

[Report 1913] / Medical Officer of Health, Keighley Borough.

Contributors

Keighley (England). Borough Council.

Publication/Creation

1913

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BOROUGH OF KEIGHLEY

ANNUAL

REPORTS

OF THE

MEDICAL OFFICER OF HEALTH

AND THE

BOROUGH SANITARY INSPECTOR

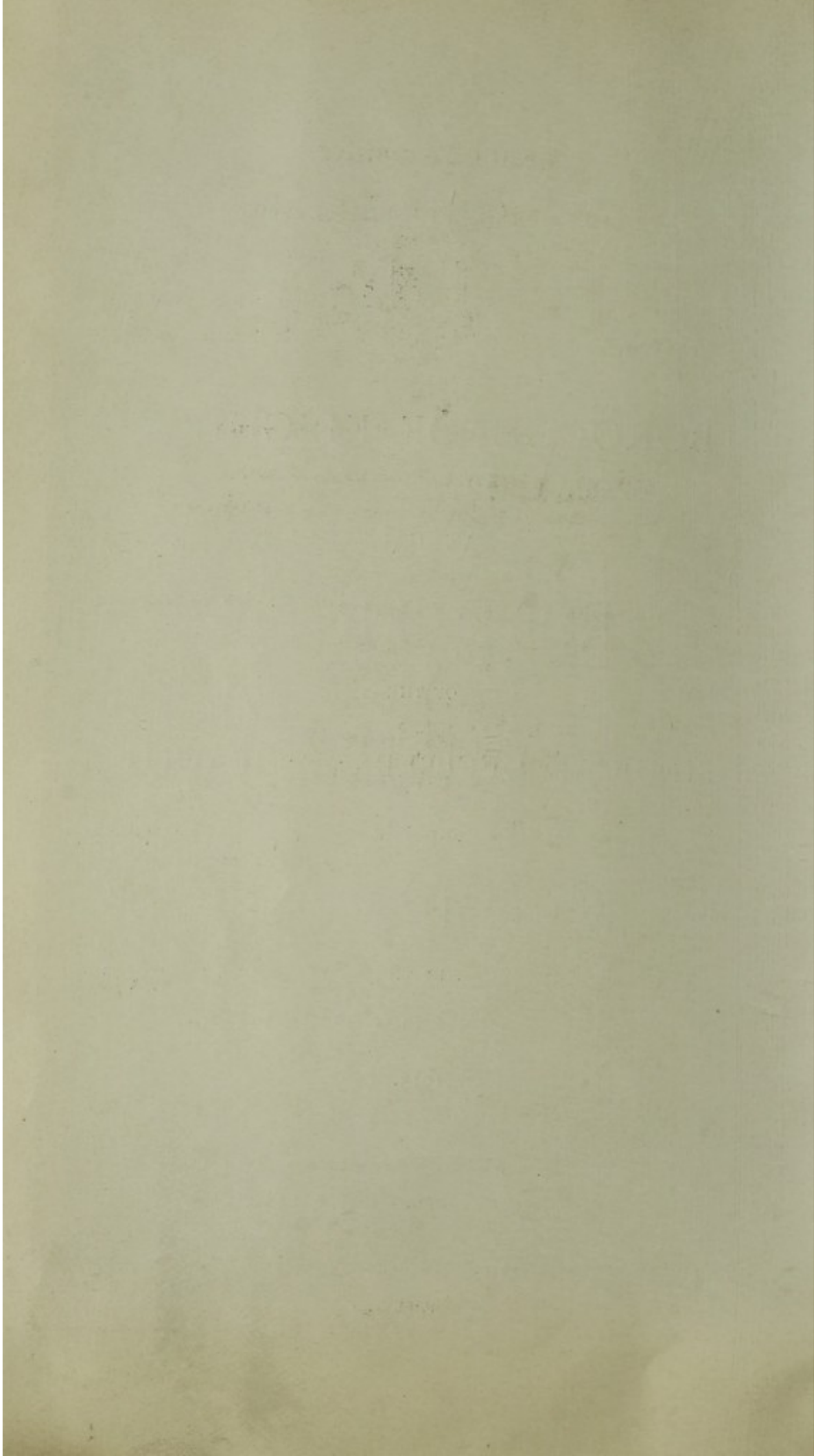
FOR THE

YEAR ENDING DECEMBER 31ST,

1913.

Keighley :

WADSWORTH & CO., THE RYDAL PRESS.



Health Committee.

THE WORSHIPFUL THE MAYOR.

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H. WHITEHEAD, COUNCILLOR R. SMITH, COUNCILLOR
T. WARDLE.

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W. HANSON, *Cert. R. San. Inst.*

Assistant Superintendent of Public Cleansing :

CHARLIE ROBINSON, A.I.C.S.

Clerks :

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THOMAS BEDFORD.

ALBERT OGDEN.

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MARY W. PATERSON, C.M.B.

Veterinary Inspector :

GEO. W. CARTER, F.R.C.V.S.

* Qualified Food Inspectors.

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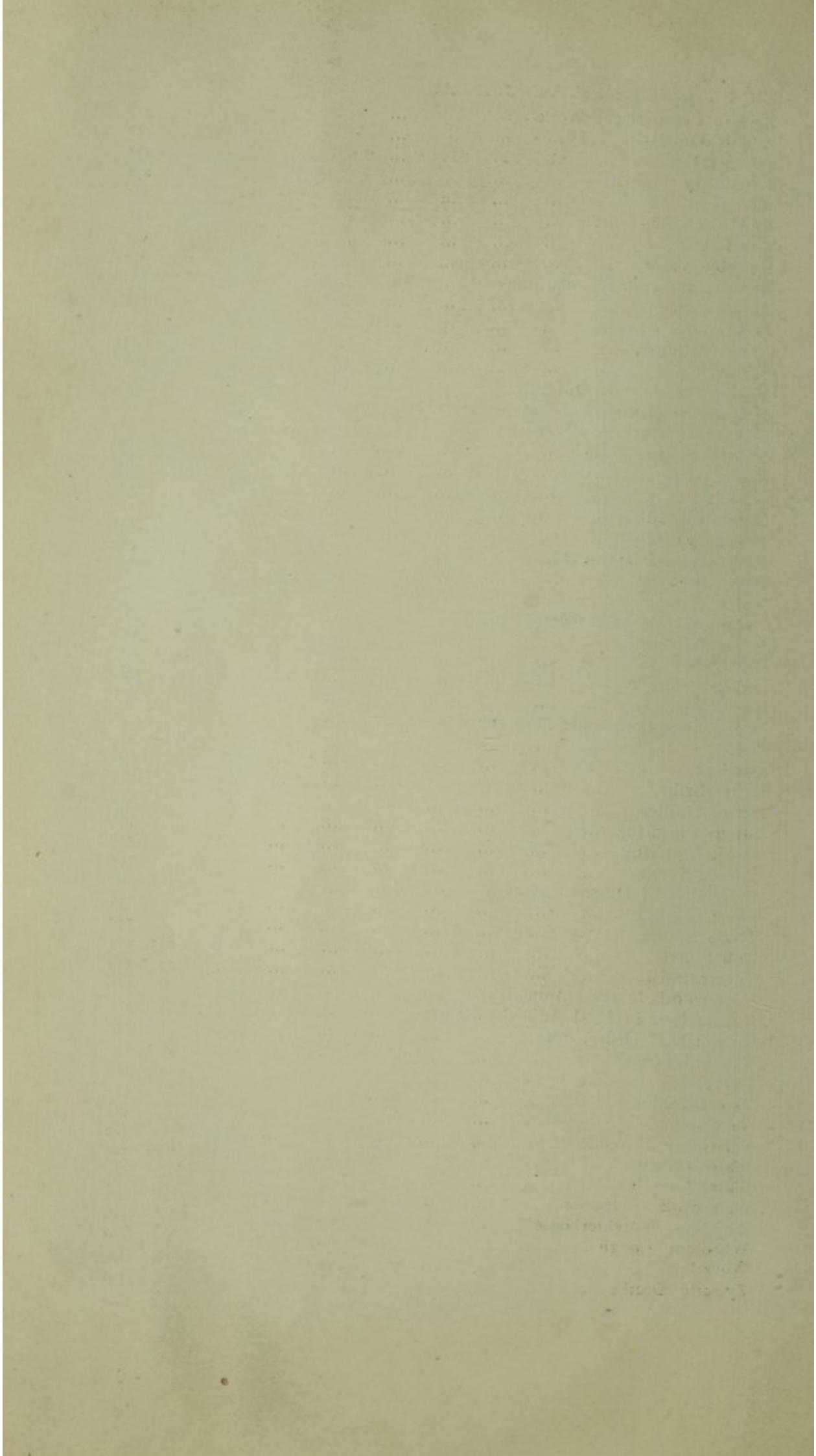
THE DIVISION OF THE

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THE
ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE
BOROUGH OF KEIGHLEY.

TOWN HALL,

KEIGHLEY, MARCH, 1914.

TO THE MAYOR, ALDERMEN, AND COUNCILLORS.

GENTLEMEN,

I beg to lay before you my Report on the health and sanitary condition of the Borough and the work of the Health Department for the year ending 31st December, 1913.

This is the thirty-second Annual Report presented since the incorporation of the Borough and the twenty-second I have written as your Medical Officer of Health.

