

**[Report 1913] / Medical Officer of Health, Sheffield City.**

**Contributors**

Sheffield (England). City Council.

**Publication/Creation**

1913

**Persistent URL**

<https://wellcomecollection.org/works/cgfgryfj>

**License and attribution**

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>



# ANNUAL REPORT

ON THE

# HEALTH

OF THE

# CITY OF SHEFFIELD

For the Year 1913.

---

HAROLD SCURFIELD, M.D., C.M.,

Medical Officer of Health.

ANNUAL REPORT

HEALTH

CITY OF SHEFFIELD

1900

PRINTED BY THE SHEFFIELD FREE PRESS AND MERCANTILE PRINTING CO. LTD.

SHEFFIELD: 1900

CONTENTS

## City of Sheffield.

---

# HEALTH COMMITTEE,

AS AT JANUARY 1st, 1913.

---

THE LORD MAYOR :

ALDERMAN SAMUEL OSBORN, J.P.

CHAIRMAN :

COUNCILLOR O. C. WILSON.

DEPUTY CHAIRMAN :

COUNCILLOR W. BASHFORTH.

ALDERMAN E. HARGREAVES.

COUNCILLOR A. ASHMORE.

.. W. BAKEWELL.

.. J. BENSON.

.. P. J. BENSON.

.. H. BOLTON.

.. J. W. CROWTHER.

COUNCILLOR A. G. W. DRONFIELD.

.. W. H. FORDHAM.

.. H. W. JACKSON.

.. M. SHEPPARD.

.. J. MARSDEN.

.. T. P. STOKES.

---

### Sub-Committees.

---

#### SANITARY SUB-COMMITTEE.

ALDERMAN E. HARGREAVES.

COUNCILLOR A. ASHMORE.

.. J. W. CROWTHER.

.. A. G. W. DRONFIELD.

COUNCILLOR W. H. FORDHAM.

.. M. SHEPPARD.

.. T. P. STOKES.

#### SMOKE NUISANCE SUB-COMMITTEE.

COUNCILLOR W. BAKEWELL.

.. W. BASHFORTH.

COUNCILLOR J. BENSON.

.. P. J. BENSON.

COUNCILLOR T. P. STOKES.

#### AUDIT SUB-COMMITTEE.

COUNCILLOR W. BAKEWELL.

.. P. J. BENSON.

COUNCILLOR A. G. W. DRONFIELD.

.. M. SHEPPARD.

# CONTENTS.

	PAGE
ACREAGE OF CITY AND SUB-DISTRICTS ... ..	3
ADVANTAGES OF SHEFFIELD ... ..	xxxiv.
BACTERIOLOGICAL AND CHEMICAL WORK ... ..	xxxiv.
BIRTHS AND BIRTH RATES ... ..	xxxv., 4, 5
BLACK SMOKE NUISANCE ... ..	45, 54
BRONCHITIS AND PNEUMONIA IN SHEFFIELD AND ENGLAND ... ..	1.
CANAL BOATS ACTS ... ..	41
CEREBRO-SPINAL FEVER ... ..	xxxvii., 12, 13, 18
CHILD WELFARE ... ..	xxxiii.
CLOSET ACCOMMODATION AND DRAINAGE ... ..	xxiii.
COMMON LODGING HOUSES ... ..	xxxi.
COMPARATIVE MORTALITY IN LARGE TOWNS ... ..	lxxviii.
CONVERSION OF PRIVIES INTO WATER CLOSETS ... ..	40, 50
DAIRY INSPECTION ... ..	59
DEATHS CHART ... ..	(opposite) 1
DEATHS AND DEATH-RATES ... ..	xxxv., 5, 11, 12, 21—39
DISADVANTAGES OF SHEFFIELD ... ..	xxxiv.
DISEASES OF ANIMALS ACTS ... ..	62
DISINFECTION ... ..	49
DRIED MILK SCHEME ... ..	xxxiii., 42
FACTORY AND WORKSHOP ACT ... ..	45, 51
FOOD ... ..	xxv., 55, 56
GENERAL SANITARY WORK ... ..	48
GRATUITOUS MEDICAL RELIEF ... ..	xviii.
HEALTH COMMITTEE ... ..	iii.
HEALTH OF SCHOLARS ... ..	xxv.
HOME WORK ... ..	52—53
HOSPITAL ADMISSIONS ... ..	14, 18
HOUSES-LET-IN-LODGINGS ... ..	xxxi., 42
HOUSING ACTS ... ..	xxviii., 40
ILLEGITIMACY ... ..	4, 10
INFANT DEPOTS ... ..	xxxiii., 42
INFANTILE MORTALITY ... ..	xxxviii., 6, 9, 10
INFECTIOUS DISEASES—NOTIFICATIONS ... ..	12—18
LARGE TOWNS, COMPARATIVE MORTALITY IN ... ..	lxxviii.
MAP OF SHEFFIELD ... ..	see cover.
MARRIAGES ... ..	4
MATERNITY AND CHILD WELFARE ... ..	xxxiii.
MEAT AND FOOD INSPECTION ... ..	57
METEOROLOGY ... ..	20
MIDWIVES ACT ... ..	43
MILK SUPPLY ... ..	xxv., 59
MORTALITY AT CERTAIN AGE PERIODS ... ..	11, 12, 13, 21—39
MUNICIPAL WARDS ... ..	2
NUISANCES ... ..	48
OCCUPATIONS OF INHABITANTS ... ..	xi.
OFFENSIVE TRADES ... ..	46
PHYSICAL FEATURES OF DISTRICT ... ..	ix.
POLIOMYELITIS ] ... ..	xxxvii., 12, 13, 18
POOR RELIEF ... ..	xvii.
POPULATION ... ..	xxxv., 2, 3, 5
PREVENTION AND TREATMENT OF TUBERCULOSIS ... ..	xxxviii.
REGISTRATION SUB-DISTRICTS AND SECTIONS.—DESCRIPTION, VITAL STATISTICS, ETC. ... ..	lviii.—lxxviii., 6
REGISTRATION SUB-DISTRICTS—INFECTIOUS DISEASE NOTIFICATIONS, ETC. ... ..	18
Do.   DEATHS AND DEATH-RATES ... ..	9
Do.   BIRTHS AND BIRTH-RATES ... ..	4
Do.   INFANTILE MORTALITY ... ..	9
Do.   POPULATION AND ACREAGE... ..	3
RICKETS IN SHEFFIELD AND ENGLAND ... ..	li.
RIVERS AND STREAMS ... ..	xxii.
SALE OF FOOD AND DRUGS ACTS ... ..	xxvii., 55, 56

CONTENTS—CONTINUED.

	PAGE.
SANITARY ADMINISTRATION ... ..	40—63
SCAVENGING ... ..	xxiii.
SCHOOLS ... ..	xxiv.
SEWERS AND SEWAGE DISPOSAL ... ..	xxii.
SLAUGHTER HOUSES AND MEAT INSPECTION ... ..	57, 58
SOCIAL CONDITIONS ... ..	xi.
SUMMARY OF VITAL AND MORTAL STATISTICS ... ..	1
SUNSHINE ... ..	x., 20
TRADES MORTALITY ... ..	xiii., xiv.
TRANSFERABLE DEATHS AND BIRTHS ... ..	19
TUBERCULOSIS DISPENSARY, WORK OF ... ..	xlii.
TUBERCULOSIS OF LUNG AND PHTHISIS ... ..	xxviii—xlix., 17, 18, 22
TUBERCULOSIS AND MILK ... ..	59
TUBERCULOSIS INSPECTORS' WORK ... ..	41
TUBERCULOUS DISEASES ... ..	xxxviii—xlix., 17, 18, 22
UNEMPLOYMENT ... ..	xviii.
VENEREAL DISEASES ... ..	lvii.
VETERINARY INSPECTOR'S REPORT ... ..	57
VITAL AND MORTAL STATISTICS ... ..	xxxv., 2
WATER SUPPLY ... ..	xx.
WOMEN INSPECTORS' WORK ... ..	42
WORKSHOP INSPECTION ... ..	45, 51
ZYMOTIC DISEASE—	
Seven Principal Zymotics ... ..	6, 12, 13, 18
Small Pox ... ..	xxxvi., 6, 12, 13, 18
Measles ... ..	xxxvi., 6, 13
Scarlet Fever ... ..	xxxvi., 6, 12, 13, 14, 18
Diphtheria ... ..	xxxvi., 6, 12, 13, 16, 18
Enteric Fever ... ..	xxxvii., 6, 12, 13, 15, 16, 18
Diarrhœa and Enteritis ... ..	xxxvii., 6, 9, 10, 11
Whooping Cough ... ..	xxxvii., 6, 15
Puerperal Fever ... ..	6, 12, 13, 17, 18

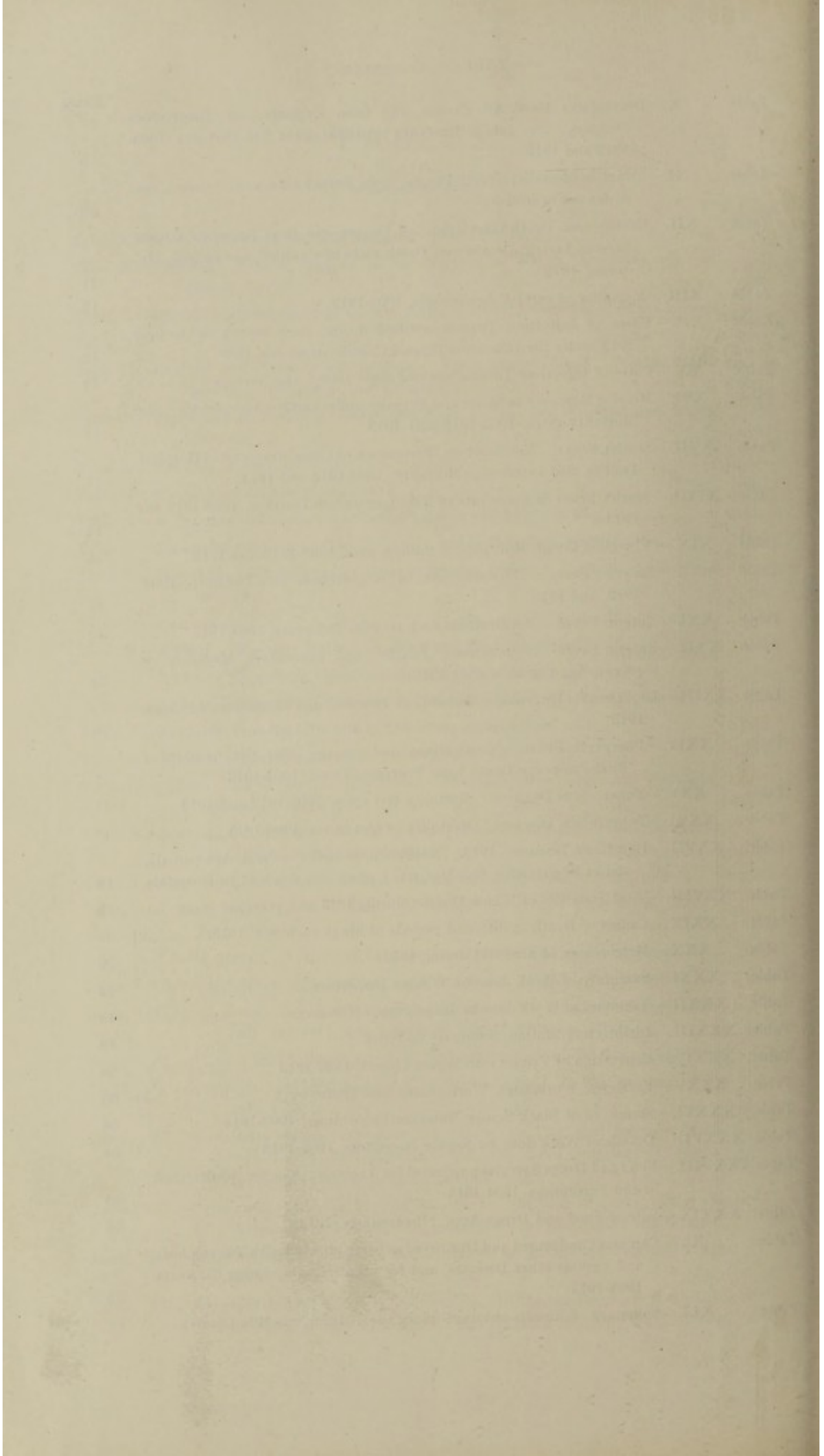
# TABLES.

---

	PAGE.
Table A.—Seven of the great towns of England. Bright Sunshine ... ..	x.
Table B.—Sheffield. Persons engaged in manufacture of Metals, Machines, etc., at Census, 1911 ... ..	xi.
Table C.—Mortality among Sheffield Cutlers, 5 years, 1908-12, distributed in age periods	xiii.
Table D.— Do. do. do. Grinders	xiv.
Table E.—England and Wales and large towns. Proportion occupied ; Female Indoor Servants ; Overcrowding ; Census 1911 ... ..	xvi.
Table F.—Pauperism in Sheffield. West and East Ridings and England and Wales, 1904-13 ... ..	xvii.
Table G.—Analyses of Sheffield Water ... ..	xx.
Table H.—Elementary Schools of Sheffield ... ..	xxiv.
Table I.—Pulmonary Tuberculosis. Sheffield, Leeds and England, 1911-12 ... ..	xxxix.
Table J.—Tuberculous Diseases. Deaths in City and in Hospitals, 1889-1913 ... ..	xli.
Table K.—Bronchitis. Mortality rates under certain age periods. Sheffield and England, 1908-12 ... ..	1.
Table L.—Pneumonia. Do. do. do. do. ... ..	1.
Table M.—Rickets. Mortality Rates. Sheffield and England, 1903-12 ... ..	li.
Table N.—Rickets. Osteotomy Operations in Hospitals of certain towns ... ..	lii.
Table O.—Rickets. Osteotomy Operations in Children's Hospitals of certain towns ... ..	liii.
Table P.—Mortality from Syphilis, and certain of its consequences ... ..	lviii.
Table Q.—Position of Sheffield among large towns, 1907-12 ... ..	lxxx.
Table R.—Fifteen English and Scotch towns. Mortality-rates ; Infantile Mortality ; Birth-rates, 1913 ... ..	lxxxii.
Table S.—Sheffield and England. Mortality-rates, various causes, and Infantile Mortality, 1894-1903 ; 1903-1912 ; 1908-12 ... ..	lxxxii.
Table T.—Sheffield and England. Mortality-rates, certain diseases in sexes, 1903-12	lxxxiii.
Table U.—Fifteen largest towns of England. Scarlet Fever and Diphtheria. Attack- rates, 1904-13 ... ..	lxxxiii.
Table I.—Population ; Estimated Increase ; and Natural Increase ; 22 years ... ..	2
Table II.—Registration Sub-Districts and Municipal Wards contained therein...	2
Table III.—Population of Registration Sub-Districts at the Censuses of 1881, 1891, 1901, and 1911, and Estimated Mean Population, 1913 ... ..	3
Table IV.—Acreage and Persons per Acre in Registration Sub-Districts, 1913 ... ..	3
Table V.—Marriages and Marriage-rates in Sheffield and in England and Wales since 1888 ... ..	4
Table VI.—Birth-rates during the year for the whole City, and for each of the Registration Sub-Districts. Also the total number of Births, Legitimate and Illegitimate, in each ... ..	4
Table VII.—Population, and Births and Deaths in Sheffield in past years ; also Birth-rates and Death-rates in Sheffield and in England and Wales ... ..	5
Table VIII.—Mortality-rates, Sheffield and England, in Quinquennial periods, 1871- 1913 ... ..	5
Table IX.—Registration Sub-Districts and Sections, Estimated Population ; Density ; Death-rates and Birth-rates ; also Infantile Mortality for year 1913	6-8

TABLES—CONTINUED.

	PAGE.
Table X.—Death-rates from All Causes, and from Zymotic and Tuberculous Diseases ; also Infant Mortality in Registration Sub-Districts, 1908-1912 and 1913 ... ..	9
Table XI.—Infantile Mortality, Nett Deaths from Stated Causes at various ages under one year of age ... ..	10
Table XII.—Deaths and Death-rates from All Causes and from Specified Causes, Persons Living, Deaths and Death-rates at specified Age-periods, etc., during 1913 ... ..	11
Table XIII.—Mortality at certain Age-periods, 1903-1913 ... ..	12
Table XIV.—Cases of Infectious Disease notified during each month of the year 1913 under the Infectious Disease (Notification) Act 1889 ... ..	12
Table XV.—Cases of Infectious Disease notified since 1903 ; also average ... ..	13
Table XVI.—Measles Mortality in Males and Females under certain Age-periods ; also Mortality-rates, 1903-1912 and 1913 ... ..	13
Table XVII.—Scarlet Fever. Notifications, Percentage of Cases Removed to Hospital, Deaths, and Percentage Mortality, 1903-1912 and 1913 ... ..	14
Table XVIII.—Scarlet Fever Sickness-rate in Registration Sub-Districts, 1903-1912 and 1913 ... ..	14
Table XIX.—Whooping Cough Mortality at various ages, 1903-1912 and 1913 ... ..	15
Table XX.—Enteric Fever. Sickness-rate in Registration Sub-Districts, 1903-1912, and 1913 ... ..	15
Table XXI.—Enteric Fever. Notifications each month, Ten years, 1904-1913 ... ..	16
Table XXII.—Enteric Fever. Notifications, Deaths, and Percentage Mortality at several Age-periods during 1913 ... ..	16
Table XXIII.—Diphtheria. Percentage Mortality in Hospital and Home-treated Cases, 1913 ... ..	16
Table XXIV.—Puerperal Fever. Notifications and Deaths, also the number of Births to every Death from Puerperal Fever, 1904-1913 ... ..	17
Table XXV.—Tuberculous Diseases. Mortality ten years, 1903-1912 and 1913 ... ..	17
Table XXVI.—Tuberculous Diseases. Mortality in two Sexes, 1903-1913 ... ..	17
Table XXVII.—Infectious Diseases, 1913. Notifications under several Age-periods, and in Registration Sub-Districts ; also cases removed to Hospitals ... ..	18
Table XXVIII.—Vital Statistics of Whole District during 1913 and previous years ... ..	19
Table XXIX.—Causes of Death at different periods of life in each Sex, 1913... ..	21—39
Table XXX.—Meteorology at Sheffield during 1913 ... ..	20
Table XXXI.—Summary of Work done by Women Inspectors... ..	42
Table XXXII.—Summary of Work done by Inspectors of Nuisances ... ..	48
Table XXXIII.—Disinfecting Station, Summary of Work... ..	49
Table XXXIV.—Conversion of Privies into Water-Closets, 1890-1913 ... ..	50
Table XXXV.—Factories, Workshops, Work-places, and Home-work ... ..	51—53
Table XXXVI.—Summary of Black Smoke Nuisance Proceedings, 1903-1913 ... ..	54
Table XXXVII.—Details of Work done by Smoke Inspectors, 1903-1913 ... ..	54
Table XXXVIII.—Food and Drugs Samples purchased for Analysis ; number Adulterated ; and Percentage, 1904-1913 ... ..	55
Table XXXIX.—Sale of Food and Drugs Acts. Proceedings, 1913 ... ..	56
Table XL.—Carcases Condemned and Destroyed as being affected with Tuberculosis and various other Diseases, and for other reasons, during the years 1904-1913 ... ..	59
Table XLI.—Summary of Results obtained under the Tuberculous Milk Clauses ... ..	61



## DEPARTMENT OF THE MEDICAL OFFICER OF HEALTH,

TOWN HALL, SHEFFIELD,

AUGUST, 1914.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,

The Memorandum to Medical Officers of Health on the preparation of their Annual Reports for 1913 issued by the Local Government Board asks for more information than previous Memoranda.

The Memorandum states that it is not intended that each subject should form the subject of full discussion in every Report, but it will, I think, be convenient if, in this my tenth Report, I follow somewhat closely the list of subjects given in the Memorandum and endeavour to review all the local circumstances having important bearing on the public health.

**PHYSICAL FEATURES AND GENERAL CHARACTER OF THE DISTRICT.**

The City of Sheffield, except for a small portion of moorland which drains into the Derwent, lies in the area drained by the Don and its tributaries.

The older town of Sheffield was situated at the junction of the Sheaf and the Don but the modern City extends over six valleys namely, those of the Don, the Loxley, the Rivelin, the Porter Brook, the Sheaf and the Meersbrook.

There is very little level ground except on the alluvium of the valley bottoms, the most extensive flat area being in Attercliffe, Brightside and Tinsley in the portion of the Don Valley which runs north-east towards Rotherham. The site of a house may be anything from 100 feet to 1,000 feet above the sea level.

The eastern portion of the City is built on the coal measures which consist of alternating shales, sandstones, coals and underclays.

The western portion of the City is built on the Millstone Grit, a formation which consists of several thick beds of sandstone separated by beds of shale and clay. The Millstone Grit rocks attain a height of 1,400 to 1,500 feet above sea level to the west of the City and, with their moorland covering, form the gathering grounds for Sheffield's water supply. Towards the west these rocks form imposing edges and towards the east, they dip gently towards the overlying coal measures.

The prevailing wind is westerly to south-westerly.

The average rainfall is about 30 inches, but may vary from 41 inches on the high moorlands to the west at Redmires to 25 inches in the low-lying part of the City near Tinsley

The climate is bracing but cannot be described as dry, with a high rainfall and a retentive subsoil consisting of clay, shale and dense sandstone. The many slopes, however, enable the rainfall to get away rapidly.

With so much of the City built on ridges and hills, there must be of course much variety in the climate according to the height and situation of a house. Thus the climate is undoubtedly drier and more bracing on the hillsides and damper and more "steamy" in the valley bottoms. The hills promote the washing of the streets by rain, and provide a good fall for the sewers without the need for pumping and help the circulation of air round the houses. They also carry off the rain rapidly without causing excessive dampness and thus to some extent compensate for the somewhat impervious nature of the subsoil. The hills also no doubt tend to expand the lungs and keep the breathing apparatus of the inhabitants in good order.

Sheffield, except for those districts most affected by the smoke, compares favourably with most towns as regards hours of bright sunshine. The smoke from boiler furnaces is kept within reasonable limits but the greater part of the factory smoke proceeds from the metallurgical furnaces and with regard to these latter, it is always contended that for certain processes it is necessary for the metal under treatment to be wrapped in an envelope of smoke.

The chief effect of the smoke is local. Thus the Attercliffe neighbourhood loses about 25 per cent. of its sunshine owing to smoke, but I think there can be no doubt that the brightness of the sunshine in the district generally is dimmed from this cause.

Probably one of the worse effects of the smoke is indirect in that it discourages any but the most energetic housewives in the struggle to maintain a high ideal of a clean home.

The following table kindly supplied by Mr. E. Howarth, Curator of the Weston Park Museum has reference to the years 1905-9, and shows the record of hours of bright sunshine in a few of the larger towns.

**TABLE A.**—*Seven of the great towns of England. Bright Sunshine. Total Hours observed.*

	1905	1906	1907	1908	1909	Average.
Sheffield—Weston Park ... ..	1,432	1,438	1,428	1,287	1,333	1,384
Do. Attercliffe ... ..	1,144	1,142	1,057	919	1,002	1,053
Birmingham ... ..	1,174	1,251	1,105	1,140	1,215	1,177
Bradford—Town Hall ... ..	1,074	1,071	837	—*	—	994
Do. Lister Park... ..	—	—	—	1,285	1,277	1,281
Leeds† ... ..	1,270	1,249	1,167	1,055	1,125	1,173
London ... ..	1,290	1,513	1,235	1,365	1,371	1,355
Manchester ... ..	1,039	1,070	894	982	1,000	997
Nottingham ... ..	1,633	1,597	1,323	1,385	1,494	1,486

\* Recorder moved to Lister Park from the Town Hall.

† Recorder near Midland Station.

In November, 1913, the City Council agreed to take part in conjunction with the University in the research scheme suggested by the Committee for the Investigation of Atmospheric Pollution (appointed at the International Exhibition and Conference, London, 1912).

It has subsequently been decided to establish four stations for the collection of the rain-water necessary for the research, namely at Weston Park, Hillsboro' Park, Meersbrook Park and Attercliffe Cemetery.

## SOCIAL CONDITIONS.

Occupations  
of the Inhabi-  
tants.

The condensed list of occupations in Volume X. of the Census of 1911 is shown under 23 headings. The heading which calls for special comment in the case of Sheffield is—Metals, Implements, etc. The number of occupied males and females shown under this heading is given in the following table:—

TABLE B.—PERSONS ENGAGED IN THE MANUFACTURE OF METALS, MACHINES, IMPLEMENTS AND CONVEYANCES AT THE CENSUS, 1911.

	Total Males.	Total Females.
1 and 2.—IRON, STEEL, ETC., MANUFACTURE ... ..	20,158 ...	25
<i>Puddling Furnaces, Iron and Steel Rolling Mills</i> ... ..	6,649 ...	—
<i>Steel-Manufacture, Smelting, Founding</i> ... ..	13,076 ...	25
<i>Other Iron and Steel Manufacture</i> ... ..	353 ...	—
3.—GENERAL ENGINEERING AND MACHINE MAKING.		
Ironfounders ... ..	2,462 ...	52
Blacksmiths, Strikers ... ..	1,692 ...	1
Erectors, Fitters, Turners (including Labourers) ... ..	4,244 ...	—
Others ... ..	5,041 ...	75
<i>Patternmakers</i> ... ..	457 ...	—
<i>Metal Machinists</i> ... ..	755 ...	3
<i>Boiler Makers</i> ... ..	751 ...	—
4.—ELECTRICAL APPARATUS ... ..	976 ...	5
5.—8.—TOOLS; DIES, ETC.; ARMS; MISCELLANEOUS METAL TRADES...	30,773 ...	9,077
<i>Tool Makers</i> ... ..	4,485 ...	372
<i>File Makers</i> ... ..	3,651 ...	1,190
<i>Saw Makers</i> ... ..	1,243 ...	202
<i>Cutters; Scissors Makers</i> ... ..	12,049 ...	2,692
<i>Wire-Drawers, Makers, Workers, Weavers</i> ... ..	1,222 ...	51
<i>White Metal, Plated-Wire Manufacturers; Pewterers</i> ... ..	5,546 ...	4,201
9.—SHIPS AND BOATS ... ..	15 ...	—
10.—VEHICLES.		
Cycle and Motor Car-Makers, Mechanics ... ..	441 ...	38
Others ... ..	1,888 ...	8
<i>Railway-Coach, Wagon Makers</i> ... ..	1,268 ...	5
11.—DEALERS ... ..	654 ...	146

The occupations which have a special influence on health are those in which the workers are exposed to various forms of dust. The grinders are the workers chiefly affected, and a population of about 4,000 grinders accounts annually for about 60 deaths from Tuberculosis of the Lungs, or from one-ninth to one-eighth of all the deaths in the City from this cause.

Dr. Collis of the Home Office has recently demonstrated that this liability to Consumption is common to all workers who are exposed to dust containing free silica, such as gannister workers, sandstone quarrymen (as contrasted with limestone quarrymen who do not so suffer) gold-miners, tin-miners, flint-knappers, etc.

Thus the improvement which is to be expected from the operation of the new regulations as to greater cleanliness and more effective removal of dust in the grinding hulls and cutlers' shops may be greatly aided by the substitution of composition stones for sandstone which is now taking place to a considerable extent.

The cutlers and grinders are exposed to various other forms of dust, such as steel, brass, emery, pearl, horn, ivory and bone. Both cutlers and grinders have a high mortality from diseases of the lungs other than Consumption, and there can be no doubt that this is in part due to the constant inhalation of dust.

Of the dusts mentioned probably ivory, horn and bone are the least injurious. In estimating the effect of dust one has to distinguish between (A) a wounding effect; (B) a clogging effect; and (C) the effect of the dust particles in acting as rafts for carrying infection into the lungs.

Silica dust appears to be the only one which has all three effects.

Coal dust may have a clogging effect, but apparently acts as a preventive of Tuberculosis. The coal miner's liability to Consumption is slight, and the colliery districts are practically speaking the only parts of the country where the male death-rate from Consumption is less than the female.

The number of Sheffield workers below ground in Coal and Shale Mines is shown in the Census as 4,872.

The following tables show that 51·2 per cent. of the grinders die from Consumption, 19·6 per cent. from other respiratory diseases, and 29·2 per cent. from other causes; whereas only 17·6 per cent. of the cutlers die from Consumption, 22·5 per cent. from other respiratory diseases, and 59·9 per cent. from other causes.

Among all males over 20 years of age in Sheffield the proportion is as follows:—15·8 per cent. from Consumption, 20·2 per cent. from other Respiratory Diseases and 64 per cent. from all other causes.

**TABLE C.**—*Showing certain causes of Death which occurred among Sheffield Cutlers during the Five Years, 1908—1912, distributed in Age periods.*

CAUSE OF DEATH.	NUMBER OF DEATHS WHICH OCCURRED								At all Ages.	Percentage of all Deaths.	Average Age at Death.
	IN THE AGE PERIODS.										
	20-	25-	35-	45-	55-	65-	75 and over.				
Pulmonary Tuberculosis ...	7	16	25	24	19	8	—	99	17.6	46	
Pneumonia ...	1	3	7	7	12	13	2	45	8.1	56	
Bronchitis ...	—	1	2	5	19	21	15	63	11.2	65	
Fibroid Disease of Lung ...	—	—	—	1	1	1	—	3	.5	60	
Other Respiratory Diseases	—	—	3	—	7	5	—	15	2.7	58	
All other Causes ...	6	15	16	58	89	107	45	336	59.9	61	
All Causes ...	14	35	53	95	147	155	62	561	100.0	58	

**TABLE D.**—*Showing certain causes of death which occurred among Sheffield Grinders, during the Five Years, 1908—1912, distributed in age periods.*

CAUSE OF DEATH.	NUMBER OF DEATHS WHICH OCCURRED.								At all Ages.	Percentage of all Deaths.	Average Age at Death.
	IN THE AGE PERIODS.										
	20—	25—	35—	45—	55—	65—	75 and over.				
Pulmonary Tuberculosis ...	6	42	93	106	37	7	—	291	51.2	44	
Pneumonia ...	1	6	6	8	7	2	1	31	5.5	47	
Bronchitis ...	1	1	3	13	18	16	4	56	9.9	59	
Fibroid Disease of Lung ...	—	2	6	3	9	1	—	21	3.7	51	
Other Respiratory Diseases	—	—	2	1	—	—	—	3	.5	47	
All other causes ...	5	12	28	29	46	35	11	166	29.2	55	
All Causes ...	13	63	138	160	117	61	16	568	100.0	49	

The hand-filecutters used to show a special liability to lead poisoning but since the introduction of special regulations this liability has practically disappeared.

The file-cutting shops in which files are cut on lead beds are under Home Office inspection, and those in which zinc beds are used are under the inspection of the local Workshops Inspector.

There is not much female factory labour in Sheffield. The principal occupations are those of burnishers, polishers and buffers in the silver trades, and those engaged in the finishing processes of the cutlery trades, such as wiping, whetting and wrapping up. There are also a considerable number employed in the sweets factories.

In the census table of occupations, the buffers are shown under the heading "white metal," etc., and the cutlery workers under "cutlers."

The buffer's work is dusty work, but as many of them are only employed at it for a few years it is difficult to say if it has an injurious effect.

Other Social  
Conditions.

From the point of view of social conditions the outstanding feature of female labour in Sheffield is the low rate of pay. The explanation of the low wages is apparently that the women and girls mostly live at home and are content to work for a pocket-money wage to supplement the earnings of the principal bread-winner. Very few female industrial workers receive the minimum living wage recently fixed by the Co-operative Wholesale Society, and it is quite a common thing for an adult female to receive a wage of 6s. to 8s. for her week's work.

The low value put upon woman's labour of course makes it very difficult for those women who have to live by their earnings. It may have many other effects. Does the woman who is accustomed to earning very little before marriage have a lower ideal of the home to be striven for after marriage? Does it also tend to lower the value in the man's eyes of the woman's work as a wife and a mother? It certainly is the case that very many wives in Sheffield have no idea of the amount of their husband's earnings. There is a custom of giving the wife £1 a week on which to keep the house going quite without regard to the size of the family and the amount of the man's earnings, but whether that custom is more prevalent in Sheffield than in places where woman's labour is better paid it would be extremely difficult to say.

The following table is extracted from the Census return and shows how Sheffield compares with other large towns as regards other facts which may have a bearing on public health.

**TABLE E.**—*England and Wales and the large towns with over 200,000 population. Certain particulars with regard to proportion occupied, female indoor servants, and overcrowding, at Census, 1911.*

TOWNS.	Proportion per 1,000, aged 10 years and upwards, occupied.		Proportion per 1,000 Married Women, occupied.	Proportion per 1,000 children aged 10-14 years, occupied.		Proportion of Female Indoor Servants per 1,000 families.	Proportion per 1,000 of persons living more than 2 to a room.
	Males.	Females.		Males.	Females.		
England and Wales ...	838	325	103	69	35	189	91
*Birmingham ...	851	413	185	28	6	86	100
Bradford... ..	892	450	195	264	245	65	93
Bristol ... ..	818	375	120	20	6	143	48
Hull ... ..	842	264	63	29	6	111	81
Leeds ... ..	868	379	130	151	113	82	112
Leicester ... ..	853	474	265	35	17	84	11
Liverpool ... ..	828	317	89	19	2	135	101
London ... ..	838	396	132	18	2	194	177
Manchester ... ..	861	394	145	44	10	93	72
Newcastle ... ..	842	271	53	20	2	137	316
Nottingham ... ..	853	457	224	74	54	95	43
Portsmouth ... ..	828	280	81	32	6	138	23
Salford ... ..	863	386	141	50	15	79	101
<b>SHEFFIELD</b> ... ..	<b>871</b>	<b>278</b>	<b>77</b>	<b>128</b>	<b>47</b>	<b>120</b>	<b>84</b>
Stoke-on-Trent ... ..	863	409	219	143	97	75	86
West Ham ... ..	831	289	76	19	1	70	152

\* The figures for Birmingham are for the City as at the Census, and do not refer to Greater Birmingham.

The possession by a family of a sufficient income and the expending of the income in such a way as to secure the essentials of healthy living must have a very important effect on the mortality rates. It may be doubted whether wealth in itself beyond what is required to enable a family to live in a garden city such as Bourneville or Port Sunlight or in the Peabody Buildings in London has any appreciable effect on the death-rate, but under present conditions such accommodation is not available for all the families who may be willing to avail themselves of it, and hence it comes about that there is a great difference between the death-rate in the congested central parts of a town and in the residential parts where people are living under more or less garden city conditions.

In comparing one town with another it is important to know to what extent the highly-rented residential quarters are included in the statistics.

I think there can be no doubt that Sheffield has a great advantage over many towns in that to a large extent its highly-rented residential quarters are inside the City boundaries. It is quite otherwise with Manchester and Liverpool. On the other hand

Sheffield is at a disadvantage as compared with Birkenhead, a great portion of which consists of highly-rented residential quarters for Liverpool, or as compared with Bournemouth or Brighton which are to a considerable extent residential quarters for well-to-do persons not engaged in any occupation.

In these comparisons the number of indoor domestic servants is some guide to the proportion of the population living under conditions which render them little liable to the effects of insufficient food, over-crowding and other incidentals to poverty. The proportion of female indoor servants per 1,000 families varies very greatly in the large towns, for example from 60 per 1,000 families in Bolton and Bury to 415 in Bournemouth, 707 in Kensington, and 737 in Hampstead. Sheffield occupies a middle position.

Sheffield compares favourably with the towns in the table as regards married women's labour and this may be taken as an indication that the wages of the male bread-winner of the family compare favourably with those paid in other towns.

Married women's labour must be as a rule prejudicial to healthy homes.

Table E. shows that the amount of child labour was less than in the other two large Yorkshire towns at the time of the census, and since the census there will have been a further reduction owing to the alteration in the by-law regulating the age for leaving school.

Since May, 1911, a child may only leave school between the ages of 12 and 14 if it has passed an examination satisfactory to H.M. Inspector of Schools in Seventh standard work, and not as formerly on obtaining an attendance certificate. The new by-law also abolishes half time attendance.

Another point favourable to Sheffield is the comparatively small amount of casual labour. There are a small number of casual labourers who work intermittently for the Railway Companies and at the Canal.

If the Registrar-General's definition of overcrowding is a trustworthy indicator it would appear from the table that Sheffield does not compare unfavourably with the other large towns in this respect.

The following table prepared from returns kindly supplied by Mr. P. H. Bagenal, Local Government Board Inspector, shows that, as regards percentage of pauperism, Sheffield does not differ appreciably from the rest of the West Riding and is better off than the East Riding and England and Wales taken as a whole.

**TABLE F.**—PAUPERISM IN SHEFFIELD AND ECCLESALL UNIONS, ALSO IN THE WEST AND EAST RIDINGS OF YORKSHIRE, AND IN ENGLAND AND WALES.

TEN YEARS, 1904—1913.

YEAR.	PERCENTAGE OF PAUPERISM TO POPULATION (as enumerated on 1st January of each year).						
	Sheffield Union.	Ecclesall Union.	Combined Districts of Sheffield and Ecclesall Unions.	West Riding of Yorks.	East Riding of Yorks.	Combined Districts of West and East Ridings of Yorks.	England and Wales.
1904 ...	2.0	1.2	1.7	1.6	2.5	1.7	2.3
1905 ...	2.1	1.3	1.8	1.7	2.6	1.8	2.4
1906 ...	2.1	1.2	1.7	1.7	2.7	1.8	2.4
1907 ...	1.9	1.1	1.6	1.7	2.6	1.8	2.4
1908 ...	1.9	1.2	1.6	1.6	2.6	1.8	2.5
1909 ...	2.1	1.2	1.8	1.7	2.7	1.8	2.6
1910 ...	2.1	1.3	1.8	1.7	2.7	1.8	2.5
1911 ...	1.8	1.2	1.6	1.5	2.5	1.6	2.1
1912 ...	1.7	1.1	1.4	1.3	2.1	1.4	1.8
1913 ...	1.6	1.1	1.4	1.2	2.1	1.4	1.9

About three-sevenths of the population of the City are in the Ecclesall Union, and about four-sevenths in the Sheffield Union.

**Unemployment.**

During the last ten years Sheffield has been less exposed to severe fluctuations in trade than many of the other large towns, for example, those where ship-building is carried on.

There are about 45,000 workers in the insured trades in the district covered by the Sheffield Labour Exchange, and the average rate of unemployment during the first two years of the working of the Insurance Act in the Sheffield district has been  $1\frac{1}{2}$  per cent. while in Nottingham district during the same period the rate has been 9 per cent.

**Gratuitous Medical Relief.**

The following statement shows the work done by the Hospitals supported by voluntary contributions during their last year of work.

(1) Hospitals supported by Voluntary Contributions.

	IN-PATIENTS.	OUT-PATIENTS.	AVAILABLE BEDS.
Royal Hospital ... ..	3,190	39,284	192 (Hospital) 42 (Convalescent Home)
Royal Infirmary ... ..	3,962	16,262 19,980 (accidents and emergencies).	326 (Hospital) 24 (Convalescent Home)
Children's Hospital ... ..	651	5,613 7,928 (East End Out-patient Branch).	60
Jessop Hospital for Women ... ..	311 (confinements) 20 (obstetrical cases). 882 (gynaecological cases).	2,038 73 confinements attended at Home by Hospital Midwives.	74
<b>TOTAL</b> ... ..	<b>9,016</b>	<b>91,108</b>	<b>718</b>

With the exception of the Children's Hospital all these Institutions still utilize the system of Subscribers' "recommends." Accidents and emergencies, including cases of Ophthalmia Neonatorum are, however, treated without "recommends."

These Hospitals serve the District round Sheffield, but it is probable that about four-fifths of the In-patients and seven-eighths of the Out-patients are Sheffield residents.

(2) Poor Law Institutions.

The following statement shows the beds occupied and available during the year for the sick in Poor Law Institutions belonging to the two Boards of Guardians.

	Beds Available.	Beds Occupied.
For ordinary medical and surgical cases ... ..	1,071	964
For mental cases ... ..	341	238
For venereal cases (males) ... ..	34	19
" " (females) ... ..	20	11
Infirm cases ... ..	480	422
	<b>1,946</b>	<b>1,654</b>

In addition to the above there were on the average about 500 persons in receipt of out-door medical relief all the year round.

A slight deduction must be made from the above figures, owing to the fact that about 5 per cent. of the population of the Sheffield Union and 2 per cent. of the population of the Ecclesall Union live outside the City.

The accommodation, according to the Local Government Board's requirement, at the City Hospitals for Infectious Diseases is as follows :—

	Beds.
Lodge Moor Hospital ...	313
Crimicar Lane Hospital ...	30
Winter Street Hospital ...	96
Moor End Hospital ...	20

---

459

---

There are 10 rooms available for Small-Pox Contacts in cottages at Winter Street.

The three last-named hospitals were used for Tuberculosis of the Lungs during 1913.

The number of patients admitted to the City Hospitals during 1913 was 3,642, and the average beds continuously occupied was 466.

Treatment was provided at the School Clinic for 7,333 cases as under :—

Dental Cases ...	2,324
Skin Cases ...	3,036 (381 with X-rays)
Ophthalmic Cases ...	1,629
Aural Cases ...	344

The average number of cases other than Insured Persons undergoing tuberculin treatment at any one time at the Tuberculosis Dispensary during the year 1913 was about 100. The only other treatment actually given at the Dispensary consisted in the supply of Cod Liver Oil and Malt Extract, etc., to school children, of whom the average number at any one time was about 30.

During 1913 there were 21 District Nurses working in the City.

Seventeen were in the service of the Queen Victoria District Nursing Association, one works in St. Matthew's Parish, one for the Darnall Medical Aid Society, and two working in Brightside and Grimesthorpe respectively are chiefly supported by the large east-end works.

The District Nurses between them attended about 3,000 patients and paid more than 75,000 visits during the year.

To sum up, the In-door Hospital Treatment during 1913 was represented by the continuous occupation of about 2,520 beds, or 5·3 beds per 1,000 of the population, and Out-door Medical Treatment by a number of patients equal to about 174 per 1,000 of the population.

## WATER SUPPLY.

Sheffield's water supply until recently has been entirely derived from reservoirs formed by impounding the head waters of tributaries of the Don. Since August 1913, a portion of the supply, at present about 3 million gallons per day, has been obtained from the head waters of the Derwent through the tunnel connecting the Derwent Board reservoirs with the Sheffield system.

The gathering grounds are all similar and consist of moorlands lying over the Millstone Grit series of rocks. The following table shows the result of analyses of the various sources of supply.

TABLE G.—SHEFFIELD CORPORATION WATER WORKS.—ANALYSES OF WATER MADE IN JANUARY AND FEBRUARY, 1913, AFTER FILTRATION.

