuberculosis, child welfare work, and the opening of venereal disease clinics are all of comparatively recent development, and it is in great measure due to Dr. Marsden's abilities that Birkenhead holds the position that it does to-day in regard to these matters. The duties of the Medical Officer of Health in Birkenhead include the responsibility for the meat inspection at Woodside Lairages, and few places in the Kingdom offer such extensive opportunities for experience of this work. Consequently Dr. Marsden soon became an acknowledged authority on the inspection of meat, and for a time all Army Service Corps Officers took a course of training under him on this subject. Many, and interesting, were the tales Dr. Marsden could tell of his experiences in the lairages, and in the Courts, where he was frequently called as an expert witness in meat cases.

Dr. Marsden was a remarkably good public speaker, and as he was widely read and possessed of much originality of thought, he was always a popular figure at Sanitary Congresses and the meetings of the various Societies of which he was a member.

He was thrice President of the Birkenhead Medical Society; he had occupied the Presidential Chair of the North Western Branch of the Society of Medical Officers of Health, of the Royal Medical Society of Edinburgh, and of the Birkenhead Literary and Scientific Society.

In debate he was valiant, and sometimes inflicted severe verbal punishment upon his opponents, but it was usually well meant, and rarely taken amiss by those who knew him.

Antiquarian research, collecting old books, pictures and china varied his studies from the purely professional. He wrote a "History of the Birkenhead Literary and Scientific Society, 1857-1907" and was joint author of "Genealogical Memoirs of the Family of Marsden." His literary knowledge was very considerable.

Of very strong character, he was altogether a remarkable and distinguished man, and he will long be remembered by many who came within his sphere of influence in Birkenhead.

Dr. Marsden married Beatrice Eva, daughter of Rev. C. Cotterill Ward, M.A., (Cantab.) Rector of Salford, Oxfordshire; by her, and their daughter, he is survived.

THE INFECTIOUS DISEASES HOSPITAL,
TOLLEMACHE ROAD.

Report for the Year 1918.

HOSPITAL VISITING SUB-COMMITTEE.

MR. ALDERMAN E. G. MASON, J.P., Chairman.

MR. ALDERMAN THOMAS SHAW.

MR. ALDERMAN MICHAEL BYRNE.

MR. COUNCILLOR ROBERT FRAME.

MR. COUNCILLOR W. W. KELLY, J.P.

MR. COUNCILLOR D. R. ROWLANDS (Mayor).

MEDICAL OFFICER.

DR. R. SYDNEY MARSDEN.

EXTRA SURGEON.

DR. H. LAIRD PEARSON.

MATRON.

MISS EMILY YEOMANS.

There has been no addition to the number of beds in the hospital during the year. The full Staff consists of the Matron, 17 nurses, 19 female servants, an engineer, 2 porters and 2 gardeners.

FEVER HOSPITAL.

The total number of patients treated in the hospital during the year was 756; of these 714 were admitted during the year, and 42 remained in hospital from 1917.

The following table gives a summary of the cases treated in the hospital during the year 1918, along with the results obtained.

DISEASES	M.	F.	Re-covered		Died	
			M.	F.	M.	F.
Scarlet Fever—remaining ..	17	19	16	19	1	..
admitted ..	243	296	235	276	8	20
Typhoid ..	3	3	1	3	2	..
Diphtheria ..	81	78	68	65	13	13
remaining ..	1	5	1	4	..	1
German Measles - admitted..	3	1	3	1	..	..
Measles ..	2	1	2	1	..	..
Chickenpox ..	1	..	1	..	..	..
Pneumonia ..	1	..	..	..	1	..
Tuberculosis ..	..	1	..	..	..	1

Out of those admitted, 58 died, giving a death-rate of 8.1 per cent.

Military and Naval Cases Treated.

Out of the 714 cases admitted during the year, 3 were soldiers, viz: 2 with German Measles and 1 with Scarlet Fever; and 2 were sailors, viz: 1 with Measles and 1 with Scarlet Fever.