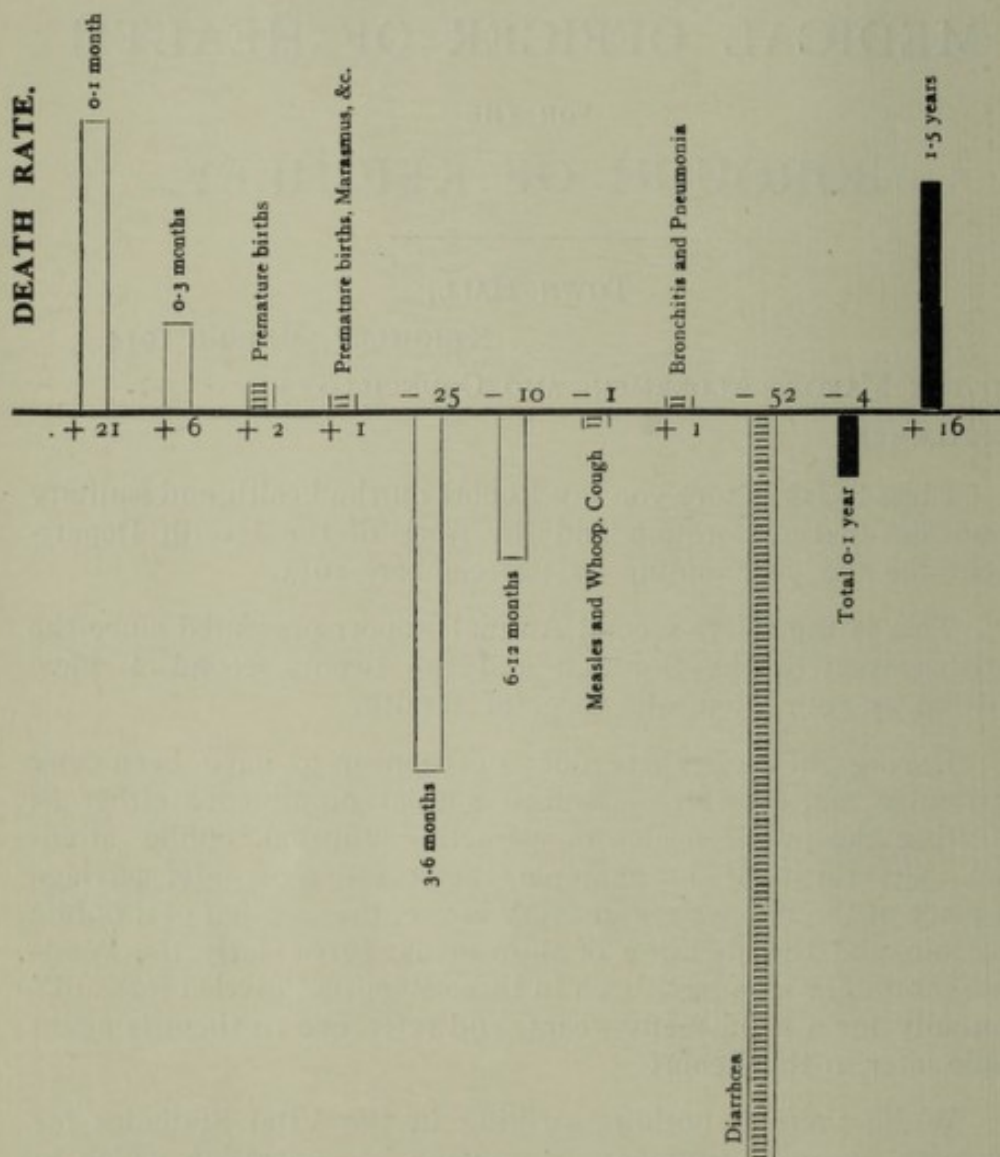
During the year there does not appear to have been any particular matter which assumed special prominence either as affecting the public health or attracting unusual public attention. Certain items, for example, the provision of water carriage in place of the tub system in every house, the erection of a public abattoir, and the abolition of slum areas, particularly the Westgate insanitary area have been in these Reports "carried forward" annually for a good many years, and reference to them is again made later in the Report.

While there is nothing striking in the Vital Statistics for the year, several enactments have come into operation which in the near future should modify beneficially the sickness and mortality rates throughout the country. Of these, probably the most important are the General Order consolidating and amending former Tuberculosis Regulations, and the medical benefit clauses of the National Insurance Act.

Before proceeding with the routine report, there are two comparisons to which your attention might well be directed. The first is one made by the Medical Officer of the Local Government Board in relation to Infant and Child Mortality. In it

a comparison is made between the average experience of Keighley during 1907-10, and that of the 241 urban areas in England. The second I had recently occasion to lay before the Health Committee. It is concerned with the vital statistics and sanitary conditions in Keighley during the past three years, compared with those existing in the borough 25 years ago.

Keighley Child Mortality.



NOTE.—The base line represents the average death-rate for 241 urban areas for the ages and diseases specified, and the vertical columns above or below the line show Keighley's position relative to the average. In the diagram plain vertical columns stand for age-groups, lines for diseases and black columns for total mortality 0-1 and 1-5 years.

You will note that during the first three months of life, namely 0-1 month and 0-3 months, the death rate in Keighley was above the average of the 241 urban areas, especially in the

period 0—1 month. At ages 3—6 months and 6—12 months the death rate was below the average of other towns. For the whole year the rate was 4 per cent. below the average. On the other hand, if the death-rate be calculated over an extended period 1—5 years the borough comes out 16 per cent. above this average.

It will be seen that the death-rate from such developmental causes as Premature Birth, Want of Breast Milk, Marasmus and Congenital Debility, as well as from Measles, Whooping Cough, Bronchitis and Pneumonia, was almost on an average with the rates from the same causes in the 241 urban areas. In regard to Diarrhoea, the death-rate in the borough was 52 per cent. below the average of the other towns. If then, our death-rate (0—1 year) from Premature Birth, Congenital Debility, Measles, Whooping Cough, Bronchitis and Pneumonia was 4 per cent. below the average of other English towns, while from Diarrhoea our rate is 50 per cent. below the average, why is it that our death-rate among children between 1 and 5 years is 16 per cent. above the average? Are those deaths due to preventable causes? Perhaps an answer may be found in the following report. For instance, it may be noted that in the period covered by the above comparison, 53 children died in the borough from Tuberculosis, and 19 met with violent death.

The second comparison referred to is detailed in the following synopsis :—

SYNOPSIS OF KEIGHLEY VITAL STATISTICS.

Comparison of 25 years ago with to-day.

Comparison of 25 years ago with to-day.													
		1	2	3	4	5	6	7	8	9			Health Committee Expenditure per hd per ann.
	Population.	Birth Rate.	Death Rate.	Infant Mortality.	Death Rate from Infectious Disease.	Death Rate from Consumption.	Annual Cases of Typhoid Fever.	Average Age at death.	New Houses built.	No. of Excreta Tubs.	No. of Privy Middens.	Surface Area of Excreta (sq. yds.)	
Average of the 10 years	1881-1890	30.3	21.7.	166	2.4	2.2	55	Years.	165	3860	280	1600	1/9
" " 10 years	1891-1900	28.2	19.1	162	2.0	1.7	53	31	200	4000	50	1000	...
" " 10 years	1901-1910	23.8	15.8	133	1.2	1.3	15	32	133	3100	35	750	...
" " 3 years	1911-1913	20.1	14.5	117	1.2	.8	3	36	66	2700	4	647	a/-

Thus compared with 25 years ago:—

1. The Birth-rate is 10 per 1000 less—equivalent to 440 fewer babies born annually, or 37 per cent. decrease.
2. The Death-rate is 7 per 1000 less—equivalent to a saving of 308 lives annually, or 40 per cent. decrease.
3. The Infant Mortality has decreased equivalent to a saving of 40 infant lives annually.
4. The Death-rate from Infectious Diseases has fallen 50 per cent.
5. The Death-rate from Consumption of the Lungs has fallen more than 50 per cent.
6. The Attack-rate from Typhoid Fever was twenty times as great as it is now.
7. The average age at death then was 31 years; now it has risen to 36 years; i.e., the expectation of life is 5 years longer.

The net expenditure of the Health Department is only a few pence more per head of population than 20 years ago.

8. Houses were being built at the rate of 200 annually—last year only 36.
9. There are 2700 tubs of excreta in the Borough—many closets being within 8 inches of the house window.

nearly fill up the area bounded by the Library, Town Hall, and the £18,000 extension of the Institute for Higher Education—50 rows and 55 in a row,—and, at the recent rate of conversion, will take 20 years to convert to W.C.'s.

10. Tuberculosis too prevalent in certain areas, for instance, last year it was 7 times as prevalent in the West as in the North West Ward.

As in former years extracts from previous Reports are repeated to make each report complete in itself as well as for the information of the Local Government Board, the West Riding County Council, and outsiders generally.

A.—NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

(1) Physical Features and General Character of the Borough.

The Borough of Keighley is situated at the confluence of the River Aire with the River Worth. Though the Town Hall Square is 365 feet above sea level, the town lies at the junction of three valleys, bounded by Rombalds Moor on the North and East, and spurs of the Pennine Range on the West and South. As the town grows, building extends up the hill-sides, so that the Borough is now co-terminus with, and includes, the hamlets of Hainworth, Thwaites Brow and Braithwaite. Thus the height above sea level varies from 300 to 950 feet. The area of the Borough is 3,902 acres, about one half being urban in character, the other half Rural.

The geological stratum upon which the Town stands is mill-stone grit, that is, a hard sandstone found in the Coal Measures. The stone is quarried from all the hill-sides surrounding the town, and from it, with some half-dozen exceptions, all the houses are built. The soil may be shortly described as loam, clay and gravel, and the sub-soil, clay and grit. The physical geography of the district combined with the clay sub-soil tend to favour the prevalence of such complaints as Rheumatism and Follicular Tonsillitis, but otherwise the locality, from its elevation and proximity to the moors, is bracing and healthy.

(2) Population, Area, &c.

At the Census of 1891 the population was 30,811, or allowing for the subsequent extension of the borough boundary approximately 35,000. In 1901 it was 41,564 and in 1911 it was 43,487.

There was thus only an increase of 4.7 per cent. in the population in the last intercensus period, compared with 7.4 per cent. in the previous one.

The estimated population of the borough for the middle of 1913 was 44,010.

The number of inhabited houses in 1911 was 10,098, with an average of 4.306 persons per house, compared with an average of 4.55 persons at the previous census. The small increase in population is probably due to the abnormal amount of emigration which is still going on.

Area of Borough—3,902 acres.

Rateable value—£205,675.

1d. in the £ on the general District Rate realises £737.

Relief of the Poor and other expenses of the Guardians
1s. 0 $\frac{3}{4}$ d. in the pound.

(3) Social Conditions and Employment.

The town depends almost entirely upon its manufacturing trade. The chief industries are Woollen Manufacturing, Combing, Spinning, Weaving—for which it ranks next after Bradford and Halifax—and the manufacture of Worsted Spinning Machinery for which it holds the foremost place in the Kingdom. It also possesses extensive Iron Foundries and Machine Tool making, Laundry Machine, Washing and Sewing Machine Works. A very large proportion of female labour is engaged in the various branches of the Woollen Industry, while the iron works and various forms of Machine making, afford employment to the bulk of the male population. The ready employment for female labour in the mills is of interest in helping to account for the increasing proportion of females over males as shown in the Census returns.