	REDMIREs.	LOXLEY.	LITTLE DON.	DERWENT VALLEY.	
PHYSICAL CHARACTERS—					
Suspended Matter ... ..	Trace.	None.	Trace.	Faint Trace.	
Appearance of a column 2-ft. long ...	Slightly Cloudy Greyish.	Clear, Colourless	Very slightly cloudy yellow	Clear, Colourless.	
Taste ... ..	Normal.	Normal.	Normal.	Normal.	
Odour ... ..	None.	None.	None.	None.	
ON ANALYSIS THE SAMPLE GAVE THE FOLLOWING RESULTS:—					
Grains per gallon.	Total Solid Matter ... ..	5·04	5·04	6·72	6·72
	which lost on ignition ... ..	·84	1·68	2·24	1·12
	Chlorine ... ..	·60	·70	·60	·80
	equal to Sodium Chloride ... ..	1·00	1·16	1·00	1·32
	Nitrogen in oxidised forms ... ..	None.	Faint trace.	Very faint trace.	None.
	equal to Nitric Acid (anhydrous) Poisonous Metals (Lead, etc.)... ..	— None.	— None.	— None.	— None.
Parts per million.	Degrees of Hardness (Each degree of hardness represents a soap destroying power equivalent to one grain of chalk per gallon) ... ..	1·8	1·6	1·7	2·1
	Reducing Power (Representing the oxygen absorbed by the organic and other oxidisable matters in one million parts of water) ... ..	·15	·67	·30	·42
	Free and Ureal Ammonia ... ..	·06	·02	·01	·13
Albuminoid Ammonia ... ..	·04	·03	·08	·08	
NUMBER OF ORGANISMS growing on Nutrient Gelatin at 20 deg. C. per one cubic centimetre of the water ...	3	20	20	4	
TESTS FOR BACILLUS COLI COMMUNIS in ten cubic centimetres of the water ...	Negative.	Negative.	Negative.	Negative.	
TESTS FOR BACILLUS ENTERITIDIS SPOROGENES in ten cubic centimetres of the water ... ..	Negative.	Negative.	Negative.	Negative.	

The composition of the water from each source is similar. The gathering ground of the Derwent lies partially over the Yoredale series but as there is no lime in the water, it is evident that the limestone shales of that series do not enter into the composition of the gathering ground.

The water is soft and contains brown peaty and earthy colouring matter, varying with the nature of the gathering ground and most marked during the first rain after a drought. The gathering grounds are almost uninhabited and practically free from sources of human pollution. Until 1909 none of the water was filtered but during the last five years filtration has been adopted for the sake of improving the appearance of the water, in most cases by means of mechanical pressure filters but at Langsett by sand filter beds.

The natural untreated water has a marked plumbo-solvent action and in 1888, owing to cases of lead poisoning occurring from the use of the water, a Special Commission was appointed to enquire into the matter.

The Special Commission recommended that a small quantity of chalk, in a minute state of division such as would not affect the water for domestic or manufacturing purposes, should be added to it before its distribution to the town. This recommendation was tried experimentally, and found to answer the purpose. Suitable apparatus has therefore been installed at the various reservoirs. The weight of chalk taken up by the water varies from one to two grains per gallon, according to the state of the water and its capacity for dissolving carbonate of lime.

The result of the addition of the chalk has been satisfactory and there has been no recurrence of the lead poisoning. In fact, during the last 10 years I can only call to mind two cases where the medical attendant has had suspicions of symptoms of lead poisoning due to water.

The untreated water when bottled up in a lead pipe for 24 hours may take up from one-tenth of a grain to one grain of lead per gallon. The treated water only takes up one-fortieth of a grain or less. It is just possible that a person with a special idiosyncrasy who always drank the water that had been standing in the pipes all night might become affected but practical experience shows that the danger has been successfully dealt with. The filtration of the water has probably also tended to lessen its plumbo-solvent capacity.

During the last ten years the only other incident deserving of mention with regard to the quality of the water was the development of an organism known as *Uroglena* in one of the reservoirs during a time of drought in 1911. The growth of the organism, though not in any way injurious to health caused an unpleasant "fishy" smell which passed away after a few days, and there has been no recurrence of the trouble.

During the year ended March 25th, 1914, the Water Department supplied water to an estimated population of 491,808 within the statutory district, of whom about 20,000 or 4 per cent. live outside the City.

The number of houses supplied in the statutory district was 114,044, the number of water-closets 68,343 and the number of baths 19,947, being an increase of 327, 2425 and 506 respectively, as compared with the previous year.

The average daily consumption per head per day (1) for domestic and all other supplies not by meter, including water supplied for fires and waste, was 15.30 gallons as compared with 14.06 for the previous year and (2) for trade purposes by meter was 12.53 gallons as compared with 11.79 for the previous year.

The number of houses in the City at the end of March, 1914, was 107,288, of which 105,797 were supplied with town's water, 18,391 of the latter having baths.

### RIVERS AND STREAMS.

It was inevitable that in the past the many streams and rivers flowing through the city should be used for the receipt of drainage.

These sources of pollution have been dealt with year by year and now I think it can be stated that there is very little pollution of water-courses by drains or overflows from cesspools. Probably there is more pollution from the throwing of refuse into unprotected watercourses (a very difficult thing to stop) than from the discharge of drains into them.

### SEWERS AND SEWAGE DISPOSAL.

As recently as 1888 rubble sewers were being constructed in Sheffield.

In 1901 there were 110 miles of stone rubble sewers. At the present time there are about 25 miles of which about 16 miles are not in immediate need of reconstruction.

The method which has been hitherto chiefly adopted for the ventilation of the sewers is by open gratings at the street level, though there are a few shafts. These street level gratings give rise to many complaints. It is a moot point as to whether sewer ventilation is necessary and as to whether any harm is done by bottling up the smell in the sewers. The experience of Bristol is always quoted to show that no harm is done by having sewers unventilated.

In 1886 the Sewage Disposal Works at Blackburn Meadows were opened. The purification process adopted was lime precipitation. As this process only effected a 50 per cent. purification by removal of suspended matter, the whole of the works have had to be remodelled to suit modern standards.

The method of purification now adopted is a bacteriological one and is effected by screening catch-pits, continuous flow settling tanks and contact beds filled with screened clinker graded from coarse at the bottom to fine on top.

At the outset the question arose as to whether contact beds for single contact or for double contact would have to be provided, the estimated cost being £270,000 for single contact and £367,500 for double contact, exclusive of land.

The scheme deals not only with the sewage of the City but also with that of a population of 11,500 living outside, chiefly in the Wortley and Norton Rural Districts.

The actual dry weather flow is about 15,000,000 gallons per day, of which it was estimated in 1904 that 3,000,000 gallons was clean water from works, springs and streams.

The scheme is based on a dry weather flow, including trade wastes of 12,000,000 gallons per day. The latter figure corresponds fairly closely with the 27 gallons of water supplied daily by the Water Department per head of the population.

The capacity of the screening catch-pits is one-forty-eighth of the estimated dry weather flow of 12,000,000 gallons. The capacity of the settling tanks is 15,000,000 gallons, or  $1\frac{1}{4}$  times the estimated dry weather flow.

The first contact beds are 30 acres in extent and are large enough to deal with three times the dry weather flow, reckoning that they are filled and emptied three times in the 24 hours. The storm beds are 16 acres in extent, have approximately one-half of the capacity of the first contact beds when acting as contact beds, and a capacity of 32,500,000 gallons when used as streaming filters for storm-water. The total capacity of the works, including storm water, is 64,500,000 gallons.

The results from single contact have been very satisfactory and the average purification effected thereby (80 to 90 per cent.) gives an effluent approximately conforming to the provisional standard required by the West Riding Rivers Board and the Local Government Board. The chief difficulty in fully meeting the standard is due to slight

excesses of colloidal and suspended matters which are difficult to remove by a single treatment, and the question of some secondary treatment for this purpose is at present under the consideration of the City Council. For the present, assistance in treatment is provided by the use during dry weather of the storm beds as ordinary contact beds.

The total cost of the scheme including land and old works (£33,000) is £401,000. To this will have to be added the cost of whatever secondary treatment is adopted. The cost of the provision for a population of nearly half a million has, therefore, been about 17s. per head.

#### CLOSET ACCOMMODATION AND DRAINAGE.

At December 31st, 1913, the (approximate) number of dwelling houses in the city was 107,150. Of these 81,253 were supplied by water-closets, 3,903 by slop closets and trough closets and 21,994 by privy middens.

Slop closets and trough closets are not satisfactory for dwelling-houses and the Corporation have not paid any contributions towards the substitution of trough closets and slop closets for privy middens for more than 10 years.

A small proportion of the larger houses having internal water-closets still have privy middens outside.

Table XXXIV. shows the progress being made with the conversion of the privy middens. The last column shows that the £8,000 placed in the estimates each year has not been expended and with a view to making more rapid progress, the Council, in January, 1914, made an addition to the staff engaged in preparing the plans for privy conversion work and also increased the contribution from £3 to £4 per privy converted where the owner elects to do the work by employing his own architect or builder.

When the conversion work is put in hand, the rest of the drainage of the property is overhauled so that the result of the conversion scheme is to secure satisfactory drainage systems for the property dealt with.

#### SCAVENGING.

Since 1903 all new houses have been supplied with movable bins for house refuse and in all privy conversion contracts bins have been substituted for middens. Prior to this date in the conversion scheme waterclosets and fixed ashpits were substituted for privy middens and some of these large fixed ashpits have been found to be nearly as great a nuisance as the privy middens. There are 10,834 of these ashpits in use at the present time. The majority of them serve more than one house.

Under Section 108 of the Sheffield Corporation Act 1912, the Corporation are empowered to require the substitution of movable bins for fixed ashpits on payment of half the cost. The number of bins in regular use at March 1914 was 48,455. In the case of the smaller houses with common yards it is usual to provide one bin for two houses. In some cases more than one bin is provided for a house. The number of houses on the bin system is about 60,000. The bins are emptied twice or thrice weekly.

There are two destructors. The Lumley Street Destructor, opened in June 1897, has 16 cells and dealt with 40,999 tons of refuse during the year ended March 25th, 1914. The Penistone Road Destructor, opened in 1904, consists of 12 cells and dealt with 32,843 tons of refuse during the same period.

In addition to this, 30,704 tons of refuse were sent to Renishaw tip by rail, and 12,739 tons of refuse to other tips and to local farmers for agricultural purposes both by rail and by road. Practically speaking no privy midden refuse is sent to tips.

The average cost per ton for dealing with the refuse during the five years ended March 25th, 1914, at the Destructors and at the Renishaw Tip has been as follows:—

	s.	d.
Lumley Street Destructor ... ..	3	2·36
Penistone Road Destructor ... ..	3	10·73
Renishaw tipping scheme ... ..	3	3·29

The total amount of the ashpit, bin and shop refuse dealt with during 1913 was 117,285 tons, which is equivalent to about 5 cwts. per head of the population.

### SCHOOLS.

The following table gives some particulars of the public elementary schools in the City:—

Sanitary  
Conditions.

TABLE H.—ELEMENTARY SCHOOLS.

	Council Schools.	Non-Provided Schools.	Temporary Schools.	TOTAL.
Number of Schools ... ..	62	43	10	115
Number of Departments ... ..	174	89	10	273
Accommodation ... ..	61,527	20,793	1,294	83,614
Number on Rolls ... ..	61,814	20,379	1,396	83,589

All the Council Schools, with the exception of Fulwood, are supplied with water-closets, and the town's water.

In the newer schools pedestal closets with automatic flush are provided, and in the case of the older schools the more primitive type of trough closets have now been replaced by automatically flushed pedestals in all cases. The Fulwood School which has 209 scholars on the rolls and is situated in the Porter Brook Valley about a mile above the head of the sewer, is supplied with water from a well and is provided with privies in which moss litter is used as a deodorant.

All the Non-provided schools are supplied with town's water, and all except Crosspool and Shiregreen with water-closets.

Crosspool and Shiregreen with 88 and 144 children on the roll respectively are supplied with privies.

Some of the points to which attention has been specially drawn recently in connection with the schools are:—

- (1) The need for opening doors and windows during breaks and intervals in order to flush the class-rooms with fresh air, and with the same object in view the need for increasing the amount of opening window space.
- (2) The need in the interests of adequate lighting for the more frequent cleaning of the windows, especially in the more congested parts of the City. This cleaning is at present carried out four times a year.
- (3) The need for the more frequent scrubbing of the floors. This is at present done four times a year.
- (4) The advisability of introducing into the curriculum more open-air classes.

er School  
Buildings.

The schools which are now being built are a very great improvement on the older type, particularly as regards ventilation. The old type of central hall school with class-rooms all round was very unsatisfactorily ventilated. In the new schools and the alterations and extensions of the older schools, the City Architect is supported by the Buildings Sub-Committee of the Education Committee in making special efforts to secure efficient cross ventilation of all rooms. The separation of the cloak rooms from the teaching rooms is also conducive to a better atmosphere in the latter.

In the single-storey school cross ventilation is secured by the ingenious device of keeping the corridor roof down to a height of 8 feet and providing a clerestory above it. The same device is used to give cross ventilation to the class-rooms on the upper floor of a two-storied school, the lower storey being ventilated directly across the corridor by opening windows placed opposite each other in the corridor and class-room walls respectively.

In addition to the endeavour to secure cross ventilation, practically the whole area of all the windows in the new schools is made to open, so that the class-rooms can be flushed with air in a few minutes.

I understand the better facilities for ventilation are greatly appreciated by the teachers, and there can be no doubt that if they are properly taken advantage of they will greatly conduce to the better health of the children.

The playgrounds and playsheds in the case of the newer schools are of ample area, and the asphalt paving in all cases is maintained in good condition.

er Matters  
affecting the  
Health of  
Children.

When outbreaks of infectious disease occur in the schools the Medical Officer of Health and the School Medical Officer confer as to the measures to be taken. Three such outbreaks of Diphtheria occurred during 1913, viz., in connection with Heeley Bank Council School, the Open Air School, and the Industrial School at Hollow Meadows. In each case free use was made of the arrangement with the University for bacteriological examinations in order to discover and exclude "Carriers" and such disinfection as was thought necessary was carried out.

The Infants' Departments of Hillsbro' C.E. School and St. Wilfrid's R.C. School were closed during 1913 for periods of 3 weeks and 2 weeks respectively on account of Measles.

Dr. Ralph P. Williams draws attention in his Report to gradual improvements in the clothing, footgear, and cleanliness of the children. 181 of the worst cases of neglected school children were reported to the Women Inspectors' Department in order that they might be dealt with by sanitary notices, etc.

40,943 free breakfasts, and no free mid-day meals, were provided during 1913. 1913 was a year of good trade.

Dr. Williams also draws attention to the cutting down of the estimates with regard to the teaching of Domestic Economy, Cookery, Housewifery, and Mothercraft, in spite of the understanding that when the leaving age was increased to 14 this subject was to assume for the older girls a position of the very greatest importance in the curriculum. It is to be hoped that this matter will be differently dealt with another year as the hope for healthier homes in the future depends much more on the knowledge of the housewife than on the structure of the house.

#### FOOD.

Milk  
Supply.

The milk supply is derived from about 2,740 cows stalled inside the City and about 5,600 cows stalled outside the City.

The City cowsheds are visited by the three Veterinary Surgeons about once a quarter in order to see that the Dairies, Cowsheds, and Milkshops Orders and the Regula-

tions made under them are carried out, and also for the purpose of examining the individual cows, principally with a view to the detection of tuberculosis of the udder.

For the purpose of finding tuberculous udders among country cows, we have to trust to the taking of samples arriving by road or rail and following the matter up if the sample is found to contain tubercle bacilli.

During the five years, 1908-12, 144 tuberculous udders have been found in the City stalls or an average of 1.2 per hundred stalls per annum. The number for 1913 was 14 or 0.51 per hundred stalls.

During the same period, by the much more imperfect method adopted, 112 tuberculous udders have been found among the (approximately) 5,600 stalls of the country cows supplying Sheffield with milk. The number for 1913 was 29.

In September an order was made prohibiting the milk supply from a Derbyshire farm coming into Sheffield. The farmer expressed his intention of sending no more of his milk into the City so that the Order has never been determined.

In the case of milk samples taken for examination for tuberculosis we never rely upon a negative direct microscopical test but in every case the samples are submitted to the inoculation test. In a few cases we have been able to act on a positive direct microscopical test and thus save time.

Eight cases of Scarlet Fever and two cases of Diphtheria were notified during the year at dairy farms or milkshops. In every case but one the patient was removed to Hospital and in every case disinfection was carried out without the milk supply becoming affected. In one case the patient was treated at home and the cows and milk business were removed to another farm till the home was free from infection.

When scarlet fever occurs at a dairy farm or dairy the susceptible members of the household who have been exposed to infection are kept away from the milk for eight days and the patient on leaving hospital goes to another address for a month before going home.

In July a Magistrate's Order had to be obtained for the removal to Hospital of a case of Scarlet Fever occurring at a Dairy Farm.

Towards the end of December the milk supply of one dairy farm became infected with Scarlet Fever. The origin of the infection was obscure but appeared to be associated with a farm hand who had suffered from an ailment which did not arouse suspicions of Scarlet Fever. He was removed from all connection with the milk immediately after the milk was found to be infected and the subsequent decline of the outbreak justified the opinion that his indisposition was the cause of the trouble. There was no suggestion of carelessness on the part of the dairy farmer in this case.

In order to have the earliest possible knowledge of an outbreak of this kind a card is kept for each dairy farm and the notified infectious diseases occurring among customers are entered upon the card on the morning after notification, the Inspector having ascertained the source of the milk supply on the day of notification. In this manner it is known promptly when a suspicious number of infectious cases have occurred among the customers of a particular dairy farm. Of course this does not prevent the epidemic but only enables one to take early steps to prevent its continuance.

Inspection of the meat has been carried out regularly by the Veterinary Surgeons and the Meat Inspector, though, of course with 140 private slaughter-houses scattered over the City inspection for diseased meat is necessarily imperfect. The details and result of the meat inspection are given elsewhere in this report.

A Deputation from the Sheffield and District Retail Colonial Butchers' Association pointing out that chilled American meat is being sold as English and asking for assistance in stopping the practice came before the Sanitary Sub-Committee in October. The matter was referred to the Town Clerk, who reported that proceedings for such an offence might be taken either under the Merchandise Marks Act for applying a false trade description to the meat, or secondly, for obtaining money by false pretences. It was decided to convey this opinion to the Association.

On Saturday, October 25th, a number of persons, chiefly visitors to Sheffield who had a ham and tongue tea at a City restaurant were attacked by illness. There were upwards of 14 cases. Three were admitted to the Royal Hospital about two hours after tea, one of them unconscious and in a state of collapse. The chief symptoms of those affected were vomiting, diarrhoea, colic and cramps in the limbs. The symptoms as a rule passed off quickly and most of the patients were convalescent on the following day, and all made a good recovery. Portions of the boiled ham and the tinned tongue which appeared to be the cause of the outbreak were examined bacteriologically at the University without throwing any definite light on the matter.

The 284 bakehouses on the register have been regularly inspected and as a rule found in satisfactory condition.

In many instances bread is baked on a small scale, perhaps intermittently, in ordinary dwelling houses for sale in the neighbourhood. In such cases bread is often baked and exposed for sale under conditions which cannot be called satisfactory. In other cases bread baked under satisfactory conditions at factory bakehouses may be exposed for sale under unsatisfactory conditions in living rooms used as small shops.

The number of samples taken during 1913 was 696 of which 49 were adulterated or below the standard.

This gives an adulteration rate of 7 per cent. as compared with 8 per cent. for the previous year

In September owing to the fact that the amount of adulteration shown by the Analyst's reports had been low the question was raised as to whether it was necessary to take so many samples.

It was pointed out that with the exception of Leeds, which during 1911 took the fewest samples and had the highest adulteration rate, Sheffield already takes fewer samples than any other town with a population of over 200,000 and that the adulteration rate in Sheffield is not as a rule below the average. It was decided not to make any change with regard to the number of samples taken.

When samples are found to be adulterated every effort is made to get at the really guilty party.

In the case of one sample which was below the standard during the year, the farmer claimed that the milk had been supplied by a Derbyshire farmer. At my request a sample of the Derbyshire farmer's milk was taken by the Derbyshire Public Analyst. The result of the analysis was to show that the milk was slightly deficient in non-fatty solids but not sufficiently so to justify proceedings being taken.

Under the circumstances the proceedings against the Sheffield farmer were withdrawn, as it seemed possible that the non-conformity to the standard was due to the natural poverty of the milk.

In the case of another sample, certified by the Analyst to contain added water, the farmer asked that a sample should be taken direct from the cows with the result that the milk so taken was found to be above the standard for non-fatty solids, the appeal to the cow, therefore, confirming the suspicion of adulteration. During 1912 the

Sale of  
and  
is Acts

vendor of this sample was fined £2 10s. 0d. for selling watered milk, and £5 for mixing the milk of a cow suffering from tuberculosis of the udder with the rest of his milk, after being notified that the cow was so suffering.

In one of the milk cases two samples were taken from a milk dealer living just outside the City. One was reported by the Analyst to be deficient in milk fat, the other to contain added water. The milk dealer stated that he had sold the milk as supplied to him by two different farmers, one living inside the City, the other living just outside the City. A sample was taken from one of the farmers mentioned an hour later and from the other farmer on the following day. In both cases the farmers' samples turned out to be genuine. Proceedings were therefore taken against the dealer with regard to each of the samples and fines of £1, and £2 10s. respectively were imposed.

In one case where proceedings were taken for selling margarine without a label, the margarine and the butter were kept on the same dish, the excuse given being that the proper dish was being washed. The vendor was however unable to produce the dirty dish. As there were other dishes on the counter containing margarine there seemed to be no excuse for the two articles being on the same dish. This shop was in a poor neighbourhood, and we have information that it is the practice of some shop-keepers of this class to supply margarine to customers who ask for small quantities of butter. We have proved this information to be correct in several instances.

It has been a common practice for small shopkeepers other than chemists to sell sweet spirits of nitre and in many such cases the drug is found to have lost most of its strength by evaporation. Four prosecutions for offences of this kind took place during 1913 and in each case in accordance with the usual practice the shopkeeper gave an undertaking to the Bench to discontinue selling this drug.

(4) Milk and Cream Regulations.

There has been no need to use these Regulations in dealing with the use of preservatives in milk. The practice of adding preservatives to milk has been discouraged for many years by the Sheffield and District Cowkeepers' Association and the Health Committee has on several occasions successfully instituted proceedings under the Sale of Food and Drugs Acts for the addition of Boracic Acid to milk. All milk samples taken under the Sale of Food and Drugs Acts are examined for the presence of preservatives.

### HOUSING.

(1) General.

The total number of dwelling-houses at March, 1914, was 107,288, of which 98,952, or about 92 per cent. are let at rentals not exceeding £26. The number of empty houses at March, 1914, was 1,493.

Of the empty houses 877 were houses commanding a rental of 5s. a week and under, free from rates, of which number 196 appeared not to be in a habitable condition. Of the remaining empty houses 169 were houses commanding a rental of 5s. to 7s. 6d. a week, free from rates, and of these 12 appeared not to be in a habitable condition.

At the time of the 1861 census more than half of the 38,052 inhabited houses must have been of the back-to-back type. No new back-to-back houses have been erected since November, 1864, when they were prohibited by the first set of By-laws for New Buildings.

The number existing at 1864 has been considerably reduced by re-building operations, by the substitution of business premises for dwelling-houses in the central portion of the town, by the clearance of the Crofts Unhealthy Area under the Housing Act of 1890, and to a less extent by the demolition of houses in congested courts. At the present time there are about 16,000 houses of this type in existence. They are built in blocks, the front houses looking on to the street, the back houses looking on to the court. The usual type consists of three rooms, known as the "house," the "chamber," and the "garret." There is a dark staircase at the back, usually a cellar, and the garret in

the older ones has no fireplace. The conveniences usually constitute one block of buildings situated in the court behind the houses. The old method of drainage was by a system of surface channels which brought the waste liquid to the street gutter, along which it ran to the nearest catch-pit. In most cases gullies on the footpaths connected to the sewer have been substituted for the surface channels running over the footpaths from the "front" houses. In most cases, when the privies in the court are converted, underground drains are substituted for the surface channels of the "back" houses, if the surface channels are still in existence. In a few cases surface channels found in good condition are allowed to remain.

The old method of water-supply was by a stand-pipe in the court. These are being rapidly replaced by taps over the sinks, towards the cost of which work the Corporation contribute one-third.

The tenants of the front houses are supposed to have the same right to use the yard of the court as those of the "back" houses, but they do not use the right as freely, and it is a common practice for refuse to be pitched from the front houses on to the street surface.

The rent of the three-roomed back-to-back house varies from 3s. to 5s., and either they are popular or people have become used to them, because the rental of a back-to-back house is usually more per room than that of a through house in the same locality, and there are numerous examples of houses of three rooms, in all respects similar to back-to-back houses, with a blank wall at the back where windows could have been fixed giving through ventilation.

Under instructions from the Housing Sub-Committee a systematic inspection of the properties in the area where the back-to-back houses are situated has now been in progress for some time, and as the result the owners have been required to carry out certain alterations and improvements in addition to renovation. In a few cases of congested blocks the owner has been required to demolish one or more houses. As a rule the alterations asked for have been something as follows:—

- (1) The raising of attic windows to as near the eaves as possible.
- (2) The enlargement of the opening portion of the casement windows to the top of the frame.
- (3) The fixing of additional windows far back in the gable (when possible) so as to give something like through ventilation.
- (4) The provision of a large sky-light and ventilator in the roof so as to light the staircase and attic and provide an outlet for foul air at the highest point.
- (5) The provision of a ventilator over the set-pot.
- (6) The provision of a water tap over the sink in lieu of the stand pipe in the Court.

In addition to the foregoing alterations considerable repairs are often necessary, such as the renewing of roofs or floors, the provision of new concrete floors for living rooms, re-plastering, the removal of dampness by the provision of blue brick damp-proof courses, etc.

When all such work has been thoroughly done certain objections to the back-to-back house remain,

- (1) The ventilation is not as good as in a "through" house.
- (2) The tenants in the front houses are tempted to throw their refuse on the streets.
- (3) The staircases are very awkward.
- (4) The houses are considered to be more dangerous in case of fire.
- (5) It is very seldom possible to have a food pantry ventilated to the open air.  
(It has not been customary to provide a cellar for food as in the Leeds houses, but only for coal).
- (6) The vapour from washing is difficult to get out of the house.

Another objection to these houses which, however, also applies to a very large proportion of the "through" houses, is the common court-yard with its block of conveniences.

The renovation of the back-to-back houses has been going on steadily during the last few years. It would be quite impossible for the work to proceed rapidly owing to the present scarcity of houses. The Chief Assistant Overseer's reports show that there have never been so few empty houses in Sheffield during the last 10 years as recently. Thus the number of empty houses found in April of each of the last years was as follows:—1914, 1,493; 1913, 2,238; 1912, 3,899; 1911, 4,774; 1910, 5,594.

A great many of the above-mentioned empty houses are not in repair, some are voluntarily closed, and many have a rental prohibitive for the occupiers of back-to-back houses.

This scarcity of houses is confirmed by the larger number of cases of overcrowding that are being reported, and by the greater difficulty we have in enforcing notices for overcrowding.

The reports of the Women Inspectors show that there is a serious increase in the amount of overcrowding and the difficulty in obtaining houses is becoming acute. It is impossible that it should be otherwise when we have regard to the extraordinary falling off in the number of new dwelling houses certified year by year.

In the years about 1900 there was a boom in the building trade. The following list shows the new dwelling houses certified since that year:—

1900	...	...	2,876	1907	...	...	1,753
1901	...	...	2,118	1908	...	...	1,778
1902	...	...	1,977	1909	...	...	1,469
1903	...	...	2,051	1910	...	...	1,243
1904	...	...	1,963	1911	...	...	866
1905	...	...	1,982	1912	...	...	703
1906	...	...	1,904	1913	...	...	542

That only 542 new dwelling houses (less than one fifth of those certified in 1900) should have been certified in a year of exceptionally good trade like 1913 is certainly remarkable. It would appear that the difficulty can only be met by the Corporation undertaking a far bigger programme of building low-rented houses than has ever been hitherto contemplated.

While dealing with the back-to-back house I mentioned the common yard. A very large proportion of the "through" houses are built with 2, 4, 6 or 8 houses to a common yard. There is a block of conveniences with, in many cases, one W.C. for two houses. Even in the case of about 50 per cent. of the new houses one W.C. is still provided for the use of two houses, in order to effect a saving in the initial cost and in the water rate.

I am strongly of opinion that a separate W.C. should be provided for each new house. If this were enforced one would hope to see the provision of a self-contained yard or garden for each new house follow as a matter of course.

The common yard, with the mixing up of all the families who have a right to use it, must facilitate the spread of infectious ailments, and it is impossible to think that the use of a W.C. in common by two families does not aggravate this risk.

In the progress of the Conversion Scheme during the past 5 years, 9,155 water-closets have been provided for 13,663 houses.

There has been no need to make Regulations under Section 17 of the Housing Act, 1909, as there are, practically speaking, no underground sleeping rooms in the city.

The description of the Registration Sub-Districts and Sections given elsewhere in this report shows that the provision of gardens for the use of the houses varies very

much in the different localities. In addition to gardens there are a large number of allotments. The number of Corporation allotments at the present time is about 1,465, and the number provided by private persons is about 2,260, making 3,725 in all, equal to about 3½ per cent. of the total houses in the city.

Common  
Lodging  
Houses.

The Common Lodging Houses are under the supervision of the Watch Committee and are regularly inspected by the Police. The Medical Officer of Health is asked to advise the Watch Committee with respect to sanitary matters.

The Police Inspector responsible for the work reports that with very few exceptions the beds, bedding and rooms have been found in fairly clean condition. He further reports that many keepers have introduced an improvement by substituting wire mattresses for straw mattresses, and that there is a marked difference between the freshness of the atmosphere in houses where the ventilation has recently been improved and that in houses not yet dealt with.

Many of the houses are old and when the time for annual licensing comes round it has been customary to have some of the worst overhauled and improved. The by-laws leave the amount of cubic space to the discretion of the Watch Committee. Formerly 300 cubic feet was the amount required. During the last 10 years the number of beds has been gradually reduced so as to give nearly 400 cubic feet per bed.

There is no doubt that many of the lodgers object to free ventilation. One portion of one of the old lodging houses which had a good supply of ventilation grates was known to the lodgers as "The Ice House." How far this objection to ventilation is a matter of custom and how far it is stimulated by a paucity of bed-clothes in the cold weather, it is hard to say. Many of the winter occupants of Common Lodging Houses sleep out of doors in the summer and one would expect these to like fresh air at nights, but apparently they do not. On the other hand granted that the bed clothes are sufficient it ought to be possible, having in view the rapidity with which consumptives become used to the "open window," to educate the lodgers quite readily to fresh air at nights.

There are at present 26 Common Lodging Houses for males with accommodation for 1,353 lodgers and there is one Common Lodging House containing five double beds for married couples and six beds for single females.

A great addition was made to the accommodation when Councillor A. Truelove opened "The Hostel," in Water Lane, with accommodation for 82 lodgers, in 1909; and at the time of writing it is expected that in a few weeks time another Hostel will be opened in Westbar by the same gentleman with accommodation for 264 lodgers. The charge per bed at the older houses varies from 4d. to 6d. per night. The charge in the Water Lane Hostel is 6d. per night, or 3s. per week and the tariff at the Westbar Hostel will be as follows:—

7d. per night or, 3s. 6d. per week.  
1s. „ or 6s. per week, for better accommodation.  
Board and Lodging 15s. per week, inclusive.

Houses-  
-in-  
-lodging.

Much the worst and most filthy accommodation in the City is provided in the furnished houses and houses-let-in-lodgings. These houses are regularly inspected by the Women Inspectors and a special effort has been recently made to improve the condition of the furnishings and bedding provided. These houses are inhabited by the most derelict class of the community, who have come down through drink or misfortune and lost their furniture.

A house of this class is furnished with a few shillings worth of furniture and let at a doubled rental, payment being usually in advance. The occupiers when once they have come down to furnished lodgings have a difficulty in getting out again because they cannot produce a paid-up rent book to the house agents.

In my Report for 1910 (p. xviii.) I suggested that the Corporation might provide furnished rooms of a better type for people who come down in this manner, on the understanding that the occupancy was to be temporary, till such time as the occupants could again get a house and furniture of their own, perhaps with the assistance of the Guild of Help.

An article in the *Manchester Guardian* of May 11th, 1914, stated that the Manchester Corporation were about to embark on a scheme for the provision of furnished rooms in order to grapple with a similar problem, and it will be a matter of great interest to watch the result of the Manchester experiment.

Houses-let-in-Lodgings are the despair of many Health Committees. They cannot be inspected like Common Lodging Houses because they are supposed to be homes inhabited by families. As regards proceedings we deal with three parties. We proceed against the owner for certain structural conditions, against the landlord (or person who sub-lets furnished) for non-compliance with certain of the by-laws and for such things as failure to whitewash, and against the lodger or occupier for non-compliance with other by-laws and for such things as a filthy condition of the rooms.

With respect to verminous and filthy bedding it is often difficult to decide whether one ought to proceed against the landlord for having let the furnishings in a filthy and verminous condition, or against the lodger for having made the furnishings filthy and verminous. In most cases the landlord lives somewhere on the premises, and it is fair to saddle him or her with the responsibility. Proceedings against the lodgers are futile because, having no belongings other than the clothes they stand up in, they simply "move on" when the summons is served.

In the past landlords of houses-let-in-lodgings have in some cases kept Common Lodging Houses without a license by the simple expedient of getting their lodgers to say that they paid by the week. This difficulty has now been met by Section 138 of the Sheffield Corporation Act, 1912; which reads as follows:—

" No house or part of a house within the City shall be exempt from the provisions with respect to common lodging houses of the Public Health Acts or of Part IX. of the Act of 1900 or any By-laws made thereunder on the ground that accommodation in such house or part of a house is let for a longer period or longer periods than one day or is not let for a less period than one week."

In 1907 a set of new By-laws was approved and the Sheffield Health Committee took part in a Conference of delegates from northern towns on this difficult question of the inadequate supervision of these houses. Two of the points made by the Sheffield delegates were that it was difficult to prevent overcrowding because the landlord could not be compelled to exhibit a placard in each room stating the accommodation and that it was impossible to enforce elementary decency because a married couple might have to go through the bedrooms of other married couples before obtaining access to their own bedroom, there being no power to make a by-law requiring a separate door from a staircase to each letting. These two difficulties have now been met by Section 137 of the Sheffield Corporation Act 1912 which enacts as follows:—

" Section 90 of the Public Health Act 1875 shall operate so as to empower the Corporation to make By-laws with respect to the following matters relating to houses which are let in lodgings or occupied by members of more than one family (that is to say):—  
 "(1) For requiring a placard to be affixed in each room so let or occupied setting forth the cubical content and accommodation thereof:  
 "(2) For requiring a separate approach to each such room or tenement separately occupied without passing through any other room or tenement."

The new By-laws require a separate water supply on each floor of houses-let-in-lodgings. As the owner or landlord has in many instances not been prepared to face the expense of this provision the effect has been to diminish the number of houses split up into tenements and to increase the number of small furnished houses let to one family only.

The actual number of registered houses-let-in-lodgings is now only 81, while the number of "furnished houses" of the same type which undergo regular inspection is 445.

**MEANS FOR PREVENTING MORTALITY IN CHILDBIRTH AND IN INFANCY.**

General.

The staff of Women Inspectors now consists of one Head and 17 assistants.

In 1906 the City Council adopted the principle that all the Women Inspectors should possess the triple qualification of Hospital Nurse, Midwife and Sanitary Inspector. The then existing staff were allowed leave of absence to undergo a short probationership at the Children's Hospital and to be trained as Midwives. The Inspectors appointed since the date mentioned have been trained nurses and midwives and if not already qualified as Sanitary Inspectors, have obtained their Sanitary Inspectors' Certificate after appointment. By this means the visiting of the same houses by different inspectors for varying purposes has been avoided and the duties in connection with the Midwives Act, The Notification of Births Act, and the Public Health Acts, have been carried out by the same women. This arrangement has answered admirably and as there are only a few practising midwives living in the district of each inspector, it has been possible for the inspectors to obtain the friendly co-operation of the midwives in furthering their work.

About 60 per cent. of the 13,000 to 14,000 births occurring annually are attended by midwives and an effort is made in each case to visit the house where the birth occurs before the midwife's ten days' attendance has ceased.

When a case of Ophthalmia Neonatorum is notified by a midwife the house is at once visited and the case followed up to ensure as far as possible that adequate medical treatment is provided. In not a few cases the Inspector's first visit has been the means of drawing the midwife's attention to the fact that the eyes required treatment.

All the hospitals treat cases of Ophthalmia Neonatorum as emergencies. The Police Ambulance is available for the removal of mother and baby to hospital when the case cannot be satisfactorily treated at home and the services of the Queen Victoria District Nurses are available for cases treated at home.

In the case of births notified as being attended by medical practitioners the aim is to pay the first visit after about a fortnight has elapsed, when presumably the attendance of the practitioner has ceased.

One of the most important duties of the Women Inspectors is to assist in the scheme of the milk depôt and "Baby Consultations" which has grown to such magnitude as to call for a short description.

This scheme arose out of the recommendations of a Special Committee appointed by the City Council in 1906 to enquire into the causes of Infant Mortality and the primary object was to find a safe milk for bottle-fed babies during the period in the late summer when diarrhœa is prevalent. For this purpose dried milk was tried and in accordance with the advice of those who had had experience in managing infant milk depôts we did not content ourselves with simply retailing dried milk. The rule was laid down that each baby for which dried milk was supplied must be brought to the depôt by its mother every week to be seen by the physician in charge, in order to ascertain what progress it made. The dried milk proved more easily digestible than ordinary cows' milk, so it came about that the system begun in the diarrhœa season was continued all the year round.

Since April 1913, five half-days in the week have been devoted to the consultations. At the time of writing more than 300 mothers are bringing up their babies every week and we shall shortly need to have six half-days in the week for the work. The three doctors who conduct the consultations are Dr. Albert E. Naish, Dr. Lucy Naish, and Dr. Sophia Witts. Mothers who are in difficulties with regard to breast-fed babies are encouraged to come. "Test feeds" are given and the greatest care is taken to avoid unnecessary weaning. In several instances, as the result of advice given mothers have been able to breast-feed who had failed on previous occasions. Most of the babies brought to the

Milk Depôt  
Baby  
Consulta-  
tion.

Consultations are bottle-fed because it is generally the bottle-fed babies which are found by the Women Inspectors not to be thriving. In addition to the babies brought to the Consultations on the recommendation of the Women Inspectors a considerable number are brought on the recommendation of neighbours who have profited, and a certain number are sent by medical practitioners. Dried milk is supplied at cost price for most of the bottle-fed babies. The firms from whom we obtain the dried milk are as follows :—

“ Glaxo,”	Trufood, Ltd.,	The West Surrey Central Dairy
45 and 47 King’s Road,	1 and 3, Creechurch Lane,	Co., Ltd.,
St. Pancras,	Leadenhall Street,	Guildford,
London, N.	London, E.C.	Surrey.

As the result of the system at least 1,200 Sheffield mothers are receiving expert advice every year with regard to the rearing of healthy babies. It comes, as a matter of course, that every mother endeavours to bring her baby to the Consultations clean, well cared for and suitably clothed.

Model baby clothes are shown to the mothers while they are waiting and paper patterns are sold to them at a cheap rate. The Women Inspectors take it in turns to attend the Consultations, to weigh the babies and to assist generally.

A chart is kept of each baby’s progress and each mother is supplied with typewritten instructions as to how the milk is to be mixed, the amount to be given, frequency of feeding, etc. The home is visited by the Women Inspector between the attendances at the Consultations to see that the instructions have been understood and are being followed out. No treatment is given at the Consultations but the system ought to lead to babies being treated at a more hopeful stage of an ailment, seeing that the mothers of all babies requiring medical treatment are recommended to take them at once to their Doctor.

#### BACTERIOLOGICAL AND CHEMICAL WORK.

The bacteriological work required by the City is carried out by the Pathological Department of the University and the facilities provided are more used year by year.

During 1913, 2,104 swabs were examined for Diphtheria, 154 bloods for Enteric, 2,997 sputa for Tubercle, and 782 samples of cows’ milk for Tubercle of the udder.

For these examinations a regular rate of payment by the City to the University is arranged, but in addition, Professor Dean has willingly carried out other investigations outside the tariff, such as the performance of lumbar puncture and the examination of the fluid in cases of suspected Cerebro-spinal Meningitis, the examination of Diphtheria swabs for virulence by the inoculation test in the case of obstinate “carriers,” the examination of meat suspected of causing ptomaine poisoning, etc.

Owing to the recognised purity of the source of the water supply, there is no useful purpose to be served by routine bacteriological examinations.

Apart from the Sale of Food and Drugs Acts there has been no chemical work done during the year, there having been no occasion to examine water from wells or springs.

#### SUMMARY OF ADVANTAGES AND DISADVANTAGES OF SHEFFIELD.

It may be useful to summarise the Advantages and Disadvantages of Sheffield from the point of view of Public Health and Vital Statistics.

I think we can say that the natural conditions and physical features of the district are favourable. The natural conditions do not seem to produce a liability to Rheumatism nor Tuberculosis of the Lung, but they may be a little unfavourable for persons liable to Bronchitis.

The following are some of the advantages :—

Men's wages compare favourably with those of other towns.

There are less violent fluctuations of employment than in many towns.

There is little factory employment of married women.

There is little casual labour.

The Vital Statistics are helped by the fact that most of the highly-rented residential quarters are inside the City.

There are a large number of allotment gardens.

The following are some of the disadvantages :—

Wages for women are very low.

Fifteen per cent. of the houses are of the back-to-back type.

The common-yard system prevails which is liable to spread infectious disease.

More than 20 per cent. of the houses are still provided with privy middens.

Another 20 per cent. of the houses are provided with large fixed ashpits for house refuse.

There is the bad effect of the grinders' trade in causing Consumption, and the less marked effect of the other dusty trades in causing diseases of the respiratory system.

Twenty-five per cent. of the natural supply of sunshine is cut off by smoke in certain areas of the City.

#### VITAL AND MORTAL STATISTICS.

The mean estimated population for the year was 471,662.

Popula-  
n.  
Births.

The number of births registered during the year was 13,307, and the transferable births numbered 7 inwards and 26 outwards. The nett births recorded, therefore were 13,288, which was more than in the previous year by 401. This figure gives a birth rate of 28·2 per 1,000 persons living. The average rate for the previous 10 years was 30·6. The annual rates were as follows :—

1903	...	...	...	33·6	1908	...	...	...	32·3
1904	...	...	...	32·7	1909	...	...	...	29·8
1905	...	...	...	30·6	1910	...	...	...	28·1
1906	...	...	...	31·1	1911	...	...	...	27·7
1907	...	...	...	32·3	1912	...	...	...	27·7

It will be seen that the birth-rate for 1913 is 0·5 higher than that for the previous year, and 2·4 lower than the average for the last decade.

Deaths.