By special agreement with the Corporation of Wallasey, small-pox cases from this Borough are now sent to the Wallasey Small-pox Hospital.

THE E. P. SMITH MEMORIAL CONVALESCENT FUND.

FOR PATIENTS WHO HAVE BEEN TREATED IN THE FEVER HOSPITAL.

There were no suitable cases to receive benefit by the fund during the year 1918.

APPENDIX.

- 1—Vital Statistics of Whole District during 1918 and previous years.
- 2—Causes of and Ages at Death during 1918.
- 3—Infantile Mortality during the year 1918.
- 4—Return of Deaths of Soldiers and Sailors—1918.

TABLE I. shows the deaths registered in the whole Borough during 1918, arranged with reference to the age at which death occurred in each case. They are disposed in four sub-tables—the deaths in the townships of Birkenhead and Claughton in the first, deaths in Tranmere (exclusive of the Union premises) and Oxtan in the second, the deaths in the incorporated portion of Higher Bebington in the third, and the deaths in the Union Hospital and Workhouse in the fourth. The deaths of infants are entered up in three columns—those under one year, those of one year and under two years, and those turned two years and under five. Then follow the deaths of children and young persons, those turned five years and under twenty; and of adults those turned twenty and under forty, and those turned forty and under sixty. In the last two columns are the deaths of old people, those turned sixty and under eighty, and those of eighty and upwards.

TABLE II.—Weekly Condensed Register of Meteorological Results for 1918.

Vital Statistics of Whole District during 1918 and previous Years.

Year	Population estimated to Middle of each Year	BIRTHS			TOTAL DEATHS REGISTERED IN THE DISTRICT		TRANSFERABLE DEATHS		NETT DEATHS BELONGING TO THE DISTRICT		
		Un-corrected Number.	Nett.		Number	Rate	of Non-residents registered in the District	of Residents not registered in the District	Under 1 year of age		At all ages
			Number	Rate					Number	Rate per 1,000 Nett Births	
1913	135740	3971	3907	28.7	1972	14.5	46	106	458	117	2032
1914	137996	3790	3772	27.3	2112	15.3	85	123	462	122	2153
1915	140291	3864	3844	27.4	2227	15.8	138	104	439	122	2193
1916	142622	3880	3818	26.9	2067	14.4	150	117	407	105	2034
1917	144993	3315	3261	22.4	2004	13.8	189	108	333	95	1932
1918	147403	3153	3113	21.1	2706	18.3	219	118	344	110	2005

Total Population at all ages - 130,794

Number of inhabited houses - 24,343

Average number of persons per house 5.3

Area of District in acres
(exclusive of area covered by water) } 3,850

Total families or separate occupiers 26,887

At Census, 1911.

Causes of, and Ages at Death during year 1918.