It is of interest too to note that 35 per cent. of children between the age of 10 and 14 are, according to the Census returns, in employment. It is not our province to discuss the economic aspect of this half-time system, but one may readily question the wisdom of allowing over one-third of our children of School age to engage in work to the possible, if not probable, detriment of their physical and mental development.

There is no evidence that any particular occupation has a baneful influence on the borough employees, nor does it appear that fluctuations in trade have had any great effect on the health of the community. During the past year trade has been good, and even when one of the town's industries has been depressed the varied nature of the trades and the ready employment for both sexes prevent a strike or temporary depression from seriously restricting the necessities of life and thus affecting the public health. The variety of trades therefore tends to industrial stability, and, owing to the large choice of occupation for employees, the borough may be regarded as in great measure self-dependent.

B.—SANITARY CIRCUMSTANCES OF THE DISTRICT.

(1) Water Supply.

The Keighley Waterworks is an undertaking entirely in the hands of the Corporation. The water supply is derived from upland gathering grounds on Stanbury, Trawden, Oakworth and

Haworth Moors, on the borders of Lancashire and some five to eight miles west of Keighley.

Comprised in the Scheme are (1) Watersheddles, a high level storage reservoir situated 1,100 feet above sea-level, $27\frac{1}{2}$ acres in extent, with a capacity of 156,000,000 gallons. (2) Ponden, a millowners' compensation reservoir on the head waters of the River Worth, two miles down the valley from Watersheddles, with an area of 30 acres, and a capacity of 212,500,000 gallons. (3) Blackhill service reservoir, 800 feet above ordinance datum and a capacity of 2,500,000 gallons. The gathering ground for Watersheddles, 1,600 acres in extent, is mostly moorland overlying millstone grit.

Quality of Supply.

The water is naturally very pure but soft, having a hardness of $1\frac{1}{2}$ degrees.

Like all moorland waters, it has a slightly brownish colour from the peaty gathering ground, and an acid reaction produced by certain bacteria present in the humus. The peaty colour is objectionable merely on aesthetic grounds, but the acid possesses distinctly plumbo-solvent powers. To remove the colour, therefore, and to assist in neutralising the dangerous acid, the water is conveyed from Watersheddles to Oldfield in an iron pipe, 12 to 18 inches in diameter, and there submitted to careful filtration. The Oldfield Filtration Works, completed in 1893, consist of three Polarite beds, four sand filters and one clean water reservoir. Each Polarite chamber contains 2 feet, 6 inches of polarite, while the filtering media in the sand filters consist of 18 inches of hard-packed rubble sandstone, 6 inches of 4 inch broken sandstone, 3 inches of $\frac{3}{4}$ inch to $\frac{1}{4}$ inch gravel, and 18 inches of sand, that is, a total depth of 4 feet. The water passes through the filters at a rate of 500 gallons per yard per 24 hours. Of the four sand filters, three are always working while the top layers of the fourth are being washed. In this way nearly two million gallon of water are passed into the clean water reservoir daily. To further neutralise the peaty acid and obviate the risk of plumbo-solvent action going on in the lead service pipes, varying quantities of ammonia alkali (carbonate of soda) are added hourly.

As you are aware, the acid is the result of bacterial action and is continually being formed, especially during warm weather when the bacterial activity is greatest. During a period of drought the acid so produced accumulates in the peat until washed out by heavy rainfall. It is thus apparent that the degree of acidity varies from time to time and necessitates regular and systematic treatment, varying with the amount of acid present in the water.

Regular analysis is made of the water before and after treatment at the Oldfield Filtration works. This is necessary not on account of possible pollution, but in view of the varying amount of organic acid in the peaty gathering ground, and consequently of the varying potential plumbosolvency of the peaty water. Sudden variations due to temperature, rain fall and bacterial activity have thus to be detected and dealt with.

The amount of alkali required to produce slight alkalinity is determined by daily or weekly analysis and the daily addition of from 160 to 240 lbs. of ammonia alkali per million gallons has prevented any appreciable plumbo-solvent action on the service pipes, and consequently any possibility of lead-poisoning among the consumers.

To prevent any possible pollution from surface manuring the Corporation purchased and control not only the moorland but the cultivated farm land adjoining the gathering ground.

From Oldfield, after filtration and treatment with alkalies, the water is distributed to consumers, the greater part being conveyed to Blackhill service reservoir, whence from an altitude of 800 feet it can be delivered to practically all parts of the Borough.

Sufficiency of Supply.

As a rule there is a plentiful supply. At the same time householders in Long Lee have complained, not without cause, that their supply was insufficient at times. This is quite apart from any scarcity arising from the long continued drought of the past summer. Not only was the diameter of the supply main at Long Lee too small, but during the day when water was being freely drawn at Ingrow, the pressure in the service main to Long Lee became too low to raise a sufficient supply for the needs of those living 500 feet above the level of the mains in the town.

This defect has now been overcome. A trunk main varying from 9 inches to 6 has been laid from the existing main at Denby Hill direct to Long Lee, via Cross Roads, instead of by the circuitous route through Bracken Bank and Ingrow Bridge. The high lying suburbs, Hainworth, Long Lee and Thwaites Brow, are thus independent of their former somewhat limited supply.

In previous Reports one was able to say that no restriction had been put on the amount of water used for domestic purposes. The excessive summer drought, however, led to a precautionary curtailment of the supply for a few weeks towards the end of autumn but only during the night. No danger to health and comparatively little inconvenience resulted from the temporary restriction. A necessary prohibition had for a longer period to

be put on the unlimited use and abuse of water for swilling pavements. This restriction was in a measure necessitated by the trunk mains now proving too small for the growing requirements of the district and will continue until new and larger supplementary mains have been provided.

Apart from, or in addition to, the scarcity of water arising from dry seasons this insufficiency of trunk mains proved, and is likely to prove, a serious obstacle to the speedy substitution of water carriage for night soil tubs. This interference with a very necessary sanitary reform is to be deprecated, especially as the reform will not result in so great a waste or consumption of water as is generally supposed, while in every other respect, economic as well as hygienic, there are manifold reasons why the process should be accelerated.

The average daily consumption of water for domestic and trade purposes was 27 gallons per head of population.

Of 10210 houses in the Borough some 9760 are supplied from the Corporation mains, leaving approximately 450 dependent upon private supplies. The majority of these houses are cottages and farms, which from their outlying and elevated situation cannot readily be supplied otherwise than by springs and shallow wells, together with a group of houses in Springbank and those on the west side of Ingrow Lane.

Little need be said regarding the extension of the Sladen Valley Works. The construction of the new Lower Laith Reservoir is steadily going on. An impermeable foundation seems to have been secured, the puddle trench is nearing completion and the contract for the further work is about to be advertised.

(2) Rivers and Streams.

The subject of river pollution is not an urgent one within the Borough. The North Beck in its passage through the Westgate insanitary area was frequently made the dumping ground for dead cats, old clogs and even straw mattresses, but as practically all drains are now connected with sewers, there is little or no liquid pollution going on. The same comparative freedom from pollution holds good with regard to the River Worth, although one of its smaller tributaries from Glen Lee occasionally shows evidences of contamination by domestic sewage.

(3) Drainage, Sewerage and Sewage Disposal.

(a) HOUSE DRAINAGE.

The plans for the drainage of all new buildings are passed by the Highways and Buildings Committee. The construction of the drains is supervised by the staff of the Borough Engineer, who grants a certificate that the building is fit for occupation

before occupancy is permitted. The responsibility for the condition of the drains is then transferred to the Health Department, although the official of that Department has had no opportunity to become acquainted with the course or construction of the drains for which he is made responsible. This does not seem a satisfactory arrangement for either the property owner, the contractor, or the officials concerned.

Details of the amount of house-drainage work accomplished during the year is given in the appended report of the Chief Sanitary Inspector. Generally, however, it may be stated that wherever infectious disease occurs in a house or when complaints are received of any insanitary condition the drains are inspected as part of the routine. Similarly when the Borough Engineer reports that he is about to pave a street, the opportunity is taken to test and make good the drains of all houses abutting on that street before the paving work proceeds. The tests usually applied are smoke, grenade or water, the latter especially being used for new drains.

In the town proper, all house drains are now connected with the sewer. Those in outlying parts of the borough are mostly connected with sumps, although at farm buildings the sewage may be run on to agricultural land.

(b) SEWERAGE.

As stated in the previous paragraph all house drains except those from a few outlying cottages and farms are connected with sewers so that for the time being the sewerage of the town may be said to be completed.

There are three sewerage systems in the borough. The outfall sewer of the principal one conveys the drainage of five-sixths of the town to the sewage disposal works at Marley. The two remaining outfall sewers are in connection with small sewage disposal works at Braithwaite and Utley.

The main sewers are composed of brick or pipe and are perfectly satisfactory. The older sewers on the other hand, are built of stone, have rounded bottoms, and although they appear efficient can no longer be considered up-to-date. Consequently they are being replaced by modern pipe sewers. The Borough Engineer reports that "the length of pipe-sewers put in during 1913 is 609 lineal yards, consisting of storm sewers, 55 yards; defective sewers relaid, 192 yards; new sewers including those laid in the developing of estates, 362 yards."

(c) SEWAGE DISPOSAL.

Connected with the three sewerage systems mentioned above are three separate Disposal Works. By far the most important

are those at Marley. There the egg-shaped outfall sewer discharges into three septic or sedimentation tanks each 200 feet long by 59 ft. broad, by 6ft. 6in. deep.

After passing through the sedimentation tank the sewage is distributed over twelve continuous percolating "Bacteria filters," each 100 ft. in diameter and 6ft. deep, by means of revolving sprinklers worked automatically by the head of sewage in the afferent conduit. Thence the effluent is conveyed for final treatment to the sewage farm, consisting of 60 acres of land, of which 50 acres are laid out in beds prepared for dealing with sewage on the principle of intermittent downward filtration.

Sludge from the septic tanks is discharged into lagoons on some adjoining land. There it is allowed to dry before being disposed of—part to farmers, part being spread on neighbouring agricultural land belonging to the corporation.

The sewage from the two other drainage areas, Braithwaite and Utley, is somewhat similarly dealt with. That from Braithwaite is passed through a septic tank and double contact bacteria filters: from Utley it is conveyed to two sedimentation tanks, and then on to agricultural land.

(4) Closet Accommodation.

At the close of 1913 it was estimated that there were in the borough 7030 water closets, 1700 waste water closets and 2569 tub closets. There are no midden privies in the town although naturally in connection with farm buildings there are some combined house and farm-yard middens.