The number of deaths of Sheffield residents during the year, after making corrections for transferable deaths occurring in public institutions and elsewhere, was 7,446. This gives a death rate of 15·8 per 1,000 persons living, which has to be compared with an average of 16·6 for the previous 10 years. On two occasions only has it been lower, namely, 1910, when it was 14·2, and 1912 when it was 14·3. The outstanding features of the mortality for 1913 were the high death-rates from Measles and Diarrhoea, the effect of which is also shown by an increase in the rate of Infant Mortality. The annual rates for the last 10 years were as follows :—

1903	...	...	...	19·0	1908	...	...	...	16·6
1904	...	...	...	17·2	1909	...	...	...	15·9
1905	...	...	...	17·6	1910	...	...	...	14·2
1906	...	...	...	17·3	1911	...	...	...	16·1
1907	...	...	...	17·8	1912	...	...	...	14·3

(4) Small-pox.

There was no case of Small-pox notified during the year.

(5) Measles.

The death rate for Measles during 1913 was 0·77 per 1,000 of the population which is 0·12 above the average for the previous decade.

The following Table shows the death rates from Measles since 1894:—

1894	...	...	...	0·50	1904	...	...	...	0·08
1895	...	...	...	0·54	1905	...	...	...	0·97
1896	...	...	...	0·59	1906	...	...	...	0·17
1897	...	...	...	0·55	1907	...	...	...	0·88
1898	...	...	...	0·49	1908	...	...	...	0·24
1899	...	...	...	0·60	1909	...	...	...	0·95
1900	...	...	...	0·53	1910	...	...	...	3·26
1901	...	...	...	0·55	1911	...	...	...	1·73
1902	...	...	...	0·45	1912	...	...	...	0·41
1903	...	...	...	0·80	1913	...	...	...	0·77

It will be noticed that from 1894 to 1902 the death-rate remained fairly constant year by year averaging 0·53.

From 1903 to 1911 the tendency has been to have a year with a high and a low death-rate alternately and the interval between epidemics has varied from 15 to 19 months. The average rate for the nine years has been 0·68. This alternation is now becoming less marked. In 1912 the rate only fell to 0·41. In 1913 the rate was 0·77. The 1912-13 epidemic began in October 1912 after an inter-epidemic interval of about 18 months, lasted all the winter and gradually died away in May and June 1913. Instead of being followed by an interval of 18 months as previously a new epidemic began in October 1913 after an interval of only three months and gradually gained ground all through the winter of 1913-14, reaching its maximum in April, 1914.

The ages at death from Measles were as follows:—

-1	1-2	2-3	3-4	4-5	5-10	10—
75	155	53	31	21	26	1

(6) Scarlet Fever.

The death-rate from Scarlet Fever was 0·16 per 1,000 of the population, which has to be compared with 0·08 for 1912, and an average of 0·18 for the decade 1903-1912.

The attack rate was 7·4 per 1,000. The average attack rate for the decade 1903-1912 was 5·24 per 1,000 persons living per annum.

The history of Scarlet Fever in Sheffield has been in recent years as follows:—

The mortality from this disease was low in 1894 and 1895, and high in 1896 and 1897. There was a decline in 1898 and a rise again in 1899. It remained low from 1900 to 1902, and then became high during the five years 1903-1907, the climax being reached in 1906 when the death-rate was 0·53. During the five years previous to 1913 the mortality from this disease was less than in any of the years mentioned above.

During 1913 the death-rate of 0·16, though double that of the previous year, was not nearly so high as in the period from 1903 to 1907, when the death rates were as follows:—

1903	...	...	...	0·24	1905	...	...	...	0·23
1904	...	...	...	0·21	1906	...	...	...	0·53
					1907	...	...	...	0·23

(7) Diphtheria.

The death-rate from Diphtheria was 0·13 per 1,000 of the population. This rate is the highest since 1907, but is almost exactly the same as the average for the 10 years previous to 1913.

The number of cases of sickness reported during 1913 was 831, which is the highest number since the year 1902, and is 365 above the average of the 10 years previous to 1913.

Whooping  
cough.

The mortality from Whooping Cough was at the rate of 0·14 per 1,000 living, which is 0·27 below that for 1912 and 0·21 below the average of the previous 10 years.

Typhoid  
fever.

The death-rate for Typhoid Fever during 1913 was 0·04 per 1,000, which ranks with that for 1910 as the lowest on record.

The number of Typhoid Fever cases notified during the year was 74, which is the smallest for any year since notification was introduced in 1889.

Diarrhoea  
and  
Enteritis.

The death-rate from Diarrhoea and Enteritis during 1913 was 1·0 per 1,000 living. This has to be compared with 0·42 for 1912, and 1·33 for 1911.

It was not to be expected that the low incidence of Diarrhoea which was noteworthy during 1912 owing to the cold wet summer would be repeated in 1913, which was characterised by more summer heat and less wet.

The summer of 1913 was not, however, unusually hot; the maximum temperature of the ground during August was in fact less than in the previous year, but the heat was maintained for a longer period. This is shown by the fact that whereas in 1912 the temperature of the ground at four feet below the surface remained for 9 weeks over 54 degrees, during 1913 this temperature was maintained for 14 weeks.

The following table shows the average soil temperature during August, and the total Diarrhoea deaths from the end of June to the end of October, for the past 16 years.

YEAR.	Average Soil Temperature at four feet during August.	Total Deaths from Diarrhoea and Enteritis June to October.
1898	55·5	935
1899	57·5	884
1900	57·3	867
1901	57·6	964
1902	54·4	338
1903	55·1	739
1904	56·6	678
1905	56·7	791
1906	56·2	923
1907	54·8	535
1908	55·8	526
1909	55·4	372
1910	55·5	430
1911	58·3	607
1912	55·5	186
1913	54·9	376

Acute  
Encephalitis  
and  
Cerebro-spinal  
Fever.

Cases of Poliomyelitis and Cerebro-spinal Fever occur sometimes sporadically, sometimes in epidemics.

There were 6 cases of Poliomyelitis and 10 cases of Cerebro-Spinal Fever notified during 1913 but in 3 of the latter the diagnosis was subsequently revised. The 13 cases occurred in 13 different houses. Each case had apparently no connection with any other case.

Poliomyelitis caused the death of a male child of 4 months and of a male of 18 years and left some paralysis in a male child of 2½ years, a male of 7 years and a female of 11 years and no damage in the case of a female child of 20 months.

Of the 7 cases of Cerebro-Spinal Fever all but one proved fatal. In the one case which recovered, the recovery was attributed by the medical attendant to the serum treatment being begun about the fourth day from the onset of the illness.

(12) Tuberculous Diseases.

The death-rate from all Tuberculous Diseases was 1·64 per 1,000 persons living. During the decade 1903-1912 the rate was 1·69. The deaths from Tuberculosis of the Lung alone gave a rate of 1·24 per 1,000 as compared with 1·20 for the preceding decade. 1,033 new cases of sickness from Tuberculosis of the Lung were notified during the year as compared with 981 in 1912, 836 in 1911, 667 in 1910 and 712 in 1909.

By a General Order of the Local Government Board dated 19th December, 1912, all forms of Tuberculosis became compulsorily notifiable from 1st February, 1913. This has had the effect in Sheffield of bringing to the notice of the Medical Officer of Health 822 cases of Tuberculosis of other organs than the lungs.

The death-rates from all Tuberculous Diseases during the last 14 years were as follows :—

1900	...	...	2·03	1907	...	...	1·70
1901	...	...	2·07	1908	...	...	1·78
1902	...	...	1·80	1909	...	...	1·57
1903	...	...	2·11	1910	...	...	1·39
1904	...	...	1·88	1911	...	...	1·59
1905	...	...	1·64	1912	...	...	1·67
1906	...	...	1·52	1913	...	...	1·64

(13) Infant Mortality.

The Infant Mortality for the year was 128 per 1,000 births. This was higher than the previous year when it was 107, the increase being accounted for chiefly by the increased amount of Diarrhoea and Measles.

The following table shows the Infantile Mortality rates for the previous 16 years in the City of Sheffield, and the excess over the English rate for each year.

YEAR.	Infant Mortality.	Excess over English Rate.	YEAR.	Infant Mortality.	Excess over English rate.
1897	196	40	1905	166	38
1898	195	35	1906	158	26
1899	194	31	1907	145	27
1900	200	46	1908	141	21
1901	202	51	1909	119	10
1902	150	17	1910	127	22
1903	181	49	1911	141	11
1904	158	13	1912	107	12
			1913	128	19

#### PREVENTION AND TREATMENT OF TUBERCULOSIS.

It is common to hear speakers at Sanitary Congresses say "Consumption is a house disease." The sooner we realise that this is only a little bit of the truth the better. There is no sex proclivity to the disease, and the effect of climate in its causation may be ignored.

We have to consider home conditions, work conditions, and habits.

If the whole population of England and Wales lived under similar conditions to the female population of Sheffield, 15 per cent. of whom live in back-to-back houses, the annual deaths from Consumption would drop by 40 per cent. from 39,000 to 23,400.

I do not think that anyone would attribute this 40 per cent. excess of the England deaths to housing conditions. We have then the choice of habits and work conditions. A portion of the excess may be due to the worse habits of the male as regards alcoholism, and the frequenting of spit-infected public houses, common lodging houses, etc., but we must ascribe the bulk of it to work conditions.

Neither the work conditions nor the housing conditions of the Sheffield female population are ideal, so that the halving of the English death-rate from consumption ought to be easily attainable by a little attention to housing and a lot of attention to work conditions.

A great deal of research work is yet to be done in order to show why particular trades cause consumption, and one cannot help feeling that a general enquiry throughout the country by a Local Government Board Medical Inspector and a Home Office Medical Inspector, who would study conditions on the spot and work in touch with the local Medical Officers of Health would lead to most valuable results. Even the grouping for statistical purposes of operatives who are exposed to similar risks to health cannot be done from the Census alone but demands a knowledge of local conditions. As an example of the problems to be elucidated I may mention the extraordinary difference between the consumption death-rate of the two large West Riding towns—Leeds and Sheffield.

The following table shows the death-rates from this disease in the sexes and at various age periods in England, Sheffield and Leeds.

TABLE I.—*Pulmonary Tuberculosis and Phthisis in 1911 and 1912.*

ANNUAL DEATH RATES PER 1,000 OF THE POPULATION (CENSUS 1911).

Age periods		Under 5	5-15	15-25	25-45	45-65	Over 65
MALES	England ..	0·350	0·165	1·055	1·915	2·270	1·170
	Sheffield ..	0·335	0·140	0·950	2·305	<u>4·490</u>	2·650
	Leeds.. ..	0·470	0·335	1·555	2·605	2·900	2·595
FEMALES	England ..	0·330	0·300	1·130	1·335	1·045	0·585
	Sheffield ..	0·300	0·285	0·900	1·215	1·100	0·930
	Leeds.. ..	0·835	0·520	1·585	1·435	0·800	0·330

For each sex up to 25, Sheffield is best, England second, and Leeds worst. For males 25-45 Leeds is the worst, and for males 45 to 65 Sheffield is the worst. For females Sheffield is better than Leeds up to 45 and worse later. The pronounced male maximum in Sheffield at ages 45-65 is due to the grinders who develop the disease late in life, often after a prolonged period of preliminary silicosis.

Is the earlier male maximum in Leeds due to the effect of the dust of the textile manufactories and tailoring workshops which operates more rapidly, carrying infection without any preliminary pneumokoniosis to men of poorer physique working at a more indoor occupation than that of a grinder?

Is the excess over 45 among Sheffield females due to the fact that the grinders develop the disease late and infect their wives, when they do so, later still?

Why is Sheffield better than Leeds for children? Is this the effect of back-to-back houses? In Leeds there were in 1913 about 71,500 back-to-back houses or 63 per cent. of the total houses as compared with Sheffield's 15 per cent.

During 1913, 26·5 per cent. of the cases of consumption notified in Sheffield were in back-to-back houses. As the back-to-back houses are only 15 per cent. of the total number it follows that they furnished 75 per cent. more than their proper share of the cases of consumption. Seeing, however, that the back-to-back houses are the cheapest housing accommodation and inhabited by the members of the community who are most exposed to other effects of poverty such as an insufficient dietary, want of fuel, want of bed clothes, want of proper clothing, etc., it is impossible to separate the effect of the back-to-back houses pure and simple.

Again there is a great difference between Leeds and Sheffield as regards the number of females occupied and the nature of their occupations. The following lists show the principal female occupations according to the 1911 census headings:—

	Sheffield.	Leeds.
Total Females over 10 .. .. .	178,670	188,792
Engaged in Occupations .. .. .	49,745	71,575
Occupations :—		
Tools ; Dies, etc. ; Arms ; Miscellaneous Metal Trades ..	9,077	1,390
Domestic Indoor Servants (other than in Hotels, Lodging, and Eating Houses) .. .. .	11,867	8,405
Papers, Prints, Books, and Stationery .. .. .	1,101	3,349
Textile Manufactures .. .. .	124	10,374
Dress .. .. .	4,977	24,954

Is the greater prevalence of consumption among the young women of Leeds when compared with the young women of Sheffield due to their being more largely employed under unhealthy conditions as tailors, dressmakers, etc., and in the textile manufactories?

The foregoing are examples of the problems awaiting solution by an enquiry such as I have suggested.

Another problem which requires further investigation is the proportion of tuberculosis in children which is due to bovine infection. Dr. Philp Mitchell has recently demonstrated that 90 per cent. of the cases of tuberculous glands in infants and children in Edinburgh are caused by cow's milk.

As regards industrial consumption in Sheffield it is hoped shortly to institute a series of dinner-hour talks with a view to putting before the grinders the best means of guarding themselves against contracting the disease.

Table J shows that the amount of segregation of advanced consumptives, as judged by the proportion of deaths in hospital increases year by year, the diminished segregation in the Union Hospitals being more than compensated for by the increased segregation in the Corporation Hospitals.

I have not included in this table the deaths of Sheffield residents which occurred in asylums, as it is probably correct to say that in most cases the disease develops after the removal to the asylum for the mental trouble.

**TABLE J.**—*Tuberculous Diseases. Deaths in City and in Hospitals, together with percentage, also death-rates during years 1889-1913.*

YEARS.	DEATHS FROM PHTHISIS (CHIEFLY TUBERCULOSIS OF LUNG).				Whole City.	Percentage occurring in Hospitals.	Death-rate from Tuberculosis (all forms) per 100,000 living.
	HOSPITALS.						
	Union.	Municipal.	Voluntary.	Total.			
1889	62	1	10	73	552	13·2	257
1890	75	—	8	83	618	13·4	271
1891	81	2	9	92	551	16·7	254
1892	59	—	10	69	459	15·0	225
1893	74	—	12	86	552	15·6	244
1894	72	1	14	87	502	17·3	211
1895	76	—	15	91	473	19·2	227
1896	56	1	11	68	453	15·0	188
1897	90	—	16	106	522	20·3	201
1898	98	—	14	112	448	25·0	183
*1899	117	1	17	135	502	26·9	210
1900	135	1	14	150	539	27·8	202
1901	142	1	19	162	580	27·9	207
1902	121	—	10	131	491	26·7	181
†1903	142	2	22	166	573	29·0	211
1904	154	1	15	170	536	31·7	188
1905	135	—	14	149	490	30·4	164
1906	126	—	17	143	452	31·6	152
1907	146	—	16	162	524	30·9	170
1908	214	3	14	231	564	41·0	178
1909	174	3	13	190	524	36·3	156
1910	166	4	9	179	455	39·3	139
1911	193	3	12	208	557	37·3	159
1912	211	11	14	236	595	39·7	167
1913	155	71	11	237	585	40·5	164

\* 1899. Voluntary Notification introduced November, 1899.

† 1903. Compulsory Notification introduced November, 1903.

The deaths recorded under Municipal Hospitals previous to 1908 occurred in the City Fever Hospitals, the patients having been admitted for some other infectious disorder. Hospitals for the treatment of Consumptives have been opened as follows:—Moorend in 1908, Crimicar in 1909, and Winter Street in 1912. Crimicar Hospital was formerly reserved for Small Pox and Winter Street Hospital for other infectious diseases.

As regards the treatment of Tuberculosis Dr. John Rennie has prepared a report on the work of the Dispensary during 1913, as follows :—

*Work of the Tuberculosis Dispensary.*

(By John Rennie, M.D., Tuberculosis Medical Officer, Sheffield.)

The only criterion of definite Pulmonary Tuberculosis which can be accepted for statistical purposes is the microscopical finding of Tubercle bacilli in the sputum; but from the Public Health point of view of prevention and of the successful treatment of early cases, clinical evidence without the finding of Tubercle bacilli must be accepted as definite.

The notifications of 1913 have been classified as follows :—

- (1) Those cases in which Tubercle bacilli have been found in the sputum.
- (2) Those cases in which the sputum has been examined but no Tubercle bacilli have been found.
- (3) Those cases in which the sputum has not been examined.

All the examinations of sputum for the City and Dispensary have been done at the Pathological Laboratory of the University, and only reports from this source have been recognised.

Table A shows the number of cases dealt with during 1913 under insured and non-insured persons, both males and females together with the result of the sputum examinations. Fifty-three per cent. of the cases were insured persons, and 66 per cent. of the total cases notified were males. Tubercle bacilli were found in 40 per cent. of the notified cases. In 43 per cent. of the cases the sputum was not examined

*Table A.*

Result of Examination of Sputum.	INSURED PERSONS.			NON-INSURED PERSONS.			All Persons.
	Males.	Females.	TOTAL.	Males.	Females.	TOTAL.	
Positive ..	260	38	298	36	85	121	419
Negative ..	75	17	92	40	49	89	181
Not Examined	134	27	161	140	143	283	444
TOTAL ..	469	82	551	216	277	493	1044

In Table B, the cases are set out under several age periods. Out of 191 notifications of children under 15 years of age, Tubercle bacilli were found in only 4 cases. These cases were examined at the Dispensary and showed the usual clinical signs which are characteristic of the common adult type of disease. In children the disease generally begins at the root of the lungs and its recognition at an early stage is very difficult, and a large proportion have to be passed through the observation ward before a definite diagnosis can be made. An X-rays apparatus would help greatly in the thorough investigation of this type of case.

Table B.

Result of Examination of Sputum.	AGE PERIODS.								All Ages.
	Under 5	5-10	10-15	15-20	20-30	30-45	45-60	Over 60	
Positive .. .. .	—	—	4	28	98	170	93	26	419
Negative.. .. .	2	14	15	20	36	49	32	13	181
Not examined .. ..	37	67	52	32	55	85	81	35	444
TOTAL .. .. .	39	81	71	80	189	304	206	74	1044

Table C shows that 568, *i.e.*, 54 per cent. of the cases notified during the year, were dealt with at the Dispensary. Of these 464 were admitted into the Corporation Hospitals. (No case was kept out of hospital on account of advanced disease.) In 88 cases institutional treatment was considered unnecessary or the patients themselves were unable to take advantage of it; they were therefore placed under Dispensary supervision, by which is meant that they report themselves periodically at the Dispensary for examination and in this way one is able to keep in touch with them. 16 patients were given tuberculin treatment as out-patients without undergoing previous preliminary treatment in hospital. This method is only applicable in a small proportion of cases. It will be noted that 186 patients seen at the Dispensary did not have their sputum examined. Forty-three per cent. of these were children under 15 years while the remainder were cases in which there was either no sputum or the disease was in a very advanced condition.

Table D gives particulars of cases not dealt with at the Dispensary and the reasons therefor. Patients undesirous of treatment numbered 193, of whom 80 were extremely ill when visited by the Inspector and were therefore unable to visit the Dispensary for examination, nor did they wish removal to hospital by ambulance; while 219 were receiving treatment in institutions other than Corporation hospitals. It is thus seen that out of 980 cases alive on the Inspector's visit after notification, 69 per cent. received institutional treatment.

Seventeen of the notifications which were made during 1913, and 65 made before 1913 were cancelled, as there were no longer existent any signs of active tuberculosis.

Table C.

Result of Examination of Sputum.	AGE PERIODS.								TREATMENT PROVIDED.				TOTAL.
	Under 5	5-10	10-15	15-20	20-30	30-45	45-60	Over 60	Hospital.	Dispensary Supervision.	Tuberculin.		
Positive ..	—	—	4	21	76	116	46	2	246	12	7	265	
Negative ..	—	13	12	18	31	27	16	—	99	14	4	117	
Not examined	7	46	27	23	28	35	15	5	119	62	5	186	
TOTAL ..	7	59	43	62	135	178	77	7	464	88	16	568	

Table D.

Result of Examination of Sputum.	AGE PERIODS.										Reason for Non-Treatment by Municipal Authority.				TOTAL.
	Under 5	5-10	10-15	15-20	20-30	30-45	45-60	Over 60	Extreme illness prevented.	Unwillingness of Patient.	Death of patient immediately after notification.	TREATMENT ELSEWHERE.			
												In Union Hospital.	In Private Sanatorium or General Hospital.		
Positive ..	—	—	—	7	22	54	47	24	36	34	9	72	3	154	
Negative ..	2	1	3	2	5	22	16	13	3	7	6	46	2	64	
Not examined ..	30	21	25	9	27	50	66	30	41	72	49	84	12	258	
TOTAL ..	32	22	28	18	54	126	129	67	80	113	64	202	17	476	

Table E gives some particulars of the duration of the illness between notification and death. 34 per cent. of the cases died in the same year as that in which they were notified, while the advanced condition of many cases on notification is well shown by the fact that 30 per cent. of them died within 4 months of their coming under notice. 48 per cent. of the Consumptives entering Union hospitals for treatment died in the year of notification while only 11 per cent. died amongst those treated in the Corporation hospitals. Thus the proportion of hopeless cases dealt with by the Guardians is still very much larger than that dealt with by the municipal authority.

Three "flats" in Hawley Street belonging to the Corporation have been fitted up for temporary use as a Dispensary, but this accommodation is quite inadequate, and on this account the work is somewhat hampered. At the time of writing plans for a new building for the work of the Dispensary are in course of preparation.

The Dispensary is open every day from 9 a.m. to 5.30 p.m., and on Tuesday and Friday evenings until 9 p.m. Patients are seen only by appointment, and this arrangement greatly facilitates the work.

The total number of attendances during the year was 20,177. Of these 2,831 were made by new cases and 17,346 by old.

The new cases may be divided into three classes, notified cases, contacts and suspects.

Table E.

Result of Examination of Sputum.	Cases notified and dying during year 1913.										Cases notified and dying within four months of date of notification.				Where Death occurred.					
	Age when notified.								Over 60	Total.	1 mo.	2 mos.	3 mos.	4 mos.	Total.	Hospitals.			Home.	TOTAL.
	Under 5	5-10	10-15	15-20	20-30	30-45	45-60	Total.								Union.	Municipal.	Voluntary.		
Positive ..	—	—	4	10	26	57	41	15	153	67	34	25	10	136	43	34	—	76	153	
Negative ..	2	—	1	2	1	6	11	6	29	22	2	3	—	27	17	2	—	10	29	
Not Examined ..	19	8	14	10	17	34	48	18	168	100	21	15	7	152	37	17	3	111	168	
	21	8	19	22	44	97	100	39	350	198	57	43	17	315	97	53	3	197	350	

(1) NOTIFIED CASES EXAMINED. Table F shows the cases under sex and as to whether insured or not, also the result of the examination and the treatment given.

Table F.

NOTIFIED CASES EXAMINED.				RESULT OF EXAMINATION.			
Males.	Females.	Insured.	Non-Insured	Treatment given.		Cases Discharged cancelled.	Cases referred to Union Hospitals.
				Sanatorium.	Tuberculin.		
440	253	370	323	421	19	186	52
			TOTAL.	693			15

(2) "CONTACTS" EXAMINED. Table G shows the cases under each sex, also the result of the examination.

Table G.

"CONTACTS" EXAMINED.				RESULT OF EXAMINATION.				
Males.	Children.	Females.		Found Normal.	Placed under Observation.	Treatment given.		Referred to Union Hospitals.
		Adults.	Children.			Sanatorium.	Tuberculin.	
161	568	413	608	1323	402	16	5	4
			TOTAL.	1750				

It will be seen that of the 1,750 persons examined 1,323, or 76 per cent. were found to be normal, while 402 were placed under observation until a negative or positive diagnosis was made.

(3) "SUSPECTS" EXAMINED. The number of "suspect" cases examined was 388, as shown in table H. These were mostly sent by private medical practitioners, School Medical Officers and Women Inspectors. The initial examinations revealed only 24 per cent. of these without signs of Tuberculosis. The remainder were either immediately notified or treated as observation cases.

Table H.

"SUSPECTS" EXAMINED.				RESULT OF EXAMINATION.							
Males.	Children.	Females.		Insured.	Non-Insured.	TREATMENT.		REFERRED TO			
		Adults.	Children.			Placed under Observation	Sanatorium.		Tuberculin.	Own Doctor.	Union Hospital.
101	110	76	101	110	278	93	216	61	8	9	1
			TOTAL.	388							

As a result of the examination of "contacts" and "suspects" 708 were placed in the observation class of whom a great proportion are children. A conservative attitude has been adopted towards the notification of such cases seeing that they are already under the control of the Dispensary and, owing to their non-infectious nature, periodic visitation by the Women Inspectors would serve no useful purpose. These cases are seen and examined at the Dispensary at intervals of one, two, three or four months, until their condition is such that either they are considered well and consequently discharged, or definite treatment at the Dispensary, Open Air Recovery School or Sanatorium is indicated. At the commencement of a definite line of treatment the case is notified. The observation class thus forms a link between the normal individual and a definite case of Pulmonary Tuberculosis.

Out of 708 observation cases 16 per cent. were subsequently considered positive and notified; 33 per cent. were found negative and discharged, while the remainder were under observation at the time of this enquiry.

No difficulty is experienced in getting "contacts" of school age to come for examination as they are able to attend during the day, but it is disappointing that more adult "contacts" have not been examined, the explanation being that they are unable to give up their work to attend at the Dispensary during ordinary consulting hours, and it has been found impossible to deal with a larger number of cases in the evenings when the time is taken up with treatment. The appointment of a second medical assistant has recently been made, however, and it is hoped to cope with the work more satisfactorily. The examination of such cases will undoubtedly prove an invaluable adjunct to the general scheme as it will lead to the diagnosis of many cases in an early and curable stage.

The work of the Tuberculosis Dispensary as regards patients of school age is carried out in close co-operation with the School Medical Department. The whole of Wednesday and Saturday mornings are set aside chiefly for the examination and treatment of school children. One of the School Medical Officers assists the Tuberculosis Medical Officers. There is an interchange of records between the two Departments and thus overlapping of work is largely prevented. Twenty places in the Open Air School are reserved for children with Hilum Tuberculosis. These are visited once a week at the Open Air School by the Tuberculosis Medical Officers. A record of their temperatures is kept by the teacher, and suitable cases are treated with tuberculin. In 1913 the results were very satisfactory, all the children being able to return to their ordinary school at the end of the Open Air School session. Tuberculin treatment when necessary was then continued at the Dispensary while the children were attending their ordinary school. The total number of attendances of school children was 2,036.

*Hospitals.*—There were 157 beds available for cases of Tuberculosis of the Lung during 1913 at Winter Street, Commonside and Crimicar Lane Hospitals. There were 101 beds at Winter Street. Of these 14 were set apart for male observation cases, 13 for advanced females and the remainder for the treatment of males in all stages of the disease. Crimicar Lane Sanatorium had 28 beds which were reserved for early cases among males. In Commonside Hospital there were 28 beds, 8 of which were reserved for female observation cases and 20 for the early and most hopeful female cases.

The admission of cases to the hospital is controlled by the Dispensary. Altogether there were 612 admissions during 1913. In those cases where the disease was advanced and the home conditions poor every effort was made to keep them in hospital; the residence of some of these cases has extended over one year. 77 deaths among the advanced cases occurred during 1913 in these hospitals. In the early type of case with the probability of speedy restoration to full working capacity, short periods of two to three months sanatorium treatment with tuberculin has been advocated.

As regards tuberculin treatment the same procedure as before has been adopted, namely, a short period of residence in hospital where tuberculin treatment is commenced, followed by a course of 8 to 12 months' attendance as out-patient at the Dispensary. The best type of afebrile case with good recuperative power has been selected, and about 80 per cent. of these patients are able to do full work while undergoing treatment. The total number of cases treated during the year was 446, with an average of 120 attending twice weekly during the year. Another year's work tends to confirm the opinion that tuberculin will take a permanent place in the therapeutics of Tuberculosis, but there are considerable limitations to its scope. There are a large number of cases in which other methods of treatment are more applicable. It is impossible to expect permanency of results from any form of known treatment in those cases which show signs of extensive involvement of lung tissue. Speaking broadly a great number of cases that do well under sanatorium treatment do better with the addition of tuberculin, and short periods of sanatorium treatment with tuberculin are much to be preferred to longer periods of sanatorium treatment without tuberculin.

The condition of the 52 cases which were given in detail in the report of last year is as follows:—Six deaths have occurred since last year. Of these 4 belonged to Stage III., and 2 to Stage II. 41 are still doing full work, one cannot be traced and 4 are unable to do any work at all.

The observation wards for both male and female cases, adults and children, which were started in August, 1913, have already been found to be a decided acquisition to the general working of the Dispensary and to lead to a more profitable use of the hospital and sanatorium beds. All the clinical work in connection with them is carried out by the Tuberculosis Medical Officers, who visit the hospitals daily. In the next report it is hoped to give a detailed account of the work carried on in these wards, and its effects in the direction of economy of the general scheme.

A special visitation and enquiry was made by the Women Inspectors during the summer of 1913 for the purpose of ascertaining the condition of the consumptives on the books of the Dispensary.

The number of cases on the books was 1,743. Of this number 115 were cases in "suspense" where the disease had been arrested, either temporarily or permanently, but with regard to whom there was not sufficient certainty to justify the cancelling of the notification. The remaining 1,628 were accounted for as follows:—

Occupying beds in the Sheffield Union Hospital .. .. .	80
"    "    Ecclesall Union Hospital .. .. .	60
"    "    City Sanatoria .. .. .	128
Under tuberculin treatment at the Dispensary .. .. .	189
Under treatment by private medical practitioners .. .. .	261
Attending voluntary hospitals .. .. .	102
"Special cases" with regard to whom the doctor undertook to give instructions for preventing the spread of infection .. .. .	9
Not receiving any medical treatment .. .. .	799

Of the 799 not receiving treatment 323 were males at work, 63 were females at work, 130 were females doing housework, 128 were at school and 16 were infants. Of the remainder, 57 males and 10 females were not at work, and 72 were scholars not at school.

Excluding the 140 cases in the Union Hospitals, the 115 cases "in suspense" and the nine cases under the supervision of private medical practitioners, there were 1,479 cases on the books, 687 of whom were "insured persons" and 792 were non-insured.

An effort was made to ascertain what further hospital treatment might be required for or desired by patients at present living at home.

It was ascertained that there were 158 cases for whom hospital treatment might be desirable, 68 of whom would probably desire hospital treatment if they had the chance of going into a Corporation Hospital instead of the Poor Law Hospital, and 25 who were bed-fast.

### BRONCHITIS AND PNEUMONIA.

The next table shows the death rates from Bronchitis in the sexes and at various age periods.

In England there is only a slight excess of the male death-rate from Bronchitis over the female. The excess is appreciable under five years of age. For ages 5 to 25 the male death-rate is slightly lower than the female. For other age periods over 25 the male death-rate is slightly higher than the female.

In Sheffield the excess of the male death-rate over the female is more marked than in England, being about 7.4 per cent. higher, as compared with 1.1 per cent. A similar excess is found at ages under 5 to that which is found in England but it is continued to the age period 5 to 15, the only age period at which the male rate is lower than the female being 15 to 25, although up to 45 the difference is not well marked. After 45 years of age the male death-rate is considerably in excess of the female for the remainder of life.

Bronchitis is more fatal in Sheffield than in England for each sex and for every age period except from 5 to 25 for females and from 15 to 25 for males, the chief excess being for children under 5 and for males over 45 years of age.

**TABLE K.**—*Bronchitis. Mean Mortality Rates per million persons living, at certain age periods in both sexes, in Sheffield and in England during the quinquennium, 1908-1912.*

		All Ages.	0-5	5-15	15-25	25-35	35-45	45-55	55-65	Over 65
Sheffield	Males ...	1,371	4,196	51	16	99	259	1,038	3,988	14,938
	Females ...	1,276	3,557	21	19	77	253	792	3,012	13,449
England	Males ...	1,070	2,981	31	21	53	180	664	2,457	10,322
	Females	1,058	2,468	31	22	41	153	541	2,044	10,099

The next table shows the death-rates from Pneumonia in the sexes and at the various age periods.

**TABLE L.**—*Pneumonia. Mean Mortality-rates per million persons living, at certain age periods in both sexes, in Sheffield and in England during the quinquennium, 1908-1912.*

		All Ages.	0-5	5-15	15-25	25-35	35-45	45-55	55-65	Over 65
Sheffield	Males	1,759	6,885	274	382	671	1,061	1,902	3,003	6,121
	Females	1,211	5,709	213	174	272	500	889	1,460	4,511
England	Males	1,327	5,367	217	281	485	831	1,324	2,210	3,879
	Females	950	4,462	206	159	262	428	641	1,257	3,066

The first point to notice is that there is a large excess of the male death rate over the female both in Sheffield and in England.

In England the only age period at which the male death-rate is not markedly higher than the female is from 5 to 15. The difference is most marked from 45 to 55 and the

male death-rate is practically double the female from 25 to 65. After 65 years of age the difference is much less marked.

In Sheffield the difference between the two sexes under 5 is similar to what it is in England and for every other age period the difference between the two sexes is well marked. From 5 to 15 when the English male and female rate are almost equal the Sheffield male rate is higher than the female by about 30 per cent. From the period 15 to 25 the Sheffield male rate becomes more than double the female until the period over 65 years is reached. After 65 the difference is less marked but is more marked than it is in England.

When a direct comparison is made between England and Sheffield it will be noticed that the Sheffield death-rates which are nearly as low as the English rates are those for females at the age period 5 to 35. It may, therefore, be said that for children of both sexes, for males at all ages and for females over 35 years of age Pneumonia is much more fatal in Sheffield than in England.

I think Bronchitis and Pneumonia are more fatal to men than to women in Sheffield because there are more male workers in the Sheffield dusty trades, and that the Sheffield adults of both sexes suffer more than the English adults also in part owing to the dusty trades.

As regards the excessive mortality among children I think this is in part due to the excessive prevalence of Measles and Whooping Cough in co-operation with bad home conditions.

It might be suggested that the climate is in part responsible but the fact that the excessive mortality does not show itself among females from 5 to 25 as regards Bronchitis and among females from 5 to 35 as regards Pneumonia seems rather to negative the suggestion.

#### RICKETS.

It is extremely difficult to deduce a reliable idea of the prevalence of Rickets in various districts from statistics.

Rickets causes more deformities than deaths and is seldom recorded as the cause of death.

**TABLE M.**—*Rickets. Death-rates per Million for Sheffield and England during the last decade.*

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
England ... ..	50	54	41	40	36	34	32	30	27	21
Sheffield ... ..	72	78	56	51	68	45	69	35	39	21

The Sheffield death-rate for the year 1913 was 42 per million.

In 1904 I endeavoured to obtain some idea of the prevalence of Rickets from the records of the various hospitals in the country supported by voluntary subscriptions.

For this purpose an approximate calculation was made of the average number of osteotomies performed annually per 100 surgical beds from 1894 to 1903.

**TABLE N.**—*Rickets. Osteotomy operations in hospitals of certain towns.*

Town.	Hospitals.	No. of Osteotomies per 100 surgical beds.
Liverpool ... ..	Royal Infirmary, Royal Southern Hospital, David Lewis Hospital and Stanley Hospital ... ..	14.4
Manchester and Salford	Manchester Children's Hospital and Salford Royal Hospital ... ..	62.7
Birmingham ... ..	General Hospital, Queen's Hospital and Birmingham and Midland Free Hospital for Sick Children ... ..	12.0
Leeds ... ..	General Infirmary ... ..	20.0
<b>SHEFFIELD</b> ... ..	Royal Infirmary, Royal Hospital and Free Hospital for Sick Children ... ..	16.6
Bristol ... ..	General Hospital, Royal Hospital for Sick Children and Women, and Royal Infirmary ... ..	14.1
Bradford ... ..	Children's Hospital and Royal Infirmary ... ..	28.3
Newcastle-upon-Tyne and Gateshead.	Royal Infirmary, Gateshead Children's Hospital, Fleming Memorial Hospital for Diseases of Children. ... ..	19.2
Leicester ... ..	Leicester Infirmary ... ..	3.0
Portsmouth ... ..	Portsmouth, Portsea, and Gosport Hospital... ..	6.1
Bolton ... ..	Bolton Infirmary ... ..	16.6
Sunderland ... ..	The Infirmary ... ..	7.9
Oldham ... ..	The Infirmary ... ..	23.2
Blackburn ... ..	Blackburn and East Lancashire Infirmary ... ..	16.0
Preston ... ..	Royal Infirmary ... ..	2.9
Norwich ... ..	Jenny Lind Infirmary ... ..	13.1
Plymouth ... ..	South Devon and East Cornwall Hospital ... ..	6.3
Halifax ... ..	Royal Infirmary ... ..	19.1
Burnley ... ..	Victoria Hospital ... ..	2.4
Wolverhampton ...	Wolverhampton and Staffordshire General Hospital	8.0
Huddersfield ... ..	The Infirmary ... ..	21.5

In the case of some towns only the records of Children's Hospitals could be obtained, and the following list gives the records of various Children's Hospitals separately :—

**TABLE O.**—*Osteotomy operations in Children's Hospitals of certain towns.*

Town.	Hospitals.	No. of Osteotomies per 100 surgical beds.
Manchester ... ..	Children's Hospital ... ..	109·6
Bradford... ..	Children's Hospital ... ..	90·8
Kingston-upon-Hull ...	Victoria Children's Hospital ... ..	55·4
Newcastle-on-Tyne ..	Fleming Memorial Hospital for Diseases of Children	51·7
<b>SHEFFIELD</b> ... ..	Free Hospital for Sick Children ... ..	<b>49·3</b>
Birmingham ... ..	Birmingham and Midland Free Hospital for Sick Children ... ..	49·6
Derby ... ..	Derbyshire Hospital for Sick Children ... ..	69·8
Bristol ... ..	Royal Hospital for Sick Children ... ..	40·7
Nottingham ... ..	Children's Hospital ... ..	44·4
Gateshead ... ..	Children's Hospital ... ..	14·3

In collecting the information with regard to the work of the Hospitals interesting remarks were made by several of my correspondents :—

A MANCHESTER correspondent wrote that he had been greatly struck by the much greater prevalence of Rickets among hospital patients in Manchester as compared with Preston, and that there seemed to be some distinct cause over and above poverty.

From NORWICH came the comment :—" There are always a considerable number of Rickets cases in the Out-patient Department."

From WOLVERHAMPTON :—" We have a large number of cases of Rickets attending the Out-patient Department."

From PORTSMOUTH :—" The Surgeons here do not as a rule operate before the age of 10, so our numbers are of little value to you. As a matter of fact Rickets is extremely prevalent in this neighbourhood, and a large proportion of children attending here show signs of Rickets."

From **Sheffield Royal Hospital** :—" I think the average (proportion) of cases of Rickets admitted here is higher than at Guy's (London.)"

From BIRMINGHAM :—" I may say that in Birmingham the number of Osteotomies performed bears no relation to the prevalence of Rickets. The treatment of the bony deformities produced by this disease is almost exclusively dietetic and hygienic in my experience. Amongst the Out-patients at the Children's Hospital about 25 per cent. of the surgical cases present some evidence of Rickets."

From GATESHEAD CHILDREN'S HOSPITAL :—" About 1,200 Out-patients are treated annually, 9 per cent. of which are suffering from Rickets. Osteotomy is not performed until the child has reached the age of 8 years."

From HALIFAX :—" Rickets is very prevalent in Halifax. You have probably heard the expression 'Halifax legs.'"

From CROYDON GENERAL HOSPITAL :—" I left Sheffield some five months ago to take up my duties as House Surgeon here. During these months I have certainly seen few cases of Rickets. I might add we have had no Osteotomy operation on rachitic cases for the last five months."

From THE BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR CHILDREN :—" We have an enormous number of Out-patients being treated for Rickets."

From MANCHESTER:—"In my out-patient room at the Manchester Children's Hospital I see about 400 patients weekly. Amongst these the commonest general condition is Rickets, and many show absolutely no deformity requiring operation, whilst a large number are cured by means of splints and massage so far as the local treatment is concerned, leaving only a small number for osteotomy in the Hospital."

Medical Inspection of school children would give a valuable indication of the prevalence of Rickets in the different towns if some uniformity of standard could be agreed upon among the Medical Inspectors.

The following are some recent results showing the percentage of Rickets found as the result of routine medical inspection in the schools of various towns:—

				1912	...	1913
Liverpool	Entrants	Boys	...	1.59	...	2.13
		Girls	...	.95	...	1.32
	Leavers	Boys	...	.28	...	.55
		Girls	...	.17	...	.50
Manchester	Entrants	Boys	...	...	...	3.23
		Girls	...	...	...	2.5
	Leavers	Boys	...	...	...	.52
		Girls	...	...	...	.49

School Medical Inspection confirms the inference to be drawn from hospital practice in Liverpool and Manchester. In Manchester there are according to the census returns 7,462 married women working in the textile and dress trades as compared with 1,903 in Liverpool.

In Sheffield out of 17,257 children undergoing routine inspection in 1913, 470 cases of Rickets were noted (or about 2½ per cent.), 87 being specified as bow-legs and 45 as knock-knees.

In Glasgow during 1911-12 out of 24,515 boys examined at the Board Schools there were found 475 knock-knees, 464 bow legs, 562 curved tibiae, 113 pigeon breasts, and 109 other cases of Rickets, making a total of 7 per cent. of those examined; and out of 5,506 boys and girls examined at the voluntary schools there were found 215 knock-knees, 187 bow legs, 217 curved tibiae, 39 pigeon breasts, and 56 other cases of Rickets, making a total of 12.9 per cent. of those examined.

In Dundee during 1912-1913, 8.2 per cent. of the boys and 3.0 per cent. of the girls were found to be affected. Among 3,357 boys inspected there were found 38 cases of bow leg, 48 of knock knee, and 217 of rickety chest, and among 3,404 girls inspected there were found 18 cases of bow leg, 26 of knock-knee, and 66 of rickety chest.

In Dundee there are a large number of married women employed in the jute factories.