CAUSES OF DEATH.	NET DEATHS AT THE SUBJOINED AGES OF RESIDENTS, WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.										DEATHS IN OR BELONGING TO LOCALITIES AT ALL AGES.						TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT			
	All ages	Under 1 year		2 and under 5		5 and under 15		15 and under 25		25 and under 45		45 and under 65		Whole Borough	Bir-ken-head	Trans-mereghon		Oxton	Beb-ington.	Work-house
		1	2	3	4	5	6	7	8	9	10	11	12							
All causes { Certified { Uncertified	2587	329	177	103	167	165	460	531	545	2587	1277	738	106	44	38	384	319			
Chicken-pox	18	5	...	...	1	...	1	4	4	18	10	6	2	...	...	...	...
Enteric Fever	3	...	...	...	...	...	3	...	...	3	2	1	...	...	...	...	3
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	39	4	23	11	1	...	...	...	...	39	26	13	...	...	...	...	27
Scarlet fever	58	2	3	18	27	3	...	...	...	58	20	12	2	...	...	...	26
Whooping-cough	50	16	20	11	1	...	...	...	...	50	24	23	2	...	...	1	23
Diphtheria and Membranous Croup	36	2	3	21	10	...	...	...	...	36	26	8	2	...	...	...	23
Influenza	437	5	13	31	38	68	180	72	30	437	204	129	20	7	4	73	1			
Erysipelas	4	...	...	...	...	1	1	2	...	4	2	2	...	...	2	...	...	
Cerebro-Spinal Fever	2	1	...	...	...	...	4	...	...	2	1	4	1	...	...	6	2
Other Zymotic Diseases	12	6	...	...	...	...	72	49	5	12	54	44	3	2	3	61	15
Phthisis (Pulmonary Tuberculosis)	167	1	1	1	6	32	72	49	5	167	54	44	3	2	3	61	15			
Tuberculous Meningitis	24	2	6	7	6	1	1	1	...	24	11	11	...	...	...	2	5
Other tuberculous diseases	42	6	6	9	7	6	6	2	...	42	14	20	...	...	1	7	10	
Rheumatic Fever, Rheumatism	4	...	...	...	...	1	...	...	...	4	1	2	...	...	...	1	...
Cancer, malignant disease	154	...	...	...	...	...	13	87	54	154	51	50	3	5	7	38	17
Bronchitis	188	31	14	6	4	...	13	49	69	188	122	41	5	2	1	17	4			
Broncho-Pneumonia	137	41	33	25	12	3	7	7	9	137	95	32	3	...	1	6	13			
Pneumonia (all other forms)	217	15	17	32	17	14	69	29	23	217	133	51	10	3	1	19	25			
Other diseases of Respiratory organs	28	2	1	4	2	1	8	9	1	28	19	6	...	1	1	1	3			
Diarrhoea and Enteritis	64	43	8	3	2	2	1	3	2	64	41	16	2	1	1	1	1			
Appendicitis and Typhilitis	12	...	...	1	5	...	3	2	1	12	4	5	2	...	...	1	9
Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	6	...	...	...	...	...	3	2	1	6	2	2	1	...	...	1	2
Nephritis and Bright's Disease	40	2	1	...	3	4	6	16	8	40	21	10	5	...	...	4	4	
Puerperal Fever	5	...	...	...	...	1	4	...	...	5	1	1	1	...	...	2	1
Other accidents and diseases of Pregnancy and Parturition	8	...	...	...	...	1	7	...	...	8	3	5	...	...	...	2	2
Congenital Debility & Malformation, including Premature Birth	135	123	9	3	...	...	...	...	...	135	80	37	10	1	1	6	9
Violent Deaths, excluding Suicide	58	3	2	7	7	6	6	16	11	58	29	20	2	...	...	7	28	
Suicides	6	...	...	...	...	...	3	3	...	6	4	1	...	...	...	...	2
Brain Disease	116	3	5	...	2	2	10	32	56	116	38	35	5	7	3	28	20			
Heart Disease	165	8	...	...	8	8	43	60	63	165	73	60	4	4	5	19	14	
Other Diseases	323	33	11	10	10	9	26	80	214	323	163	101	25	12	8	81	52			
	2005	544	177	206	108	165	461	535	549	2005	1287	744	108	44	38	384	319			

Infantile Mortality during the year 1918.