It is satisfactory to note that the conversion of tub-closets into water-closets is proceeding slowly and steadily. Now that the advantages of fresh air are becoming appreciated, tenants find they cannot open their windows with a tub-closet within a few feet of the window-sill. Some are actually within 8 inches. The desire for a more modern and more sanitary method of dealing with night-soil is therefore growing more urgent, and seeing the bill for excreta removal amounts to £400 a year, it should not be beyond the scope of practical economics to capitalise that sum and proceed more quickly with the process of conversion. The Health Committee, as stated in last year's report, are proceeding on the lines of "worst first," and but for the scarcity of water during the summer drought, a larger number of Conversions would have taken place. As it was 296 tub-closets were abolished and 503 houses were supplied with one W.C. each—this number of course, being due to the fact that in most instances, more than one household went to a closet.

The "conversions" effected during the past few years are shown below :—

	1907	1908	1909	1910	1911	1912	1913
Houses	238	79	472	148	205	190	503
Factories, &c.	21	5	3	5	—	—	8
	259	284	475	153	205	190	511

Special provisions in the Keighley Act of 1898 give practically the same powers as Sect. 39-42 of the Public Health Acts Amendment Act 1907 for conversion of privy into water closets. It looks as if it may take 15 to 20 years before we see the last of these antiquated tubs, unless the sanitary conscience is aroused to demand their more speedy abolition. Fortunately no new houses can be erected without the provision of modern water-closets.

Practically all tubs are emptied weekly—the exceptions being in connection with outlying cottages and farms.

(5) Scavenging, &c.

There are approximately 9000 portable receptacles for household refuse in use, fully two-thirds of which number are emptied at least weekly, and the remainder once a fortnight. In the summer time more frequent emptying is attempted, and necessarily so where a number of tubs are grouped together, and where thoughtless housewives fill them with decaying vegetable matter instead of burning it in the natural destructor—the kitchen fireplace.

Ash pits, like privy middens, are only to be found in the outlying districts, and are emptied as required—sometimes by corporation workmen, sometimes by the farmers themselves.

Domestic and trade refuse is tipped on a suitable and convenient site between the Gasworks and Sewage farm. The tip is very carefully managed, the refuse being covered with soil, trees planted round the tipping area, and everything done to make this method of refuse disposal as little objectionable as possible. It must not, however, be inferred that tipping meets modern requirements so well as a destructor—the provision of which will have to be faced before long.

The scavenging of all paved streets is undertaken by the Health Committee and carried out by a Special Cleansing Staff. The appreciation of this work as Sanitary work is gradually developing and an increasing number of streets are being swept

daily, to the greater comfort, as well as the greater healthiness, of the community.

Unpaved streets and madacam roads, that is the highways within the Borough, are under the charge of the Highways Committee and the scavenging is undertaken by the Borough Engineer as required.

Further details as to Refuse Removal, Street Cleansing, &c., will be found in the Report of the Sanitary Inspector, pages 343-7.

(6) Sanitary Inspection of District.

A classified statement of the inspections made during the year has been supplied by the Sanitary Inspector in compliance with Art. XX. (16) of the L.G.B. Order:—

	Inspections.	Re-inspections.
Inspection of dwelling houses	... 4061	... 3966
„ Schools	... 74	... 21
„ Factories, Workshops and Bakehouses	... 427	... 33
„ Cowsheds, Dairies and Milk-shops	... 351	... 20
„ Ice Cream premises	... 33	—
„ Fried Fish Shops	... 253	... 8
„ Slaughterhouses	... 1148	... 9
„ Offensive Trades	... 71	... 20
„ Common Lodging Houses,&c.	97	... 5
„ Offensive Accumulations	... 39	... 6
„ Drains and Sewers	... 4328	... 1402
„ Tents and Vans	... 77	—
„ Miscellaneous	... 1640	... 5

Further details are given on pages 306-319.

The defects or nuisances discovered during these inspections, together with the result of the notices issued and the sanitary improvements effected thereby, will be found detailed on pages 307-310.

Number of Statutory Notices served... 380

Number of Informal or Preliminary Notices served 323

Of the 703 notices served, 526 were fully complied with, or the necessary works to comply with the same were in progress at the end of the year. Where nothing had been done, or where the nuisance occurred too late for compliance, the items are "carried forward." These amounted to 177.

(7) Premises and Occupations controlled by Bye-laws.

(a) COMMON LODGING HOUSES.

These are now three in number, with sleeping accommodation for 325 lodgers—a provision amply sufficient for the re-

quirements of the district. A fourth lodging-house, which for years was reported as totally unsuitable for the purpose, was purchased by the Corporation and closed as unfit for human habitation.

The remaining houses provide very satisfactory accommodation and the management may be considered to meet requirements—at least the Bye-laws are complied with and the premises generally kept clean and tidy.

(b) HOUSES LET IN LODGINGS.

Every attempt has been made to supervise the management of these unsatisfactory houses, but the class of tenant, migratory in morals as well as in residence, and the methods of sub-letting make proper supervision extremely difficult. Fortunately the number of "Furnished Apartments" has been considerably reduced, but the remaining few are by no means models of propriety and cleanliness, and as formerly reported they cannot be made such until bye-laws corresponding in definiteness and strictness to those for Common Lodging Houses are obtained and enforced.

(c) OFFENSIVE TRADES.

These include 6 tanners and leather dressers, 4 tripe dressers, 1 gut scraper, 1 tallow melter, 1 maggot breeder, 40 fish friers, 3 rag and bone dealers, and 2 hide and skin dealers.

Your bye-laws have been reasonably complied with, and the various trade processes carried on with due consideration to the maintenance of sanitary conditions and the amenities of the neighbourhood. The only point one need emphasise is the scrupulous care and cleanliness which ought to be observed in triperies and gut scraping establishments. The difference, say, between a tannery, a knackers yard and a tripery, is obvious, and the bye-law requiring cleanliness in each and all may be the same, but nevertheless it must be very differently interpreted when dealing with businesses in which no food, food for animals and food for human beings is being prepared.

(8) Medical Inspection of Schools.

The Medical Officer of Health is also the School Medical Officer recognised by the Board of Education. The Report of the School Medical Officer for the past year has recently been placed in your hands, so that only a very short summary of some of the points discussed in that Report need now be given. For details see separate Report.

(a) BUILDINGS, &c.

The Public Elementary Schools, 9 Council and 4 Non-Provided, are built on very varied plans—the Central Hall

principle predominating. The Council Schools are divided into 18 Departments and the Non-Provided Schools into 7.

The total seating accommodation is ample, but the unequal distribution of schools and population results in a tendency to overcrowd certain departments, e.g., St. Mary's, while others are insufficiently filled.

Attention is drawn to defective lighting and ventilation in some of the older Schools, to inadequate and insufficient cloak-room accommodation in others, and to the scanty provision of soap and towels in all.

Trough closets or groups of pedestals, irregularly flushed, are provided in all schools and, though much inferior to the single pedestal closet with chain-pull flush, are kept fairly clean and tidy.

(b) DETAILS OF INSPECTION.

All children aged 5, 7 and 12 were examined in School during School hours. There were conducted 2269 "routine" inspections to which parents were duly invited and at which 75 per cent. were present. Parents were then advised as to the nature of defects found and the steps to be taken for the removal or amelioration of these defects.

The following table summarises the principal defects found :

Percentage of Children with Abnormal Conditions.

Nature of Defect or abnormality.	Among 624 5 year olds.		Among 672 7 year olds.		Among 973 12 year olds.		Am'ng 2269 " Routine " cases.	
	No. of cases.	%	No. of cases.	%	No. of cases.	%	No. of cases.	%
Impaired Nutrition ...	14	2.2	34	5.0	42	4.3	90	3.9
Teeth decayed—less than 4	386	61.9	268	39.9	632	64.9	1286	56.6
" " —4 or more ...	238	38.1	404	60.1	341	35.1	983	43.4
*Enlarged Tonsils ...	138	22.3	246	36.6	255	26.2	639	28.1
*Adenoids, Granular Pharyn- gitis ...	89	14.3	135	20.1	115	11.8	339	14.9
Enlarged Glands of Neck ...	19	3.0	27	4.0	23	2.4	69	3.0
Uncleanliness of Body ...	6	1.0	5	.7	9	.9	20	.9
Nits, Vermin ...	97	15.5	140	20.8	195	20.0	432	19.0
External Eye Disease ...	40	6.4	35	5.2	43	4.3	118	5.2
Defective Vision ...	—	—	58	9.2	178	18.3	236	14.7
Disease of Ear ...	23	3.7	21	3.1	18	1.8	62	2.7
Defective Hearing ...	40	6.4	59	8.8	53	5.4	152	6.7
Mental Condition ...	—	—	84	11.9	96	8.9	180	10.9
Defective Speech ...	20	3.2	33	4.9	28	2.9	81	3.5
Disorders of Heart ...	5	.8	8	1.2	17	1.7	30	1.3
" " Lungs ...	97	15.5	103	15.3	86	8.8	286	12.6
Defects of Nervous System...	7	1.1	8	1.2	12	1.2	27	1.2
Tuberculosis ...	2	.3	4	.6	9	.9	15	.6
Rickets ...	15	2.4	20	3.0	16	1.6	51	2.2
Deformities, Spinal Disease, etc. ...	19	3.0	29	4.3	25	2.6	73	3.2

* Defects noted if present in any degree.

The following table summarises the frequency of occurrence of certain diseases and conditions among children at different age-periods:

Disease	5 year olds.	7 year olds.	12 year olds.
	%	%	%
Measles	57	84	88
Whooping Cough	45	50	51
Scarlet Fever	13	22	21
Diphtheria	3'4	5'7	6'4
Chicken Pox	27	40	38

These details are of special interest in connection with administrative work during epidemic times. The majority of susceptible children have contracted the diseases named by the age of seven, and except under special circumstances exclusion of children from infected families is all that is required, while the education of the other children is not interfered with.

(c) AMELIORATION OF DEFECTS.

Subsequent to the advice given at the time of Inspection homes are visited, defects discussed, action advised and the dangers of delay duly emphasised. Re-examination of many of the defectives follows, with the result that some 70 per cent. of defects were ameliorated and a considerable number cured.

Attention was drawn to good work done in connection with the Holiday Camp at Humphrey Head, with allotment gardening, swimming baths and the generous assistance given by the Charity Organisation Society and other charitable institutions.