The following are some other results obtained by routine inspection during 1913:—

				Percentage of Rickets.	
Derby	Entrants	Boys	...	...	2.15
		Girls	...	...	1.17
	Leavers	Boys	...	...	1.82
		Girls	...	...	1.21

				Percentage of Rickets.		
				(Slight)	(Marked)	Total.
Leeds ...	Entrants	Boys ...	4.5	1.5	6.0	
		Girls ...	3.4	1.3	4.7	
	Leavers	Boys ...	1.6	.3	1.9	
		Girls ...	1.1	.3	1.4	
Leicester ...	Entrants	Boys ...	...	0.97		
		Girls ...	...	0.98		
	Leavers	Boys ...	...	1.23		
		Girls ...	...	0.4		
Hull ...	Entrants	Boys ...	...	3.07		
		Girls ...	...	10.8		
	Leavers	Boys ...	...	3.91		
		Girls ...	...	2.11		
Nottingham ...	Entrants	Boys ...	...	9.5		
		Girls ...	...	7.34		
	Leavers	Boys ...	...	2.74		
		Girls ...	...	2.18		
Scarborough ...	Entrants	Boys ...	...	8.49		
		Girls ...	...	4.78		
	Leavers	Boys ...	...	1.47		
		Girls ...	...	2.29		
Edinburgh ...	...	...	...	1.84	of bow-legs, knock-knees and pigeon chests.	
Halifax ...	Entrants	Boys ...	...	2.7		
		Girls ...	...	2.09		
	Leavers	Boys ...	...	4.12		
		Girls ...	...	0.78		
Bootle ...	Entrants	Boys ...	...	2.53		
		Girls ...	...	1.33		
	Leavers	Boys ...	...	1.01		
		Girls ...	...	—		
Darlington ...	Entrants	Boys ...	...	2.44		
		Girls ...	...	1.32		
	Leavers	...	...	None.		

				Percentage of Rickets.
Exeter	...	All routine inspections	...	49
Torquay	...	Ditto	...	3
Cambridge	...	Ditto	...	3
Govan	...	Ditto	...	5.2
Lancashire	Boys	{	Entrants aged 3...	4.0
			" " 4...	3.3
			" " 5...	3.2
			Leavers " 12...	.8
			" " 13...	.9
	Girls	{	Entrants aged 3...	3.1
			" " 4...	2.8
			" " 5...	2.2
			Leavers " 12...	.3
			" " 13...	.09
Berkshire	...	All routine inspections	...	1.99
Staffordshire	Boys	{	Entrants	3.1
			12-13 years	2.1
			13-14 years	1.2
	Girls	{	Entrants	1.8
			12-13 years	.8
			13-14 years	.7
Yorkshire— East Riding.	Entrants	{	Boys	40
			Girls	05
	Leavers	{	Boys	90
			Girls	—
Somersetshire	...	All routine inspections	...	.5

The School Medical Officer reports that there has been a continuous decrease in the amount of Rickets found year by year from 1909 to 1913.

Dr. Ralph P. Williams has kindly supplied me with some further Rickets percentages as the result of routine inspections for 1913, except where otherwise mentioned.

Huddersfield	...	2.01	Wallasey	...	1.18 Boys
Wakefield	...	3.25		...	.7 Girls
Harrogate	...	3.02	Aldershot	...	3.0
Barnsley	...	.69	Bolton	...	.7
Cheltenham	...	15.8 (1913)	Coventry	...	.1
	...	5.3 (1912)	Yorks.—West Riding Area	...	1.93
Chester	...	9.1 Infts.	Denbighshire	...	.7
	...	8.8 (1908)	Gloucestershire	...	1.0
	...	6.6 (1909)	Derbyshire	...	.92
Keighley	...	4.6 (1910)	Dorsetshire	...	.27
	...	3.1 (1911)	Cornwall	...	4.8 (1913)
	...	3.1 (1912)		...	5.9 (1912)
	...	2.4 (1913)			

Some of the results just given are very extraordinary. It will be noted that with the single exception of Hull entrants signs of Rickets are much more frequently noticed among the boys than the girls. The fatality of Congenital Syphilis as judged by the death certificates is also greater for boys than girls.

The causation of Rickets is not thoroughly understood. There is no doubt that bad artificial feeding of infants is a most important factor and it is generally admitted

that the absence of the proper amount of fat and proteid in the infant's food are in some way connected with the cause of the trouble. It is also considered that the absence of sunlight and perhaps of fresh air and exercise act as contributory causes.

The ideal circumstances for the development of Rickets would probably be found in the case of a bottle-fed baby living up a common stair in a Glasgow "backland."

Many theories have recently been advanced as to the comparative importance in the causation of Rickets of the various factors and as to the exact way in which these factors operate.

I cannot help thinking that an extended enquiry dealing with the previous history of the pronounced cases of Rickets found amongst school entrants with special reference to the information obtained during infancy through the Notification of Births Act may throw valuable light on the matter and I hope to be able to arrange for such an investigation in Sheffield.

I suggest that the enquiry should be limited to the pronounced cases in order to get rid of the fallacy arising from the varying opinions of medical inspectors as to what combination of signs or symptoms justifies a diagnosis of Rickets.

As far as can be gathered Sheffield occupies a middle place among the towns as regards the prevalence of Rickets. The disease ought not to be very prevalent in Sheffield because there is little employment of married women in factories and consequently few only of the mothers are prevented from breast-feeding their babies, and most of the living rooms are on the ground floor so that the babies can get fresh air and sunlight without difficulty.

#### VENEREAL DISEASES.

Owing to the system of death certification in use, the mortality statistics give no idea of the actual prevalence or fatality of Syphilis in the country.

The Registrar-General thinks, however, that the death-rates give a fairly good idea of the comparative prevalence of this disease in various parts of the country. He points out that the accuracy of the comparison can be further tested by using the statistics of the diseases which are now generally regarded as sequelæ of Syphilis, viz., Locomotor Ataxy, General Paralysis of the Insane, and Aneurysm.

During 1903-1912 the average annual death-rate from Syphilis in Sheffield was 70 per million, as compared with 50 in England.

In Sheffield the proportion of the certified deaths ascribed to the congenital form of the disease is greater than in England. Thus five-sixths of the certified deaths in Sheffield, and two-thirds of the certified deaths in England are under 15 years of age.

According to the certification the congenital disease causes a much higher death-rate in male infants than in female infants both in Sheffield and England.

The disease is more frequent in towns than in the country.

The next table, taken from the Registrar-General's Report for 1912, shows that Sheffield occupies a middle position between the County Boroughs and the Urban Districts of England and Wales.

The figures for England refer to 1911 and 1912 only. In order to obtain more reliable statistics for comparative purposes in the case of the smaller population of Sheffield, the Sheffield rates have reference to the ten years 1903-1912.

TABLE P.—Mortality from Syphilis and certain of its Consequences.

		Mortality-rate per million living.		
		Males.	Females.	Persons.
London ... ..	Syphilis ... ..	90	57	73
	L.A. and G.P.I.* ...	195	41	113
	Aneurysm ... ..	87	24	54
	Total of above ...	—372	—122	—240
County Boroughs ...	Syphilis ... ..	90	59	74
	L.A. and G.P.I.* ...	161	36	96
	Aneurysm ... ..	63	11	36
	Total of above ...	—314	—106	—206
<b>SHEFFIELD</b> ... ..	<b>Syphilis</b> ... ..	<b>81</b>	<b>61</b>	<b>71</b>
	<b>L.A. &amp; G.P.I.*</b> ...	<b>112</b>	<b>35</b>	<b>73</b>
	<b>Aneurysm</b> ... ..	<b>35</b>	<b>7</b>	<b>21</b>
	<b>Total of Above</b> ...	<b>—228</b>	<b>—103</b>	<b>—165</b>
Other Urban Districts ...	Syphilis ... ..	50	36	43
	L.A. and G.P.I.* ...	117	26	70
	Aneurysm ... ..	47	9	27
	Total of above ...	—214	— 71	—140
Rural Districts ... ..	Syphilis ... ..	24	18	22
	L.A. and G.P.I.* ...	86	23	54
	Aneurysm ... ..	36	7	21
	Total of above ...	—146	— 48	— 97
All Areas ... ..	Syphilis ... ..	61	42	52
	L.A. and G.P.I.* ...	133	30	80
	Aneurysm ... ..	54	11	32
	Total of above ...	—248	— 83	—164

\* Locomotor Ataxy and General Paralysis of Insane.

Professor Dean informs me that up to the present time the investigation of the causes of wasting diseases of Infants and of mental defects of persons of all ages by means of the Wassermann Re-action does not indicate an excessive prevalence of Syphilis in Sheffield as compared with some other towns where similar investigations have been pursued.

#### REGISTRATION SUB-DISTRICTS AND SECTIONS.

In accordance with the instructions of the Health Committee several of the Registration Sub-Districts have been divided into sections for statistical purposes.

As the names of the sub-districts give very little idea of their situation, it will be advisable to give a detailed description of the boundaries and character of each sub-district and section.

The following sub-districts have been divided into sections:—Sheffield North and Sheffield South into three sections; Park, Brightside West, Brightside East, Attercliffe, Ecclesall North and Broomhall into two sections. There are, therefore, now, 25 sub-districts and sections for statistical purposes.

In considering the reference to altitudes it should be borne in mind that the bed of the river Don as it enters the city at Wadsley Bridge is 203 feet above the sea level, and that the crest of the Jordan Weir at Tinsley, where the Don leaves the City, is 94 feet above sea level.

Table IX. gives the death-rates in sub-districts and sections under a list of causes which has been in use for a long time for the whole of the City, with the addition of rheumatism.

Most of the terms in the list speak for themselves but it will be advisable to mention the causes which make up the bulk of the deaths which are classified in groups. The groups are set out below, together with the principal causes falling under the several groups.

**DISEASES OF THE NERVOUS SYSTEM.**—Meningitis, apoplexy, cerebral hæmorrhage, hemiplegia, all forms of insanity, epilepsy and infantile convulsions.

**DISEASES OF THE CIRCULATORY SYSTEM.**—All diseases of the heart and arteries.

**DISEASES OF THE RESPIRATORY SYSTEM.**—Chiefly bronchitis (pneumonia is shown separately).

**DISEASES OF THE DIGESTIVE SYSTEM.**—Perforating ulcer of stomach, inflammation of stomach, appendicitis, hernia, obstruction of intestines, cirrhosis and other diseases of liver and peritonitis.

**NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM.**—All inflammations of the kidney and diseases of the bladder and urethra.

**DISEASES OF THE PUERPERAL STATE.**—Accidents of pregnancy and accidents of child-birth such as hæmorrhage, convulsions, embolism and complications other than puerperal fever.

**DISEASES OF EARLY INFANCY.**—All forms of debility at birth such as premature birth, marasmus, atelectasis, etc.

**AFFECTIONS PRODUCED BY EXTERNAL CAUSES.**—Deaths by drowning, "gassing," fire, poisoning, accidents, homicide, and all deaths by violence falling under the heading of suicide.

Too much importance should not be attached to death-rates in the sections from individual causes, remembering that the period is for one year only, especially where the population of the section is small. For example in Handsworth, the population of which was only 1,309, during 1913 the death-rate from diseases of the circulatory system was more than three times that for the City as a whole, 7 deaths from heart disease being sufficient to cause this anomaly.

In the descriptions of the sections which follow, the number of Common lodging houses and the number of Houses-let-in-lodgings have been given. In addition to the Houses-let-in-lodgings which come under the operation of by-laws and most of which are let furnished, there are a number of houses of a similar character farmed by the landlords of Houses-let-in-lodgings, some of which are sub-let furnished and some unfurnished, and all of which undergo regular inspection in the same manner as the houses-let-in-lodgings. It is these houses to which the terms "Houses sub-let furnished" and "Houses sub-let unfurnished" apply, in the descriptions which follow.

A.	Area in acres .. .. .	99	Population .. .. .	5,365
	Persons per acre .. .. .	54·2	Separate occupiers .. .. .	1,135
	Common lodging houses 6 (accommodating 180 lodgers).		Houses-let-in-lodgings 15.	
	Houses sub-let furnished .. .. .	71	Houses sub-let unfurnished .. .. .	(Nil).

The boundary is the River Don from Lady's Bridge as far north as Albert Terrace Road, including the Royal Infirmary and the houses immediately round St. Philip's Church, then extending back to Lady's Bridge by Shalesmoor and West Bar. This is a low-lying section very little above the river level, the altitudes varying only from 160 feet at Lady's Bridge to about 200 feet at the site of the Infirmary. The conversion of the privies into water-closets in this section is practically completed. There are about 539 back-to-back houses. The only open spaces are about St. Philip's Church and the Royal Infirmary. There are no gardens. A large portion of the area is occupied by low-rented property. There is some flooding of the lowest portions of the district in times of heavy storm.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 28·0, the death-rate was 24·6, and the infant mortality rate was 153, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Diphtheria, Whooping Cough, Puerperal Fever or Suicide.

The following diseases were below the rate for the whole City to the extent shown :— Other Forms of Tuberculosis, 52 per cent. ; Digestive System, 32 per cent.

The following diseases were in excess of the rate for the whole City to the under-mentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	192	Circulatory System .. .. .	43
Scarlet Fever .. .. .	19	Respiratory System .. .. .	102
Enteric Fever .. .. .	343	Non-Venereal Diseases of the	
Diarrhœa and Enteritis .. .. .	26	Genito-Urinary System .. .. .	86
Pneumonia .. .. .	27	Early Infancy .. .. .	21
Cancer .. .. .	69	Puerperal State (except Puer-	
Pulmonary Tuberculosis .. .. .	61	peral Fever) .. .. .	144
Rheumatism .. .. .	355	Other Affections produced by	
Nervous System .. .. .	62	External Causes .. .. .	235
Area in acres .. .. .	91	Population .. .. .	15,859
Persons per acre .. .. .	174·3	Separate occupiers .. .. .	3,340
Common lodging houses 9 (accommodating		Houses-let-in-lodgings	31.
Houses sub-let furnished .. .. .	145	Houses sub-let unfurnished .. .. .	(Nil).

North  
Sheffield (B)

The boundary runs along West Bar and Shalesmoor on the east, along Henry Street and Netherthorpe Place on the north, St. Philip's Road on the west, and Allen Street, Brocco Street, Hollis Croft, Tenter Street, and West Bar Green on the south.

All the privies in this section have been converted and the whole of the area is on the bin system. There are 2,055 back-to-back houses. There are no vacant sites. None of the houses have gardens attached and there are no allotment gardens. There are no open spaces except where houses have been demolished and sites not yet built up. This section is on a higher level than section A, and is built on a spur of the ridge between the Rivelin and the Porter valleys and the altitudes vary from about 160 feet in the neighbourhood of Gibraltar Street to 320 feet in Upper St. Philip's Road.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 38·8, the death-rate was 27·2 and the infant mortality rate was 188, which have to be compared with 28·2, and 15·8 and 128 respectively for the whole City.

There were no deaths from Puerperal fever or Rheumatism.

The following disease was below the rate for the whole City to the extent shown :—Scarlet Fever, 18 per cent.

The following diseases showed a rate about equal to that of the whole City :—Diphtheria, Whooping Cough, Nervous System.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	229	Digestive System .. .. .	35
Enteric Fever .. .. .	40	Non-Venereal Diseases of the	
Diarrhœa and Enteritis .. .. .	107	Genito-Urinary System .. .. .	78
Pneumonia .. .. .	119	Early Infancy .. .. .	58
Cancer .. .. .	49	Puerperal State (except Puer-	
Pulmonary Tuberculosis .. .. .	164	peral Fever) .. .. .	292
Other forms of Tuberculosis .. .. .	58	Suicide .. .. .	27
Circulatory System .. .. .	79	Other Affections produced by	
Respiratory System .. .. .	45	External Causes .. .. .	28

		acres			
Area in acres	.. ..	68	Population	.. ..	8,846
Persons per acre	.. ..	130·1	Separate occupiers	.. ..	2,081
Common lodging houses	.. ..	(Nil)	Houses-let-in-lodgings	.. ..	3
Houses sub-let furnished	.. ..	(Nil)	Houses sub-let unfurnished	.. ..	(Nil)

The section is bounded by Saint Philip's Road on the east, Mushroom Lane on the north, and Western Bank and Brook Hill on the south.

In this section 95 per cent. of the privies have been converted ; there are 700 back-to-back houses, and the greater portion of the district is built up with houses which have no gardens. The western portion of the section, however, includes Weston Park and a small number of houses round it which have gardens. The altitudes vary from 212 feet at the junction of Saint Philip's Road with Netherthorpe Place to 440 feet at the Mappin Art Gallery in Weston Park.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 32·3, the death-rate was 17·9, and the infant mortality rate was 129, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Whooping Cough or Enteric Fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

		Per cent.				Per cent.	
Measles	.. ..	11	Diarrhœa and Enteritis	.. ..	12		
Scarlet Fever	.. ..	31	Pneumonia	.. ..	16		
Diphtheria	.. ..	12	Digestive System	.. ..	39		

The following diseases showed a rate about equal to that of the whole City :—Nervous System, etc., Circulatory System, also Suicide.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

		Per cent.				Per cent.	
Puerperal Fever	.. ..	189	Early Infancy	.. ..	47		
Cancer	.. ..	130	Puerperal State (except Puerperal Fever)	.. ..	34		
Pulmonary Tuberculosis	.. ..	73	Other Affections produced by External Causes	.. ..	28		
Other Forms of Tuberculosis	.. ..	43					
Rheumatism	.. ..	87					
Respiratory System	.. ..	16					
Non-Venereal Diseases of the Genito-Urinary System	.. ..	31					

Area in acres	.. ..	165	Population	.. ..	14,684
Persons per acre	.. ..	89·0	Separate occupiers	.. ..	3,030
Common lodging houses	7 (accommodating 328* lodgers)		Houses-let-in-lodgings	.. ..	21
Houses sub-let furnished	.. ..	188	Houses sub-let unfurnished	.. ..	10

\*(including 82 at "The Hostel.")

The boundary begins at Lady's Bridge and extends on the north along Bridge Street, West Bar, Tenter Street, Hollis Croft, Brocco Street and Allen Street, enclosing St. George's Church, turns south to Wilkinson Street, then east, skirting Wellington Street, passing along a portion of Division Street, and along Barker's Pool, Norfolk Row, and Norfolk Street back to Lady's Bridge.

This section is built on the slope of a hill and the altitudes vary from about 160 feet at Lady's Bridge to about 340 feet near St. George's Church. There are no vacant sites. A very small number of the houses in the western end have small gardens attached. About 95 per cent. of the privies have been converted. There are 1,434 back-to-back houses. The open spaces

are Paradise Square, Fitzalan Square, the Church yards of the Cathedral Church and St. George's and at the present time the unbuilt-on portion of the Crofts improvement area.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 28·5, the death-rate was 20·4 and the infant mortality rate was 179, which have to be compared with 28·2, 15·8, and 128 respectively for the whole City.

There were no deaths from Enteric fever or Suicide.

The following diseases were below the rate for the whole City to the extent shown :—Diphtheria, 44 per cent. ; Whooping cough, 51 per cent. ; Cancer, 16 per cent.

The following diseases showed a rate about equal to that of the whole City :—Other forms of Tuberculosis ; Nervous system ; Non-venereal diseases of the Genito-urinary System.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	33	Respiratory System .. .. .	44
Scarlet Fever .. .. .	158	Digestive System .. .. .	95
Puerperal Fever .. .. .	84	Early Infancy .. .. .	26
Diarrhœa and Enteritis .. .. .	58	Puerperal State (except Puerperal Fever) .. .. .	71
Pneumonia .. .. .	37	Other Affections produced by External Causes .. .. .	37
Pulmonary Tuberculosis .. .. .	87		
Rheumatism .. .. .	63		
Circulatory System .. .. .	24		
Area in acres .. .. .	73	Population .. .. .	5,511
Persons per acre .. .. .	75·5	Separate occupiers .. .. .	1,204
Common lodging houses .. .. .	(Nil).	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

South  
Sheffield (B)

The boundary, beginning at the top end of Norfolk Street, goes along Norfolk Row and Barker's Pool, turns down Cambridge Street, and across the Moorhead and along Porter Street as far as Sylvester Street, then along the line of the Porter Brook to Pond Street, up Howard Street, and along Arundel Street and Norfolk Street back to the starting point.

This section is built on the slope of a hill. The altitudes vary from about 180 feet above sea level near the Midland Railway approach to about 280 feet at the site of the Town Hall. The open spaces are St. Paul's Church yard and two small playgrounds—one adjoining Sylvester Lane and the other in Porter Street. The privies are nearly all converted. The section contains 740 back-to-back houses. There are no gardens attached to the houses and there are no vacant building sites.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 30·0, the death-rate was 24·3, and the infant mortality rate was 181, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Diphtheria, Whooping cough, Enteric fever, Puerperal fever or Rheumatism.

The following disease was below the rate for the whole City to the extent shown :—Respiratory System, 19 per cent.

The following disease showed a rate about equal to that of the whole City :—Digestive System.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	42	Non-venereal diseases of the	
Scarlet Fever .. .. .	13	Genito-urinary System ..	141
Diarrhoea and Enteritis .. .. .	93	Early Infancy .. .. .	32
Pneumonia .. .. .	12	Puerperal State (except Puer-	
Cancer .. .. .	43	peral Fever .. .. .	339
Pulmonary Tuberculosis .. .. .	133	Suicide .. .. .	283
Other forms of Tuberculosis .. .. .	80	Other Affections produced by	
Nervous System. .. .. .	94	External Causes .. .. .	267
Circulatory System .. .. .	17		
Area in acres .. .. .	118	Population .. .. .	7,559
Persons per acre .. .. .	64.1	Separate occupiers .. .. .	1,796
Common lodging houses .. .. .	(Nil)	Houses let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

The boundary, beginning in Pond Street (near the Midland Station) extends along the Porter Brook to Bramall Lane close to St. Mary's Church, passes along Bramall Lane to Havelock Bridge, and turns north along the line of the River Sheaf as far as St. Mary's Road, then along Suffolk Road to the starting point. This is a low-lying district, the altitudes varying from 190 to 240 feet above sea level. The open spaces are the Bramall Lane Cricket Ground, the Sheaf House Recreation Ground and St. Mary's Church yard, and there are unbuilt-on sites between Edmund Road and the River Sheaf.

70 per cent. of the houses have water-closets. There are 180 back-to-back houses. Only about 2 per cent. of the houses have gardens, and there are no allotment gardens in the section.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 19.9, the death-rate was 15.1, and the infant mortality rate was 119, which have to be compared with 28.2, 15.8 and 128 respectively for the whole City.

There were no deaths from other forms of Tuberculosis, Diphtheria or Puerperal fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	48	Digestive System .. .. .	54
Diarrhoea and Enteritis .. .. .	23	Early Infancy .. .. .	36
Pneumonia .. .. .	43	Other Affections produced by	
Pulmonary Tuberculosis .. .. .	26	External Causes .. .. .	42

The following diseases show a rate about equal to that of the whole City :—Cancer, Respiratory system.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Scarlet Fever .. .. .	63	Non-venereal diseases of the	
Whooping Cough .. .. .	81	Genito-Urinary System ..	10
Enteric Fever .. .. .	202	Puerperal State (except Puer-	
Rheumatism .. .. .	111	peral Fever) .. .. .	217
Nervous System .. .. .	32	Suicide .. .. .	27
Circulatory System .. .. .	40		
Area in acres .. .. .	135	Population .. .. .	13,205
Persons per acre .. .. .	97.8	Separate occupiers .. .. .	2,829
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	11
Houses sub-let furnished .. .. .	80	Houses sub-let unfurnished .. .. .	6

The boundary, beginning at the end of Saint Mary's Road, passes along Shrewsbury Road, Talbot Street, Bernard Street, Weigh Lane, by St. John's Church, to Cricket Inn Road, westward along Cricket Inn Road and Broad Street, southward along Shude Hill, Bakers Hill, Norfolk Street, Arundel Street, Howard Street and Suffolk Road to the starting point.

Many of the oldest houses in the city are in this section, and a large portion of the residents belong to the poorer working-class. The area is entirely built up, and there are no open spaces or allotment gardens. There are 1,256 back-to-back houses. 95 per cent. of the houses have water-closets. There are about 30 houses with gardens. The central portion of this section is near the Midland Station and lies low, the altitude near the Corn Market being about 160 feet but it rises on either side to an altitude of 250 feet in Norfolk Street on the west and to about 300 feet near St. John's Church and Duke Street on the east. The most thickly populated portion is situated on the rising ground behind the Midland Station.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 38·7, the death-rate was 23·9 and the infant mortality rate was 164, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Scarlet Fever .. .. .	50	Suicide .. .. .	21
Whooping Cough .. .. .	44	Other Affections produced by	
Other Forms of Tuberculosis .. .. .	25	External Causes .. .. .	15
Rheumatism .. .. .	35		
Non-Venereal Diseases of the			
Genito-urinary System .. .. .	12		

The following disease showed a rate about equal to that of the whole city :—Pulmonary Tuberculosis.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	86	Nervous System .. .. .	31
Diphtheria .. .. .	140	Circulatory System .. .. .	17
Enteric Fever .. .. .	86	Respiratory System .. .. .	59
Puerperal Fever .. .. .	505	Digestive System .. .. .	89
Diarrhœa and Enteritis .. .. .	148	Early Infancy .. .. .	47
Pneumonia .. .. .	144	Puerperal State (except Puer-	
Cancer .. .. .	10	peral Fever) .. .. .	266
Area in acres .. .. .	2,372	Population .. .. .	13,323
Persons per acre .. .. .	5·6	Separate occupiers .. .. .	2,800
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

Park (B).

This is the remainder of the Park Registration Sub-district, and includes Norfolk Park, also the Victoria Station, the markets, and the Fumival Road and Effingham Road district. The River Don forms its northern boundary up to a point a little beyond Attercliffe Road Station.

A large portion of this district is of a rural and agricultural character, and it extends to the City boundary. There are 497 back-to-back houses.

In the low-lying district round the edge of the canal and the Gas Works there is a considerable working-class population, and here practically all of the privies have been converted. In the upper part of the district between City Road and Norfolk Park most of the houses are more highly rented and have gardens attached to them. Here in a large number of cases the privies have not been converted.

The altitude varies from 150 feet in Effingham Street near the river level to 700 feet in the neighbourhood of Intake and Gleadless Common.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 23·7, the death-rate was 13·7, and the infant mortality rate was 85, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Scarlet fever, Puerperal fever, Other Forms of Tuberculosis, Puerperal state (except Puerperal fever) or Suicide.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	31	Respiratory System .. .. .	33
Diarrhoea and Enteritis .. .. .	20	Non-venereal Diseases of the	
Pulmonary Tuberculosis .. .. .	58	Genito-urinary System.. .. .	12
Nervous System .. .. .	10	Early Infancy .. .. .	39

The following diseases showed a rate about equal to that of the whole City :—Whooping cough ; cancer ; circulatory system ; digestive system.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Diphtheria .. .. .	84	Rheumatism .. .. .	22
Enteric Fever .. .. .	249	Other Affections produced by	
Pneumonia .. .. .	16	External Causes .. .. .	120
Area in acres .. .. .	325	Population .. .. .	23,129
Persons per acre .. .. .	71·2	Separate occupiers .. .. .	5,137
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	2
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

side  
(A).

Beginning at the Wicker Arches, the boundary passes up Spital Hill, Burngreave Road and Rock Street, along Andover Street, up Fox Street, along Nottingham Street, enclosing Pitsmoor Church, passes along a footpath across open ground and includes the Parkwood Recreation Ground and allotments at Parkwood Springs, and thence to the Great Central Railway, following the railway to Bardwell Road, along Bardwell Road and then along the River Don to Corporation Bridge, and along Chatham Street and the Great Central Railway to the starting point.

The conversion of the privies is nearly completed in this area with the exception of the neighbourhood of Parkwood Springs, where about two-thirds have been done. The eastern portion of the district is built up, but there is a large amount of open space in the western portion of the section on high ground around Parkwood Springs. There is a densely populated part of this section on the river level, on each side of Harvest Lane, and this low-lying part especially includes a lot of low-rented property. There are many persons of the hawker class living around Harvest Lane. There are 2,115 back-to-back houses. There are few gardens except in Parkwood Springs, and attached to some of the more highly-rented houses. There are about 700 houses with gardens chiefly in the Parkwood Springs district and in the neighbourhood of Burngreave Road. There is a recreation ground at Nottingham Cliff and a recreation ground and 160 allotments at Parkwood Springs on the edge of the section.

The altitudes vary from about 152 feet at the Wicker Arches, and 173 at the Corporation Bridge, to 280 feet in Burngreave Road and 380 feet at the highest house in Parkwood Springs ; and to 500 feet at the Old Park Wood.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 34·2, the death-rate was 20·6 and the infant mortality rate was 153, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Puerperal fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Diphtheria .. .. .	28	Puerperal State (except Puer-	
Pulmonary Tuberculosis .. .. .	10	peral Fever) .. .. .	51
Digestive System .. .. .	23	Suicide .. .. .	12
Non-venereal Diseases of Genito-urinary System.. .. .	65		

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	158	Rheumatism .. .. .	38
Scarlet Fever .. .. .	39	Nervous System .. .. .	24
Whooping Cough .. .. .	18	Circulatory System .. .. .	50
Enteric Fever .. .. .	109	Respiratory System .. .. .	26
Diarrhœa and Enteritis .. .. .	64	Early Infancy .. .. .	71
Pneumonia .. .. .	26	Other Affections produced by	
Cancer .. .. .	22	External Causes .. .. .	75
Other Forms of Tuberculosis .. .. .	18		

Brightside  
West (B).

Area in acres .. .. .	1,764	Population .. .. .	24,458
Persons per acre .. .. .	13·9	Separate occupiers .. .. .	5,008
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

This section is the remainder of the Brightside West Registration Sub-district right out to the Northern boundary of the City, and includes Pitsmoor, Firvale and Firth Park.

The section is largely of a rural character and includes several hundred houses with large gardens. There are open spaces at Roe Wood and Firth Park. Practically all the privies have been converted. There are 27 back-to-back houses in the district. The lower-rented houses in the section are chiefly occupied by artisans.

This is a very hilly section and the altitudes vary from 200 feet at Firvale and Grimesthorpe to 450 feet at Sheffield Lane Top and over 500 feet above sea level at Parkwood.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 19·5, the death-rate was 8·7, and the infant mortality rate was 90, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Puerperal state (except Puerperal fever), Whooping cough or Enteric fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	67	Nervous System .. .. .	27
Scarlet Fever .. .. .	75	Circulatory System .. .. .	23
Diphtheria .. .. .	36	Respiratory System .. .. .	58
Diarrhœa and Enteritis .. .. .	64	Digestive System .. .. .	48
Pneumonia .. .. .	49	Non-venereal Diseases of the	
Cancer .. .. .	12	Genito-urinary System.. .. .	38

	Per cent.		Per cent.
Pulmonary Tuberculosis .. ..	76	Early Infancy .. .. .	27
Other Forms of Tuberculosis ..	80	Suicide .. .. .	61
Rheumatism .. .. .	35	Other Affections produced by External Causes .. ..	64

The following disease was in excess of the rate for the whole City to the extent shown :—  
Puerperal Fever, 110 per cent.

tside  
(A).

Area in acres .. .. .	236	Population .. .. .	12,813
Persons per acre .. .. .	54.3	Separate occupiers .. ..	2,631
Common lodging houses .. ..	(Nil)	Houses-let-in-lodgings .. ..	7
Houses sub-let furnished .. ..	(Nil)	Houses sub-let unfurnished .. ..	(Nil)

Beginning at Lady's Bridge, the boundary follows the River Don as far as the River Don Works of Vickers, Ltd., passes along Hawke Street, and turns back along Brightside Lane, Savile Street East, and Savile Street to the Wicker Arches, then along the Great Central Railway and Chatham Street to Corporation Bridge and along the River Don back to Lady's Bridge.

The whole of this area lies very low, near the level of the River Don, and the altitudes simply vary with the fall of the river from 150 to 120 feet above the sea level. This is an entirely working-class district. There are no gardens attached to the houses. Two-thirds of the area is occupied by works, railways, stores, etc. Owing to lying low, this section is specially affected by smoke and fog. There are 969 back-to-back houses. There are approximately 100 houses still served by privy middens. There is one asphalted recreation ground belonging to the Corporation at Newhall, between Don Road and Alfred Road.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 41.8, the death-rate was 26.5, and the infant mortality rate was 198, which have to be compared with 28.2, 15.8 and 128 respectively for the whole City.

There were no deaths from Enteric Fever, or Suicide.

The following diseases were below the rate for the whole City to the extent shown :—  
Rheumatism, 35 per cent. ; Digestive System, 16 per cent.

The following diseases showed a rate about equal to that of the whole City :—Pulmonary Tuberculosis ; Circulatory System, ; and, Puerperal State (except Puerperal Fever).

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	215	Other Forms of Tuberculosis .. ..	136
Scarlet Fever .. .. .	45	Nervous System .. .. .	61
Diphtheria .. .. .	212	Respiratory System .. .. .	93
Whooping Cough .. .. .	386	Non-venereal Diseases of Genito- urinary System.. .. .	56
Puerperal Fever .. .. .	110	Early Infancy .. .. .	96
Diarrhoea and Enteritis .. ..	59	Other Affections caused by External Causes .. ..	127
Pneumonia .. .. .	123		
Cancer .. .. .	13		

tside  
(B).

Area in acres .. .. .	1,357	Population .. .. .	27,566
Persons per acre .. .. .	20.3	Separate occupiers .. ..	5,944
Common lodging houses .. ..	(Nil)	Houses-let-in-lodgings .. ..	(Nil)
Houses sub-let furnished .. ..	(Nil)	Houses sub-let unfurnished .. ..	(Nil)

This is the remainder of the Brightside East Registration Sub-district, and includes all the big east-end works, also the Corporation Sewage Works, High Wincobank with the corporation model estate, and Low Wincobank, Grimesthorpe, and a large number of dwelling-houses on the hillside between Grimesthorpe Road and Carlisle Street.

A great portion of this area is of a rural character. There are about 250 houses with gardens. 95 per cent. of the privies have been converted. There are 1,015 back-to-back houses. The most densely populated portions are between Ellesmere Road and the great works, and at Grimsthorpe, and the residents in these areas are chiefly of the artisan class. This section lies on the eastern slope of the ridge which rises from the left bank of the River Don, and the altitudes vary from about 100 feet at Blackburn Meadows and 150 at the Wicker Arches to over 300 feet at the highest end of Ellesmere Road and Grimsthorpe village, and 440 feet at the Corporation model estate, and over 500 feet at the Roman Camp, Wincobank.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 32·0, the death-rate was 16·9 and the infant mortality rate was 150, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Diphtheria .. .. .	68	Other Forms of Tuberculosis ..	27
Cancer .. .. .	26	Rheumatism .. .. .	67
Pulmonary Tuberculosis .. ..	21		

The following diseases showed a rate about equal to that of the whole City :—Pneumonia ; Nervous System ; Circulatory System ; Non-venereal Diseases of Genito-urinary System, and Early Infancy.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	42	Digestive System .. .. .	81
Scarlet Fever .. .. .	13	Puerperal State (except Puer-	
Whooping Cough .. .. .	73	peral Fever .. .. .	34
Enteric Fever .. .. .	63	Suicide .. .. .	37
Puerperal Fever .. .. .	84	Other Affections produced by	
Diarrhœa and Enteritis .. .. .	37	External Causes .. .. .	39
Respiratory System .. .. .	16		

Attercliffe  
(A).

Area in acres .. .. .	271	Population .. .. .	18,681
Persons per acre .. .. .	68·9	Separate occupiers .. .. .	3,931
Common lodging houses 1. (accommodating 68 Lodgers).		Houses-let-in-lodgings.	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

The boundary, beginning at Washford Bridge, passes down the river a short distance and across to the canal, along the canal to Staniforth Road, along Staniforth Road, along Attercliffe Road and Common to the old city boundary at the Tinsley tram terminus, passes westward along Weedon Street to the River Don, and then along the river to the starting point.

This section is low-lying, practically on the river level, the only slight rise being Attercliffe Hill Top with an altitude of 180 feet. The lowest levels of about 115 feet are found at the Tinsley end. There are no spaces in this district suitable for building on, the only spaces being railway sidings and land for the extension of works, and in connection with Attercliffe old burial ground and Attercliffe Church. This is one of the districts which are most affected by smoke and consequent fog. About four-fifths of the privies have been converted. There are 261 back-to-back houses. There are very few houses with gardens and there are no allotment gardens. The bulk of the residents are employed in the east-end works.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 35·9, the death-rate was 19·1, and the infant mortality rate was 157, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Puerperal Fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Diphtheria .. .. .	60	Non-venereal diseases of the	
Cancer .. .. .	16	Genito-urinary System ..	46
Circulatory System .. ..	24		

The following diseases showed a rate about equal to that of the whole City :—Pulmonary Tuberculosis ; Suicide ; Other Affections produced by External Causes.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	18	Rheumatism .. .. .	71
Scarlet Fever .. .. .	32	Nervous System .. .. .	34
Whooping Cough .. .. .	46	Respiratory System .. .. .	33
Enteric Fever .. .. .	156	Digestive System .. .. .	33
Diarrhœa and Enteritis .. ..	19	Early Infancy .. .. .	69
Pneumonia .. .. .	76	Puerperal State (except Puer-	
Other forms of Tuberculosis ..	20	peral Fever) .. .. .	34
Area in acres .. .. .	1,123	Population .. .. .	45,228
Persons per acre .. .. .	40·3	Separate occupiers .. .. .	8,947
Common lodging houses .. ..	(Nil)	Houses-let-in-lodgings .. ..	1
Houses sub-let furnished .. ..	(Nil)	Houses sub-let unfurnished ..	(Nil)

Attercliffe  
3).

This is the remainder of the Attercliffe Registration Sub-district, including the populous district to the east of Attercliffe Road and Common, and also the whole of Greenland and Darnall.

This is a somewhat undulating area which is less low-lying and is not built up like Attercliffe A. There are over 600 houses with gardens attached to them, and there is a considerable amount of open space. About four-fifths of the houses have water-closets attached to them. In portions of this district during the last 10 or 15 years areas have been built up with small badly-built houses and have degenerated into slums.

In the Darnall district there are a number of more highly-rented houses, but generally speaking, the houses are occupied by various grades of workers from artisans to labourers. There are about 280 back-to-back houses in the section.

The altitudes vary from about 130 feet near Carbrook Church to about 240 feet at Darnall Station and 300 feet at Bowden Housteads Wood.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 34·3, the death-rate was 16·3 and the infant mortality rate was 141, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Enteric Fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Scarlet Fever .. .. .	56	Digestive System .. .. .	45
Puerperal Fever .. .. .	47	Non-venereal Diseases of the	
Pulmonary Tuberculosis .. ..	14	Genito-urinary system ..	45
Rheumatism .. .. .	11	Other Affections produced by	
Nervous System .. .. .	16	External Causes .. .. .	15
Circulatory System .. .. .	20		

The following Diseases showed a rate about equal to that of the whole City :—Measles, Cancer ; Respiratory System ; Puerperal State (except Puerperal Fever).

The following Diseases were in excess of the rate for the whole City to the undermentioned extent :—

		Per cent.			Per cent.
	Diphtheria .. .. .	132	Other forms of Tuberculosis ..		38
	Whooping Cough .. .. .	101	Early Infancy .. .. .		38
	Diarrhœa and Enteritis .. .. .	45	Suicide .. .. .		47
	Pneumonia .. .. .	45			
<b>Handsworth.</b>	Area in acres .. .. .	76	Population .. .. .		1,309
	Persons per acre .. .. .	17·2	Separate occupiers .. .. .		265
	Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .		(Nil)
	Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .		(Nil)

That portion of the Handsworth Sub-district which is within Sheffield consists of the portion of the Handsworth Urban District which was added to the City in 1901. It includes High Hazels Park, and a small residential district beyond the Darnall tram terminus.

Most of the houses have gardens attached to them. About 70 are still served by privy middens. There are four back-to-back houses. A considerable number of houses have been built during the last five years and a number are being erected at the present time.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 22·2, the death-rate was 17·6 and the infant mortality rate was 34, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Scarlet Fever, Diphtheria, Whooping Cough, Enteric Fever, Puerperal Fever, Diarrhœa and Enteritis, Other Forms of Tuberculosis, Rheumatism, Non-venereal Diseases of the Genito-urinary System, Early Infancy, Puerperal State (except Puerperal Fever), or Suicide.

The following diseases showed a rate about equal to that of the whole City :—Pneumonia, Measles, Nervous System, Respiratory System.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

		Per cent.			Per cent.
	Cancer .. .. .	72	Digestive System .. .. .		172
	Pulmonary Tuberculosis .. .. .	23	Other Affections produced by		
	Circulatory System .. .. .	215	External Causes .. .. .		244
<b>Tinsley.</b>	Area in acres .. .. .	691	Population .. .. .		6,684
	Persons per acre .. .. .	9·7	Separate occupiers .. .. .		1,150
	Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .		(Nil)
	Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .		(Nil)

The Tinsley section is part of South East Rotherham Registration sub-district which was added to the city in 1912. It includes the old village of Tinsley, and the colliery village of Tinsley Park, a number of large works close to the river between Attercliffe and Rotherham, and a new and rapidly growing residential district for men engaged at these works.

The colliery village of Tinsley Park consists of 150 old houses which are supplied with pail closets. There are about 80 houses served by privy middens, chiefly in the old village of Tinsley. The new part of Tinsley which is at present being extended, consists chiefly of artisans' houses provided with water-closets, and which have gardens attached.

The altitudes vary from 90 feet on the river bank at the Rotherham end of the section to about 190 feet at Tinsley old village and in the neighbourhood of the colliery.

During 1913 the Vital Statistics of this section were as follows:—

The birth-rate was 27·8, the death-rate was 11·1 and the infant mortality rate was 124, which have to be compared with 28·2, 15·8 and 128 respectively from the whole City.

There were no deaths from Puerperal Fever, Rheumatism, or Suicide.

The following diseases were below the rate for the whole City to the undermentioned extent:—

	Per cent.		Per cent.
Measles .. .. .	41	Respiratory System .. .. .	42
Pneumonia .. .. .	34	Digestive System .. .. .	46
Cancer .. .. .	49	Non-venereal Diseases of the	
Pulmonary Tuberculosis ..	63	Genito-urinary System ..	75
Other Forms of Tuberculosis ..	62	Other Affections produced by	
Nervous System .. .. .	40	External Causes .. .. .	32
Circulatory System .. .. .	55		

The following diseases showed a rate about equal to that of the whole City:—Scarlet Fever, Diarrhoea and Enteritis, Early Infancy.

The following diseases were in excess of the rate for the whole City to the undermentioned extent:—

	Per cent.		Per cent.
Diphtheria .. .. .	140	Puerperal State (except Puer-	
Whooping Cough .. .. .	108	peral Fever) .. .. .	83
Enteric Fever .. .. .	249		
Area in acres .. .. .	988	Population .. .. .	19,674
Persons per acre .. .. .	19·7	Separate occupiers .. .. .	4,132
Common lodging houses .. ..	(Nil)	Houses-let-in-lodgings .. ..	(Nil)
Houses sub-let furnished .. ..	(Nil)	Houses sub-let furnished .. ..	(Nil)

Hillsborough

The boundary, starting from a point in the river Don opposite Hillsborough Park, passes along the City boundary to a point in the River Rivelin at Liberty Hill, then along the Rivelin to Malin Bridge and along Holme Lane, Bradfield Road and Borough Road to the starting point.