CAUSE OF DEATH.	Period										Total Deaths under 1-yr
	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 mos.	3-6 mos.	6-9 mos.	9-12 mos.		
All Causes :-	70	18	15	10	113	64	56	56	50	339	
Certified ..	5	..	..	..	5	..	..	..	..	6
Uncertified ..	..	..	..	..	..	..	..	..	..	..
Smallpox ..	..	..	..	..	..	..	..	..	..	..
Chickenpox ..	..	..	..	..	..	..	..	..	..	..
Measles ..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..
Whooping Cough ..	..	..	..	..	..	..	..	..	..	..
Diphtheria and membranous croup	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis ..	..	..	..	..	..	..	..	..	..	..
Abdominal Tuberculosis ..	..	..	..	..	..	..	..	..	..	..
Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..
Meningitis (not tuberculous)	1	..	..	..	1	..	..	..	1	13
Convulsions ..	1	4	2	..	7	5	1	..	1	13	
Laryngitis and Croup	..	..	..	..	..	..	..	..	..	..
Bronchitis ..	..	1	..	1	2	11	6	7	5	31
Pneumonia (all forms)	..	..	2	1	3	9	11	18	15	56
Diarrhoea ..	..	..	..	..	..	4	11	6	9	30
Enteritis ..	..	1	1	2	4	6	1	1	1	13
Gastritis ..	..	..	..	..	..	8	3	..	2	13
Syphilis ..	..	1	1	..	2	3	..	..	..	5
Rickets ..	..	..	..	..	..	..	..	..	..	..
Suffocation, overlying	2	..	1	..	2	..	..	..	..	..
Injury at Birth ..	..	..	..	..	..	..	..	..	..	..
Atelectasis ..	..	..	..	..	..	..	..	..	..	..
Congenital Malformations	4	2	..	1	7	1	1	1	..	9	
Premature Birth ..	39	4	..	2	45	2	1	..	..	48
Atrophy, Debility, Marasmus	25	5	1	3	40	12	7	5	2	66	
Other Causes ..	3	..	..	..	4	..	5	5	3	17
	75	18	15	10	118	64	56	56	50	344	

Net Births in the year { legitimate 2982
 illegitimate 131
 Net Deaths in the year of { legitimate infants 326
 illegitimate infants 18

MILITARY AND NAVAL DEATHS.

The deaths of 39 soldiers and 23 sailors were registered in the Borough during the year 1918, of which 58 occurred in Institutions.

The following are the particulars respecting the deaths,
viz :—

Age	Cause of Death	Branch of Service
57	Nephritis ...	Military
39	Phthisis ...	"
42	Gunshot ..	"
47	Pneumonia ...	"
25	Gunshot ...	"
25	Phthisis ...	"
31	Pneumonia ...	"
22	Drowning ...	"
33	Gunshot ...	"
20	Phthisis ...	"
33	Heart Disease ...	"
40	Malaria ...	"
35	Carbuncle ...	"
21	Influenza ..	"
27	Influenza ...	"
30	Influenza ...	"
25	Influenza ..	"
26	Influenza ...	"
31	Influenza ...	"
31	Influenza ...	"
25	Influenza ...	"
22	Influenza ...	"
26	Influenza ...	"
44	Pneumonia ...	"
24	Influenza ...	"
36	Influenza ...	"
34	Influenza ...	"
27	Influenza ...	"
34	Influenza ...	"
25	Gunshot ...	"
25	Violence—Crushes ...	"

Age	Cause of Death	Branch of Service
40	Nephritis ...	Military
38	Influenza ...	"
27	Pneumonia ...	"
24	Pneumonia ...	"
52	Tubercular Pleurisy ...	"
27	Phthisis ...	"
23	Influenza ...	"
23	Pleurisy ...	"
17	Pneumonia ...	Naval
49	Fractured Skull ...	"
27	Pneumonia ...	"
40	Influenza ...	"
18	Heart Disease ...	"
27	Enteritis ...	"
33	Influenza ...	"
18	Influenza ...	"
29	Influenza ...	"
32	Influenza ...	"
18	Influenza ...	"
21	Influenza ...	"
30	Influenza ...	"
26	Influenza ...	"
28	Influenza ...	"
28	Influenza ...	"
49	Influenza ...	"
18	Influenza ...	"
49	Influenza ...	"
27	Influenza ...	"
21	Influenza ...	"
18	Fractured Spine ...	"
19	Influenza ...	"

TABLE 1.—Deaths Registered in the Borough of Birkenhead during the Year ending December 31st, 1918.

[illegible]

TABLE II.--Weekly Condensed Register of Meteorological Record for 1918.

[illegible]

The Meteorological Results are for the 52 weeks ending December 25th 1916. Mean-reading of the Barometer for 50 years reduced to sea level and to 35° Fahrenheit.