The proposed opening of a Special School for Mentally Defectives was acknowledged and an extension of the work of the "Inspection Clinic" strongly recommended.

(9) Food.

(a) MILK SUPPLY.

Most of the milk consumed in the borough comes from farms within its area. On an average there are 620 milch cows, in 105 cowsheds on 63 dairy farms. All are inspected by your Veterinary and Sanitary Inspectors, the former of whom reports three times a year on the health of the cows and the condition under which the milk is produced as found by him at three systematic inspections in the spring, autumn and winter quarters.

Analyses show the supply of milk purveyed in the borough to be of good quality and increasingly free from particles of filth or extraneous matter.

Enough has been said in former Reports on the necessity of scrupulous cleanliness in all stages of production, storage and transit of this vital article of food, and if attention is not again drawn at length to these details it is not because their importance has diminished or that the need for a reminder has in every case disappeared.

The matter is further discussed in the Report of the Sanitary Inspector and need not be reiterated here.

(b) MEAT.

There are 12 slaughter-houses situated in different parts of the borough and all are inspected regularly and impartially. So far as known, therefore, practically all meat sold has previously been inspected, but, however energetic your Inspectors may be, they cannot undertake efficient inspection when slaughtering is conducted in a dozen different places at the same time.

It is due to the trade to state that most, if not all, are anxious to conduct their various operations as hygienically as their premises will allow. At the same time one must confess that as a rule the slaughterhouses are overcrowded, badly lighted, and insufficiently provided with proper means for ensuring cleanliness.

For this condition of things there is only one remedy, and that is a public Abattoir. Even if there were no need for regular meat inspection, the impossibility of maintaining that scrupulous cleanliness necessary in the preparation of human food is sufficient reason why an up-to-date Abattoir should be provided. That butchers are doing the best they can with the means at their disposal has already been put on record, and it is for the public to say whether they continue satisfied to have their meat supplies prepared for them under conditions which have been called in question for the past twenty years.

The need for a public slaughterhouse was fully endorsed by the Council in 1899 when a site was purchased for the purpose. Many obstacles to the establishment of an abattoir have been removed since then, and former interested objectors would now view with complacency this desirable and well-nigh indispensable requirement of modern times. It is to be hoped that the efforts of the Health Committee to secure a suitable site in place of the one formerly purchased may ere long meet with deserved success.

During the year there were surrendered the carcasses of 11 cows, 32 pigs, and 1 sheep, which, with various separate organs and parts, weighed approximately 7 tons, 16cwts., 1 qrs., 10 lbs. The Health Department having previously been notified of the doubtful condition of the animals, no action under Sect. 117 of the Public Health Act, 1875, was necessary.

Further details on this subject will be found on pages 313-21 of the Sanitary Inspector's Report.

(c) OTHER FOOD STUFFS.

The inspection of Market Stalls, &c., especially on Saturday nights, is conducted methodically, so that care is taken by the proprietors to avoid exposing any article whose unsoundness or unwholesomeness might attract the Inspector's eye. Not infrequently hampers of fish or fruit arrive by rail, but the consignee will not accept delivery on account of the unsound condition of the goods. In this way 5 large barrels of Californian pears had to be condemned as unfit for food, but naturally no punitive action could be taken in such a case.

Particulars of analyses of samples purchased under the Sale of Food and Drugs Act will be found later in the Report.

(10) Housing.

This subject, though appearing early in the Report, was the last to be written and simply because it was felt to be one most difficult to deal with. There was the further painful feeling that so little had been done to meet the serious needs of the poorer classes. Property owners may think enough has been done already, but much more could and would have been done to improve housing conditions had there been vacant houses to which displaced tenants could have gone.

During the year the Health Committee have made visits of inspection to the more slummy areas, e.g., Westgate, Sunderland Street, Garden Street, Beck Street, &c., and, as the responsible Committee, are fully alive to the urgent need for active measures towards better housing.

With regard to the first mentioned area, the Committee have been reduced to the inglorious position of marking time. This area was officially represented to the Council in 1899 as an unhealthy area, and again in May, 1911. In 1899 the then Council fully admitted the unsatisfactory condition of much of the property within the area, but financially could not undertake an Improvement Scheme. In July, 1911, however, the Council decided (1) the Area is an Unhealthy Area, (2) an Improvement Scheme ought to be made in respect thereof, (3) a Joint Committee submit a Scheme for the improvement of such area. Two and a half years have passed since July, 1911, that is, since the Corporation in open Council decided that the area was unhealthy and that an improvement scheme **ought** to be carried out. The members of every Health Committee for the past 20 years have endorsed the wisdom and justice of a reconstruction scheme, and further support was given to the Westgate Improvement Com-

mittee by the Council's resolution in July, 1913, to enlarge the area that should be dealt with in the Improvement Scheme. Additional evidence may readily be found in the Tuberculosis and the Mortality Registers, the former of which shows that in 1913 Tuberculosis was seven times as prevalent in the West as in the North-West Ward, while the latter shows that the death-rate for the same period was eight times as high in the West Ward as in the North-West.

Many of the worst houses within the area have, during the past few years been closed—74 in 1911 and 10 in 1912,—and some have been more or less demolished, but the Health Committee have lately been induced to hold their hand because of the difficulty of re-housing the tenants at rentals to suit their limited means.

In February of last year a deputation from the Health and Westgate Improvement Committees visited Liverpool to inspect the municipal workmen's dwellings, and investigate the conditions which led the Corporation there to embark on an extensive housing scheme. Apart from the financial aspects, some doubt seemed to exist lest the tenement system adopted there might not appeal to Keighley people. The sanitarian naturally thinks more of the hygienic environment, the enforced cleanliness, diminished overcrowding and the concomitant or resultant improvement in health and physique associated with municipal dwellings, and trusts that these factors would slowly be appreciated by slum dwellers, with benefit both to themselves and the general community.

Coming next to Sunderland and Back South Street, you will remember that last year the Health Committee was giving its attention to a condition of things there identical with those existing in Westgate. The result has been that 15 houses and tenements were officially closed as unfit for human habitation, while in the same area some 35 tenements have been dealt with under Sect. 15 of the Housing and Town Planning, &c., Act, 1909, and are now in process of reconstruction.

In other parts of the town, e.g., Allison Square, Hainworth Shay, &c., improvements were carried out, full details of which and of the work summarised above are given in the Report of the Sanitary Inspector, who acts as Inspector under the Housing Acts.

Demolition orders following upon Closing Orders were made in respect of 3 houses in Allison Square, 2 in Beck Street, 1 in Turkey Street, and 5 in Westgate.

The Inspections made for the purposes of Sect. 17 of the

1909 Act, and the result of such inspections may be summarised as follows :—

Number of dwelling houses inspected under Sect.					
17	...	...	...	...	96
Number found so dangerous or injurious to health					
as to be unfit for human habitation ...					18
Number of representations made with a view to					
Closing Orders ...					18
Number of Closing Orders made ...					18
Number of houses where defects were remedied					
or in progress without Closing Orders ...					75
Number of houses made fit for habitation after					
Closing Orders ...					0

The general character of the defects consisted in dampness of walls and floors, defective walls and ceilings, windows not made to open, unpaved yards and defective drainage. Details will be found enumerated in the Report of the Housing Inspector, page 326.

The *adequacy* or otherwise of houses for skilled artisans varies with the state of trade and the demand for this class of house is readily met by private enterprise. With houses to let at 2/6 to 5/- per week the problem is different and apparently insurmountable unless the municipality face the responsibility of supplying the demand. The erection of a block of flats or tenements, to be let at a low rental, has been seriously considered by the Health Committee, and one awaits developments with both interest and anxiety.

The subject of *overcrowding* is becoming complicated by a variety of definitions. There is legal overcrowding, generally regarded as a matter of cubic feet of air space, irrespective of the efficiency of the means of ventilation, moral overcrowding, where there is common use of a bedroom by adult members of the same family, irrespective of sex, and sanitary, or rather insanitary, overcrowding, where more than two persons occupy a bedroom, even when one is a consumptive.

There does not appear to be any great prevalence of overcrowding in a legal sense. There are, however, many bedrooms technically overcrowded, but with other rooms in the house unoccupied. The evil consequences of thus unnecessarily sacrificing the available air space does not seem to be appreciated, even when one of the occupants of the crowded room is tuberculous. As mentioned later in the Report, only 12 per cent. of the notified cases of Tuberculosis had the use of a separate bedroom. These local customs die hard and before dying they leave their fatal mark on many a victim. Public comment on the moral and physical unhealthiness of this form of overcrowding seems the

only remedial agent capable of opening the mind of the ordinary householder.

The following figures extracted from the 1911 Census returns shows the number of families and the number of persons living in houses or tenements with 1, 2, 3 and 4 rooms respectively.

No. of rooms per tenement.	Number of persons in each family.												Number of families.	Total Number of persons.
	1	2	3	4	5	6	7	8	9	10	11	12		
1	96	105	51	21	9	—	—	—	—	—	—	—	282	588
2	87	231	179	125	83	56	34	5	6	—	—	—	806	2669
3	60	341	407	334	228	148	90	60	18	7	6	3	1702	6772
4	65	401	534	434	317	224	114	74	41	17	9	6	2236	9234

There are no grounds for supposing that the population occupying these smaller tenements has decreased since 1911, so that we may conclude that there are 80 one-roomed houses and nearly 500 two-roomed houses with 3 or more occupants, while 2800 families and over 10,000 persons live in three-roomed houses.

The provision of *Open Spaces* is characteristic of the town, there being a central square, three public parks and two public playgrounds. In the older parts, e.g., Sun Street, Greengate, where the worst type of back-to-back houses may be found, there is diminished air-circulation, but fortunately the areas are small and ready access to opener spaces is available.

Cleanliness about the house and weekly swilling of the pavements and back yards are marked characteristics of the better-class working population, while the converse would not libel the average occupant of the slum dwelling.

The paving of yards is steadily progressing and this improvement naturally encourages cleanliness and the swilling habit.

Supervision of the erection of new houses is maintained, and a certificate of fitness for occupation granted by the Borough Engineer in every instance before tenancy is allowed. There has been no improvement in the building trade during the past year, and as seen from the following table the number of new houses is only a fraction of the number erected a dozen years ago:—

The Domestic Workshops on the Register include the following Classes:—

Bakers (above ground)	...	...	...	...	28
„ (under ground)	...	...	...	...	6
Tailors	...	...	...	...	6
Shoemakers	...	...	...	...	4
Dressmakers	...	...	...	...	12
Pork Butchers	...	...	...	...	5
Miscellaneous	...	...	...	...	3
					—
					64

SANITATION IN FACTORIES AND WORKSHOPS.