The portion lying between the Middlewood and Malin Bridge car routes is the only part which is entirely built over. With this exception it is practically a rural district, including the villages or hamlets of Liberty Hill, Woodland View, Wadsley, and Malin Bridge. Hillsborough Park is in this district.

This is a very hilly sub-district. One portion of it is situated on the end of the ridge which separates the Rivelin from the Loxley and the other portion on the ridge which separates the Loxley from the Don River. The altitudes vary from 204 feet at Hillsborough Park to 440 feet at Wadsley Church and 600 feet at Loxley House and at Liberty Hill.

In this section 15 per cent. of the privies have been converted. There are 82 back-to-back houses. Most of the houses in the sub-district have gardens attached and there are allotment gardens. The area at Liberty Hill and part of the area at Woodland View are not yet sewered.

During 1913 the Vital Statistics of this Sub-district were as follows:—

The birth-rate was 23·0, the death-rate was 12·4 and the infant mortality rate was 115, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Whooping Cough, Enteric Fever, Puerperal Fever, or Rheumatism.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	47	Circulatory System .. .. .	22
Scarlet Fever .. .. .	37	Non-venereal Diseases of the	
Diphtheria .. .. .	20	Genito-urinary System .. .. .	32
Diarrhoea and Enteritis .. .. .	41	Early Infancy .. .. .	21
Pneumonia .. .. .	59	Other Affections produced by	
Pulmonary Tuberculosis .. .. .	39	External Causes .. .. .	44

The following diseases showed a rate about equal to that of the whole City :—Cancer, Nervous System, Digestive System, also Suicide.

The following diseases were in excess of the rate for the whole City to the extent shown :—Other Forms of Tuberculosis, 40 per cent. ; Respiratory System, 10 per cent. ; Puerperal State (except Puerperal Fever), 22 per cent.

**Ecclesall  
North (A).**

Area in acres .. .. .	223	Population .. .. .	11,476
Persons per acre .. .. .	51·5	Separate occupiers .. .. .	2,064
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	1
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

The boundary, beginning at Hillfoot Bridge, follows the River Don to a point near Hillsbro' Park, turns south-westerly along Bradfield Road and along Langsett Road to Greaves Street, along Greaves Street to Grammar Street, along Grammar Street and Creswick Street to Langsett Road again, along Langsett Road, and Wood Street to the starting point. Penistone Road passes through the middle of this section, which includes the Barracks.

The eastern portion of the area is low-lying ; the western portion lies on the side of a hill. The altitudes vary from 175 feet at Hillfoot Bridge to 330 feet at Grammar Street.

This section includes streets which are known as the "A.B.C. streets," which lie between Penistone Road and the river. These houses had the reputation of not being well built and of accommodating a considerable number of the people who removed when the Crofts Improvement Scheme was dealt with, but they are now considerably improved and are occupied by a better class of tenant and are kept in better repair.

In this section fifty per cent. of the privy middens have been converted. There are 42 back-to-back houses. There are open spaces round Owlerton, and in the low-lying land near the river, where there is some agricultural land. There are very few houses with gardens.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 40·9, the death-rate was 20·1 and the infant mortality rate was 160, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Diphtheria, Enteric Fever, Puerperal State (except Puerperal Fever), or Suicide.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Scarlet Fever .. .. .	43	Digestive System .. .. .	37
Whooping Cough .. .. .	37	Other Affections produced by	
Cancer .. .. .	41	External Causes .. .. .	21
Rheumatism .. .. .	27		

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	138	Nervous System .. .. .	16
Puerperal Fever .. .. .	137	Circulatory System, etc. .. .. .	23
Diarrhoea and Enteritis .. .. .	94	Respiratory System .. .. .	33
Pneumonia .. .. .	29	Non-venereal Diseases of the	
Pulmonary Tuberculosis .. .. .	33	Genito-urinary System.. .. .	16
Other Forms of Tuberculosis .. .. .	96	Early Infancy .. .. .	69
Area in acres .. .. .	431	Population .. .. .	25,065
Persons per acre .. .. .	58.2	Separate occupiers .. .. .	5,327
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

This is the remainder of the Ecclesall North Registration Sub-district. It includes the whole of Walkley. For a considerable distance Langsett Road forms the eastern boundary, the River Loxley the northern end and the Rivelin the western boundary.

Fifty per cent. of the privies have been converted.

There are 306 back-to-back houses. Most of the houses have gardens attached to them. There are also open spaces which are not built over and there are a large number of allotment gardens.

The section is situated on the terminal slope of the ridge which separates the Rivelin Valley from the Porter Valley, the altitudes varying from 218 feet at Hillsbro' Bridge and 237 feet at Malin Bridge to 678 feet at Northfield Road.

During 1913 the Vital Statistics of this section were as follows :—

The birth-rate was 30.1, the death-rate was 13.7 and the infant mortality rate was 104, which have to be compared with 28.2, 15.8 and 128 respectively for the whole City.

There were no deaths from diseases of the Puerperal State (except Puerperal Fever).

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Whooping Cough .. .. .	72	Digestive System .. .. .	12
Diarrhoea and Enteritis .. .. .	37	Non-venereal Diseases of	
Pneumonia .. .. .	33	Genito-urinary System.. .. .	12
Cancer .. .. .	12	Suicide .. .. .	61
Rheumatism .. .. .	35	Other Affections produced	
Circulatory System .. .. .	34	by External Causes .. .. .	53
Respiratory System .. .. .	11		

The following diseases showed a rate about equal to that of the whole City :—Measles, Puerperal Fever, Pulmonary Tuberculosis, Nervous System.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Scarlet Fever .. .. .	32	Other Forms of Tuberculosis .. .. .	23
Diphtheria .. .. .	28	Early Infancy .. .. .	13
Enteric Fever .. .. .	86		
Area in acres .. .. .	7,588	Population .. .. .	50,216
Persons per acre .. .. .	6.6	Separate occupiers .. .. .	10,961
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	1
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

The boundary of this sub-district, commencing at Hillfoot Bridge, passes in a westerly direction along Wood Street, Whitehouse Lane, Fox Road, Sherde Road, Daniel Hill Street, Fulton Road, Heavygate Road, and Northfield Road, to the footpath over the quarries, and along the said footpath to Bolehill Road, thence along Bolehill Road and Nichols Road to the south eastern boundary of St. Michael's Cemetery, and along the boundary to the River Rivelin, thence along the course of the River Rivelin to Liberty Hill, at which point the river becomes the City boundary, thence along the city boundary to Ringinglowe, and along the old township boundary by Hangram Lane, to Carr Bridge, which crosses the Porter Brook and along the Porter Brook to Brocco Bank, thence along Brocco Bank, Clarkehouse Road, and Wilkinson Street, and in an irregular course between Victoria Street and Hanover Street to Brook Hill, along Brook Hill, Western Bank and Mushroom Lane, crossing Bromley Street and Fawcett Street, along Watery Lane, Portmahon, Uppertorpe Road, through the Royal Infirmary Grounds, and thence in an irregular course between Albert Terrace Road and Portland Street, and crossing Cross Bedford Street and Penistone Road to the River Don at a point near Rutland Bridge, thence following the river to Hillfoot Bridge.

The only congested part of this sub-district is the area situated between the River Don and the Crookesmoor Recreation Ground. In this area 95 per cent. of the privies have been converted into water-closets; there are 647 back-to-back houses and there are practically no vacant building sites, no gardens attached to the houses and no allotments.

The rest of the sub-district has an excellent situation between the Porter and the Rivelin, and includes the more or less highly-rented residential districts of Crookesmoor, Broomhill, Ranmoor, Nether Green, Sandygate and Fulwood. Some portions of the Crookes district are not so good; the houses have not been well-built, and the tenants have not been satisfactory. There are, in this more open part of the sub-district, about 136 back-to-back houses. Many of the privies still require to be converted, but on the other hand a large number of the houses had water-closets provided when built. Most of the houses have gardens. There is plenty of open space, and as one goes further west the character of the district becomes first agricultural and then moorland.

The altitudes in the sub-district vary from about 170 feet at Rutland Bridge near the River Don, 300 feet on the Rivelin below Walkley Cemetery, and 350 feet on the Porter at Hunter's Bar, to 789 at Lydgate Lane, 900 at Sandygate, over 940 feet at Lodgemoor Hospital, and 1,450 feet at Stanage.

During 1913 the Vital Statistics of this sub-district were as follows:—

The birth-rate was 22·0, the death-rate was 12·1, and the infant mortality rate was 80, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from diseases of the Puerperal State (except Puerperal Fever).

The following diseases were below the rate for the whole City to the undermentioned extent:—

	Per cent.		Per cent.
Measles .. .. .	37	Other Forms of Tuberculosis ..	27
Scarlet Fever .. .. .	50	Nervous System .. .. .	19
Diphtheria .. .. .	68	Respiratory System .. .. .	35
Whooping Cough .. .. .	72	Digestive System .. .. .	18
Puerperal Fever .. .. .	47	Early Infancy .. .. .	44
Diarrhœa and Enteritis .. .. .	61	Suicide .. .. .	41
Pneumonia .. .. .	48	Other Affections produced by	
Pulmonary Tuberculosis .. .. .	13	External Causes .. .. .	23

The following diseases showed a rate about equal to that of the whole City:—Enteric Fever and Circulatory System.

The following diseases were in excess of the rate for the whole City to the extent shown:—Cancer, 13 per cent. ; Rheumatism, 63 per cent. ; Non-venereal Diseases of Genito-urinary System, 11 per cent.

Area in acres .. .. .	3,613	Population .. .. .	47,100
Persons per acre .. .. .	13·0	Separate occupiers .. .. .	10,089
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

The boundary beginning at Myrtle Road at the point where it crosses the River Sheaf, passes along the River Sheaf to a point opposite Colver Road, crossing the railway and along Colver Road to Queen's Road, thence along Queen's Road, London Road, Chippinghouse Road, Crescent Road, Kenwood Park Road, and the General Cemetery Wall to the Porter Brook; thence in a westerly direction along the Porter Brook to Carr Bridge, and along the old township boundary to the City boundary at Ringinglowe, thence following the City boundary to Abbey Lane, and along the course of the River Sheaf to the point at which the Meersbrook enters it, thence up the Meersbrook to the City boundary, and along the City boundary to a point near Newfield Green, thence along the footpath and Myrtle Road to the River Sheaf.

This sub-district varies very much in its character and includes a thickly populated and low-lying area between Myrtle Road and the Meersbrook, and also a fairly-thickly populated district round Abbeydale Road. Otherwise it may be described as of a highly-rented residential character, with plenty of open spaces and a considerable amount of agricultural land and woodland. It includes the districts of Nether Edge, Millhouses, Ecclesall, Greystones, Whirlow, and the southern portion of Sharrow. 75 per cent. of the houses have water-closets and there are 140 back-to-back houses. The sub-district is a hilly one and the altitudes vary from about 220 feet in Queen's Road to 1,050 feet at Ringinglowe, which is the highest point.

During 1913 the Vital Statistics of this sub-district were as follows:—

The birth-rate was 22·2, the death-rate was 11·2 and the infant mortality rate was 65, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

The following diseases were below the rate for the whole City to the undermentioned extent:—

	Per cent.		Per cent.
Measles .. .. .	98	Rheumatism .. .. .	51
Diphtheria .. .. .	68	Nervous System .. .. .	15
Whooping Cough .. .. .	72	Circulatory System .. .. .	26
Puerperal Fever .. .. .	47	Respiratory System .. .. .	23
Diarrhœa and Enteritis .. .. .	67	Early Infancy .. .. .	61
Pneumonia .. .. .	45	Puerperal State (except Puer-	
Cancer .. .. .	14	peral Fever) .. .. .	51
Pulmonary Tuberculosis .. .. .	16	Other Affections produced by	
Other Forms of Tuberculosis .. .. .	25	External Causes .. .. .	53

The following diseases showed a rate about equal to that of the whole City:—Enteric Fever, Non-venereal Diseases of the Genito-urinary System, also Suicide.

The following diseases were in excess of the rate for the whole City to the extent shown:—Scarlet Fever, 76 per cent. ; Digestive System, 10 per cent.

Area in acres .. .. .	111	Population .. .. .	15,569
Persons per acre .. .. .	140·3	Separate occupiers .. .. .	3,392
Common lodging houses, 4. (accommodating 172 lodgers).		Houses-let-in-lodgings, (Nil).	
Houses sub-let furnished .. .. .	9	Houses sub-let unfurnished .. .. .	(Nil)

The boundary, beginning in Ecclesall Road, at the corner of Hanover Street, follows Ecclesall Road to the end of the Moor, passes south of Ellin Street and then along

Porter Street across the Moorhead, along Cambridge Street, thence westward along Division Street and across in an irregular course to Wilkinson Street, down Hanover Street, along Aberdeen Street and Broomhall Street back to Hanover Street, and along Hanover Street to the starting point.

This section is somewhat flat, but rises towards the west, the altitudes varying from about 220 feet to 290 feet above sea level. It is entirely built on; there are no vacant sites; and very few of the houses have gardens. There are no open spaces or allotment gardens. 95 per cent. of the houses have water-closets. 1,980 or nearly two-thirds are of the back-to-back type.

During 1913 the Vital Statistics of this section were as follows:—

The birth-rate was 31·3, the death-rate was 19·2 and the infant mortality rate was 117, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Enteric Fever.

The following diseases were below the rate for the whole City to the undermentioned extent:—

	Per cent.		Per cent.
Measles .. .. .	66	Puerperal State (except Puer-	
Respiratory .. .. .	18	peral Fever) .. .. .	26
Early Infancy .. .. .	11		

The following diseases showed a rate about equal to that of the whole City:—Pneumonia, Cancer.

The following diseases were in excess of the rate for the whole City to the undermentioned extent:—

	Per cent.		Per cent.
Scarlet Fever .. .. .	19	Nervous System .. .. .	41
Diphtheria .. .. .	108	Circulatory System .. .. .	14
Whooping Cough .. .. .	81	Digestive System .. .. .	60
Puerperal Fever .. .. .	242	Non-venereal Diseases of	
Diarrhoea and Enteritis .. .. .	69	Genito-urinary System .. .. .	102
Pulmonary Tuberculosis .. .. .	60	Suicide .. .. .	86
Other Forms of Tuberculosis .. .. .	28	Other Affections produced by	
Rheumatism .. .. .	111	External Causes .. .. .	55
Area in acres .. .. .	254	Population .. .. .	10,809
Persons per acre .. .. .	42·6	Separate occupiers .. .. .	2,566
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

Broomhall  
(B).

This section includes the highly-rented residential district of Broomhall Park, and the Broomspring Lane district, also the district adjacent to Ecclesall Road from Hanover Street to Brocco Bank.

There are practically no vacant sites excepting the large gardens and grounds attached to existing buildings. Most of the houses have, at any rate, small gardens; many of them have large gardens. The open spaces in the section are the Botanical Gardens and the nursery gardens adjoining Sharrow Mills. There are no common-lodging houses, houses-let-in-lodgings or furnished houses in the district. The number of back-to-back houses in the section is 160. Most of the privies have been converted into water-closets. The section lies on the slope of a hill and the altitudes vary from 250 feet to 420 feet above sea level.

During 1913 the Vital Statistics of this section were as follows:—

The birth-rate was 15·4, the death-rate was 11·9, and the infant mortality rate was 72, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Measles, Enteric Fever, Scarlet Fever, Puerperal Fever, Whooping Cough, or Puerperal State (except Puerperal Fever).

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Diphtheria .. .. .	28	Nervous System .. .. .	32
Diarrhoea and Enteritis .. .. .	57	Non-venereal Diseases of	
Pneumonia .. .. .	54	Genito-urinary System .. .. .	23
Cancer .. .. .	48	Early Infancy .. .. .	77

The following diseases showed a rate about equal to that of the whole City :—Pulmonary Tuberculosis, Circulatory System, Respiratory System, Other Affections produced by External Causes.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Other Forms of Tuberculosis .. .. .	38	Digestive System .. .. .	48
Rheumatism .. .. .	274	Suicide .. .. .	440
Area in acres .. .. .	275	Population .. .. .	25,708
Persons per acre .. .. .	93·5	Separate occupiers .. .. .	5,992
Common lodging houses .. .. .	(Nil)	Houses-let-in-lodgings .. .. .	(Nil)
Houses sub-let furnished .. .. .	(Nil)	Houses sub-let unfurnished .. .. .	(Nil)

The boundary, beginning at the corner of Ellin Street and Bramall Lane passes south of Ellin Street, then along Ecclesall Road and Harrow Street to the Porter Brook, along the Porter Brook to the western boundary of the General Cemetery and along Cemetery Wall, Kenwood Park Road, Crescent Road, Chippinghouse Road, London Road, Queen's Road, and Colver Road to the River Sheaf, thence along the River Sheaf to the point where Myrtle Road crosses the river, and along Myrtle Road and Bramall Lane to Ellin Street.

Sharrow is almost entirely built over, and includes the thickly populated districts lying on each side of London Road and Cemetery Road. The only portions not thickly populated are the district near Sharrow Head and the site of the General Cemetery. About 80 per cent. of the houses have water-closets. There are 1,040 back-to-back houses. There are about 250 houses with gardens, the houses in the western portion having gardens of considerable size. The altitudes vary from 218 feet at Bramall Lane to 380 feet at Sharrow Head.

During 1913 the Vital Statistics of this Sub-district were as follows :—

The birth-rate was 23·1, the death-rate was 14·8 and the infant mortality rate was 108, which have to be compared with 28·2, 15·8 and 128 respectively for the whole City.

There were no deaths from Enteric Fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	90	Rheumatism .. .. .	35
Scarlet Fever .. .. .	50	Early Infancy .. .. .	40
Whooping Cough .. .. .	24	Suicide .. .. .	61
Diarrhoea and Enteritis .. .. .	32	Other Affections produced by	
Pneumonia .. .. .	27	External Causes .. .. .	48

The following diseases showed a rate about equal to that of the whole City :—Puerperal Fever, Other Forms of Tuberculosis, Nervous System, Digestive System.

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Diphtheria .. .. .	28	Non-venereal Diseases of the	
Cancer .. .. .	23	Genito-urinary system.. ..	43
Pulmonary Tuberculosis .. ..	11	Puerperal State (except Puer-	
Circulatory System .. .. .	10	peral Fever) .. .. .	34
Respiratory System .. .. .	14		
<b>Norton.</b> Area in acres .. .. .	1,906	Population .. .. .	21,827
Persons per acre .. .. .	11.5	Separate occupiers.. .. .	4,408
Common lodging houses .. ..	(Nil)	Houses-let-in-lodgings .. ..	(Nil)
Houses sub-let furnished .. ..	(Nil)	Houses sub-let unfurnished ..	(Nil)

Beginning at the confluence of the Meersbrook with the River Sheaf, the boundary of this section follows the course of the River Sheaf upwards to the point where Abbey Lane crosses the River, from this point in an easterly direction along the City boundary to a point in the Meersbrook at Leeshall Wood, thence down the brook to the River Sheaf.

This district includes the rapidly growing suburb of Norton Woodseats, the Meersbrook, district, Meersbrook Park, and a small portion of the village of Norton.

Less than one-third of this section is built upon. 40 per cent. of the houses have gardens. 80 per cent. of the houses have water-closets. There are about 60 back-to-back houses. The district includes two golf courses, plenty of open space and about 700 garden allotments.

The section is a very hilly one and the altitudes vary from 250 feet near Heeley Station to over 700 feet near Norton village.

During 1913 the Vital Statistics of this sub-district were as follows :—

The birth-rate was 23.3, the death-rate was 11.0, and the infant mortality rate was 100, which have to be compared with 28.2, 15.8 and 128 respectively for the whole City.

There were no deaths from Enteric Fever, or Puerperal Fever.

The following diseases were below the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Measles .. .. .	81	Nervous System .. .. .	36
Diarrhœa and Enteritis .. ..	60	Respiratory System .. .. .	41
Pneumonia .. .. .	60	Digestive System .. .. .	43
Cancer .. .. .	12	Early Infancy .. .. .	22
Pulmonary Tuberculosis .. ..	26	Other Affections produced by	
Other Forms of Tuberculosis ..	32	External Causes .. .. .	48
Rheumatism .. .. .	59		

The following diseases showed a rate about equal to that of the whole City :—  
Circulatory System, Puerperal State (except Puerperal Fever).

The following diseases were in excess of the rate for the whole City to the undermentioned extent :—

	Per cent.		Per cent.
Scarlet Fever .. .. .	158	Non-venereal Diseases of the	
Diphtheria .. .. .	12	Genito-urinary System .. ..	14
Whooping Cough .. .. .	157	Suicide .. .. .	78

#### POSITION AMONG THE TOWNS.

The table showing the position of the largest towns having been deleted in the Annual Summary of the Registrar-General the usual particulars cannot be given for the year 1913; a table has, however, been extracted from tables in previous Annual Reports to show the position of Sheffield during the six years 1907-1912 among the 40 odd

English towns with a population over 100,000, the towns with the highest birth-rate and lowest death-rate being put at the top. This table appears on p. lxxx.

Thus Sheffield in the six years 1907-1912 is tenth from the highest for birth-rate, occupies a good position for Diphtheria, a position just below the middle for Enteric Fever, Whooping Cough, and Infant Mortality, and a worse position for Scarlet Fever, Measles, Diarrhœa and the death-rate for All Causes.

The figures in table R were obtained by Dr. Robertson from the towns named, and show Sheffield's position for 1913 among a smaller selection of 15 of the large towns.

This table shows that among the 15 towns in 1913 Sheffield was fourth for birth-rate, eleventh for general death-rate, seventh for Infant Mortality, fourteenth for Scarlet Fever, eleventh for Pulmonary Tuberculosis, fourth (tied with two other towns) for Other Forms of Tuberculosis, twelfth for Pneumonia, ninth for Bronchitis, third for Cancer, and tenth for Diarrhœa.

#### COMPARISON WITH ENGLAND.

It is not to be expected that the mortality statistics of a large industrial City like Sheffield will compare favourably with those of the whole country which includes the Rural and small Urban Districts, but at the same time a comparison of this kind is always useful.

In my Report for 1904 such a comparison was made in respect of the decade 1894-1903, and it was shown that Sheffield compared favourably for Cancer, Rheumatism, and Diseases of the Circulatory System, and Tuberculosis among females, and unfavourably for Diphtheria, Measles, Scarlet Fever, Whooping Cough, Enteric Fever, Diarrhœa, Tuberculosis among males, Bronchitis especially among children and males over 35, and Pneumonia chiefly among children and males over 45 years of age.

Table S compares the decade 1894-1903 with the decade 1903-1912 and the quinquennium 1908-1912, and table T shows the Male and Female Death-rates for the decade 1903-1912.

It will be noted that we are still in a favourable position as regards Cancer, Rheumatism and Diseases of the Circulatory system, and Tuberculosis among females; that we now compare favourably with respect to Diphtheria and Enteric Fever; and that there is still an excess for Measles, Scarlet Fever (less marked in the quinquennium 1908-1912) Whooping Cough, and Diarrhœa, and also for Tuberculosis of Lung among males, and Bronchitis and Pneumonia.

One expects more infectious disease in towns from the greater facilities for the spread of infection. A glance at the comparison with other towns shows that we are not in a very exceptional position, but that we are not in a better position is I think probably due to the mixing up of different families on the common yard system.

Table U gives an approximate idea of the attack-rate in the large towns from Scarlet Fever and Diphtheria.

As regards the excessive prevalence of Diarrhœa I should attribute it rather to bad conditions inside the home, such as dirtiness and improper feeding, than to bad conditions outside the home, although I do not forget the auxiliary effect of privy middens in causing Diarrhœa. The statistics for the sections show that Diarrhœa is still worst in the central area where the substitution of water-closets and movable bins is most complete, although there is undoubtedly an improvement in these areas, both as to Diarrhœa and Infant Mortality. In order to obtain substantial progress improvements in municipal cleanliness must be backed up by cleanliness in the homes.

It is a cheering fact to note from table S that the Sheffield death-rate from All Causes and from Infantile ailments more nearly approaches the English rate than formerly.

**TABLE Q.**—*Towns of England and Wales of over 100,000 population. Position of Sheffield with regard to Mortality from All Causes and from Principal Epidemic Diseases; Comparative Mortality Figures; Infant Mortality; also Birth-Rates, 6 years, 1907-1912.*

YEAR.	Number of Towns in list.	Birth-rate.	Corrected Death-Rate.	DEATH-RATE PRINCIPAL EPIDEMIC DISEASES.							Infant Mortality from		
				Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Diarrhoea.	Diarrhoea and Enteritis under 2 years.	Diarrhoea and Enteritis under 2 years.	All Causes under One year.
1907	41	6	29	28*	1*	37	38	20*	3*	41	—	—	31
1908	41	7	26	16*	1*	18	22*	39*	3*	30	—	—	24
1909	41	10	25	25*	1*	38	19*	1*	4*	34	—	—	17
1910	43	15	23	10*	2*	23	25*	36*	8*	36	—	—	24
1911	44	13	29	25*	1*	44	24*	9*	9*	—	17	—	23
1912	44	10*	28*	37*	1*	19	28*	37*	13*	—	—	26	26
Average	...	10	27	24	1	30	26	24	7	35	17	26	24
											} 31		

N.B.—(A) In stating the position of Sheffield in the list, the town with the highest birth-rate and the town with the lowest death-rate in the list are regarded as coming first.

(B) The mortality from Diarrhoea has been variously stated by the Registrar-General. In the first 4 years the figures had reference to deaths from Diarrhoea at all ages per 1,000 persons living at all ages; in 1911, deaths from Diarrhoea and Enteritis under 2 years of age per 1,000 living at all ages; and in 1912, deaths from Diarrhoea and Enteritis under one year of age per 1,000 births.

(C) Figures marked thus \* denote ties.



TABLE S.—Sheffield and England. Annual Death-rates per Million living from various Causes; also Infantile Mortality. 10 years 1894-1903. 10 years 1903-1912. 5 years 1908-1912.

Periods.	All Causes.		Measles.		Scarlet Fever.		Diphtheria.		Whooping Cough.		Enteric Fever.		Diarrhoea (Enteritis included 1911 onwards).		Rheumatism, Gout, Cerebral Haemorrhage, and Diseases of the Circulatory System.		Cancer.		Phthisis.		Other Tuberculous Diseases.		Bronchitis. Pneumonia		Infantile Mortality Rate.			
	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.	Sheffield.	England.		
Ten Years— 1894-1903 ..	19,589	17,424	557	383	188	139	441	260	427	341	275	163	1,486	724	2,344	2,301	658	802	1,352	1,309	664	576	1,775	1,522	1,757	1,204	184	150
Ten years— 1903-1912 ..	16,600	14,845	649	314	183	89	116	154	355	261	88	75	872	799	2,435	2,431	797	935	1,198	1,121	486	464	1,465	1,108	1,483	1,205	144	121
Five years— 1908-1912 ..	15,436	14,163	719	306	78	69	94	136	329	235	66	00	872	799	2,402	2,436	838	974	1,192	1,061	406	418	1,329	1,063	1,481	1,133	127	112

8 yrs. 8 yrs. D. D. 1,189 538 2 yrs 2 yrs. D. & E D & E 872 799 3 yrs. 3 yrs. D. D. 737 364 2 yrs. 2 yrs. D & E D & E 872 799

**TABLE T.**—*Sheffield and England. Annual Death-rates per million living from certain diseases, among Males and Females, 10 years, 1903-1912.*

DISEASE.	MALES.		FEMALES.	
	Sheffield.	England.	Sheffield.	England.
Diphtheria ... ..	119	154	117	153
Scarlet Fever ... ..	189	93	178	85
Measles ... ..	688	334	624	295
Whooping Cough ... ..	289	239	424	281
Enteric Fever ... ..	105	89	69	60
Diarrhœa and Enteritis ... ..	1,207	591	1,068	484
Tuberculosis of the Lungs and Phthisis ... ..	1,665	1,317	731	937
Other Tuberculous Diseases ... ..	547	502	442	427
Bronchitis ... ..	1,549	1,123	1,390	1,112
Pneumonia ... ..	1,713	1,407	1,256	1,016
Rheumatism, Gout and Diseases of the Circulatory System (including Cerebral Hæmorrhage) ...	2,385	2,389	2,483	2,472
Cancer ... ..	702	813	896	1,049

**TABLE U.**—*Fifteen Towns of England over 200,000 population. Scarlet Fever and Diphtheria Attack Rate, 10 years, 1904-1913*

TOWN.	Attack rate per 1,000 living.	
	Scarlet Fever.	Diphtheria.
Birmingham ... ..	4·61	1·24
Bradford ... ..	2·95	1·57
Bristol ... ..	2·70	2·18
Hull ... ..	2·20	2·11
Leeds ... ..	2·58	1·63
Leicester ... ..	5·44	0·77
Liverpool ... ..	4·58	1·38
Manchester ... ..	4·88	0·93
Newcastle-on-Tyne ... ..	2·87	1·43
Nottingham ... ..	3·00	1·80
Portsmouth ... ..	3·78	2·66
Salford ... ..	4·42	1·73
<b>SHEFFIELD</b> ... ..	<b>5·34</b>	<b>1·09</b>
Stoke-on-Trent ... ..	4·14	2·63
West Ham ... ..	4·26	1·63

This table is compiled from the Registrar-General's Annual Summaries. The figures are only approximate as they have not been corrected for errors in population estimates revealed by the 1911 census.

I am, Gentlemen,

Your obedient servant,

HAROLD SCURFIELD,

Medical Officer of Health.

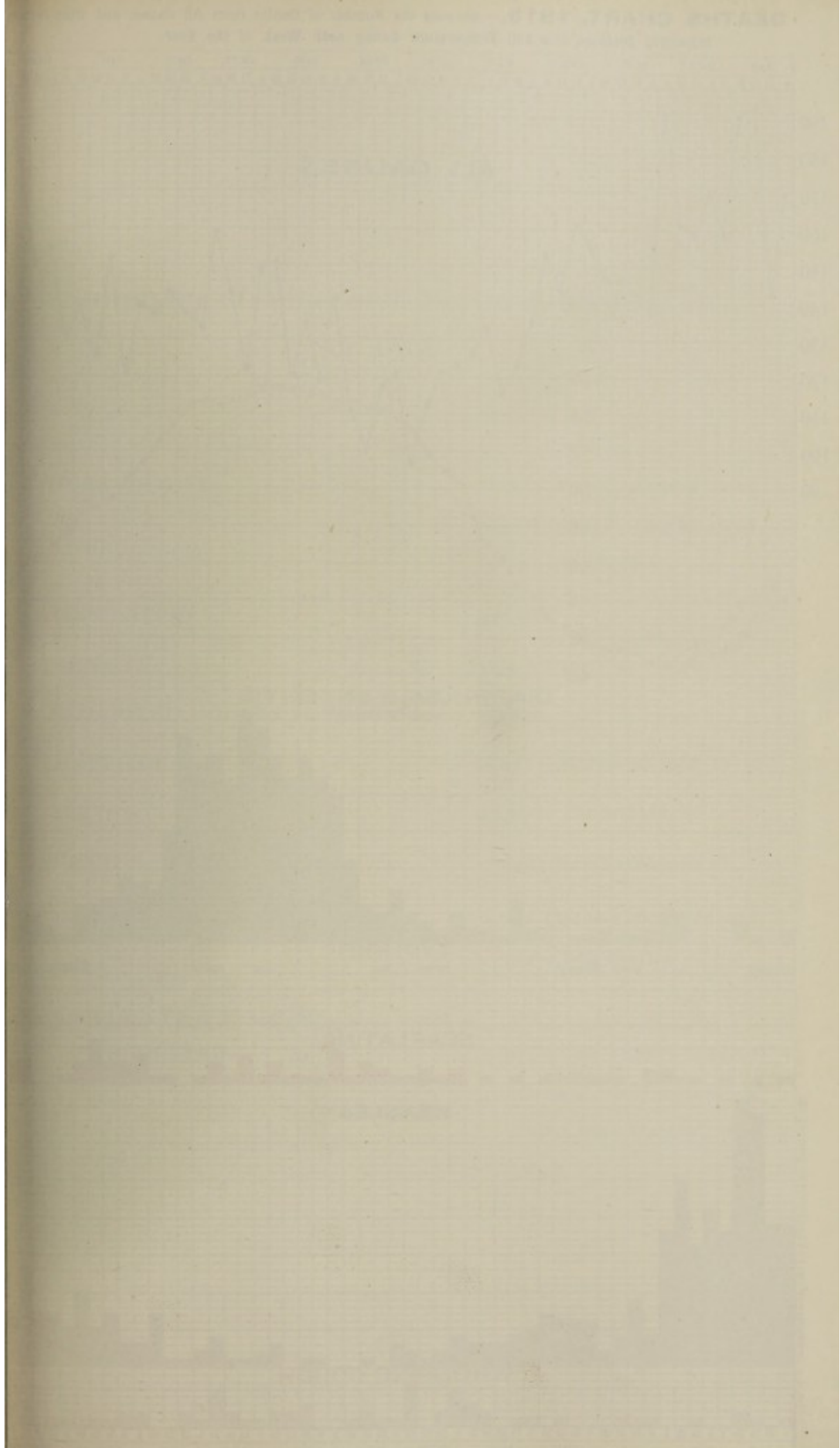
TABLE I  
 Summary of the results of the experiments on the effect of the concentration of the solution on the rate of the reaction.

Concentration of the solution (M)	Rate of reaction (M <sup>-1</sup> s <sup>-1</sup> )
0.01	0.001
0.02	0.002
0.03	0.003
0.04	0.004
0.05	0.005
0.06	0.006
0.07	0.007
0.08	0.008
0.09	0.009
0.10	0.010

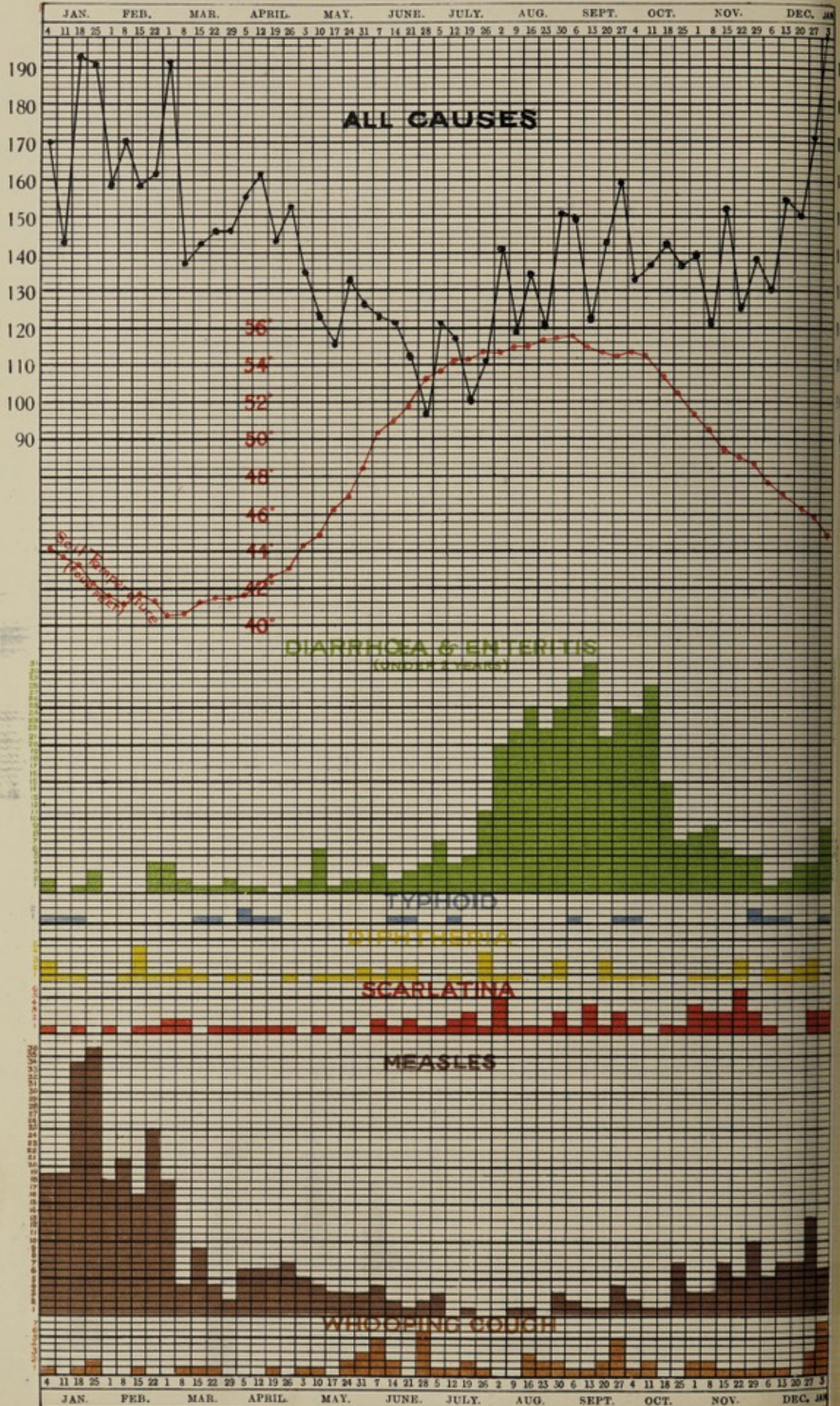
TABLE II  
 Summary of the results of the experiments on the effect of the temperature on the rate of the reaction.

Temperature (°C)	Rate of reaction (M <sup>-1</sup> s <sup>-1</sup> )
10	0.001
20	0.002
30	0.004
40	0.008
50	0.016
60	0.032
70	0.064
80	0.128
90	0.256

The rate of reaction was measured by the change in the concentration of the reactants over time. The results show that the rate of reaction increases with both the concentration of the solution and the temperature. The increase in the rate of reaction with temperature is more pronounced than with concentration.



**DEATHS CHART, 1913.**—Showing the Number of Deaths from All Causes and from certain Infectious Diseases, also Soil Temperature during each Week of the Year.



## Summary of Vital and Mortal Statistics, etc., for 1913.

---

AREA OF CITY	....	....	....	24,353 Acres, divided into FOURTEEN Registration Sub-Districts.
POPULATION	....	....	....	471,662.
DENSITY	....	....	....	19.4 Persons per Acre.
INHABITED HOUSES at CENSUS 1911				98,815.
MARRIAGES	....	....	....	4,077; Marriage-rate, 17.3.
BIRTHS	....	....	....	13,288; Birth-rate, 28.2.
DEATHS	....	....	....	7,446; Death-rate, 15.8.
INFANTILE MORTALITY	....	....	....	1,702 under 1 year, or 128 per 1,000 Births.
ESTIMATED INCREASE OF POPULATION	....	....	....	5,254 but the natural increase, <i>i.e.</i> , excess of Births over Deaths, was 5,842.

## Vital and Mortal Statistics.

The estimated mean population of the City for 1913, based on the Census enumerations of 1901 and 1911, was 471,662, which is the figure adopted by the Registrar-General for that year.

Taking the sex ratio as at the Census of 1911, the number of males and females works out at 232,839 and 238,823 respectively.

TABLE I.—Population, Estimated Increase, and Natural Increase, 22 years.

YEAR.	Population.	Estimated Increase.	Excess of Births over Deaths.
1892	330,816	5,269	5,006
1893	336,171	5,355	4,165
1894	341,612	5,441	5,239
1895	347,141	5,529	5,004
1896	352,760	5,619	5,121
1897	358,470	5,710	4,668
1898	364,272	5,802	4,853
1899	370,168	5,896	4,484
1900	376,160	5,992	4,280
*1901	410,151	33,991	4,875
1902	414,506	4,355	6,874
1903	418,906	4,400	6,160
1904	423,355	4,449	6,526
1905	427,850	4,495	5,576
1906	432,395	4,545	5,945
1907	436,986	4,591	6,353
1908	441,630	4,644	6,931
1909	446,321	4,691	6,198
1910	451,065	4,744	6,238
1911	455,817	4,752	5,288
†1912	466,408	10,591	6,226
1913	471,662	5,254	5,842

\* City extended October 31st, 1901.

† City extended April 1st, 1912.

TABLE II.—Registration Sub-Districts and Municipal Wards contained therein.

REGISTRATION SUB-DISTRICTS.	MUNICIPAL WARDS.
§Sheffield North ... ..	St. Philip's.
Sheffield South ... ..	St. Peter's (part) ; Crookesmoor (small part containing 54 persons).
Sheffield Park ... ..	Park.
Brightside West ... ..	Brightside (part) ; Burngreave (part) ; Neepsend.
Brightside East ... ..	Brightside (part) ; Burngreave (part).
Attercliffe ... ..	Attercliffe (part) ; Darnall (part).
Handsworth (part) ... ..	Darnall (part).
*Tinsley (part of S.E. R'ham.) ...	Attercliffe (part).
Hillsbro' ... ..	Hillsbro' (part).
Ecclesall North ... ..	Walkley ; Hillsbro' (part).
Ecclesall West Central ... ..	Crookesmoor (part) ; Hallam ; St. Peter's (small part containing 36 persons).
Ecclesall South ... ..	Ecclesall ; Heeley (part).
†Broomhall ... ..	Broomhall.
†Sharrow ... ..	Sharrow.
Norton ... ..	Heeley (part).

§ That part of St. Peter's Ward which was contained in the Registration Sub-District of North Sheffield was transferred on 1st March, 1913, to South Sheffield. St. Philip's Ward is now co-terminous with the District of North Sheffield.

\* Tinsley extension remains in the Registration District of Rotherham.

† Broomhall and Sharrow were united for registration purposes on 1st September, 1911, but the two districts have been treated as separate entities in the tables throughout this report.

**TABLE III.**—*Population of Registration Sub-Districts at the Censuses of 1881, 1891, 1901, and 1911; and estimated mean Population, 1913.*

DISTRICT.	Population Enumerated.				Estimated Population, middle of 1913.
	1881.	1891.	1901.	1911 *	
Sheffield North	38,982	37,499	38,784	35,019	30,070 Sheffield North.
Do. West ...	14,957	14,105	26,538	24,416	27,754 Do. South.
Do. South	17,919	18,411			
Do. Park	19,948	21,401	25,323	26,390	26,528 Do. Park.
Brightside West	56,719	67,083	40,214	46,228	47,587 Brightside West.
Do. East			37,778	40,035	40,379 Do. East.
Attercliffe ...	26,965	35,883	51,585	61,693	63,909 Attercliffe.
Handsworth ...	—	—	757	1,188	1,309 Handsworth.
Tinsley ...	—	—	—	5,284	6,684 Tinsley.
Hillsbro' ...	—	—	11,763	17,965	19,672 Hillsbro'.
Nether Hallam	38,967	46,328	32,189	35,831	36,541 Ecclesall North.
Upper Hallam ...	2,513	2,709			
Ecclesall ...	67,538	80,824	35,165	44,803	47,100 Do. South.
			26,995	26,588	26,378 Broomhall.
			28,323	26,266	25,708 Sharrow.
Norton ...	—	—	10,828	19,261	21,827 Norton.
Totals ...	284,508	324,243	409,070	459,916	471,662 Totals.

\* As altered since the date of the Census.

**TABLE IV.**—*Acreage and Persons per acre in Registration Sub-Districts, 1913.*

Registration District.	Area in Acres.	Mean Estimated Population, 1913.	Persons per Acre.
Sheffield North ...	258	30,070	116·6
Do. South ...	356	27,754	78·0
Do. Park ...	2,507	26,528	10·6
Brightside West ...	2,089	47,587	22·7
Do. East ...	1,593	40,379	25·3
Attercliffe...	1,394	63,909	45·8
Handsworth (part) ...	76	1,309	17·2
Tinsley (part of Rotherham) ...	691	6,684	9·7
Hillsbro' ...	988	19,672	19·9
Ecclesall North ...	654	36,541	55·8
Do. West Central ...	7,588	50,216	6·6
Do. South ...	3,613	47,100	13·0
Broomhall ...	365	26,378	72·3
Sharrow ...	275	25,708	93·5
Norton ...	1,906	21,827	11·5
City ...	24,353	471,662	19·4

TABLE V.—*Marriages and Marriage Rates in Sheffield and in England and Wales since 1888.*

Year.	Total Number of Marriages in Sheffield.	Persons Married per 1,000 in Sheffield.	Persons Married per 1,000 in England and Wales.
1888	2,885	17·9	14·4
1889	3,073	18·7	15·0
1890	3,174	19·7	15·5
1891	3,128	19·2	15·6
1892	3,091	18·7	15·4
1893	2,797	16·6	14·7
1894	3,215	18·8	15·0
1895	2,810	16·2	15·0
1896	3,322	18·8	15·7
1897	3,465	19·3	16·0
1898	3,496	19·2	16·2
1899	3,663	19·8	16·5
1900	3,508	18·7	16·0
1901*	3,640	18·8	15·9
1902	3,682	17·8	15·9
1903	3,506	16·7	15·7
1904	3,507	16·5	15·3
1905	3,466	16·2	15·3
1906	3,943	18·2	15·7
1907	4,004	18·3	15·9
1908	3,419	15·5	15·1
1909	3,445	15·4	14·7
1910	3,639	16·1	15·0
1911	3,726	16·3	15·2
1912†	3,885	16·7	15·5
1913	4,077	17·3	15·5
Average ...	3,445	17·7	15·4

\* City extended October 31st, 1901. † City extended April 1st, 1912.

TABLE VI.—*Birth-rates during the year for the whole City and for each of the Registration Sub-Districts; also the total number of Births, Legitimate and Illegitimate, in each.*

District.	Estimated Population in the middle of 1913.	Legitimate.		Illegitimate.		Totals.	Birth-rate per 1000 persons living per annum.	
		Male.	Female.	Male.	Female.		Crude.	Corrected for Public Institutions.*
Sheffield North ...	30,070	486	458	22	29	995	33·1	35·0
Do. South ...	27,754	464	400	23	26	913	32·9	26·5
Do. Park ...	26,528	414	349	19	21	803	30·2	31·2
Brightside West ...	47,587	611	601	71	51	1,334	28·0	26·6
Do. East ...	40,379	693	629	37	21	1,380	34·2	35·1
Attercliffe ...	63,909	1,090	1,028	34	36	2,188	34·2	34·8
Handsworth ...	1,309	15	14	...	...	29	22·1	22·2
Tinsley ...	6,684	87	97	...	1	185	27·7	27·8
Hillsbro' ...	19,672	216	227	3	2	448	22·7	23·0
Ecclesall North ...	36,541	557	568	25	24	1,174	32·1	32·9
Do. W.Cent. ...	50,216	543	516	14	8	1,081	21·5	22·0
Do. South ...	47,100	503	507	40	36	1,086	23·0	22·2
Broomhall ...	26,378	308	297	19	17	641	24·3	24·8
Sharrow ...	25,708	288	246	9	12	555	21·6	23·1
Norton ...	21,827	264	215	6	10	495	22·7	23·3
Totals ...	471,662	6,539	6,152	322	294	13,307	28·2	
Add—Transfers from Districts outside City ...	...	2	...	2	3	7		
		6,541	6,152	324	297	13,314		
Deduct—Transfers to Districts outside City ...	...	10	8	7	1	26		
Nett totals ...	...	6,531	6,144	317	296	13,288		28·2

\*The corrected Birth-rate for the Sub-Districts is obtained by distribution of the Births which occurred in the Jessop Hospital and the two Union Hospitals among the Sub-Districts in which the mothers' homes were situated at the time of their admission to the hospitals.

**TABLE VII.**—*Population and Births and Deaths in Sheffield in past years. Also Birth-rates and Death-rates in Sheffield and in England and Wales.*

YEAR.	POPULATION.	SHEFFIELD.				ENGLAND.	
		BIRTHS.		DEATHS.		Birth-rates.	Death-rates.
		Number of Births.	Birth-rates per 1,000 persons living per annum.	Number of Deaths.	Death-rates per 1000 persons living per annum.		
1736	14,105						
1801	45,755						
1811	53,231						
1821	65,275						
1831	91,692						
1841	111,091						
1851	135,310	5,946	41·6	4,027	28·2	34·2	22·0
1861	186,375	7,561	40·5	4,610	24·7	34·6	21·6
1871	241,506	9,764	40·4	6,843	28·3	35·0	22·6
1872	245,023	9,973	40·6	6,445	26·3	35·6	21·3
1873	248,954	10,761	43·2	6,558	26·3	35·4	21·0
1874	253,645	10,861	42·8	7,009	27·6	36·0	22·2
1875	257,827	11,026	42·7	6,642	25·7	35·4	22·7
1876	262,080	11,205	42·7	6,568	25·1	36·3	20·9
1877	266,401	10,859	40·7	6,154	23·1	36·0	20·3
1878	270,791	10,985	40·3	7,208	26·6	35·6	21·6
1879	275,356	10,822	39·2	6,422	23·3	34·7	20·7
1880	279,800	10,723	38·3	6,410	22·9	34·2	20·5
1881	284,508	10,814	38·0	5,909	20·7	33·9	18·9
1882	289,194	10,837	35·4	6,281	21·1	33·8	19·6
1883	293,001	10,812	36·9	6,755	23·0	33·5	19·6
1884	296,856	11,272	37·9	6,832	23·0	33·6	19·7
1885	300,762	10,737	35·6	6,328	21·0	32·9	19·2
1886	304,720	10,573	34·6	6,130	20·1	32·8	19·5
1887	308,730	10,389	33·6	6,820	22·0	31·9	19·1
1888	312,793	9,863	31·5	6,611	21·1	31·2	18·1
1889	316,901	10,844	34·2	6,841	21·5	31·1	18·2
1890	321,079	10,691	33·2	8,316	25·9	30·2	19·5
1891	325,947	11,862	36·4	7,775	23·9	31·4	20·2
1892	330,816	11,846	35·8	6,840	20·7	30·4	19·0
1893	336,171	11,584	34·5	7,419	22·1	30·7	19·2
1894	341,612	11,267	33·0	6,028	17·6	29·6	16·6
1895	347,141	12,012	34·6	7,008	20·2	30·3	18·7
1896	352,760	11,853	33·6	6,732	19·1	29·6	17·1
1897	358,470	12,132	33·8	7,464	20·8	29·6	17·4
1898	364,272	12,066	33·1	7,213	19·8	29·3	17·5
1899	370,168	12,459	33·7	7,975	21·5	29·1	18·3
1900	376,160	12,572	33·4	8,292	22·0	28·7	18·2
*1901	410,151	12,766	33·0	7,891	20·4	28·5	16·9
1902	414,506	13,938	33·6	7,064	17·0	28·5	16·3
1903	418,906	14,136	33·6	7,976	19·0	28·5	15·5
1904	423,355	13,850	32·7	7,284	17·2	28·0	16·3
1905	427,850	13,082	30·6	7,510	17·6	27·3	15·3
1906	432,395	13,420	31·1	7,475	17·3	27·2	15·5
1907	436,986	14,125	32·3	7,772	17·8	26·5	15·1
1908	441,630	14,268	32·3	7,337	16·6	26·7	14·8
1909	446,321	13,296	29·8	7,098	15·9	25·8	14·6
1910	451,065	12,664	28·1	6,426	14·2	25·1	13·5
1911	455,817	12,623	27·7	7,335	16·1	24·4	14·6
*1912	466,408	12,887	27·7	6,661	14·3	23·8	13·3
1913	471,662	13,288	28·2	7,446	15·8	23·9	13·7

\* City extended.

The number of deaths during 1913 was 7,446. Of these 3,977 were deaths of males, and 3,469 deaths of females. The death-rate was 15·8 per 1,000 per annum; or 17·1 per 1,000 for males, and 14·6 per 1,000 for females.

**TABLE VIII.**—*Mortality Rates in Quinquennial Periods in Sheffield and in England.*

Quinquennial Periods.	Mean Mortality rate per 1,000 of the population.	
	Sheffield.	England.
1871 to 1875	26·8	22·0
1876 to 1880	24·2	20·8
1881 to 1885	21·6	19·4
1886 to 1890	22·1	18·9
1891 to 1895	20·9	18·7
1896 to 1900	20·6	17·7
1901 to 1905	18·2	16·1
1906 to 1910	16·4	14·7
1911 to 1913 (3 years)	15·4	13·9

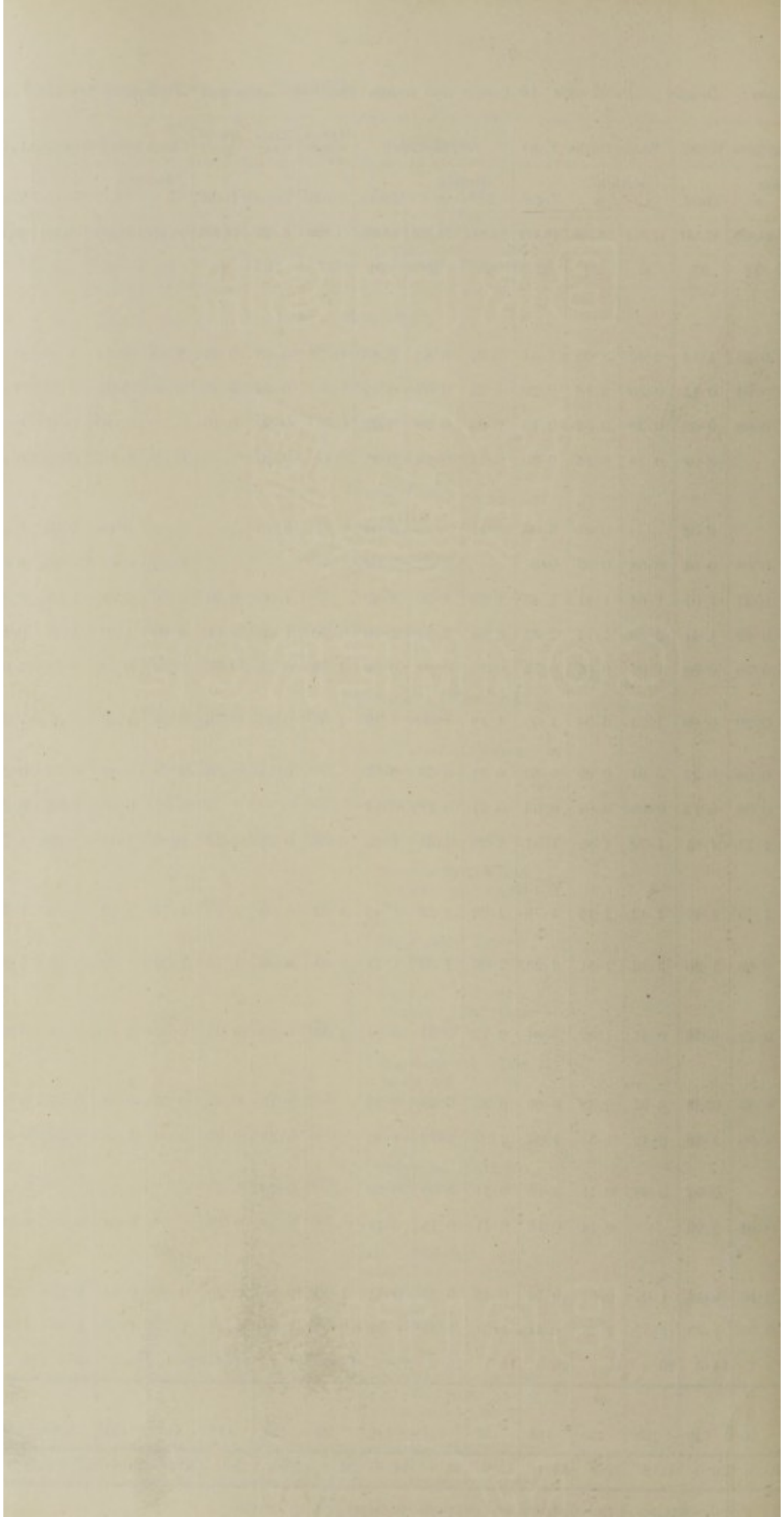
TABLE IX.—Registration Sub-Districts and Sections.\* *Estimate*

DISTRICT.	SHEFFIELD NORTH.				SHEFFIELD SOUTH.				PARK.			
	Section.				Section.				Section.			
SECTIONAL AREA.	A.	B.	C.	Total.	A.	B.	C.	Total.	A.	B.	Total.	
ESTIMATED POPULATION.	5,365	5,859	8,846	30,070	14,684	5,511	7,559	27,754	13,205	13,323	26,528	
NO. OF PERSONS PER ACRE	54	174	130	117	89	76	64	78	98	6	117	
Small Pox .. ..	—	—	—	—	—	—	—	—	—	—	—	
Measles .. ..	2·24	2·52	0·68	1·93	1·02	1·09	0·40	0·86	1·43	0·53	0·96	
Scarlet Fever .. ..	0·19	0·13	0·11	0·13	0·41	0·18	0·26	0·32	0·08	—	0·08	
Diphtheria .. ..	—	0·13	0·11	0·10	0·07	—	—	0·04	0·30	0·23	0·53	
Whooping Cough .. ..	—	0·13	—	0·07	0·07	—	0·26	0·11	0·08	0·15	0·23	
Typhus Fever .. ..	—	—	—	—	—	—	—	—	—	—	—	
Enteric Fever .. ..	0·19	0·06	—	0·07	—	—	0·13	0·04	0·08	0·15	0·23	
Puerperal Fever .. ..	—	—	0·11	0·03	0·07	—	—	0·04	0·23	—	0·23	
Diarrhoea and Enteritis .. ..	1·30	2·14	0·91	1·63	1·63	1·99	0·79	1·48	2·57	0·83	1·74	
Pneumonia .. ..	2·05	3·53	1·36	2·63	2·25	1·81	0·92	1·80	3·94	1·88	2·94	
Cancer .. ..	1·49	1·32	2·04	1·56	0·75	1·27	0·92	0·90	0·98	0·83	0·81	
Pulmonary Tuberculosis and Phthisis .. ..	2·05	3·28	2·15	2·73	2·32	2·90	0·92	2·05	1·14	0·53	0·67	
Other Forms of Tuberculosis .. ..	0·19	0·63	0·57	0·53	0·41	0·72	—	0·36	0·30	—	0·30	
Rheumatism, etc. .. ..	0·56	—	0·23	0·17	0·20	—	0·26	0·18	0·08	0·15	0·23	
DISEASES OF	Circulatory System..	2·43	3·03	1·81	2·56	2·11	1·99	2·38	2·16	1·97	1·80	1·88
	Nervous System and Organs of Special Sense .. ..	2·43	1·58	1·58	1·73	1·43	2·90	1·98	1·87	1·97	1·35	1·72
	Respiratory System except Pneumonia..	3·17	2·27	1·81	2·29	2·25	1·27	1·58	1·87	2·50	1·05	1·72
	Digestive System except Diarrhoea and Enteritis .. ..	0·38	0·76	0·34	0·57	1·09	0·54	0·26	0·76	1·06	0·53	0·59
	Non - Venereal Diseases of Genito-urinary System.. ..	1·12	1·07	0·79	1·00	0·61	1·45	0·66	0·79	0·53	0·53	0·53
	Early Infancy .. ..	1·49	1·95	1·81	1·83	1·56	1·63	0·79	1·37	1·82	0·75	1·34
	Puerperal State except Puerperal Fever	0·19	0·32	0·11	0·23	0·14	0·36	0·26	0·22	0·30	—	0·30
Suicide .. ..	—	0·13	0·11	0·10	—	0·36	0·13	0·11	0·08	—	0·08	
Other Affections produced by external causes .. ..	1·49	0·57	0·57	0·73	0·61	1·63	0·26	0·72	0·38	0·98	0·86	
Other Causes .. ..	1·68	1·70	0·67	1·39	1·36	2·17	1·86	1·66	2·12	1·43	1·77	
All Causes .. ..	24·6	27·2	17·9	24·0	20·4	24·3	15·1	19·7	23·9	13·7	18·6	
Infant Mortality, <i>i.e.</i> , Deaths under One per thousand births .. ..	153	188	129	167	179	181	119	167	164	85	149	
Birth-rates .. ..	28·0	38·8	32·3	35·0	28·5	30·0	19·9	26·5	38·7	23·7	31·4	

Population; Density; Death-rates All Causes and certain Specified Causes and Birth-rates per 1,000 living; also Infantile Mortality Rates for the Year 1913.

BRIGHTSIDE WEST.			BRIGHTSIDE EAST.			ATTERCLIFFE.			HANDS- WORTH.	TINS- LEV.	HILLS- BRO.	ECCLESALL NORTH.			E'SALL W. C'NTR.	E'SALL SOUTH.	BROOMHALL.			SHAR- ROW.	NOR- TON.	CITY.	DISTRICT.	
Section.			Section.			Section.			Total.	Total.	Total.	Section.			Total.	Total.	Section.			Total.	Total.	Total.	SECTIONAL AREA.	
A.	B.	Total.	A.	B.	Total.	A.	B.	Total.	Total.	Total.	Total.	A.	B.	Total.	Total.	Total.	A.	B.	Total.	Total.	Total.	Total.	ESTIMATED POPULATION.	
23,129	24,458	47,587	12,813	27,566	40,379	18,681	45,228	63,909	1,309	6,684	19,672	11,476	24,355	36,541	50,216	47,100	15,569	10,809	26,378	25,708	21,827	471,662		
71	14	23	54	20	25	69	40	46	17	10	20	52	58	56	7	13	140	43	72	94	12	19	NO. OF PERSONS PER ACRE	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Small Pox.	
2.08	0.25	1.13	2.42	1.09	1.51	0.91	0.82	0.85	0.76	0.45	0.41	1.83	0.74	1.07	0.48	0.02	0.26	—	0.15	0.08	0.14	0.767	Measles.	
0.22	0.04	0.13	0.23	0.18	0.20	0.21	0.07	0.11	—	0.15	0.10	0.09	0.21	0.16	0.08	0.28	0.19	—	0.11	0.08	0.41	0.159	Scarlet Fever.	
0.09	0.08	0.08	0.39	0.04	0.15	0.05	0.29	0.22	—	0.30	0.10	—	0.16	0.11	0.04	0.04	0.26	0.09	0.19	0.16	0.14	0.125	Diphtheria.	
0.17	—	0.08	0.70	0.25	0.40	0.21	0.29	0.27	—	0.30	—	0.09	0.04	0.05	0.04	0.04	0.26	—	0.15	0.11	0.37	0.144	Whooping Cough.	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Typhus Fever.	
0.09	—	0.04	—	0.07	0.05	0.11	—	0.03	—	0.15	—	—	0.08	0.05	0.04	0.04	—	—	—	—	—	—	0.043	Enteric Fever.
—	0.08	0.04	0.08	0.07	0.07	—	0.02	0.02	—	—	—	0.09	0.04	0.05	0.02	0.02	0.13	—	0.08	0.04	—	—	0.038	Puerperal Fever.
1.69	0.37	1.01	1.64	1.41	1.49	1.23	1.50	1.42	—	1.05	0.61	2.00	0.66	1.07	0.40	0.34	1.73	0.46	1.21	0.70	0.41	1.032	Diarrhoea and Enteritis.	
2.03	0.82	1.41	3.59	1.74	2.33	2.84	2.34	2.49	1.53	1.05	0.66	2.09	1.07	1.37	0.84	0.89	1.73	0.74	1.33	1.17	0.64	1.613	Pneumonia.	
1.08	0.78	0.92	1.01	0.65	0.77	0.75	0.80	0.78	1.53	0.45	0.97	0.52	0.78	0.68	1.00	0.76	0.83	0.46	0.68	1.09	0.78	0.888	Cancer.	
1.12	0.29	0.69	1.33	0.98	1.09	1.18	1.06	1.10	1.53	0.45	0.76	1.66	1.27	1.37	1.08	1.04	1.99	1.30	1.71	1.48	0.92	1.243	Pulmonary Tuberculosis and Phthisis.	
0.47	0.08	0.27	0.94	0.29	0.50	0.48	0.55	0.53	—	0.15	0.56	0.78	0.49	0.57	0.29	0.30	0.51	0.55	0.53	0.39	0.27	0.399	Other Forms of Tuberculosis.	
0.17	0.08	0.13	0.08	0.04	0.05	0.21	0.11	0.14	—	—	—	0.09	0.08	0.08	0.20	0.06	0.26	0.46	0.34	0.08	0.05	0.123	Rheumatism, etc.	
2.55	1.31	1.91	1.79	1.81	1.81	1.28	1.35	1.33	5.34	0.75	1.32	2.09	1.11	1.40	1.73	1.25	1.93	1.56	1.78	1.87	1.56	1.696	Circulatory System.	
1.86	1.10	1.47	2.42	1.45	1.76	2.03	1.26	1.49	1.53	0.90	1.47	1.74	1.52	1.56	1.21	1.27	2.12	1.01	1.67	1.63	0.96	1.499	Nervous System and Organs of Special Sense.	
1.99	0.66	1.30	3.12	1.81	2.23	2.09	1.55	1.71	1.53	0.90	1.73	2.09	1.40	1.59	1.02	1.21	1.28	1.47	1.36	1.79	0.92	1.567	Respiratory System except Pneumonia.	
0.43	0.29	0.36	0.47	1.02	0.84	0.75	0.31	0.44	1.53	0.30	0.61	0.35	0.49	0.44	0.46	0.62	0.90	0.83	0.87	0.51	0.32	0.562	Digestive System except Diarrhoea and Enteritis.	
0.21	0.37	0.29	0.94	0.58	0.69	0.32	0.33	0.32	—	0.15	0.41	0.70	0.53	0.57	0.68	0.64	1.22	0.46	0.91	0.86	0.69	0.602	Non-Venereal Diseases of Genito-urinary System.	
2.12	0.90	1.49	2.42	1.31	1.66	2.09	1.70	1.82	—	1.20	0.97	2.09	1.40	1.59	0.68	0.47	1.09	0.28	0.76	0.74	0.96	1.234	Early Infancy.	
0.04	—	0.02	0.08	0.11	0.10	0.11	0.09	0.09	—	0.15	0.10	—	—	—	0.04	0.06	—	0.04	0.11	0.09	0.082	—	Puerperal State except Puerperal Fever.	
0.09	0.04	0.06	—	0.14	0.10	0.11	0.15	0.14	—	—	0.10	—	0.04	0.03	0.06	0.11	0.19	0.55	0.34	0.04	0.18	0.102	Suicide.	
0.78	0.16	0.46	1.01	0.62	0.74	0.48	0.38	0.41	1.53	0.30	0.25	0.35	0.21	0.25	0.34	0.21	0.70	0.46	0.61	0.23	0.23	0.445	Other Affections produced by external causes.	
1.30	0.98	1.13	1.87	1.23	1.44	1.61	1.31	1.39	0.76	1.91	1.27	1.48	1.40	1.40	1.45	1.53	1.54	1.21	1.40	1.63	1.00	1.424	Other Causes.	
20.6	8.7	14.5	26.5	16.9	20.0	19.1	16.3	17.1	17.6	11.1	12.4	20.1	13.7	15.5	12.1	11.2	19.2	11.9	16.2	14.8	11.0	15.787	All Causes.	
153	90	129	198	150	168	157	141	146	34	124	115	160	104	126	80	65	117	72	106	108	100	128	Infant Mortality, i.e., Deaths under One per thousand births.	
34.2	19.5	26.6	41.8	32.0	35.1	35.9	34.3	34.8	22.2	27.8	23.0	40.9	30.1	32.9	22.0	22.2	31.3	15.4	24.8	23.1	23.3	28.2	Birth-rates.	

\* For description of Sub-districts and Sections see pages lviii to lxxviii.



**TABLE X.**—*Death Rates per 1,000 persons living, from all Causes, from Principal Zymotic Diseases and from Tuberculous Diseases, also Infantile Mortality Rates in the City and in the several Registration Sub-Districts, during the Five years, 1908-1912 and 1913.*

DISEASE.	NORTH.		SOUTH.		PARK.		BRIGHT-SIDE WEST-SIDE EAST.		BRIGHT-SIDE WEST-SIDE EAST.		ATTER-CLIFFE.		HANDSWORTH.		TINSLAY.		HILLSBRO'.		ECCLESALL NORTH.		ECCLESALL WEST CENTRAL.		ECCLESALL SOUTH.		BR'MHALL.		SHARROW.		NORTON.		CITY.	
	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913	5 Years 1908 to 1912	1913		
ALL CAUSES ...	22.9	24.0	18.0	19.7	17.4	18.8	13.1	14.5	16.7	20.0	15.5	17.1	8.0	17.6	13.7	11.1	12.7	12.4	14.8	15.5	13.6	12.1	11.2	16.2	13.9	14.8	11.1	11.0	15.4	15.8		
Small Pox ...	...	...	...	...	...	...	0.00	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.00	...	
Measles ...	1.70	1.93	0.76	0.86	0.82	0.98	0.55	1.13	0.91	1.51	0.78	0.85	...	0.76	...	0.45	0.26	0.41	0.67	1.07	0.50	0.48	0.40	0.02	0.66	0.15	0.56	0.08	0.36	0.14	0.72	0.77
Scarlatina ...	0.07	0.13	0.05	0.32	0.05	0.04	0.10	0.13	0.08	0.20	0.07	0.11	...	...	...	0.15	0.04	0.10	0.09	0.16	0.12	0.08	0.06	0.28	0.05	0.11	0.04	0.08	0.13	0.41	0.08	0.16
Diphtheria ...	0.13	0.10	0.07	0.04	0.10	0.26	0.07	0.08	0.10	0.15	0.09	0.22	...	...	0.23	0.30	0.15	0.10	0.11	0.11	0.09	0.04	0.08	0.04	0.07	0.19	0.06	0.16	0.07	0.14	0.09	0.13
Whooping Cough ...	0.68	0.07	0.38	0.11	0.33	0.11	0.30	0.08	0.35	0.40	0.38	0.27	1.59	...	0.93	0.30	0.31	...	0.38	0.05	0.18	0.04	0.23	0.04	0.17	0.15	0.20	0.11	0.19	0.37	0.33	0.14
Fever ...	0.12	0.07	0.11	0.04	0.08	0.11	0.03	0.04	0.05	0.05	0.05	0.03	...	...	...	0.15	0.08	...	0.08	0.05	0.06	0.04	0.02	0.04	0.12	...	0.04	...	0.05	...	0.07	0.04
Diarrhoea and Enteritis ...	1.39	1.63	1.07	1.48	1.45	1.70	0.77	1.01	1.23	1.49	1.40	1.42	...	...	0.23	1.05	0.37	0.61	0.86	1.07	0.54	0.40	0.45	0.34	0.85	1.21	0.85	0.70	0.47	0.41	0.94	1.03
Phthisis...	2.31	2.73	1.73	2.05	1.02	0.83	1.05	0.69	1.09	1.09	0.84	1.10	0.80	1.53	0.23	0.45	1.13	0.76	1.32	1.37	1.04	1.08	0.73	1.04	1.24	1.71	1.30	1.48	0.89	0.92	1.19	1.24
Other Tuberc.Dis.	0.60	0.53	0.46	0.36	0.36	0.15	0.38	0.27	0.38	0.50	0.38	0.53	...	...	...	0.15	0.36	0.56	0.38	0.57	0.32	0.29	0.37	0.30	0.49	0.53	0.35	0.39	0.41	0.27	0.41	0.40
† Infant Mortality per 1,000 births	172	167	139	167	148	134	115	129	141	168	137	146	79	34	118	124	97	115	121	126	109	80	88	65	121	106	117	108	84	100	127	128

\* Figures for the one year only are available for Handsworth and Tinsley extensions.

† The Infant Mortality Rates have been obtained after allocating to the district of fixed or usual residence of the parent those births which occurred in the lying-in hospitals of the city, namely:— Jessop Hospital for Women, and the Sheffield and Ecclesall Union Hospitals. The deaths of infants born and dying within a year of birth in these institutions have been treated in the same way.

**TABLE XI.—Infant Mortality: Nett Deaths from stated causes at various Ages under 1 Year of age.**

CAUSE OF DEATH.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
All Causes—Certified	347	86	83	55	571	329	279	275	230	1,684
Uncertified	11	...	...	...	11	2	2	2	1	18
Small-pox ... ..	...	...	...	...	...	...	...	...	...	...
Chicken-pox ... ..	...	...	...	...	...	...	...	...	...	...
Measles ... ..	...	...	...	1	1	...	3	29	42	75
Scarlet fever ... ..	...	...	...	...	...	...	...	1	...	1
Whooping-Cough ... ..	...	...	...	...	...	7	7	9	8	31
Diphtheria and Croup ... ..	...	...	...	...	...	...	1	...	...	1
Erysipelas ... ..	...	...	...	1	1	...	1	2	...	4
Tuberculous Meningitis ... ..	...	...	...	...	...	1	2	3	3	9
Abdominal Tuberculosis ... ..	...	...	...	1	1	5	7	4	5	22
Other Tuberculous Dis....	...	...	...	...	...	1	7	5	4	17
Meningitis ( <i>not Tuberculous</i> ) ... ..	...	...	...	...	...	1	5	5	5	16
Convulsions ... ..	15	4	10	3	32	15	12	16	8	83
Laryngitis ... ..	...	...	...	...	...	...	1	1	1	3
Bronchitis ... ..	1	4	3	3	11	42	36	35	25	149
Pneumonia (all forms) ... ..	1	2	3	1	7	27	42	50	53	179
Diarrhoea ... ..	...	6	9	6	21	81	104	76	59	341
Enteritis... ..	...	...	...	...	...	...	...	...	...	...
Gastritis ... ..	1	...	2	3	6	14	5	2	1	28
Syphilis ... ..	...	2	1	3	6	12	1	2	1	22
Rickets ... ..	...	...	...	...	...	1	2	2	3	8
Suffocation, overlying ... ..	3	1	...	3	7	9	9	...	...	25
Injury at birth ... ..	7	1	...	...	8	1	...	...	...	9
Atelectasis ... ..	28	7	...	4	39	4	...	...	...	43
Congenital Malformations	12	8	3	1	24	9	1	3	2	39
Premature birth ... ..	211	32	20	13	276	30	3	1	...	319
Atrophy, Debility and Marasmus ... ..	56	15	23	7	101	59	22	19	2	203
Other Causes ... ..	23	4	9	5	41	12	10	12	9	84
Nett Births in the (legitimate, 12,676 ; illegitimate, 614. year—					Nett Deaths in the (legitimate infants, 1,573 ; illegitimate infants, 126. Year of— unknown ,, 3.					

TABLE XII.—Deaths and Death-rates per annum per 1,000 persons living from all Causes and from Specified Causes; Persons living; Deaths and Death-rates at Specified Age Periods during 1913.

	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 3 years.	3 and under 4 years.	4 and under 5 years.	Totals under 5 years.	5 and under 10 years.	10 and under 15 yrs.	15 and under 20 yrs.	20 and under 25 yrs.	25 and under 35 yrs.	35 and under 45 yrs.	45 and under 55 yrs.	55 and under 65 yrs.	65 and under 75 yrs.	75 yrs. and upwards.
Age Distribution of Population	471662	11420	10636	11606	11411	10935	56008	51148	46900	44008	39632	81247	65294	43326	26825	13489	3785
Deaths	*7446	1702	604	222	124	92	2744	207	91	119	121	331	554	677	905	1029	666
Death-rates per 1,000 per annum	...	149.0	56.8	19.1	10.9	8.4	48.9	4.1	1.9	2.7	3.1	4.1	8.5	15.6	33.6	76.3	175.9
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	362	75	155	53	31	21	335	26	...	1	...	...	...	...	...	...	...
Scarlet fever	159	1	13	13	12	7	46	24	1	4	...	...	...	...	...	...	...
Diphtheria	125	1	14	6	14	4	39	16	2	...	...	...	1	...	...	...	...
Whooping-cough	144	31	20	6	6	2	65	3	...	...	...	...	...	...	...	...	...
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever	043	...	...	...	...	...	...	...	1	3	2	6	6	...	...	...	...
Puerperal fever	038	...	...	...	...	...	...	...	...	...	3	8	7	...	...	...	...
Diarrhoea and Enteritis	1.032	341	77	19	4	1	442	5	...	...	...	4	8	2	9	10	7
Pneumonia	1.613	179	151	51	18	14	413	26	6	6	14	51	54	52	65	54	20
Cancer	888	...	1	1	...	1	3	...	...	2	1	11	35	81	141	102	43
Pulmonary Tuberculosis and Phthisis	1.243	4	8	3	6	1	22	6	24	32	40	91	121	133	86	25	4
Tuberculous Meningitis	137	9	13	8	3	4	37	13	4	7	1	2	1	...	...	...	...
Tuberculosis of Peritoneum and Intestines	123	22	12	4	2	1	41	6	3	1	...	1	2	2	2	...	...
Tuberculosis of other organs and General Nervous System and organs of Circulatory System	139	13	8	3	2	1	27	6	4	5	6	2	5	3	5	3	...
Special Sense	1.499	102	32	12	4	11	161	16	10	16	4	17	46	91	127	147	71
Respiratory System (except Pneumonia)	1.696	6	...	...	1	...	7	11	9	13	10	32	78	106	181	253	100
Digestive System (except Diarrhoea and Enteritis)	1.567	157	54	22	7	8	248	5	3	1	5	10	23	43	109	151	141
Non-venereal diseases of genito-urinary system	562	41	6	5	3	4	59	13	12	7	5	13	32	35	33	35	21
Puerperal State (except Puerperal fever)	602	1	1	2	1	3	8	6	2	4	4	22	40	51	61	61	25
Suicide	082	...	...	...	...	...	...	...	...	1	9	11	16	2	...	...	...
Other affections produced by external causes	102	...	...	...	...	...	...	...	...	2	4	6	10	10	9	6	1
Other causes	445	28	8	7	7	7	57	13	6	8	5	21	21	28	24	15	12
	2.781	691	31	7	3	2	734	11	4	6	8	23	48	38	52	167	221

\*One male and one female ages unknown.

DISEASES OF

TABLE XIII.—Mortality at certain age periods.

AGES.	Death-rate per 1,000 Persons living at each age of Group.										
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Under 1 year ...	212.3	178.9	174.4	167.0	158.9	153.3	118.4	125.8	137.8	122.0	149.0
1 and under 2 years	76.0	46.5	68.8	48.9	59.7	49.8	49.2	46.3	61.7	38.9	56.8
2 .. 3 ..	26.0	17.0	21.4	17.6	25.1	16.2	19.9	15.8	26.2	15.9	19.1
3 .. 4 ..	17.6	12.2	13.5	14.3	15.1	10.3	10.4	7.8	16.3	9.2	10.9
4 .. 5 ..	7.8	8.2	9.9	11.8	9.9	7.4	8.1	5.3	8.0	7.4	8.4
Total under 5 ..	73.5	57.2	62.1	56.2	57.8	51.4	44.2	43.5	53.5	38.9	48.9
5 and under 10 ..	3.7	3.7	3.6	4.6	3.8	3.3	3.8	3.0	3.7	3.0	4.1
10 .. 15 ..	1.9	2.2	1.9	2.4	2.5	1.5	1.9	1.6	2.1	2.2	1.9
15 .. 20 ..	2.4	2.3	2.4	2.4	2.6	2.1	2.4	2.3	2.3	3.0	2.7
20 .. 25 ..	2.8	3.6	3.3	2.8	2.9	3.0	2.6	2.1	3.0	3.2	3.1
25 .. 35 ..	5.0	5.1	4.8	4.7	4.4	4.3	4.4	4.0	4.6	4.3	4.1
35 .. 45 ..	10.4	10.1	9.6	9.1	9.6	9.0	8.9	8.1	9.8	7.7	8.5
45 .. 55 ..	19.0	16.6	16.7	17.2	18.0	16.7	16.3	15.3	17.1	16.4	15.6
55 .. 65 ..	35.0	36.5	32.3	36.3	37.2	35.0	35.6	34.4	33.1	33.1	33.6
65 .. 75 ..	74.8	79.1	73.4	78.8	80.4	81.2	85.1	77.2	76.0	74.4	76.3
Over 75 years ...	149.5	165.7	184.7	177.7	187.6	193.9	189.5	115.2	187.2	160.5	175.9
All ages ...	18.7	16.8	17.1	16.7	17.1	15.8	15.1	14.2	16.1	14.3	15.8

TABLE XIV.—Cases of Infectious Disease notified during each month of the year 1913 under the Infectious Disease (Notification) Act 1889.

DISEASES.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	TOTALS.	
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria ...	...	67	77	82	62	53	51	55	51	54	89	85	105	831
Erysipelas ...	...	41	36	31	27	30	21	43	36	38	54	67	54	478
Scarlet Fever ...	...	181	137	185	215	213	253	335	240	341	518	416	467	3,501
Typhus Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever ...	...	5	...	12	5	4	4	3	6	10	3	12	10	74
Puerperal Fever ...	...	1	8	3	3	4	4	5	5	1	3	3	8	48
Cerebro-Spinal Fever ...	...	1	...	...	1	1	1	...	...	...	...	1	2	7
Poliomyelitis ...	...	1	...	...	...	...	...	...	2	2	1	...	...	6
TOTALS ...	...	297	258	313	313	305	334	441	340	446	668	584	646	4,945

**TABLE XV.**—Cases of Infectious Disease notified since 1903, under the Infectious Disease (Notification) Act, 1889.

DISEASES.	NUMBER OF CASES NOTIFIED.										Average 10 years, 1903-1912.	Cases notified, 1913.
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912		
Small-pox ...	59	44	4	1	...	...	...	7	...	...	12	...
Diphtheria ...	492	400	407	675	431	438	373	397	504	545	466	831
Erysipelas... ...	401	385	350	395	414	295	447	333	448	455	392	478
Scarlet Fever ...	2,110	2,906	3,086	4,905	2,357	1,404	1,530	1,337	1,382	1,754	2,277	3,501
Typhus Fever ...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever ...	345	348	320	390	209	237	177	126	251	165	257	74
Continued Fever ...	7	3	2	3	1	...	...	...	...	...	2	...
Puerperal Fever ...	38	32	38	52	42	43	51	32	43	55	43	48
†Cerebro-Spinal Fever ...	...	...	...	...	2	...	2	2	4	8	3‡	7
§Poliomyelitis ...	...	...	...	...	...	...	...	...	...	40	40*	6
Totals ...	3,452	4,118	4,207	6,421	3,456	2,417	2,580	2,234	2,632	3,022	3,491	4,945

\* 1 year only. † Cerebro-Spinal Fever was made compulsorily notifiable on 14th November, 1910.

‡ 6 years only. § Poliomyelitis was made compulsorily notifiable on 1st March, 1912.

**TABLE XVI.**—Measles.—Mortality in Males and Females, and under certain age-periods; also Mortality Rates, 10 years, 1903—1912 and 1913.

Years.	Deaths.	Rate per 1,000 Persons living	Deaths.		AGE AT DEATH.							
			Males.	F'males	Under 1 year.	1 and under 2 years	2 and under 3 years	3 and under 4 years	4 and under 5 years	5 and under 10 yrs.	10 and under 15 yrs.	Over 15 years
1903	335	.80	170	165	90	126	52	35	22	6	0	4
1904	33	.08	15	18	10	8	10	4	0	1	0	0
1905	415	.97	220	195	81	183	74	33	22	22	0	0
1906	75	.17	39	36	24	25	10	8	6	2	0	0
1907	386	.88	205	181	73	165	77	37	17	17	0	0
1908	108	.24	50	58	20	37	23	9	8	10	0	1
1909	423	.95	217	206	80	166	85	39	19	32	0	2
1910	118	.26	59	59	19	57	22	12	3	5	0	0
1911	790	1.73	421	369	173	321	146	83	27	38	1	1
1912	189	.41	104	85	37	73	34	14	9	20	1	1
Averages, 10 years 1903-1912	287	.65	150	137	61	116	53	27	13	15	0	1
1913	362	.77	186	176	75	155	53	31	21	26	...	1

**TABLE XVII.**—Scarlet Fever.—Notifications, Percentage of Cases removed to Hospital, Deaths, and Percentage Mortality, ten years, 1903-1912, and 1913.

Year ...	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Average 10 years 1903-1912.	1913
Notified Cases of Scarlet Fever	2110	2906	3086	4905	2357	1404	1530	1337	1382	1754	2277	3501
Percentage of Cases removed	67	77	76	63	73	81	82	86	86	88	78	69
Deaths ...	99	88	98	229	102	39	42	34	25	36	79	75
Percentage Mortality	4·7	3·0	3·2	4·7	4·3	2·8	2·7	2·5	1·8	2·1	3·4	2·1

**TABLE XVIII.**—Scarlet Fever.—Sickness Rate per 1,000 persons living in Registration Sub-Districts and in City, ten years, 1903-1912, and 1913.

YEAR.	REGISTRATION SUB-DISTRICTS.															
	North.	South.	Park.	Brightside.		Attercliffe.	Handsworth.	Tinsley	Hillsbro'.	Nether Hallam.	Upper Hallam.		Ecclesall.	Norton.	CITY.	
1903	4·89	4·35	8·31	5·47		3·60			1·91	5·00	5·11		4·77	5·75	5·02	
1904	6·81	7·21	6·77	7·06		3·98			14·67	8·47	8·63		5·16	8·24	6·83	
1905	5·14	6·00	3·64	7·95		6·77			7·97	Ecclesall North. 6·72		Ecclesall West Central 7·59	7·65	9·36	7·22	
1906	9·06	8·56	9·92	B'side West 11·0	B'side East 12·47	14·28	No Record.	No Record.	15·69	E'sall. North. 11·04	E'sall. W.Centl. 8·46	E'sall. South. 8·18	Broom-hall. 10·20	Shar-row. 13·79	11·12	11·34
1907	3·36	3·52	4·87	5·16	4·95	5·19	No Record.	No Record.	6·89	6·02	4·24	8·93	3·03	4·91	6·66	5·59
1908	2·23	1·21	1·79	4·78	3·80	1·48			3·30	3·97	4·28	3·14	2·08	2·78	4·63	3·18
1909	1·47	2·15	1·86	4·17	4·22	2·54			5·93	3·82	5·04	2·95	2·18	2·54	3·63	3·43
1910	1·73	1·63	3·15	3·47	2·56	2·48			4·25	2·59	3·61	4·54	2·36	2·35	3·90	3·00
1911	2·75	1·89	1·60	2·52	3·02	2·79			3·36	4·07	2·97	3·71	2·26	3·10	6·30	3·03
1912	4·03	2·78	3·36	3·50	4·08	1·89	..	4·69	5·39	6·10	2·62	4·49	2·49	4·08	7·74	3·76
Average for 10 yrs. 1903- 1912.	4·15	3·93	4·53	4·94 5·01 7 years only		4·50	..	4·69	6·94	5·37	4·46	5·13	3·51	4·79	6·73	5·24
1913	4·79	4·83	4·71	8·30	9·36	9·61	0·76	14·07	9·96	6·84	6·31	6·58	6·82	7·70	7·56	7·42

TABLE XIX.—Whooping Cough. Mortality under Certain age periods since 1903.