Section 22 of the Public Health Acts Amendment Act, 1890, is in force in the Borough, and consequently the Corporation is responsible for the proper provision of water-closet accommodation in Factories. The standard of "sufficiency and suitability" adopted by the Health Committee is "not less than one W.C. for every 25 employees, and separate provision for the sexes."

As a result of the action taken the following works were carried out—

Factories—Water supply provided	...	...	...	0
Sanitary conveniences improved	...	...	...	5
Sanitary conveniences cleansed	...	...	...	8
Additional conveniences provided	...	...	...	8
Workshops—Light and ventilation improved	...	...	...	1
Sanitary accommodation provided	...	...	...	1
Cleansed or Limewashed	...	...	...	228
Bakehouses—Cleansed or Limewashed	...	...	...	91

BAKEHOUSES.

These have all been carefully inspected and certificates of fitness granted. It cannot be said that all comply with modern requirements, but every effort seems to be made to keep them in a clean and wholesome condition. Of 79 on the Register 18 are classified as underground.

The 34 *Domestic* Bakehouses are under similar supervision and have to comply with the requirements of the Factory and Workshops Act as applied to Bakehouses. They likewise have to comply with the general law regulating the fitness of the dwelling-house for human habitation.

HOMEWORK.

Two lists of outworkers have been received and there is no reason to think there has been any contravention of the Act regarding the supply of such lists.

C.—SANITARY ADMINISTRATION OF THE BOROUGH.**(1) Staff.**

The personnel of the staff remains practically the same as last year, and consists of a Chief Sanitary Inspector and Superintendent of Public Cleansing, three Assistant Sanitary Inspectors, one Assistant Superintendent of Cleansing, three Clerks, one Health Visitor and one Vet. Surgeon. It is due to each and all to say they have worked loyally and conscientiously for the benefit of the citizens and the credit of the Department.

The record of their work is the best evidence of this and may be found detailed at pages 289 and 304.

(2) Hospital Accommodation and Administration.

The Keighley and Bingley Joint Hospital provides accommodation for 100 patients, or if the Convalescent Day rooms be utilised during the pressure of an epidemic for as many as 132. The demand for beds last year was not so great as during 1911 and 1912, yet it was sufficient to make an extension in the form of a Cubicle Pavilion not unwelcome.

This addition was felt to be specially necessary owing to the frequent admission of mixed infections, e.g., Scarlet Fever and Diphtheria, or Scarlet Fever recently associated with the infections of Measles, Whooping Cough or Chicken Pox. Many cases too of Scarlet Fever were so mild that a definite diagnosis was problematical, yet were sufficiently like Scarlet Fever to justify their isolation.

In the Cubicle Pavilion now nearing completion there are four wards of three cubicles each—the wards being arranged in the form of a Maltese Cross. Each cubicle opens separately on to a verandah, and is fitted up so as to be self-contained. Glass partitions separate the various cubicles, which can be supervised from a common duty-room forming the centre of the cross.

Separate diseases can thus be attended by the same nurse, who before entering a cubicle must take the precaution to wash her hands and don a special overall under the verandah.

The idea underlying these arrangements is based on the fact that:—

Each case on admission can be separately isolated until the diagnosis is confirmed.

Doubtful cases are not a source of danger to others nor others to them.

Mixed or undeveloped infections can be isolated so long as necessary.

The working expenses are likely to be greater than in a large common ward, but is hoped there will be compensation in the lessened number of secondary infections.

A new departure was made by the appointment on May 17th, of a lady resident Medical Officer. Owing to the great amount of work entailed by the Scarlet Fever epidemic and the steadily increasing importance of the Sanatorium your medical officer felt that he could not give sufficient attention to his duties at the Hospital, with the result that Dr. Mary Brown was appointed to relieve him of the direct charge of the patients.

In the following table the admissions from the Constituent Authorities in the Joint Boards area are given for comparison since the Hospital was opened.

Year.	Keighley.	Bingley.	Oakworth.	Haworth.	Oxenhope.	Keighley Rural.	Outside Authorities	Total.
1897	57	53	1	3	9	6	2	131
1898	164	35	11	19	...	4	7	240
1899	267	81	10	11	5	13	27	414
1900	210	102	20	13	1	68	3	417
1901	237	36	5	18	1	35	27	359
1902	91	30	5	4	5	8	28	171
1903	73	34	3	44	17	27	15	213
1904	88	18	41	21	...	29	1	198
1905	201	40	26	6	14	7	...	294
1906	214	60	33	2	8	15	...	332
1907	146	66	21	5	...	27	...	265
1908	148	85	6	46	1	17	34	337
1909	200	70	34	40	10	16	12	382
1910	353	77	6	23	2	25	...	486
1911	552	68	...	32	...	36	6	694
1912	440	187	12	66	11	70	1	787
1913	233	202	27	63	23	71	1	620

The admissions from the constituent Authorities are here given as entered in the Admission Register. Should the figures not coincide with the Notification Returns in any District, the discrepancy probably admits of simple explanation. Cases admitted on 1st January or on the evening of 31st December, after office hours, may not appear on the same year's record as that on which the notifications are received.

It will thus be seen that while from the whole district 167 fewer cases were admitted than in 1912, there were from the Borough 207 fewer than in 1912, 219 fewer than in 1911, and 120 fewer than in 1910.

The cases from the several districts were made up as follows :—

District	Scarlet Fever	Diphtheria	Typhoid Fever	Total
Keighley Boro' ...	184	47	2	233
Bingley ...	161	39	2	202
Oakworth ...	25	2	...	27
Haworth ...	56	7	...	63
Oxenhope ...	17	6	...	23
Keighley Rural ...	58	13	...	71
Outside Districts ...	—	1	...	1
	501	115	4	620

Considerable difficulty was again experienced with mixed infections. The possible combination of Scarlet Fever and Diphtheria was, as in former years, anticipated by swabbing every throat immediately on admission, but when cases of Fever were sent without previous warning from households already infected with Measles or Chicken Pox, it is obvious that no precautions could be taken until too late to prevent other children in the Ward being exposed to infection. Whether the Cubicle Pavilion will prevent such risks remains to be seen.

Of the 620 cases admitted during the year 26 ended fatally, namely, 11 Scarlet Fever, 13 Diphtheria and 2 Typhoid Fever, yielding the somewhat heavy mortality of Scarlet Fever 2.2 per cent., Diphtheria 11.3 per cent., and Typhoid Fever 50.0 per cent. Several of the cases were obviously moribund when admitted.

SMALL POX HOSPITAL.

In view of the possibility of Small Pox invading the Board's district the Board decided to make provision for the reception of cases or suspected cases at Upper Heights, Stanbury. The only alternative was to close the Sanatorium and thus leave the area without means of dealing with the more common and more fatal Tuberculosis. Upper Heights Farm was therefore leased from Keighley Corporation and steps taken to transform the buildings into suitable male and female wards with accommodation for the necessary staff.

The site is uncommonly well isolated, in fact that seems the chief objection. Special precautions have been taken to provide means for disinfection, a settling tank and bacterial "filter" have been erected for treating the sewage, and altogether it may be concluded that the necessary provision is ready to meet the emergency should the district unfortunately be called upon to deal with an outbreak of the dreaded disease.

TUBERCULOSIS SANATORIUM.

There is now accommodation for 50 cases in two double pavilions and six double sleeping chalets. The number of cases admitted last year was 151 compared with 85, 58, and 29 in the previous three years. From the Board's district there were Keighley 7, Bingley 3, Haworth 1, Oxenhope 1 and Keighley Rural 1.

This does not represent all the Consumptives in the Board's area, but only those females—insured or dependents of insured—which in the opinion of the County Tuberculosis Authority were considered suitable for institutional treatment. (The male patients are being treated elsewhere, mostly at the Cardigan Sanatorium, Wakefield.)

There seems to be an idea that every case as soon as notified should be sent to a Sanatorium. Such a view would be justified if the cases were diagnosed and notified in the earliest stage, and preferably in the "pre-tubercular stage," but unfortunately this is not done—partly because of the subtle nature of the tubercular invasion, partly because patients can not or will not seek medical aid until failing health compels them to do so.

The public should fully recognise a well ascertained fact, namely, that the prospects of ultimate cure depend on early diagnosis and suitable treatment, in a sanatorium if possible, and subsequently on the continued observance of those hygienic principles taught and practised in the Sanatorium. Many of the cases recommended for Sanatorium benefit have reached a stage when institutional treatment may be advisable for isolation purposes, but where there is little prospect of ultimate cure.

It may be of interest to record that the West Riding Insurance Committee sent 130 cases, namely, 5 from Keighley, and 1 each from Bingley, Haworth, Oxenhope and Keighley Rural, and 121 from other districts in the West Riding. The Dewsbury Insurance Committee sent 9, and Bedford Insurance Committee 8; a grand total of 147 insured cases.

A full report on the results of treatment will in due course be issued by the County Tuberculosis Officer.

(3) Chemical and Bacteriological Work.

The examination of water supplies, more particularly in regard to plumbo solvency and gross pollution, and urgent microscopic work are conducted under difficulty in the Town Hall. The analyses of food stuff and samples taken under the Sale of Food and Drugs Act are made by the County Analyst and are referred to elsewhere in the Report.

The following specimens have been bacteriologically or

microscopically examined in the West Riding County Council Laboratory during the year :—

Specimen.	Total.
Serum for Widal Reaction (Typhoid Fever) ...	5
Sputum for Tubercle	97
Swabs for Diphtheria	114
Urine for Tubercle	13
	229

(4) Administration of Local and General Adoptive Acts.

(a) The local Acts containing provisions for the better sanitary administration of the Borough, include :—

Keighley Improvement Act, 1824 (powers to abate and prevent nuisances).

Keighley Waterworks Improvement Act, 1867 (powers to prevent rivers pollution, &c.)

Keighley Waterworks Extension and Improvement Act, 1869 (powers to establish slaughterhouses, &c.)

Keighley Corporation Act, 1891, (powers to require lists of customers from dairies, laundries, &c., for removal of rubbish, dust from factories, provision of urinals, &c.)

Keighley Corporation Act, 1898 (powers to require water closets, conversion of pail closets, and prevention of nuisances, &c.)