AGES.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	Av. for Years 1903-1912	1913.
Under 1 year	119	78	54	43	61	109	13	78	27	87	67	31
1 and under 2 years	81	33	51	28	59	83	22	65	18	58	50	20
2 .. 3 ..	34	20	9	14	21	27	9	26	5	27	19	6
3 .. 4 ..	21	12	6	9	13	13	4	9	5	9	10	6
4 .. 5 ..	5	6	5	8	5	9	4	4	3	6	6	2
Over 5 years	3	2	4	7	3	6	2	6	4	5	4	3

TABLE XX.—Enteric Fever. Sickness Rate per 1,000 persons living in Registration Sub-Districts and in City, ten years 1902-1912, and 1913.

YEAR.	REGISTRATION SUB-DISTRICTS.															
	North.	South.	Park.	Brightside.		Attercliffe.	Handsworth.	Tinsley	Hills-bro'.	Nether Hallam.	Upper Hallam.	Ecclesall.	Norton.	CITY.		
1903	1.02	1.00	0.88	0.89		0.57			1.03	0.94	..	0.59	1.19	0.89		
1904	1.15	0.50	0.38	1.10		1.12			1.12	0.82	1.17	0.39	0.63	0.86		
1905	1.02	0.77	0.26	1.36		0.52			0.86	Ecclesall North. 1.05	Ecclesall West Central 0.61	0.34	0.07	0.75		
1906	0.61	0.66	0.37	E'side West 0.93	W'side East 1.28	1.51	No Record.	No Record.	0.27	E'sall. North. 1.37	E'sall. W.Cntl. 1.37	E'sall. South. 0.19	Broom-hall. 0.32	Shar-row. 0.28	0.86	0.90
1907	0.46	0.55	0.44	0.48	0.69	0.73	No Record.	No Record.	0.06	0.59	0.59	0.12	0.22	0.21	0.13	0.47
1908	1.19	0.70	0.18	0.39	0.27	0.21			0.86	0.81	0.75	0.36	0.47	0.42	0.24	0.53
1909	0.51	0.31	0.46	0.38	0.38	0.39			0.12	0.47	0.36	0.26	0.75	0.14	0.17	0.40
1910	0.31	0.33	0.23	0.55	0.20	0.35			0.17	0.20	0.43	0.05	0.23	0.15	0.16	0.28
1911	0.89	0.70	0.72	0.60	0.35	0.52			0.50	0.84	0.51	0.22	0.41	0.53	0.51	0.55
1912	0.67	0.54	0.53	0.15	0.52	0.46	..	..	0.21	0.33	0.38	0.20	0.23	0.27	0.05	0.35
Average for 10 yrs. 1903-1912.	0.78	0.61	0.45	0.50 0.53 7 years only		0.64	..	..	0.57	0.66	0.63	0.20	0.37	0.28	0.40	0.60
1913	0.27	0.18	0.23	0.17	0.30	0.08	..	0.45	..	0.14	0.24	0.06	0.08	0.08	0.14	0.16

TABLE XXI.—Enteric Fever. Cases of Sickness in each month since 1904.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1904	23	27	19	18	14	13	10	26	58	60	54	26
1905	29	31	21	16	21	10	13	44	53	30	23	29
1906	22	6	20	18	9	11	14	31	69	109	48	33
1907	26	7	18	18	12	16	14	13	19	36	13	17
1908	22	16	7	15	8	14	8	16	34	43	34	20
1909	19	19	10	9	9	8	5	14	30	25	19	10
1910	10	7	6	11	7	9	10	3	25	14	9	15
1911	20	25	13	12	10	10	13	14	30	21	25	58
1912	39	17	15	22	14	7	10	5	3	19	9	5
1913	5	—	12	5	4	4	3	6	10	3	12	10

TABLE XXII.—Enteric Fever Notifications, Deaths, and Percentage Mortality at several Age periods during 1913.

	At all Ages.	AT AGES—YEARS.							
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.	
Cases Notified	...	74	...	1	10	20	37	6	...
Deaths	...	19	...	...	2	5	12	...	...
Percentage Mortality	25·7	...	...	20·0	25·0	32·4	...	...	...

TABLE XXIII.—Diphtheria.—Percentage Mortality in Hospital and Home-treated Cases, 1913.

	HOSPITAL TREATED.	HOME TREATED.	TOTAL.
Cases of Sickness	552	279	831
Deaths	*29	30	59
Percentage Mortality	5·3	10·8	7·1

\*2 cases treated at Royal Hospital and 2 at Sheffield Union Hospital.

**TABLE XXIV.**—*Puerperal Fever. Cases of Sickness, Deaths, and Number of Births to each Death, 10 years, 1904 to 1913.*

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Notified Cases ... ..	32	38	54	42	43	51	32	43	55	48
Deaths ... ..	15	22	25	23	19	20	12	14	20	18
No. of Births to every Death from Puerperal Fever... ..	923	595	537	614	751	665	1055	902	644	738

**TABLE XXV.**—*Tuberculous Diseases. Mortality during 10 years, 1903-1912, and 1913.*

DISEASE.	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Average 1903 to 1912	1913
Tuberculous Phthisis and <i>Phthisis</i>	573	536	490	452	524	564	524	457	557	595	527	585
Tuberculous Meningitis ... ..	140	126	94	88	115	100	88	74	75	90	99	65
Tuberculosis of Peritoneum and Intestines ... ..	101	87	79	68	63	73	51	59	57	44	68	58
Other forms of Tuberculosis ... ..	72	48	38	48	40	48	39	36	34	48	45	66
Total Deaths ... ..	886	797	701	656	742	785	702	626	723	777	739	774
Death-rate per 1,000 persons living	2.11	1.88	1.64	1.52	1.70	1.78	1.57	1.39	1.59	1.67	1.69	1.64

**TABLE XXVI.**—*Tuberculous Diseases. Mortality in the two Sexes, 1903-1913.*

DISEASE.	1903		1904		1905		1906		1907		1908		1909		1910		1911		1912		1913	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Tuberculous Phthisis and <i>Phthisis</i>	413	160	379	157	344	146	316	136	357	167	381	183	365	159	309	148	359	198	412	183	387	198
Tuberculous Meningitis	81	59	69	57	51	43	50	38	57	58	64	36	47	41	43	31	41	34	52	38	40	25
Tuberculosis of Peritoneum and Intestines	51	50	48	39	44	35	36	32	32	31	38	35	25	26	35	24	35	22	25	19	34	24
Other forms of Tuberculosis	35	37	26	22	24	14	25	23	21	19	23	25	22	17	23	13	20	14	27	21	37	29



TABLE XXVIII.—Vital Statistics of Whole District during 1913 and previous Years.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NET DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number.	Nctt.		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 Nctt. Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1908 ...	441,630	14,268	14,268	32.3	7,364	16.7	129	102	2,008	141	7,337	16.6
1909 ...	446,321	13,296	13,296	29.8	7,084	15.9	108	122	1,577	119	7,098	15.9
1910 ...	451,065	12,664	12,664	28.1	6,420	14.2	134	140	1,604	127	6,426	14.2
1911 ...	455,817	12,650	12,623	27.7	7,344	16.1	164	155	1,775	141	7,335	16.1
1912 ...	466,408	12,902	12,887	27.7	6,666	14.3	159	154	1,373	107	6,661	14.3
1913 ...	471,662	13,307	13,288	28.2	7,411	15.7	177	212	1,702	128	7,446	15.8

NOTE.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. The rates have been calculated per 1,000 of the estimated gross population.

Area of District in Acres (land and inland water)—24,353. }  
 Total population at all ages—459,916. }  
 Number of Inhabited Houses—98,815. } At Census, 1911.  
 Average number of persons per house—4.7. }

TABLE XXX.—*Meteorology at Sheffield during 1913.*

Week Ending.	Mean Barometer Corrected.	MEAN DAILY SUNSHINE.				MEAN DAILY TEMPERATURE.								Total Rainfall for the Week (in inches).
		Weston Park.	Attercliffe.	High Hazels.	Lodge Moor.	Dry Bulb.	Wet Bulb.	Humidity.	Grass Minimum.	Soil 1 Foot.	Soil 4 Feet.	Air Maximum (Shade).	Air Minimum (Shade).	
1913														
Jan. 4 ...	29.885	0 37	0 9	0 38	0 16	43.0	41.0	85%	35.0	41.3	44.1	46.1	40.4	0.850
11 ...	29.918	0 7	0 6	0 20	0 13	41.5	40.7	93%	35.8	41.7	43.9	45.1	37.8	1.041
18 ...	29.578	1 14	0 9	0 52	1 34	33.3	33.1	96%	27.0	37.7	43.6	38.6	30.5	0.292
25 ...	29.649	0 2	...	0 2	0 1	37.7	36.9	92%	31.0	37.8	42.4	42.6	34.2	1.057
Feb. 1 ...	29.850	0 51	0 56	1 14	1 4	35.3	34.3	89%	29.4	37.3	41.9	41.5	33.1	0.663
8 ...	29.912	1 32	1 1	1 26	0 59	42.9	40.2	80%	34.0	39.4	41.4	49.8	40.1	0.829
15 ...	30.446	1 33	0 21	1 42	3 12	42.2	40.7	80%	30.0	39.9	41.9	52.1	37.1	0.345
22 ...	30.371	2 54	2 55	3 42	1 27	35.4	33.4	81%	27.6	37.0	41.6	40.0	32.4	0.042
Mar. 1 ...	30.010	1 22	0 27	0 50	0 43	37.9	35.9	81%	29.1	37.3	40.9	47.6	34.5	0.120
8 ...	29.901	5 9	3 23	5 17	3 45	44.8	41.2	75%	35.0	40.7	40.9	50.6	39.0	0.584
15 ...	30.107	2 53	1 50	3 3	3 32	42.3	39.1	76%	32.2	41.0	41.5	48.3	37.6	1.035
22 ...	29.353	4 9	3 10	4 13	3 9	39.6	36.5	77%	30.2	39.3	41.8	44.8	33.7	1.571
29 ...	29.800	1 32	1 38	1 49	1 32	40.8	38.5	83%	31.6	40.1	41.8	47.7	35.9	1.030
April 5 ...	29.947	3 05	2 46	3 59	1 52	44.4	42.1	83%	33.7	41.9	41.9	51.3	40.6	0.132
12 ...	30.054	1 50	1 48	1 51	1 15	40.7	38.6	84%	32.9	41.5	42.4	46.2	36.3	0.406
19 ...	29.662	5 44	3 56	4 51	3 42	44.7	41.4	77%	33.0	42.4	42.5	51.1	37.2	1.171
26 ...	29.796	4 49	4 4	6 7	4 7	47.9	44.2	78%	37.3	45.8	43.3	57.2	40.7	0.270
May 3 ...	29.745	3 47	1 7	2 29	1 20	51.7	47.6	74%	39.1	48.0	44.5	57.4	44.6	1.370
10 ...	29.608	2 20	1 31	2 17	1 52	48.7	46.4	84%	39.1	47.8	45.6	53.8	42.2	1.298
17 ...	30.062	5 46	4 17	5 38	5 22	50.6	46.5	75%	37.8	49.6	46.3	58.8	42.0	...
24 ...	29.982	5 56	4 57	5 40	4 24	52.2	48.4	75%	41.2	50.2	47.2	58.0	45.5	0.388
31 ...	29.987	6 47	4 48	6 32	6 29	61.3	56.1	71%	46.4	56.2	48.4	70.2	51.7	0.204
June 7 ...	29.918	7 34	6 51	8 14	7 26	58.9	53.0	68%	41.7	56.6	50.4	65.4	47.8	0.410
14 ...	30.000	7 4	5 37	6 27	5 35	53.1	48.3	71%	43.7	54.6	51.3	59.4	47.4	0.360
21 ...	30.060	6 33	5 22	7 22	6 38	61.6	55.5	68%	45.1	58.0	51.9	69.4	50.0	...
28 ...	30.107	5 33	4 41	5 2	3 45	57.9	53.0	72%	47.4	58.1	53.1	63.9	51.3	0.045
July 5 ...	30.218	3 26	3 4	4 5	3 7	59.2	55.4	78%	50.8	59.4	53.8	65.6	53.6	0.160
12 ...	29.923	3 11	2 39	3 3	2 40	56.5	52.2	74%	46.0	56.5	54.2	61.0	48.9	1.120
19 ...	29.981	2 39	1 51	2 32	2 10	60.3	56.0	75%	52.0	58.8	54.2	66.1	54.5	0.090
26 ...	30.176	4 0	3 42	3 57	3 7	55.0	50.8	75%	48.5	57.1	54.7	61.1	49.9	0.190
Aug. 2 ...	30.216	3 44	4 21	5 42	3 54	55.8	53.1	83%	47.2	57.7	54.7	67.5	50.9	...
9 ...	30.042	4 9	2 47	3 32	3 43	57.8	52.3	69%	44.6	57.5	54.9	64.2	49.5	0.080
16 ...	30.046	1 36	1 12	1 56	1 17	58.6	53.9	73%	50.7	58.0	54.9	65.7	53.5	0.060
23 ...	30.091	3 15	2 4	2 43	3 3	59.1	55.1	73%	48.1	58.0	55.1	65.2	52.1	0.820
30 ...	30.076	5 33	4 9	5 56	6 28	59.7	57.1	85%	47.6	58.3	55.2	69.5	52.4	0.250
Sept. 6 ...	30.151	1 33	1 57	2 29	1 12	55.7	54.4	91%	49.3	57.1	55.5	60.7	51.6	0.250
13 ...	30.093	4 38	3 33	4 31	4 21	57.7	53.9	77%	44.6	55.7	55.0	64.3	49.5	0.190
20 ...	29.683	3 1	3 32	4 14	3 30	53.5	52.1	91%	44.3	54.9	54.8	60.7	48.7	2.160
27 ...	30.019	2 39	2 25	2 53	3 22	57.5	56.0	90%	49.9	55.5	54.3	66.5	53.8	0.380
Oct. 4 ...	29.993	1 32	2 8	2 59	1 50	55.5	54.4	93%	50.3	56.3	54.4	61.9	52.6	0.580
11 ...	29.750	1 24	1 17	1 51	1 41	50.5	49.0	90%	44.9	53.1	54.3	54.3	46.9	2.810
18 ...	30.222	4 10	3 23	4 18	4 35	52.5	49.6	81%	38.2	51.5	53.4	58.6	45.7	0.110
25 ...	29.905	3 15	2 21	3 39	3 42	47.7	45.4	83%	37.4	49.7	52.6	53.9	42.9	0.070
Nov. 1 ...	29.554	2 41	2 58	3 19	2 52	50.3	48.5	88%	41.0	49.2	51.5	56.4	52.2	0.660
8 ...	29.654	2 48	1 45	2 25	3 16	45.5	43.1	83%	34.7	47.5	50.9	51.5	41.3	0.370
15 ...	29.415	1 37	1 9	2 6	1 51	46.1	44.3	86%	38.5	46.1	49.8	51.0	42.5	1.950
22 ...	29.937	1 34	0 17	1 4	1 12	49.4	46.5	81%	40.5	46.2	49.0	54.6	42.4	0.690
29 ...	30.209	1 57	1 8	2 5	1 44	45.1	42.6	82%	36.5	44.7	48.4	50.7	42.1	0.050
Dec. 6 ...	29.796	0 52	0 17	0 44	0 28	40.9	39.0	85%	35.5	45.0	47.9	45.3	39.7	0.870
13 ...	30.062	0 22	...	0 23	0 31	42.9	43.3	83%	37.0	43.2	47.1	48.4	41.1	0.030
20 ...	30.384	0 17	...	0 3	0 7	43.3	40.7	81%	38.6	43.2	46.6	45.9	41.8	...
27 ...	30.040	0 55	0 27	0 42	0 49	39.4	37.6	85%	30.3	40.7	45.8	44.5	35.9	0.910















TABLE XXIX.—Continued.

CAUSE OF DEATH.	TOTALS—ALL AGES.		1 & under 2 years.		2 & under 3 years.		3 & under 4 years.		4 & under 5 years.		TOTALS—UNDER FIVE YEARS.		5 & under 10 years.		10 & under 15 years.		15 & under 20 years.		20 & under 25 years.		25 & under 30 years.		30 & under 35 years.		35 & under 40 years.		40 & under 45 years.		45 & under 50 years.		50 & under 60 years.		60 & under 75 years.		75 & under 85 years, upwards.		TOTALS—ABOVE FIVE YEARS.								
	Totals.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.							
<b>DISEASES OF THE CIRCULATORY SYSTEM.—Continued.</b>																																													
85. Hemorrhage; other diseases of the circulatory system—																																													
A. Functional disease of heart ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
B. Epistaxis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
C. Other diseases included under 85 ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Totals—Diseases of the Circulatory System ...	800	396	404	4	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	392	401	793		
<b>IV. DISEASES OF THE RESPIRATORY SYSTEM.</b>																																													
86. Diseases of the nasal fossæ																																													
87. Diseases of the larynx—																																													
A. Laryngismus stridulus ...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B. Laryngitis ...	9	4	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
C. Other diseases of larynx ...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Totals ...	5	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
88. Diseases of the thyroid body																																													
89 and 90. Bronchitis—																																													
A. Bronchiectasis, Bronchial catarrh, etc.	4	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B. Other bronchitis	631	312	319	80	68	22	25	8	10	3	2	2	3	115	108	223	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Totals—Broncho-pneumonia	332	196	136	83	41	67	41	12	14	3	7	2	6	167	109	276	3	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
A. Lobar pneumonia	180	118	62	9	4	6	4	2	7	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
B. Pneumonia (type not stated) ...	249	144	105	21	21	15	18	9	7	2	4	5	...	52	50	102	5	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Totals—Pleurisy	14	10	4	1	1	...	...	...	...	...	...	...	...	4	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
A. Empyema	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
B. Other pleurisy ...	12	9	3	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		





TABLE XXIX.—Continued.

CAUSE OF DEATH.	TOTALS—ALL AGES.		Under 1 year.		1 & under 2 years.		2 & under 3 years.		3 & under 4 years.		4 & under 5 years.		TOTALS—UNDER FIVE YEARS.		5 & under 10 years.		10 & under 15 years.		15 & under 20 years.		20 & under 25 years.		25 & under 35 years.		35 & under 45 years.		45 & under 55 years.		55 & under 65 years.		65 & under 75 years.		75 & under 85 years.		85 years & upwards.		TOTALS—ABOVE FIVE YEARS.						
	Totals.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.					
																																							Totals.	M.	F.	Totals.	M.
<b>DISEASES OF THE DIGESTIVE SYSTEM.—Continued.</b>																																											
110. Other diseases of the intestines ...	4	3	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
111. Acute yellow atrophy of liver ...	2	1	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
112. Hydatid of liver ...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
113. Cirrhosis of liver—																																											
A. Cirrhosis of liver (not returned as alcoholic)	39	19	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
B. Cirrhosis of liver (returned as alcoholic)	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
C. Diseases formerly classed to "Other diseases of liver and gall bladder" ...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
114. Biliary calculi ...	13	2	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
115. Other diseases of the liver	8	4	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
116. Diseases of the spleen—																																											
A. Infarction of spleen ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B. Other diseases of spleen	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
117. Peritonitis (cause unstated)	9	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
118. Other diseases of the digestive system—																																											
A. Abdominal abscess, subphrenic abscess ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B. Other diseases included under 118 ...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Totals—Diseases of the Digestive system ...	752	399	353	225	157	42	41	13	11	3	4	3	2	286	215	501	11	7	4	8	2	5	3	2	10	7	20	20	15	22	17	25	18	27	11	10	2	5	113	138	251		

TABLE XXIX.—Continued.

CAUSE OF DEATH.		TOTALS—ALL AGES.		Under 1 year.		1 & under 2 years.		2 & under 3 years.		3 & under 4 years.		4 & under 5 years.		TOTALS—UNDER FIVE YEARS.		5 & under 10 years.		10 & under 15 years.		15 & under 20 years.		20 & under 25 years.		25 & under 35 years.		35 & under 45 years.		45 & under 55 years.		55 & under 65 years.		65 & under 75 years.		75 & under 85 years.		85 years & upward.		TOTAL 5—ABOVE FIVE YEARS.					
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.
VI. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																																											
119. Acute nephritis ... ..																																											
120. Bright's disease—																																											
A. Bright's disease as in 1901 list ... ..																																											
B. Nephritis (unqualified) 10 years and over, and Uremia ... ..																																											
121. Chyluria ... ..																																											
122. Other diseases of kidney and annexa—																																											
A. Abscess of kidney ... ..																																											
B. Cystic disease ... ..																																											
C. Suppression of urine ... ..																																											
D. Other diseases included under 122 ... ..																																											
123. Calculi of the urinary passages ... ..																																											
124. Diseases of the bladder ... ..																																											
125. Diseases of the urethra.																																											
Urinary abscess, etc.—																																											
A. Perineal abscess ... ..																																											
B. Other diseases of urethra, etc. ... ..																																											
126. Diseases of the prostate ... ..																																											
127. Non-veneral diseases of male genital organs ... ..																																											
128. Uterine hæmorrhage (non-puerperal)—																																											
A. Menorrhagia ... ..																																											
B. Other uterine hæmorrhage ... ..																																											
129. Uterine tumour (non-cancerous) ... ..																																											

TABLE XXIX.—Continued.

CAUSE OF DEATH.	TOTALS—ALL AGES.		Under 1 year.		1 & under 2 years.		2 & under 3 years.		3 & under 4 years.		4 & under 5 years.		TOTALS—UNDER FIVE YEARS.		5 & under 10 years.		10 & under 15 years.		15 & under 20 years.		20 & under 25 years.		25 & under 30 years.		30 & under 35 years.		35 & under 40 years.		40 & under 45 years.		45 & under 50 years.		50 & under 55 years.		55 & under 60 years.		60 & under 65 years.		65 & under 70 years.		70 & under 75 years.		75 & under 80 years.		80 years and upwards.		TOTALS—ABOVE FIVE YEARS.						
	Totals.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.									
<b>NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM &amp; ANNEXA.—Con.</b>																																																					
130. Other diseases of the uterus—																																																					
A. Disorders of menstruation (except menorrhagia)...	...																																																				
B. Other diseases included under 130 ...	2			2																																																	
131. Ovarian cyst, tumour (non-cancerous) ...	2			2																																																	
132. Other diseases of the female genital organs—																																																					
A. Diseases of ovary (excluding ovarian tumour)	1			1																																																	
B. Other diseases of female genital organs ...	5			5																																																	
133. Non-puerperal diseases of the breast (non-cancerous)	1			1																																																	
<b>Totals—Non-veneral Diseases of the Genito-Urinary System and Annexa ...</b>	<b>284</b>	<b>164</b>	<b>120</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>11</b>	<b>11</b>	<b>18</b>	<b>22</b>	<b>27</b>	<b>24</b>	<b>37</b>	<b>24</b>	<b>37</b>	<b>24</b>	<b>40</b>	<b>21</b>	<b>16</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>160</b>	<b>116</b>	<b>276</b>											
<b>VII. THE PUERPERAL STATE.</b>																																																					
134. Accidents of pregnancy—																																																					
A. Abortion ...	2			2																																																	
B. Hæmorrhage of pregnancy ...	1			1																																																	
C. Uncontrollable vomiting ...	...			...																																																	
D. Ectopic gestation ...	1			1																																																	
E. Other accidents of pregnancy ...	1			1																																																	





TABLE XXIX.—Continued.

CAUSE OF DEATH.	TOTALS—ALL AGES.		Under 1 year.		1 & under 2 years.		2 & under 3 years.		3 & under 4 years.		4 & under 5 years.		TOTALS—UNDER FIVE YEARS.		5 & under 10 years.		10 & under 15 years.		15 & under 20 years.		20 & under 25 years.		25 & under 35 years.		35 & under 45 years.		45 & under 55 years.		55 & under 65 years.		65 & under 75 years.		75 & under 85 years.		85 years & upwards.		TOTALS—ABOVE FIVE YEARS.			
	Totals	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	Totals	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	Totals			
<b>X. MALFORMATIONS.</b>																																								
150. Congenital malformations—																																								
A. Congenital hydrocephalus...																																								
B. Phimosis ...																																								
C. Congenital malformation of heart ...																																								
D. Other congenital malformations ...																																								
<i>Totals—Malformations...</i>																																								
<b>XI. DISEASES OF EARLY INFANCY.</b>																																								
151. A. Premature birth ...																																								
B. Infantile atrophy, debility and marasmus ...																																								
C. Icterus neonatorum ...																																								
D. Sclerema and oedema neonatorum ...																																								
E. Want of breast milk ...																																								
152. Other diseases peculiar to early infancy—																																								
A. Diseases of umbilicus, etc. ...																																								
B. Atelectasis ...																																								
C. Injuries at birth ...																																								
D. Cyanosis neonatorum ...																																								
153. Lack of care ...																																								
<i>Totals—Diseases of Early Infancy ...</i>																																								

TABLE XXIX.—Continued.

CAUSE OF DEATH.	TOTALS—ALL AGES.			Under 1 year.			1 & under 2 years.			2 & under 3 years.			3 & under 4 years.			4 & under 5 years.			TOTALS—UNDER FIVE YEARS.			5 & under 10 years.			10 & under 15 years.			15 & under 20 years.			20 & under 25 years.			25 & under 35 years.			35 & under 45 years.			45 & under 55 years.			55 & under 65 years.			65 & under 75 years.			75 & under 85 years.			85 years & upwards.			TOTALS—ABOVE FIVE YEARS.		
	Totals.	M.	F.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.	M.	F.	Totals.									
<b>XII. OLD AGE.</b>																																																									
154. Old Age—																																																									
A. Senile dementia ...																																																									
B. Senile decay ...																																																									
Totals—Old age ...																																																									
<b>XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES.</b>																																																									
155. Suicide by poison...																																																									
156. Suicide by asphyxia ...																																																									
157. Suicide by hanging or strangulation ...																																																									
158. Suicide by drowning ...																																																									
159. Suicide by firearms ...																																																									
160. Suicide by cutting or piercing instruments ...																																																									
161. Suicide by jumping from high place ...																																																									
162. Suicide by crushing ...																																																									
163. Other suicides ...																																																									
164. Poisoning by food ...																																																									
165. Other acute poisonings ...																																																									
166. Conflagration ...																																																									
167. Burns (conflagration accepted) ...																																																									



TABLE XXIX.—Continued.

CAUSE OF DEATH.	TOTALS—ALL AGES.		Under 1 year.		1 & under 2 years.		2 & under 3 years.		3 & under 4 years.		4 & under 5 years.		TOTALS—UNDER FIVE YEARS.		5 & under 10 years.		10 & under 15 years.		15 & under 20 years.		20 & under 25 years.		25 & under 35 years.		35 & under 45 years.		45 & under 55 years.		55 & under 65 years.		65 & under 75 years.		75 years & upwards.		TOTALS—ABOVE FIVE YEARS.										
	Totals.	F.	M.	Totals.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	Totals.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	Totals.									
																																					Totals.	F.	M.						
XIV. ILL-DEFINED CAUSES.																																													
187. Dropsy ... ..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1						
188. A. Syncope (1 and under 70 years)...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
B. Sudden death (not otherwise defined) ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
189. A. Heart failure (1 and under 70 years)...	9	4	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9			
B. Atrophy, debility, marasmus (1 and under 70 years) ... ..	10	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
C. Teething ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
D. Pyrexia ... ..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
E. Other ill-defined deaths ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
F. Cause not specified ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Totals—Ill-defined causes ... ..	22	10	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTALS ... ..	74463984	3462	978	724	324	280	119	103	57	67	46	1524	1220	2744	110	97	43	48	59	60	72	49	197	134	296	258	393	284	510	395	505	524	238	333	36	59	2459	2241	4700						

\* One male & One female—age unknown.

## Sanitary Administration.

### HOUSING OF THE WORKING CLASSES ACTS, 1890—1909.

1,763 dwelling-houses were inspected under and for the purposes of section 17 of the Housing and Town Planning Act, 1909.

As the result of the inspections a list of the repairs and alterations required was sent to the owner in each case. In the majority of cases the owner agreed to carry out the work required on receipt of the list.

In 236 cases the dwelling-houses were considered on inspection to be in a state so dangerous or injurious to health as to be unfit for human habitation, and with respect to these representations were made to the local authority with a view to the making of closing orders.

After the receipt of the representation the local authority sent notice to each of the owners that unless a satisfactory scheme was submitted they proposed to make closing orders with regard to these houses.

In 100 cases closing orders were made and served. |

The following is the result of the 100 closing orders up to the time of writing:—(a) 10 houses have been put into a fit state for human habitation, and the closing orders made with regard to them have been determined; (b) 57 houses are still closed; (c) 9 houses have been demolished; and in the case of (d) 24 houses, the closing order has not yet been made operative.

The following statement shows how the remaining 1,663 houses were dealt with. The total of 1,663 houses includes 136 of the 236 houses which were dealt with after representations had been made to the local authority, and also the larger number which were dealt with without the necessity for making representations:—

(a) 732 were renovated; (b) 10 were closed voluntarily; (c) 6 were demolished; (d) in the case of 405, work was in progress at the end of the year; and (e) 510 were houses with regard to which negotiations were in progress at the end of the year.

The general character of the defects found to exist was:—

Absence of efficient ventilation in back-to-back houses; insufficient lighting; damp walls and ceilings; defective and perished plaster; defective roofs; unsanitary outbuildings; water supply by means of stand pipes in yards; and defective paving.

### CONVERSION OF PRIVIES INTO WATER-CLOSETS.

During the year, 1,589 privies were converted and 131 additional water-closets were provided; the corresponding figures for 1912 being 1,349 and 117 respectively. Full particulars with regard to the work will be found in table xxxiv.

The work done under the supervision of this sub-department represents an expenditure during the year 1913 of about £25,499, of which the Corporation's share amounted to £6,988.

The number of sanitary conveniences at 31st December, 1913, was approximately as follows:—

(a) Privies with fixed receptacles	...	...	...	...	12,850
(b) Privies with movable receptacles (known as pail closets)	...	...	...	...	297
(c) Fresh water-closets	...	...	...	...	62,689
(d) Waste water-closets	...	...	...	...	1,300

## WORK WITH REGARD TO TUBERCULOSIS.

1,048 new cases of Tuberculosis of the Lungs were brought to the notice of the Health Department during the year; 32 of these cases were not notified during life.

In 12 cases the medical attendant undertook to give the necessary instructions to prevent the spread of infection.

In addition to first visits of investigation to new cases, the male inspectors paid 1,178 periodical re-visits, 494 visits for further investigation, 312 visits for disinfection after death, 89 visits with regard to removal to hospital, and 46 visits with regard to cleansing of houses.

The number of rooms disinfected was 5,797. This number includes the rooms of 1,143 houses which were disinfected throughout after a death or the removal of a patient.

In 37 cases reports of structural defects were sent to the District Inspectors of Nuisances; in 6 cases reports were made to the Cleansing Superintendent; and 162 cases of consumptives employed in factories and workshops were reported to the Workshops Inspector.

Most of the periodical re-visiting of the consumptives is now being carried out by the women inspectors, and at the close of the year 1,725 consumptives were being so visited.

55 consumptives were known to have left the City, of whom 3 went to Canada and one to Australia. A considerable number of consumptives were lost sight of during the year owing to removals or to leaving the Union hospitals.

## CANAL BOATS ACTS.

The number of inspections of canal boats made during the year was 563. On the whole the boats were in fairly good condition.

The total number of infringements complained of was 106 (relating to 96 inspections of boats).

The nature of the infringements was as follows:—

Absence of certificate, and certificate not identifying owner ...	29
Want of marking, lettering or numbering ... ..	41
Do. Cleanliness ... ..	2
Do. Painting ... ..	27
Do. Repairs ... ..	7
	106

It was not found necessary to institute legal proceedings with regard to any infringement.

There were 7 written notices served relating to 11 infringements, and 24 letters were sent to owners of boats requiring compliance with the Acts, etc. There were also 80 verbal notices given to masters or owners, who promised compliance.

There have been no cases of infectious disease on board any of the boats during the year.

There have been no boats detained for cleansing or disinfection.

The number of boats on the Sheffield register on December 31st, 1913, was 73, of which number 45 were believed to be in use or available.

The actual number of persons visiting Sheffield on canal boats during the year was 707, made up as follows:—

Males over 14 years of age ... ..	350
Females over 14 years of age ... ..	163
Children between 5 and 13 years of age ... ..	103
Children under 5 years of age ... ..	91
	<hr/>
	707
	<hr/>

#### WOMEN INSPECTORS' WORK.

Table XXXI shows the work done by the Women Inspectors during the year.

The figures with regard to attendances at the Baby Consultations again show an increase. The attendances for the last six years have been as follows:—

1908 ... ..	2,830	1911 ... ..	7,181
1909 ... ..	5,322	1912 ... ..	9,425
1910 ... ..	6,975	1913 ... ..	11,912

In four instances legal proceedings were taken for neglect of children, and on several occasions the women inspectors gave evidence in support of proceedings taken by the National Society for the Prevention of Cruelty to Children.

The women inspectors, as in previous years, co-operated with the School Medical Department, and had to visit, and follow up, several cases of gross neglect reported by the School Medical Officer and the head teachers of the schools.

It was found necessary to take legal proceedings against 7 landlords for failing to comply with the bye-laws for houses-let-in-lodgings regarding the thorough limewashing and cleansing of the premises, and against two landlords in respect of dirty, verminous, and dilapidated bedsteads and bedding. In each instance a fine was imposed.

The sub-let houses regularly visited by the women inspectors were as follows:—

81 furnished houses let-in-lodgings ; 445 furnished houses let to one family ; 16 unfurnished houses sub-let to one family.

During 1913 the staff of women inspectors was increased by one to cope with the extra work caused by the Order of the Local Government Board for the compulsory notification of all forms of tuberculosis, which came into force on 1st February, 1913.

The following table gives a summary of the work:—

TABLE XXXI.

Visits to houses-let-in-lodgings ... ..	1,932
Visits with regard to Births ... ..	40,133
Visits with regard to Tuberculosis (including full reports on newly notified cases among women and children) ... ..	6,593
Special reports to Tuberculosis Medical Officer ... ..	333
Visits with regard to school complaints ... ..	247
Visits for other reasons ... ..	5,162
Cases reported to the N.S.P.C.C. ... ..	249
Cases reported to S.Q.V.D. Nursing Association ... ..	9
Cases reported to the Guild of Help ... ..	17
Nuisance Notices served ... ..	423
Reports to District Sanitary Inspectors, and to other Departments ... ..	1,217
New houses let-in-lodgings registered, recommended for registration	1
Prosecutions for overcrowding and uncleanness in houses-let-in-lodgings ... ..	9

Prosecutions for neglect of children ... ..	4
Prosecutions for overcrowded and dirty dwelling houses ... ..	4
Children recommended for and subsequently sent to the Country Holiday Society's homes ... ..	27
Cases reported to the Guardians under Part I. of the Children Act ...	11

The women inspectors report that they met with more cases of overcrowding during 1913 than in any previous year. The number of cases dealt with by the inspectors in the 16 districts was 151. Of these 32 were dealt with by verbal notices, and 119 by written notices, and in four cases legal proceedings were taken.

Owing to the scarcity of houses a great amount of leniency had to be exercised, and a considerable time allowed for the finding of better accommodation in many cases.

At the time of writing there appears to be no doubt that the records for 1914 will show an increase in overcrowding as compared with 1913.

In accordance with the wish of the Insurance Committee, the Health Committee gave instructions that a note was to be made of cases of misuse of the maternity benefit met with by the women inspectors in the course of their work, without the making of specific enquiries on the subject.

Up to January 11th, 1914, when the amendment of the Act came into force, the women inspectors came across three cases where the abuse of the maternity benefit was due to the misbehaviour of the husband, one in August and two in October, 1913.

On the 11th January, 1914, an amendment of the Act, as regards maternity benefit, by which the benefit was made payable to the wife, came into force, but it is extremely doubtful whether the amendment is an improvement or not. Under Section 19 of the 1911 Act the benefit was paid to the husband, and he was made responsible for seeing that all proper provision was made for his wife during her confinement. Under Section 14 of the 1913 Act the benefit is payable to the wife, and the husband's responsibility under the Act for making provision for his wife disappears. If, therefore, the wife signs the paper by which the husband can draw the money, or if the husband is successful in obtaining the money from his wife by persuasion or threats, the protection against the abuse of the maternity benefit is gone. The following case has occurred since the amendment, and I am informed that there is no remedy under the Act.

Mrs. ——— engaged a midwife for her confinement. When the midwife came to attend her she found Mrs. ——— so destitute that she got her removed to the Jessop Hospital, where she was delivered of twins, one of whom died. Mrs. ———'s husband earns good wages but is addicted to drink. He is said to have spent the whole of the maternity benefit in drink and to have treated his wife in a most brutal manner.

It would be interesting to hear the experience of other places as to whether the amendment of the Act has been an improvement or not.

#### MIDWIVES ACT, 1902.

At the end of the year 1913 there were 62 midwives in practice on their own account in Sheffield. At the end of 1912 there were 66. The reduction in the number is accounted for as follows: Five names were removed from the list, four (of whom three were certified by examination and one was an untrained midwife in bona-fide practice at the time of the passing of the Act) on account of removal from the city, and one (certified by examination) on account of death. One (certified by examination) was added.

Of the 62 practising midwives 22 were midwives certified by examination, 5 were midwives who had had twelve months training at a lying-in hospital, but had not sat for any examination, and 35 were untrained midwives who were in bona-fide practice as such at the time of the passing of the Act.

There were 225 visits of supervision paid to midwives at their own homes during the year.

According to the rules of the Central Midwives Board notifications have to be sent by midwives under certain circumstances. There were 221 notifications of still births received, 118 having reference to full-term births, and 103 to premature births; and 207 burial certificates were given for the burial of still-born babies in cases where a midwife was in attendance at the confinement.

The number of notifications received that the midwife had been obliged to send for medical help was 641. The reasons for sending for medical help, as far as can be ascertained, were as follows:—

- (1) Abnormal presentations, 67, viz. :—Funis, 8; Transverse, 5; Face, 17; Shoulder, hand or arm, 8. Breech, 9; Foot, 7; Right Occipito Posterior, 13.
- (2) Causes affecting the child, 211, viz. :—Debility, 30; Asphyxiation, 17; Prematurity, 67; Spina Bifida, 1; Convulsions, 23; Ophthalmia, 48; Jaundice, 4; Miscellaneous, 21.
- (3) Causes affecting the mother, 363, viz. :—Placenta Prævia, 4; Ante-partum hæmorrhage, 17; Post-partum hæmorrhage, 30; Uterine inertia, contracted pelvis, and undilated os, 117; Adherent Placenta, 31; Adherent membranes, 2; Laceration of Perineum, 63; Rise of temperature, 42; Eclampsia, 5; Miscellaneous, 52.

The births attended by midwives during 1913 were approximately 8,000, and medical help was sent for in 641 cases, or 8 per cent. of the total.

I have ascertained that the fees paid by the Boards of Guardians in the city for a complete year before the passing of the Insurance Act were £137 5s. 0d., while since the passing of the Act the fees paid for a complete year were only £20 16s. 0d. The average fee paid by the Guardians is £1 1s. 0d., and it would therefore appear that before the passing of the Insurance Act the relatives paid the fee in more than three quarters of the cases when a doctor was called in by the midwife, and that since the Maternity benefit became available the relatives pay in nearly every case.

There were 48 cases of Puerperal Fever notified during the year of which 18 ended fatally. There were 48 special visits paid with regard to these cases. In 23 cases the confinement was attended by a midwife, and 5 of these cases ended fatally. In 16 cases the confinement was attended by a medical practitioner, and 9 of these cases ended fatally. In three cases the confinement was attended by a medical practitioner and a midwife. Two cases occurred inside Firvale Union Hospital. One case which ended fatally, occurred in the Jessop Hospital. Two cases were attended by handywomen, both of which ended fatally, and one, which also ended fatally, was an unattended abortion.

Of the 23 cases which occurred in the practice of midwives 4 cases occurred in the practice of one midwife, 3 cases each in the practice of two midwives, and one case each in the practice of thirteen midwives.

Some information was obtained during the year with regard to the prevalence of ophthalmia neonatorum. The number of cases coming under the notice of the Inspectors was 165. Of this number 33 cases occurred in confinements attended by medical practitioners. 18 of these cases were slight and 15 were severe. In 3 of the latter cases the eyes were left weak and defective, and there may be some permanent impairment of the sight. Six cases occurred in confinements attended by a medical practitioner and a midwife, 2 of which were slight and 4 severe, and in 2 of the latter there is a danger of permanent injury to the sight. There were 118 cases which occurred in confinements attended by midwives, 85 of these being slight, and 33 severe. Of the latter there were 16 cases in which permanent injury to the sight is feared, and in one case the baby lost the sight of one eye. Five cases occurred in connection with confinements inside the Jessop Hospital, three of which were slight and two severe. There were

2 cases in confinements attended by the Jessop Hospital nurses at the patients' homes, 1 slight and 1 severe, 1 severe case occurred in connection with a confinement in the Ecclesall Union Hospital.

In April the Sanitary Sub-Committee, as the result of a coroner's inquest, held an enquiry into the circumstances of a confinement attended by a midwife. The patient died after confinement as the result of an accident which brought on the labour. A doctor was not called in until the patient was moribund. The midwife was cautioned for not calling in a doctor sooner.

In October the Sanitary Sub-Committee held an enquiry into a case where the midwife had burned the body of a still-born child, instead of arranging for burial in the ordinary manner. She was cautioned for burning the body. According to her own statement there appeared to be some doubt as to whether the pregnancy had extended to the 28th week, in spite of which she had given the necessary certificate for obtaining maternity benefit under the National Insurance Act. She was, therefore, cautioned as to the need for greater care in giving such certificates.

#### BLACK SMOKE NUISANCE.

Proceedings were taken in 15 cases as follows :—8 steel manufacturers, 3 colliery owners, 1 brewer, 1 cutlery manufacturer, 1 corn miller, 1 builders' merchant. The results of the proceedings were as follows :—In 6 cases, orders and costs ; in two cases, £3 0s. 0d., and £2 10s. 0d. respectively, including costs ; and in the other seven cases, £8, £6, £5 10s., £4, £3, £3, and £1 respectively, and costs.

In 1904 a system was started at the request of the Sheffield Manufacturers' Association, of serving informal intimation notices immediately after the excessive emission of smoke was noticed, with the object of enabling the manufacturer to deal with the matter at once.

The number of such intimation notices served year by year has been as follows :—1904, 123 ; 1905, 394 ; 1906, 395 ; 1907, 351 ; 1908, 278 ; 1909, 220 ; 1910, 146 ; 1911, 181 ; 1912, 261 ; 1913, 244.

This practice has been an advantage in getting smoke nuisances abated more promptly, and in reducing the number of prosecutions.

The usual tables are given.

#### FACTORY AND WORKSHOP ACT.

There were five less workshops on the register at the end of the year 1913 than at the end of 1912, several having been converted into factories by the introduction of electrical mechanical power.

In addition to the work done in answer to notices shown in the table the following matters were dealt with in response to verbal intimations :—

Reconstructions of Defective Drains	...	...	...	...	...	15
Reconstructions of Water-closets	...	...	...	...	...	13
Provision of additional Water-closets	...	...	...	...	...	25
Substitution of Water-closets for privies	...	...	...	...	...	2
Provision of new urinals	...	...	...	...	...	3
Provision of special methods of ventilation for workshops	...	...	...	...	...	5

One basement tailoring workshop opened during the year was closed again on account of the serious defects pointed out to the occupier.

Of the eleven hand-laundries on the register, five are occupied by 12 Chinese workers.

The Workshops Inspector visited 175 factories and workshops in which notified

consumptives were employed in order to advise with regard to cleanliness and disinfection. In only 9 cases was the consumptive found at work at the time of the visit.

Four reports were made to H.M. Inspector of Factories with regard to unsatisfactory conditions found in connection with these visits.

The number of homeworkers notified by employers was 202. The following lists show the business carried on, and a comparison with the year 1909 :—

	1913	...	1909
Tailoring trade ... ..	51	...	74
File-cutting trade ... ..	57	...	92
Electro-plate trade ... ..	83	...	28
Shirt-making trade... ..	4	...	0
Upholstering trade ... ..	3	...	4
Hosiery trade ... ..	2	...	0
Paper bag trade ... ..	2	...	2
	—	...	—
	202	...	200
	—	...	—

There were 77 visits paid to homeworkers, but in most cases the work is intermittent, and was not in progress at the time of the Inspector's visit.

Some of the tailoring homeworkers occasionally employ a helper, and thus constitute the home a workshop subject to inspection by H.M. Inspector of Factories, and in which the abstract of the Factory Act must be affixed. This happened in five cases during the year.

There were 623 visits paid to the 284 bakehouses. In three cases new floors were provided, in two cases special means of ventilation were provided, and one bakehouse was enlarged.

Many of the bakehouses were whitewashed more frequently than the twice a year required by law. Only 7 are supplied with water by cistern, the others being supplied direct from the main. In one case the cistern needed cleansing.

The change from the old-fashioned type of oven still continues. The use of 7 of these "flash" ovens was discontinued during the year, and there are now 44 of these ovens out of use in Sheffield.

Two large workshop bakehouses became factories during the year owing to the introduction of electrical power.

Only one of the two registered underground bakehouses is now in use, and it is a restaurant kitchen.

The small baker is being gradually superseded by the large factory bakehouse, and the question of how the bread is stored and exposed for sale becomes more important from the public health point of view.

The usual table is given on page

#### OFFENSIVE TRADES.

The following list gives the number of premises where offensive trades were carried on and the number of visits paid :—

	Premises.	Visits paid.
Blood driers... ..	1	20
Bone crushers ... ..	2	52
Hide and skin markets ... ..	2	80
Horn sloughers ... ..	1	48

					Premises.		Visits paid.
Grease manufacturers	...	...	...	...	1	...	16
Gut dressers	...	...	...	...	5	...	107
Tallow melters	...	...	...	...	1	...	19
Tripe dressers	...	...	...	...	17	...	264

One fellmonger's establishment which was mentioned in last year's report has been demolished.

Four tripe dressing places mentioned in last year's report have been voluntarily closed. The tripe dressing places have, therefore been reduced from 21 in number to 17.

One gut dressing business has been established in premises belonging to the Corporation adjoining the shambles pending the building of the new abattoirs. The gut dressing places have, therefore increased from four to five as compared with last year.

One of the gut dressing businesses has been transferred from the premises where it was formerly carried on to one of the registered slaughter-houses. The old building has been demolished.

## GENERAL SANITARY WORK.

TABLE XXXII.—Summary of Work done by Inspectors of Nuisances during 1913.

Details of Work Done.	No. 1 District.	No. 2 District.	No. 2a District.	No. 3 District.	No. 4 District.	No. 5 District.	TOTALS.
(1) Premises visited on account of Nuisances ... ..	843	1,517	261	1,807	1,991	1,015	7,434
(2) Premises where Smoke test applied to Drains ...	516	395	39	310	301	273	1,834
(3) Premises where Water test applied to Drains ...	396	562	138	395	546	379	2,416
(4) Premises where Colour test applied to Drains ...	106	82	20	103	33	104	448
(5) Visits to work in progress	2,952	2,403	1,034	5,254	4,838	4,171	20,652
(6) Miscellaneous Visits ...	1,474	2,229	812	3,579	4,745	3,516	16,355
(7) Interviews with Owners	199	378	59	641	465	324	2,066
(8) Nuisances abated ...	818	720	198	1,259	1,668	828	5,491
(9) Houses inspected under the Housing Acts ...	204	204	*	512	537	439	1,896
(10) Houses renovated under the Housing Acts ...	35	63	*	355	302	245	1,000
(11) Houses closed under the Housing Acts ... ..	2	...	...	13	38	11	64
(12) Houses Demolished under the Housing Acts ...	...	...	...	42	18	...	60
(13) Visits for Zymotic Diseases	804	958	348	1,401	1,854	1,794	7,159
(14) Visits for Disinfection of Premises ... ..	434	590	181	706	916	902	3,729
(15) Visits to Milkshops ...	188	108	118	119	335	912	1,780
(16) Visits to Butchers' Shops	...	...	...	...	...	...	...
(17) Notices served— (a) Statutory ... ..	205	302	61	508	1,073	322	2,471
(b) Informal ... ..	362	1,068	126	560	671	667	3,454
(18) Proceedings ordered ...	26	12	...	63	16	31	148
(19) Proceedings taken ...	4	1	...	...	...	...	5

\* Work done in No. 2a District under (9) and (10) is shown under No. 2 District.

TABLE XXXIII.—Disinfecting Station. Summary of Work during 1913.

Number of Articles.	Description.	Number of Articles.	Description.	Remarks.
5,212	Beds	9,172	Pillows	These articles were brought in from 3,984 private houses, and from 424 public institution cases.
1,535	Bed Hangings	8,501	Pillow Cases	
4,981	Bed Slips	4,840	Sheets	
7,979	Blankets	1,451	Carpets	
5,954	Bolsters	3,560	Articles of Men's Clothing	
5,690	Bolster Cases	2,262	.. Women's ..	
6,289	Counterpanes	4,433	.. Childrens' ..	
3,400	Mattresses	9,081	Various Articles	

TABLE XXXIV.—Conversion of Privies into Water Closets.

Years.	Number of Notices Served to Convert.	Number of Notices to provide Additional Accommodation.	Number of Premises where Work has been Completed.	Number of Houses Involved.	Number of Workshops Involved.	Number of Privies Converted by Owners and Corporation.	Number of Additional Water Closets erected by Owners and Corporation.	Cost of Conversions executed by the Corporation.	Cost of Additional Closets erected by the Corporation.	Contributions to Owners in lieu of 1 <sup>st</sup> Cost of Conversions.	Net Expenditure by Corporation, being 1 <sup>st</sup> cost or in lieu of 1 <sup>st</sup> cost of Conversions.
1890-1901	1,426	857	949	7,855	378	2,900	1,298	£ ...	£ ...	£ ...	£ 11,454
1902	565	167	279	2,181	97	918	262	9,601	2,944	1,134	3,984
1903	452	154	451	2,904	104	1,329	339	11,176	2,764	1,674	5,257
1904	676	182	496	3,282	89	1,547	319	10,497	2,016	2,400	5,916
1905	708	233	638	4,034	79	1,947	390	12,914	2,538	3,271	8,027
1906	950	211	710	4,445	100	2,313	422	11,381	2,374	3,956	6,796
1907	880	378	751	4,530	95	2,296	403	11,457	1,729	4,223	8,000
1908	908	238	688	3,952	59	2,082	302	11,103	1,514	4,050	7,789
1909	744	145	559	3,009	26	1,710	195	11,047	1,213	2,612	6,276
1910	482	69	607	3,294	59	1,955	226	14,389	1,441	3,371	8,180
1911	569	78	557	2,453	11	1,742	141	10,621	604	2,324	5,848
1912	453	58	482	2,321	25	1,349	117	12,414	997	2,228	6,364
1913	360	47	531	2,586	16	1,589	131	14,012	771	2,092	6,869
Net Expenditure to 25th March, 1914, out of borrowed money ... .. £79,306											
Amount raised in the Rate since the beginning of the Conversion Scheme ... .. 11,454											
Total ... .. £90,760											
Unexpended borrowing power at 25th March, 1914 ... .. £50,694											

N.B.—The figures given in the last four columns of the table are taken from the Abstract of Accounts of the City Treasurer. They refer to the financial year ending 25th March—3 months later than the year to which the other figures refer.

TABLE XXXV.—*Factories, Workshops, Workplaces and Homework.*

## 1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries) ...	488	14	—
Workshops (including Workshop Laundries) ...	2,000	46	—
Workplaces (other than Outworkers' premises included in Part 3 of this Table) ...	16	1	—
TOTALS ... ..	2,504	61	—

## 2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars.	Number of Defects.			Number of Prosecutions
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness ... ..	80	80	...	...
Want of ventilation ... ..	12	12	...	...
Overcrowding ... ..	10	10	...	...
Want of drainage of floors ... ..	...	...	...	...
Other nuisances ... ..	25	25	...	...
Sanitary accommodation { insufficient ... ..	6	6	...	...
{ unsuitable or defective ... ..	23	19	...	...
{ not separate for sexes ... ..	2	1	...	...
<i>Offences under the Factory and Workshop Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101) ... ..	...	...	...	...
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ... ..	4	4	...	...
Other offences ... .. (Excluding offences relating to outwork which are included in Part 3 of this Table)	7	7	8	...
TOTALS ... ..	169	164	8	...

\*Including those specified in Sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

NATURE OF WORK.	OUTWORKERS'					
	Lists received from Employers.					
	Sending twice in the year.			Sending once in the year.		
	Lists. †	Outworkers. †		Lists.	Outworkers.	
		Con-tractors.	Work-men.		Con-tractors.	Work-men.
Wearing Apparel—						
(1) making, etc. ... ..	148	406	266	2	2	5
(2) cleaning and washing ... ..	...	...	...	...	...	...
Household linen ... ..	...	...	...	...	...	...
Lace, lace curtains and nets ... ..	2	...	2	...	...	...
Curtains and furniture hangings ... ..	...	...	...	...	...	...
Furniture and upholstery ... ..	6	16	4	2	4	...
Electro-plate ... ..	186	2,334	182	14	32	...
File making ... ..	140	108	2,498	2	...	4
Brass and brass articles ... ..	...	...	...	...	...	...
Fur pulling ... ..	...	...	...	...	...	...
Cables and chains ... ..	...	...	...	...	...	...
Anchors and grapnels ... ..	...	...	...	...	...	...
Cart gear ... ..	...	...	...	...	...	...
Locks, latches and keys ... ..	...	...	...	...	...	...
Umbrellas, etc. ... ..	...	...	...	...	...	...
Artificial flowers ... ..	...	...	...	...	...	...
Nets, other than wire nets ... ..	...	...	...	...	...	...
Tents ... ..	...	...	...	...	...	...
Sacks ... ..	...	...	...	...	...	...
Racquets and tennis balls ... ..	...	...	...	...	...	...
Paper, etc., boxes, paper bags ... ..	2	...	4	...	...	...
Brush making ... ..	...	...	...	...	...	...
Pea picking ... ..	...	...	...	...	...	...
Feather sorting ... ..	...	...	...	...	...	...
Carding, etc., of buttons, etc. ... ..	...	...	...	...	...	...
Stuffed toys ... ..	...	...	...	...	...	...
Basket making ... ..	...	...	...	...	...	...
Chocolates and sweetmeats ... ..	...	...	...	...	...	...
Cosques, Christmas crackers, Christmas Stockings, etc. ... ..	...	...	...	...	...	...
Textile weaving ... ..	...	...	...	...	...	...
TOTALS ... ..	484	2,864	2,956	20	38	9

†The figures 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.

## 4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Bakehouses and Confectionery ... ..	284
Tailoring and Dressmaking ... ..	969
Metal Workers ... ..	876
Wood Workers ... ..	358
Hand Laundries ... ..	11
Restaurant Kitchens ... ..	62
Miscellaneous ... ..	409
Total number of Workshops on Register ... ..	2,969



**TABLE XXXVI.**—*Summary of Smoke Nuisance Proceedings, during 1913, and during the previous ten years.*

Year.	Total Prosecutions.	Cases in which penalties imposed.	Cases in which orders made and costs imposed.	Cases withdrawn or dismissed.	Total penalties and costs imposed.			Average penalties and costs imposed.		
					£	s.	d.	£	s.	d.
1903	22	13	6	3	42	9	6	2	4	8
1904	38	20	15	3	78	19	0	2	5	1
1905	56	34	21	1	105	12	6	1	18	5
1906	26	16	10	0	90	1	0	3	9	3
1907	55	33	20	2	108	13	0	2	1	0
1908	38	21	16	1	79	11	0	2	3	0
1909	25	9	13	3	68	16	0	3	2	7
1910	19	10	7	2	50	4	0	2	19	1
1911	5	4	1	0	11	12	6	2	6	6
1912	10	6	4	0	64	6	0	6	8	7
1913	15	9	6	0	42	6	0	2	16	5

**TABLE XXXVII.**—*Details of Work done by Smoke Inspectors during 1913, and during the previous ten years.*

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Number of observations upon Chimneys of each one hour ...	7663	7730	7813	7995	7611	7504	8441	8119	8542	7842	7381
Average number of minutes of Black Smoke per hour ...	3·1	3·1	3·0	2·9	3·2	2·9	2·4	2·4	2·2	2·5	2·6
Number of Notices served ...	114	168	142	131	96	80	58	49	65	71	90
Number of complaints received	40	48	58	34	56	52	56	77	66	56	50
Number of New Boilers put down	23	20	27	28	23	6	23	7	15	18	16
Number of Chimneys erected ...	7	7	11	20	16	3	7	8	9	23	16
Number of Chimneys raised ...	7	11	15	11	10	14	12	11	24	14	15
Appliances or Improvements introduced ...	22	27	17	34	37	17	23	24	17	32	34

## SALE OF FOOD AND DRUGS ACTS.

TABLE XXXVIII.—Food and Drugs Samples purchased in pursuance of the Sale of Food and Drugs Acts, also the number found to be Adulterated, during 1913 and the preceding nine years.

ARTICLES PURCHASED FOR ANALYSIS.	1904		1905		1906		1907		1908		1909		1910		1911		1912		1913	
	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.	TOTAL SAMPLES.	NO. ADULTERATED.
Milk...	444	42	418	36	412	31	468	40	512	42	432	48	475	41	401	26	326	29	421	36
Butter Milk	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Butter	74	17	70	4	73	...	134	4	118	4	126	...	92	3	46	2	92	4	85	2
Margarine	11	...	7	...	2	...	1	...	1	...	...	...	...	1	...	1	...	5	...	...
Cream	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...
Cheese	18	5	10	2	7	...	17	...	22	...	23	...	19	...	19	...	21	...	18	...
Margarine Cheese	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lard	2	...	13	...	44	...	42	...	28	...	29	...	37	...	17	1	16	...	20	...
Bread and Butter	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Teacake and Butter	2	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Flour	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Whisky	50	12	62	13	60	10	44	2	19	3	20	...	48	7	21	1	28	4	29	...
Gin	...	...	8	...	45	2	33	...	5	2	8	1	26	7	17	2	23	3	22	1
Brandy	...	...	1	...	...	...	...	...	...	...	4	1	3	...	2	...	2	1	5	...
Rum	...	...	6	2	42	1	36	2	11	3	14	2	45	10	18	...	26	2	24	1
Honey	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Tea	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coffee	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Vinegar	...	...	...	...	...	...	3	3	3	...	20	13	...	...	...	...	...	...	...	...
Pepper	10	...	7	...	4	...	3	...	10	...	27	...	40	1	19	2	42	4	17	...
Mustard	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...
Ground Ginger	8	...	10	...	3	...	1	...	5	...	4	...	...	...	11	...	2	...	3	...
Rice	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paregoric	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Paregoric Substitute	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Laudanum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...
Laudanum S'bstit'ite	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Com. Liq. Powder...	10	1	3	...	11	1	29	1	31	...	13	...	30	2	14	2	18	...	20	1
Sweet Spirit of Nitre	39	10	37	6	10	1	31	5	23	1	28	2	16	1	14	5	16	4	16	4
Friars Balsam	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Camphorated Oil	22	2	41	3	10	...	30	1	26	1	32	...	31	...	12	...	27	...	14	...
Arrowroot	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Olive Oil	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tincture of Iodine...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Saffron	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...
TOTALS ...	699	91	696	66	723	46	875	59	817	56	784	67	863	72	614	41	654	52	699	45
Perc'nt'ge of S'mpl's Adulterated ...	13.0	...	9.5	...	6.4	...	6.7	...	6.9	...	8.5	...	8.3	...	6.7	...	8.0	...	6.4	...
Percentage of ditto for all England ...	8.5	...	8.2	...	9.3	...	8.1	...	8.5	...	7.5	...	8.2	...	8.7	...	8.4	...	...	...

The figures given above do not correspond with those given in the reports of the Local Government Board, because the samples certified by the City Analyst to be below the standard, but not certified to be adulterated, are not included in the columns "No. Adulterated."

TABLE XXXIX.—*The Sale of Food and Drugs Acts. Samples purchased, adulterations, and proceedings taken in 1913.*

MILK ... ..	Number of Samples purchased ... ..	421
	"    "    found to be genuine ... ..	383
	"    "    found to be adulterated with water ... ..	13
	"    "    found to be deficient in fat ... ..	23
	"    "    found to contain a preservative ... ..	2
	Result of proceedings.—Fines imposed—Two, £7 10s. each; one, £5 and 8s. costs; one £5 and 7s. costs; three £2 (in costs) each; nine £1 each; two £3 each; three, £2 10s. each; two, £1 and 8s. costs each; one, £1 and 15s. costs. Six cases were withdrawn on payment of costs amounting to a total of £5 9s; five cases were dismissed on payment of costs amounting to £3 15s.; one case was dismissed on a warranty; one case was withdrawn; and in one case a letter of caution was sent. One vendor was fined 10s. for refusing to sell a pint of milk to the inspector.	
BUTTER ... ..	Number of Samples purchased ... ..	85
	"    "    found to be adulterated ... ..	2
	Result of proceedings.—Fines imposed—One, £1 and 10s. costs; one 10s. and 3s. 6d. costs.	
CHEESE ... ..	Number of Samples purchased and found to be genuine ... ..	18
MARGARINE ... ..	Number of Samples purchased and found to be genuine ... ..	5
WHISKY ... ..	Number of Samples purchased and found to be genuine ... ..	29
RUM ... ..	Number of Samples purchased ... ..	24
	"    "    found to be genuine ... ..	23
	"    "    found to be adulterated ... ..	1
	Result of proceedings.—Fine imposed, 17s. (in costs).	
GIN ... ..	Number of Samples purchased ... ..	22
	"    "    found to be genuine ... ..	21
	"    "    found to be adulterated ... ..	1
	A letter of caution was sent to the vendor of the adulterated sample.	
COMPOUND LIQUORICE POWDER ... ..	Number of Samples purchased ... ..	20
	"    "    found to be genuine ... ..	19
	"    "    found to be adulterated ... ..	1
	Result of proceedings.—Fine imposed, £1 (in costs).	
CAMPHORATED OIL ... ..	Number of Samples purchased and found to be genuine ... ..	14
PEPPER ... ..	Number of Samples purchased and found to be genuine ... ..	17
LARD ... ..	Number of Samples purchased ... ..	20
	"    "    found to be genuine ... ..	19
	"    "    found to be of inferior quality ... ..	1
SWEET SPIRIT OF NITRE	Number of Samples purchased ... ..	16
	"    "    found to be genuine ... ..	11
	"    "    found to be not of required strength ... ..	4
	"    "    found to be of inferior quality ... ..	1
	Result of proceedings.—Fines imposed—two, 10s. each; one, 15s. 6d.; one, 17s.	
BRANDY ... ..	Number of Samples purchased and found to be genuine ... ..	5
GROUND GINGER ... ..	Number of Samples purchased and found to be genuine ... ..	3

During the year 23 informal samples were taken, with the following results:—One sample of milk, two of butter, six of pepper, five of cheese and one of honey were found to be genuine. A sample of sweet nitre elixir was found to consist of glycerine, potassium nitrite and paraldehyde. A sample of nitre sweating mixture was found to consist of sugar, potassium nitrite and paraldehyde. Samples of potted ham and tongue, potted salmon and shrimp and potted beef were found to be free from preservatives. Samples of potted meat, potted brawn and shrimp paste were each found to contain a boron preservative to the extent of 0·5, 0·48 and 1·41 per cent. respectively.

In three cases cowkeepers from whom the inspector had obtained samples, asked that special samples should be taken direct from the cows. In two of these cases the cows of the farm were found to be giving poor milk, and as a result the proceedings were withdrawn and certain advice was given by the Corporation's Veterinary Surgeon for the purpose of improving the quality of the milk. In the third case the "appeal to the cow" confirmed the fact that the samples obtained in the street had been watered, and the defendant was fined £3, including costs, in respect of each of the samples.

Proceedings were taken against one vendor for an offence under the Margarine Act for exposing for sale margarine not so labelled and a fine of 14s. including costs, was imposed.

## REPORT OF THE CHIEF VETERINARY INSPECTOR FOR THE YEAR 1913.

## VETERINARY STAFF.

During the year there was a staff of three qualified Veterinary Surgeons, occupied as follows:—In the inspection of dairies and cowsheds in the City and examining the udders of cows in the city cowsheds, or in country cowsheds from which diseased or suspected milk was sent into Sheffield; in inspecting meat, meatshops and slaughter-houses; in carrying out the veterinary and administrative work in connection with the Diseases of Animals Acts; and in the veterinary supervision of the Corporation stud of horses.

## TRAM AND OTHER ACCIDENTS.

Twenty-four cases of alleged damage to horses due to tram accidents were investigated, and reports made to the General Manager of the Tramways. One case was also investigated, and reported upon for the Highway and Sewerage Department.

## SLAUGHTER-HOUSES.

According to the Town Improvement Clauses Act, 1847, every existing slaughter-house had to be registered. The earliest register which the Corporation possesses is dated 1865 and contains entries of 37 slaughter-houses which were in existence in 1912. Of these, one is licensed as a horse slaughterhouse and one has been bought by the Corporation and is now let to a gut-dresser. In addition to these there are 10 private slaughter-houses which the owners claim to have been registered, but of which there is no evidence of registration. There are also nominally 35 slaughter-houses belonging to the Corporation, which are practically always let.

The following list shows the number of slaughterhouses in the City at December 31st, 1913:—

No. of Slaughterhouses belonging to the Corporation and in use previous to 1865	35
No. of Slaughterhouses in use previous to 1865, of which there is no evidence of registration .. .. .	10
No. of Slaughterhouses on the Register drawn up in 1865 under the Town Improvement Act, 1847 .. .. .	35
No. of slaughterhouses licensed under the Public Health Act 1875 .. ..	16
No. of slaughterhouses licensed annually under the Sheffield Corporation Act 1890 .. .. .	77
No. of Horse Slaughterhouses licensed.. .. .	1
<hr/>	
Total No. of slaughterhouses on the Register .. .. .	174

The following represents the work of meat inspection:—

No. of visits to Slaughterhouses .. .. .	4,622
No. of Visits to Market Places and Shambles .. .. .	2,257
No. of Visits to Shops and Stores .. .. .	3,478

Seven slaughterhouses were transferred to new occupiers during the year.

Five new annual licenses have been granted and three have been allowed to elapse.

Two slaughterhouses licensed under the Public Health Act 1875 have been voluntarily closed and are now used for other purposes.

Seven slaughterhouses in the above list have not been used for slaughtering purposes—four for 13 years, one for 7 years, one for 4 years and the other one for 3 years.

## MEAT AND FOOD INSPECTION.

In connection with Meat Inspection 230 notifications of diseased or suspected animals or carcasses were received from butchers, 28 being in respect of carcasses in private slaughter-

houses, and 202 in respect of carcasses in Slaughter-house 42 in the Killing Shambles, the slaughterhouse set apart by the Health Committee for butchers to kill and dress suspected animals and carcasses as the case may be. After inspection, in 144 instances, the carcasses were passed as fit for human food, the diseased parts (if any) being first removed and destroyed. In 82 cases the carcasses were condemned, being afterwards voluntarily surrendered by the owners for destruction. A payment of 1s. 6d. per cwt. is allowed by the Health Committee to the owners for carcasses so notified, surrendered and destroyed.

The particulars of the 70 carcasses of beef condemned during 1913 as being affected with Tuberculosis were as follows:—Four were beasts bought by the butchers as sound animals, which when killed were found to be affected with Tuberculosis; 22 were the carcasses of cows whose milk was found to contain tubercle bacilli; 26 were emaciated cows slaughtered under the Tuberculosis Order of 1913 by order of the Sheffield City Council and the County Councils of Derbyshire and Yorkshire (West Riding); 18 were diseased cows killed by butchers on behalf of the owners. Particulars with regard to all carcasses condemned during the year will be found in the table which follows, but in addition, the following were also condemned and destroyed.

(1) *Fresh Meat.*—(a) Affected with Tuberculosis—41 beasts' offals; 36 beasts' heads; 20 beasts' hearts; 120 beasts' lungs; 60 beasts' livers; 29 beasts' spleens; 33 beasts' udders; 4 carcasses of pork; 6 pigs' offals; 6 pigs' heads; 6 pigs' lungs; 5 pigs' livers; and 7 pigs' spleens.

(b) Affected with other diseases or decomposing—9 beasts' offals; 6 beasts' heads; 9 beasts' hearts; 19 beasts' lungs; 34 beasts' livers; 7 beasts' spleens; 12 beasts' udders; 39½ pounds of beef; 8 pigs' offals; 4 pigs' heads; 5 pigs' lungs; 8 pigs' livers; 6 pigs' spleens; 10 sheep's offals; 6 sheep's heads; 9 sheep's lungs; 11 sheep's livers; 42 carcasses of veal, 1 piece of veal, 2 calves' offals, 2 calves' heads, and 2 calves' lungs.

(2) *Preserved Food.*—12 pieces of bacon; 3,382 tins of canned food.

(3) *Foreign and Frozen Meat.*—10 pieces of beef; 1 bag of tripe; 1 bag of cow heels; 2 pieces of mutton; 6 cases of sheep's plucks; 50 dozen sheep's kidneys.

(4) *Game, etc.*—6 hares; 1,187 couples of rabbits.

(5) *Poultry.*—26 turkeys; 30 fowls.

(6) *Fruit.*—2 cases of pears; 22 bundles of tomatoes.

(7) *Vegetables.*—2 bags of cabbage; 2 baskets of mushrooms.

(8) *Fish.*—883 boxes, barrels, crates, etc., of various species.

The total weight condemned during the year was 37 tons 10 cwts. of meat; 22 tons 13 cwts. of fish; and 11½ cwts. of fruit and vegetables. It should be pointed out that the latter figures do not include unsound fruit and vegetables dealt with at the Wholesale Market where it is the custom of wholesale dealers to sell questionable fruit, etc., to hawkers *subject to sorting*. This custom does not appear satisfactory from any standpoint and was reported to the Health Committee in September, 1910. It still appears that the Markets Department should provide a room where this sorting could if necessary be done under supervision.

#### MEAT PROSECUTIONS.

During the year one magistrate's order was required for the condemnation and destruction of bad meat. One prosecution was ordered by the Health Committee the defendant being fined £30, including costs.

**TABLE XL.**—Showing the number of Carcases of Meat Condemned and Destroyed as being affected with Tuberculosis, and various other Diseases, and for other Causes, during 10 years 1904 to 1913.

Year.	Number of Carcases of Meat condemned and destroyed affected with Tuberculosis.						Number of Carcases of Meat condemned and destroyed affected with various other diseases and for other causes.					
	Beef.	Mutton.	Pork.	Veal.	Lamb.	Goat.	Beef.	Mutton.	Pork.	Veal.	Lamb.	Goat.
1904	25	...	1	1	...	...	24½	57½	5	20	8	...
1905	22	1	1	1	...	...	31	39	10	43½	2	...
1906	42	...	...	1	...	...	37	35	2	36	4	2
1907	38	...	1	2	...	...	44	46	4	53	2	...
1908	46	...	2	1	...	...	48½	49½	8	44	7	...
1909	58	...	1	1	...	...	42½	64	8	39	3	1
1910	57½	1	¼	1	...	...	29½	55	6¼	47	3	...
1911	85½	2	18	1	...	...	61½	123	28	105	...	...
1912	64½	...	18	...	...	...	56½	54½	18	108	5	...
1913	67½	...	4	1	...	...	25	42½	8	42	9	...

#### DAIRY INSPECTION.

In addition to examining the udders of the milking cows in the city cowsheds, the Veterinary Inspectors inspect the sanitary conditions of the cowsheds, dairies, and milk vessels, and take note of the cleanliness of the cows, also of the feeding and general management. In the case of poor samples of genuine milk found by chemical analysis, enquiries, sometimes of a protracted nature, are made into the principles and methods of feeding the cows, and friendly advice is given to assist the owners to improve the quality of the milk. During the year over 700 visits were made to dairy farms within the city. Three new cowsheds were built during the year, giving accommodation for 29 cows.

#### TUBERCULOSIS AND MILK.

The power of the Health Committee to deal with tubercular infection in milk is contained in the Tuberculous Milk Clauses of the Sheffield Corporation Act, 1900, and in the Dairies, Cowsheds, and Milkshops Amended Order of 1899. The latter only gives power over milk from cows housed in the city cowsheds; the former applies to milk sold within the city, whether produced by cows inside or outside the city.

In carrying out the executive work under these powers three kinds of samples of milk are taken: mixed, control and special. A *mixed sample* is generally one of country milk brought into the city by road or rail conveyance, but in 1913, 11 mixed samples were also taken from herds of city cows for various reasons—chiefly because city cows were temporarily at grass outside the city boundaries. A *control sample* is one taken to check the veterinary examination of the cows' udders when (1) in following up tuberculous mixed milks no cows can be found exhibiting signs of tuberculosis of the udder, or from remaining cows in the herd after excluding cows with suspected udders from which special samples have been taken; (2) in city cowsheds when the cows examined approach twenty in number in any given shed, or where, owing to the cows being out at grass, it is impossible or inconvenient to examine them. A *special sample* is one taken from a cow showing some abnormal condition of the udder more or less indicative of tuberculosis.

During the year 632 samples of mixed milk coming into Sheffield by rail or road conveyances were taken for bacteriological examination, 45 of which, equal to 7.1 per cent., gave a positive result, whilst 587 were negative. Three were repeat samples

and only represent one farm. The repetition showed that the farmer was continually sending tuberculous milk to Sheffield although no cow with a tuberculous udder was found at the farm and control samples taken from the cows at the farm were negative. An order prohibiting this farmer from sending milk to Sheffield was made by the Health Committee and is still in force.

In following up the 43 tuberculous samples, 119 visits were made to 103 farms, and the udders of 1,690 cows examined. At 26 of these farms 29 cows with tuberculous udders were found. At the remaining 77 farms no cows with tuberculous udders were found, and subsequent control samples of the mixed milk from these farms were proved negative by bacteriological examination. In most of these instances the farmers had sold cows off the farms during the period intervening between the taking of the tuberculous mixed sample and the date of the inspection. Sixty farms were visited because the milk sellers obtained part of their milk supplies from them. One tuberculous mixed milk came from a dairy supplied by 49 farms, and another by 7 farms, each of which was visited.

The average number of cows found at the 103 farms from which tuberculous mixed samples were sent was 16, and if we allow that number for the 587 farms from which the negative mixed samples were sent, we have 9,392 cows, the milk from which was examined bacteriologically and proved negative. The total number of country cows examined, either clinically or (through their milk) bacteriologically, will thus total up to (1,690 + 9,392) 11,082, amongst which 29 cows with tuberculous udders were found, equal to a percentage of 0.26. If we take the percentage of 29 tuberculous udders amongst the 1,690 country cows clinically examined, the figures work out at 1.7 per cent.

*Control Samples.*—Altogether 53 control samples were taken, 48 representing 624 cows, being taken from country herds, and 5 representing 185 cows, from city herds.

Seven of the country samples, equalling 14.6 per cent., but none of the city samples, were found to be tuberculous. At one country farm some difficulty in finding the cow giving tuberculous milk was met with and 4 control samples had to be taken, of which three were positive, before the cow was found.

The number of cowshed premises inside the city was 221, having 351 cowsheds and accommodation for 2,818 cows. The occupiers of 19 of these premises have given up keeping cows to produce milk for sale. The dairymen still keeping cows, however, have increased the number of cows in their herds, the total maximum number of cows kept in the city having been raised to 2,740. Allowing each cow to be in a city cowshed eight months, it follows that about 1,400 fresh cows must be added to that number, making about 4,000 in the city cowsheds to be examined during the year. The number of inspections of city cows made was 7,747 and 8 cows having tuberculous udders were discovered—equal to a percentage on 4,000 of 0.2. Six city cows affected with tuberculosis of the udder were also notified under the Tuberculosis Order of 1913 making a total of 14. The number of visits made by the Assistant Veterinary inspectors to the city farms was 646.

Including country cows examined 123 showed symptoms suspicious of Tuberculosis of the udder, and a sample of milk was taken from each of them for bacteriological examination. 38 proved positive, 85 giving negative results. Five city cows were condemned on microscopical examination of the milk alone, making a total of 43.

The 43 cows thus definitely proved to have tuberculous udders were disposed of as follows:—3 were sold by the owners and were lost sight of; and 40 were killed, the carcasses of 15 being passed as human food after the diseased parts had been first removed and destroyed, and 25 totally condemned and the carcasses destroyed at the destructor or knacker's yards.

One farmer was summoned before the Health Committee to show cause why an order should not be made (Section 135 of the Sheffield Corporation Act, 1900) requiring him not to supply any milk from his dairy for consumption within the city. The Order was made, and as previously mentioned, is still in force.

Table XLI. gives a summary of the results obtained under the Tuberculous Milk Clauses since they were first put into force in 1901. :—

**TABLE XLI.**—Summary of Results obtained under the Tuberculous Milk Clauses, Sheffield Corporation Act, 1900.  
Number of Samples of Milk bacteriologically examined for Tubercular infection:—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	TOTAL.
Mixed Samples .. .. .	—	28	66	89	68	115	175	251	184	336	358	447	632	2,749
Tuberculous .. .. .	—	5	11	6	10	11	17	25	20	35	34	34	45	253
Percentage .. .. .	—	17.8	16.7	6.7	14.7	9.6	9.7	9.9	10.9	10.4	9.8	7.6	7.1	9.2
Control Samples .. .. .	—	1	7	11	17	8	39	62	56	100	128	75	53	557
Tuberculous .. .. .	—	—	—	3	6	1	8	7	8	10	14	4	7	68
Percentage .. .. .	—	—	—	27.3	35.3	12.5	20.5	11.2	14.3	10.0	11.0	5.3	13.2	12.2
Samples from cows with suspicious udders .. .. .	7	20	31	27	29	17	188	173	236	253	159	150	123	1,413
Tuberculous .. .. .	3	9	9	9	13	11	43	47	60	51	50	46	38	389
Percentage .. .. .	42.8	45	29	33.3	44.8	64.7	23.4	27.1	25.4	20.1	31.4	30.7	30.9	27.5
Estimated number of cows on country farms where mixed milk samples were free from Tuberculous infection .. .. .	—	345	2,967	2,350	1,339	1,820	4,108	3,842	2,460	5,418	5,491	5,782	9,392	45,314
No. of country cows clinically examined for Tuberculosis of the udder, in following up tuberculous mixed samples .. .. .	—	75	622	170	231	279	783	544	451	760	648	685	1,690	6,938
Tuberculous .. .. .	—	2	6	1	9	10	15	13	18	29	23	29	29	184
Percentage .. .. .	—	2.7	.96	.59	3.9	3.6	1.9	2.4	4.0	3.8	3.5	4.2	1.7	2.7
No. of city cows clinically examined for tuberculosi of the udder .. .. .	1,067	2,264	672	1,774	1,521	1,434	8,808	13,587	13,558	9,573	8,784	7,531	7,747	78,720
Tuberculous .. .. .	5	7	3	8	4	2	29	34	42	22	28	18	8	210
Percentage .. .. .	.47	.31	.45	.45	.26	.14	.8*	.9*	1.1*	0.6*	0.7*	0.5*	0.2†	0.3
Disposal of cows with tuberculous udders—														
Killed .. .. .	5	9	7	7	12	11	39	45	50	46	44	43	40	358
Passed .. .. .	2	5	4	6	9	6	26	33	37	27	20	23	15	213
Percentage .. .. .	40	55.5	57.1	85.7	75	54.5	66.6	73.3	74.0	58.7	45.4	53.5	37.5	59.5
Condemed .. .. .	3	4	3	1	3	5	13	12	13	19	24	20	25	145
Percentage .. .. .	60	44.5	42.9	14.3	25	45.5	33.3	26.7	26.0	41.3	54.6	46.5	62.5	40.5
Sold or otherwise lost sight of .. .. .	—	—	2	2	1	1	5	2	11	5	7	4	3	43

\*Percentage on 3,600 only.

†Percentage on 4,000 only.

## DISEASES OF ANIMALS ACTS AND ORDERS.

## ANTHRAX.

Twelve suspected outbreaks of Anthrax were reported on premises in the city. The disease was found to exist in three cases, 2 milking cows and 1 horse being affected. The precautions taken in each instance were successful in preventing any spread of the disease.

## PARASITIC MANGE.

Eighty-three suspected outbreaks of this disease in studs in the City were dealt with during the year. In 67 cases the existence of the disease was confirmed. One hundred and twelve horses were affected. All were isolated and medically treated until cured or slaughtered. Seven hundred and five in-contact horses were also inspected. The Parasitic Mange Order of 1911 came into force on January 1st, 1912. In addition to notification by the owners of suspected or affected animals it is now also compulsory for veterinary surgeons to report such cases occurring in their practice. Forty-eight cases were so notified. Several were also notified by the Inspectors of the Sheffield Society for the Prevention of Cruelty to Animals, by the City Police and by the Assistant Veterinary Inspectors. Five prosecutions were ordered for failing to isolate and notify, fines and costs amounting to £10, £6, £6, £5, and £3 respectively being imposed.

## SWINE FEVER.

One hundred and twenty-one cases of illness or death of pigs were reported during the year. In 5 cases the symptoms or post mortem appearances were suspicious of Swine Fever, and the cases were consequently reported to the Board of Agriculture and Fisheries in compliance with the Swine Fever Order. These cases were investigated by the Veterinary Inspectors of the Board, and three were confirmed as Swine Fever. Owing to the large number of pigs which had been directly or indirectly in contact with the affected pigs, 65 notices of detention and isolation had to be served; 537 pigs being concerned. Over a hundred visits had to be made to see the Orders were being observed.

## SWINE MOVEMENT ORDERS.

The following summary shows the number of pigs for which movement licenses were issued during the year:—

Number of store pigs licensed into the City	.. .. .	1,850
.. fat pigs licensed to saleyards and slaughterhouses in the city	.. .. .	53,188
.. fat pigs licensed from sale yards to slaughterhouses in the city	.. .. .	35,606
.. fat pigs licensed to slaughterhouses outside the city	.. .. .	4,403

In connection with Swine Movement Licenses, 362 visits were made to sale yards, lairs, and other premises.

## SHEEP DIPPING.

Five owners of sheep complied with the Sheep Dipping (Scotland and North of England) Order of 1907. Two dipping periods are stated in the order. In the first period 324 sheep were dipped; in the second the number of sheep dipped was 205. To comply with the Yorkshire (West Riding) and Peak District (Sheep Dipping) Order of 1912, sheep have to be dipped twice during the month of September with not less than ten days and not more than twenty-one days between the first and second dippings. Seven owners having 219 sheep complied with the Order.

During the dipping period, September 1st to November 12th all sheep exposed in a public sale yard have to be accompanied by a declaration that they have been dipped. Sixteen such declarations relating to 198 sheep were received in connection with public sales in Sheffield.

## TUBERCULOSIS.

The Tuberculosis Order of 1913 came into force on May 1st. It represents the first attempt of the Central Authorities to control the ravages of this disease; notification of certain affected animals being required, and a varying amount of compensation being paid for animals slaughtered, according to the extent of the disease found by post-mortem examination. Between May 1st and December 31st, 36 notifications were received and in 27 cases the existence of the disease was confirmed; 27 animals being slaughtered under the Order. The total compensation paid amounted to £83 13s. 8d. Fifteen notifications were received from owners, 15 from Veterinary Surgeons in attendance and 6 from the Assistant Veterinary Inspectors.

## RABIES.

There was one suspected case of rabies to investigate during the year, but the existence of the disease was not confirmed.

## FOREIGN DOGS.

During the year 51 foreign dogs were licensed into the city, under the Importation of Dogs Order of 1901. They belonged to three different owners, and all were dogs performing at Sheffield music halls. Six visits were paid to see that the Board of Agriculture's conditions were being complied with by the owners.

## ANIMAL TRANSIT.

Over five hundred and twenty visits were made to the railway stations and cattle landings for the purposes of the Animals (Transit and General) Order of 1912, and the Exportation of Horses Orders of 1910. Several visits were also made to slaughterhouses in connection with the importation of animals from Ireland.

## NOTIFICATION OF DISEASE.

Under the Animals (Notification of Disease) Order of 1910 Veterinary Surgeons in practice are required to notify the existence or suspected existence of the scheduled contagious diseases of animals occurring in their practices. As already stated a considerable number of cases of Parasitic Mange and Tuberculosis were so notified.

## HORSE SALES.

The weekly auctions of horses and the horse fairs were regularly visited as required by the Glanders and Farcy Order of 1907.

## MARKETS AND SALEYARDS.

Repeated visits were made to the Calf Market, and the saleyards authorised for the sale of pigs were visited at least three times weekly.

J. S. LLOYD, F.R.C.V.S., D.V.S.M.Vict.,

*Chief Veterinary Inspector.*