Keighley Corporation Act, 1908 (powers re drains, manufacture of ice cream, &c.)

(b) The Acts adopted are :

Infectious Diseases Notification Act, 1889.

Infectious Diseases Prevention Act, 1890.

Public Health Acts Amendment Act 1890, Parts 2, 3, 4, 5.

Notification of Births Act, 1907.

Public Health Acts Amendment Act, 1907.

Part II., Sections 16, 19, 20, 22, 25, 27, 32, 33.

Part III., Sections 34, 35, 36, 37, 38, 43, 45, 47, 50, 51.

Part IV., Sections 52 to 66, 68.

Part V.

Part VII., Sections 81, 86.

Part VIII.

Part IX.

Part X., Section 95.

(With modifications of Sections 19, 25, 27, 35, 37, 38, 59, and 75.)

Of the Local Acts perhaps most frequent use is made of Sections 86 and 60, Keighley Corporation Act, 1891, and Section 51, Keighley Corporation Act, 1898, which give powers to provide sinks, drains, water closets, &c.

(D) INCIDENCE AND CONTROL OF INFECTIOUS DISEASE.

NOTIFICATION OF INFECTIOUS DISEASE.

The infectious Diseases notified during the year are given below, and for comparison the numbers notified every year since the Notification Act came into force.

Year.	Small Pox.	Scarlet Fever.	Diphtheria and Croup	Erysipelas	Typhoid Fever	Puerperal Fever	Pulmonary Tuberculosis	Totals.
1890	...	427	63	45	72	4	...	611
1891	...	92	36	43	38	2	...	216
1892	8	131	38	38	83	6	...	304
1893	72	68	44	43	33	8	...	268
1894	1	57	26	44	33	6	...	167
1895	...	54	18	45	46	4	...	167
1896	2	13	17	55	60	6	...	153
1897	...	49	13	40	62	4	...	168
1898	...	72	148	41	73	2	...	336
1899	...	369	43	74	56	8	...	550
1900	...	311	216	69	57	4	...	657
1901	...	260	145	29	33	2	...	469
1902	31	52	44	36	23	3	...	189
1903	25	43	15	36	21	3	...	143
1904	3	60	49	28	11	1	...	152
1905	26	173	50	24	10	2	...	285
1906	...	174	73	25	5	4	...	281
1907	...	79	95	38	11	3	...	226
1908	...	88	60	33	14	2	55	252
1909	...	160	55	38	15	2	58	328
1910	...	335	43	31	7	1	45	463
1911	...	511	90	24	4	1	57	687
1912	...	443	89	27	4	...	85	650
1913	...	224	66	35	2	1	96	424

Under the heading of Phthisis the figures appear to show a steady increase. This, however, is misleading. In 1908 voluntary Notification of Pulmonary Tuberculosis in private practice was adopted. In 1910 the notification of such cases in Poor Law practice was made compulsory. In March, 1911, Pulmonary Tuberculosis in Hospitals was added and in November of the same year another Order was issued making compulsory the notification of Pulmonary Tuberculosis wherever discovered. Finally in December, 1912, a General Order of the Local Government Board revoked all previous Orders and Regulations and made it compulsory for every medical man attending on or called in to visit any person, within forty-eight hours after first becoming

aware that any such person was suffering from *Tuberculosis in any form*, to make a notification of the case and transmit it in a sealed envelope to the Medical Officer of Health.

SMALL POX.

Another year has passed without Small Pox appearing in the district, and consequently without any disturbance of existing arrangements at the Morton Banks Hospital. The fact that over 90 per cent. of the inhabitants of this borough are without the protection afforded by primary vaccination and the further fact that the influx of navvies to the Sladen Valley Water Works might introduce infection from districts better vaccinated (but less sanitary!) have not been lost sight of by members of the Health Committee and Joint Hospital Board. The unwisdom, inconvenience and financial loss from having to empty the Sanatorium should a case or suspected case of Small Pox occur in the Joint Boards District were so apparent that steps have been taken for the proper isolation of cases at Upper Heights above Stanbury. Further reference to this matter appeared on page 260.

MEASLES.

Not for many years has the Borough been so free from this infection. Several times during the year suspected cases were reported by teachers, School Nurse, etc., but as a rule investigation proved them to be Scarlet Fever or some less serious complaint. Thus the reports though mistaken as to the nature of the disease served their purpose quite as well as if correct in every respect.

The actual number of cases occurring during the year is not known, but there were no deaths, the death-rate being .00, compared with .57, .07, .02, .13, .76 in the previous five years.

WHOOPIING COUGH.

Number of cases ...	...	...	not known.
Number of deaths ...	...	...	13
Death-rate ...	...	...	.29

Towards the end of 1912 a slight outbreak of Whooping Cough developed in the South Ward and quickly passed over the C., N.E. and part of the N.W. Wards. Its course was marked by the loss of 13 lives, 12 of these being under five years of age. School attendance had doubtless some slight effect in spreading infection, but the fact just stated that 12 out of 13 deaths were of children under school age and the further fact detailed in the School Medical Officer's Report that a large percentage of school children had Whooping Cough before reaching school age suggest that personal infection in the home and in the street was equally or most probably the main source

of infection. In forming this opinion one does not forget that with Whooping Cough as with Measles the younger the patient the more likely the disease is to prove fatal, and consequently that many children over five years of age might have suffered without any evidence appearing on the death returns.

During the second half of the year the Borough was practically free from any case of Whooping Cough.

The death-rate from this cause was .29 compared with .09, .45, and .04 in the previous three years.

In dealing with Measles and Whooping Cough all children from infected families are excluded from Infant Departments—from Senior Departments only those who have not previously had the disease.

SCARLET FEVER.

Cases notified	...	...	...	...	224
Deaths	...	...	...	...	6
Death-rate	...	...	...	...	.13

The small cloud of infection which towards the latter half of 1910 looked no bigger than a man's hand, but which during 1911 and 1912 swept the borough in spite of anything and everything done to check it, began during the first quarter of 1913 to show signs of dissolution. Instead, however, of melting away completely it hung over the town dying as it lived, irresponsible and irrepressible. During those three years the isolation of 90 per cent. of notified cases, the careful disinfection of every known infected house and garment, the closure of schools, and the utmost efforts of the Health Department proved futile until from want of further susceptible material the epidemic seemed to die spontaneously.

One lives to learn or at least likes to learn even from one's failures, but the only lesson thoroughly mastered in the past epidemic seemed to be that science and experience only count when backed up by the intelligent co-operation of householders.

The hope that good would come from prolonged holidays at Christmas and summer, and thorough disinfection of schools was negated by contrary results alternating. Thus during the August holiday of 1910 Scarlet Fever became epidemic. The Christmas holidays of 1910-11 were prolonged, yet the number of notifications steadily increased. During the summer holidays of 1911 and the Christmas holidays of 1911-12 the notifications fell, but markedly rose during the summer holidays of 1912, and again fell during the Christmas holidays of 1912-13.

The fact that the number of notifications at ages 1-5 years were throughout the three years just one half of those

between 5—15 years gives little light upon the effect of school life upon the spread of infection, but the further fact that during the same period in 20 to 25 per cent. of invaded households in which there were children, the children were under school age suggests strongly that home environment had as much or more to do with the spread of infection than had school life. In other words, personal infection in the home and in the street, together with a large susceptible population rendered the usual methods of dealing with infection comparatively ineffectual.

To suggest that some infection was not possibly, even probably, contracted in school would be folly in face of the fact that on several occasions during medical inspection cases in all stages of the disease were detected and sent home, but it is contended that sufficient care was not exercised by parents, otherwise cases such as those found would have been recognised and kept at home.

It is true some cases were so mild that the symptoms were insufficient to justify a diagnosis, but, in others, time and the exercise of a little reasoning would have warranted a definite conclusion. For instance, a householder whom we will call Mrs. B., was ill for a few days, her washing was sent out and a week or so later the washerwoman's child developed Scarlet Fever. On investigation, Mrs. B's. hands were found peeling and she gave a history of having had sore-throat, rash and a white furred tongue, which subsequently became unusually red. The only disease exhibiting those symptoms is Scarlet Fever, yet the case was not recognised.

Cases such as these, therefore, lead one to conclude that parents and ratepayers generally failed to appreciate their personal obligations to assist in checking the spread of disease. Householders were made aware by warning notices, by the distribution of leaflets describing the symptoms of the disease and the dangers of infection and by public press references that upon them rested a responsibility that no Health Department could undertake in addition to its own duties and responsibilities. What these duties were so far as the prevention of Scarlet Fever is concerned were fully detailed in last year's report and need not again be repeated.

The following Table shows the age, distribution, &c., of the cases notified during the year :—

Cases of Scarlet Fever notified during the year 1913.

MONTH.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH WARD.						NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY								
	At all Ages.	At Ages—Years.					Central	East	North-East	North-West	West	South	Total	Central	East	North-East	North-West	West	South	Total	
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65															65 and upwards
January ...	45	...	14	24	5	2	...	7	12	8	8	2	8	45	5	11	7	4	2	5	32
February ...	25	1	8	11	3	2	...	3	6	8	8	1	5	25	3	2	7	2	1	3	18
March ...	24	...	7	11	6	...	1	1	4	7	8	2	2	24	1	3	6	4	2	2	18
April ...	24	...	5	15	3	1	...	1	6	10	5	...	3	24	1	6	6	4	1	3	19
May ...	19	...	4	12	3	...	...	...	6	4	2	4	...	19	...	6	4	...	...	1	16
June ...	10	...	4	4	1	1	...	...	2	6	...	1	1	10	...	2	5	...	1	1	9
July ...	14	...	2	6	4	2	...	...	5	4	4	...	...	14	...	5	4	...	...	1	13
August ...	8	...	2	5	1	...	1	1	2	...	...	...	1	8	1	2	...	4	...	1	8
September ...	19	...	3	16	...	...	1	1	1	7	2	2	6	19	1	1	6	2	...	6	18
October ...	10	...	3	5	2	...	1	1	1	2	3	1	2	10	1	1	2	3	1	2	10
November ...	16	...	6	8	1	1	...	...	1	6	6	...	3	16	...	1	6	4	...	3	14
December ...	10	...	4	6	...	...	...	...	...	1	...	...	...	10	...	...	1	...	...	...	7
Totals ...	224	1	62	123	29	9	...	15	46	63	50	16	34	224	13	40	52	35	14	28	182
Percentage Removed														...	86.6	86.9	82.5	70.0	87.5	82.3	81.25

The 224 Cases occurred in 176 houses.

The 224 Cases occurred in 176 houses.

As regards intensity or attack-rate this varied as the wave of infection passed from Ward to Ward thus:—

In 1911 the incidence was greatest (1.6) in E. and least (.8) in N.W. Ward
 " 1912 " " (1.2) in N.W. & S. " (.7) in E. " "
 " 1913 " " (.7) in N.E. " (.2) in W. " "

As regards age distribution analysis of the epidemic showed:

In 1910 23% were under 5 years, 62% between 5-15, and 15% over 15 years
 " 1911 31 " " 59 " 10 "
 " 1912 26 " " 59 " 15 "
 " 1913 28 " " 55 " 17 "

The percentage of cases removed to Hospital was less than usual, namely, 81 per cent. compared with 83, 88, 91 per cent. in the previous three years. No satisfactory reason can be stated for the decrease nor for the great variation in the proportion isolated from any ward from year to year. From the table given above it will be seen that the largest percentage of cases was removed from those Wards where the housing accommodation is least suitable for home isolation, that is, most from C., E., and W., and least from N.W., N.E. and S. Wards.

The 224 cases notified occurred in 176 houses, that is, two or more cases occurred in 21.5 per cent. of houses, compared with 16.1, 23.5 and 18.5 in the previous three years. The attack-rate per 1000 of the population was 5.8. For England and Wales it was 3.5, for the large towns 4.2, and for the smaller towns 3.1.

There were six deaths yielding a death-rate of .13 compared with .32, .36, and .16 in the previous three years.

DIPHTHERIA.

Number of Cases ...	...	...	...	66
Number of deaths...	...	...	...	8
Death-rate ...	...	...	...	.15

Diphtheria, like Scarlet Fever, was less prevalent than during 1912, namely, 66 cases compared with 89, 90, 43 in the previous three years. All parts of the town were invaded, the incidence being .9 per thousand of the population in N.W. Ward, 1.0 in the S. and W., 1.4 in the C., 1.8 in the N.E., and 2.8 in the E.

In the Report for 1912 attention was drawn to the fact that for six years the Central Ward, which is entirely urban, had been comparatively free from Diphtheria, and that an undue proportion of cases had occurred in the N.E., which is only partly urban. The same peculiarity is again noticeable, though not quite so markedly. It was suggested that the low-lying situation of the N.E. Ward, the greater dampness of the sub-soil, and therefore greater liability to the sore throat so common

in this district might favour the growth of Diphtheria germs on the specially damaged tonsils. The further fact that locally the prevailing wind is from the S. West might help to explain the heavy incidence in this ward, but the absence of these factors do not explain the comparative freedom from Diphtheria of the Central Ward. The greater prevalence of Diphtheria this year in the E. Ward is not a usual feature, and probably depends on temporary causes.

The extent to which Diphtheria has prevailed in the borough during the past 25 years has always seemed to me to require explanation. The attack-rate may not be excessive, the type of illness has rarely been malignant, yet the disease has never been absent. In 1897 the number of notifications fell to a minimum of 13 cases, three years later a maximum of 216 cases was reached, while the average number recorded since the adoption of the Notification Act in 1890 is 63 per annum.

The germ, unlike that of Scarlet Fever, has been definitely recognised, and except in so far as it may find a temporary habitat in soil, can readily be destroyed by disinfectants, and apparently its spread should be controlled by improved sanitation. The want of success in stamping it out has been variously explained. The readiness with which mild cases may be overlooked, the tendency of the germs to lie for months dormant in the throat and posterior nares, failure to get consecutive negative swabs from cases treated at home, and the frequency with which persons free from all symptoms of the disease may still act as "Carriers," are reasons given for its continued prevalence. It remains therefore for all concerned to ask how far they may be responsible for the continuance of any of the causes mentioned and to act accordingly.

The following table shows the distribution and age of the cases notified.

Cases of Diphtheria notified during the year 1913.

MONTH.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH WARD.						NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.							
	At all Ages.	At Ages—Years.						Central	East.	North-East	North-West	West	South	Total	Central	East	North-East	North-West	West	South	Total
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards														
January	4	3	1	2	2	2	...	1	1	1	1	2	4	...	1	1	1	...	...	1	2
February	8	...	4	6	...	...	2	1	4	1	3	1	8	1	1	1	1	...	...	1	4
March	6	...	...	...	...	...	1	1	1	...	1	...	6	...	...	...	...	...	...	...	3
April	4	...	2	2	...	...	1	1	1	2	1	2	4	...	...	...	...	2	...	...	2
May	5	...	2	3	...	...	...	1	4	...	...	...	5	...	...	...	...	...	...	...	3
June	6	...	3	3	...	...	2	4	4	2	...	1	6	2	1	3	1	...	1	...	4
July	8	...	5	3	...	...	...	4	4	...	...	...	9	...	3	4	2	...	...	...	8
August	9	...	3	4	1	...	1	3	4	4	...	1	9	...	4	3	3	...	...	1	7
September	7	...	4	2	1	...	...	1	1	2	2	3	7	...	...	3	3	2	...	...	6
October	2	...	1	3	2	...	...	...	...	1	...	3	2	...	...	1	2	...	...	...	3
November	7	...	2	...	...	...	...	...	...	2	...	...	7	...	...	...	...	...	...	...	7
December	7	...	1	...	...	...	...	...	...	1	...	...	7	...	...	...	1	...	...	3	7
Totals	66	25	31	6	4	...	7	20	16	8	6	9	66	3	16	13	3	6	7	48	
Percentage Removed														...	42.8%	80% ^{81.2%}	37.5%	100%	77.7%	72.7%	

Of the 66 cases notified 25 or 38 per cent. were under 5 years of age, and 31 or 46 per cent. between 5 and 15.

As regards the effect of school life on the spread of infection 34 were in attendance at 14 different schools, while 22 were under school age. In about half the number of houses infected no member of the family was in school attendance, and therefore not likely to contract or carry infection from school. In fact, the only schools about which any suspicion would appear to attach were Long Lee with 7 cases and Eastwood with 5. As, however, only 10 positive swabs were got from all the schools, including two from Long Lee and none from Eastwood, it does not look as if much infection could be connected with any of them.

The milk supply to the 59 infected households came from 30 different milk dealers and was not considered a means of spreading the disease.

Hospital isolation was adopted in 73 per cent. of cases compared with 76, 88, and 76 per cent. in the previous three years. The proportion thus isolated varied considerably—37 per cent. from the N.W., 43 from the Central, 80 from the East, North East, and South, and 100 per cent. from the West Ward.

Mention has been made in these Reports of the frequency with which Follicular Tonsillitis occurs in the neighbourhood, and of the probability that this complaint may complicate the detection and diagnosis of Diphtheria. For instance about 100 Diphtheria outfits were supplied to medical men in the borough for the purpose of swabbing Diphtheritic-looking throats: 66 were notified as Diphtheria, 48 were sent to the Fever Hospital, but only 24 were reported by the W.R. Bacteriologist as positive Diphtheria. It is not suggested that Bacteriological evidence should supersede clinical experience, still, when it can be got it is a valuable adjunct in diagnosis. In order that no time be lost in getting this evidence the Corporation pays the cost of telegrams, and lest the patient should suffer from want of treatment during the period necessary for microscopic or bacteriological examination of the swab, free Antitoxin is supplied for use among the poor. Last year 34 bottles of Antitoxin were given out for this purpose. At times the home conditions are such that the suspected case cannot reasonably be kept at home even for a night, and consequently it has to be removed to hospital without the diagnosis being confirmed.

When, after treatment, the clinical symptoms disappear from the throat Bacteriology alone can decide whether or not the patient is free from infection. In hospital two consecutive

negative swabs must be got before the case is sent home. This very necessary requirement was only occasionally met among the cases treated at home.

The attack rate was 1.5 per 1000 of the population. For England and Wales, as well as for the large and smaller towns, it was 1.4.

There were 8 deaths from Diphtheria during the year with a death rate of .15, compared with .25, .16, .14 during the previous three years.

The preventive measures adopted in dealing with the spread of infection included:—

Hospital isolation (73 per cent. of cases.)

Supervision of cases treated at home.

Disinfection of infected houses, clothing, etc.

Exclusion from school of children from infected houses.

Notification of suspected cases by teachers, school nurse, etc., as well as by doctors.

Throat swabbing of contacts and suspected cases.

Free provision of Antitoxin for treatment and prevention.

Two successive negative swabs at intervals of four days before allowing patient to mix with others.

TYPHOID FEVER.

Number of cases	...	...	...	...	2
Number of deaths	...	...	...	...	1
Death-rate	...	...	...	...	.02

Only two cases were notified during the year—both in the Central Ward, a third was reported but subsequently withdrawn. In one instance, a girl aged 13, there was a definite history of having eaten watercress and raw mussels a fortnight before the illness began. The other case presented no probable or possible source of infection, and although the Widal blood test gave a positive reaction the course of the illness suggested paratyphoid. Both cases were removed to the Hospital and the latter ended fatally.

The history of Typhoid Fever in Keighley during the past 30 years forms an interesting study in sanitary development and the economics of human life. The following figures show the gradual diminution in the incidence since the adoption of the Infectious Diseases Notification Act in 1890, and similarly the diminution in the number of deaths since 1880.

5 years.	Average number of cases annually	Number of deaths annually	Death rate for 5 years period
1880-1884	—	9	'34
1885-1889	—	9	'31
1890-1894	51	9	'28
1895-1899	59	10	'31
1900-1904	29	5	'12
1905-1909	11	2	'03
1910-1913	4	1	'02
1913	2	1	'02

It has previously been remarked that no serious attempt was made to abolish the tub-system of excreta disposal till 1900, and that a notable decrease in the incidence of what has characteristically been called Filth Fever began about this period. It may be the two circumstances were merely incidental. On the other hand Typhoid Fever is a water-borne disease, being generally spread by impure water, milk, and shell fish. Now there being no alteration in the water or milk supply of the borough, or in the consumption of oysters, mussels, etc., that could explain the diminished prevalence of this filth disease, it is highly probable that the more general adoption of water closets and the more frequent emptying of excreta tubs have been factors in the progressive disappearance of Typhoid Fever.

The attack rate was .04 per 1000 of the population compared with .22 for England and Wales, .25 for the large towns, and .24 for the smaller non-county boroughs. Further, the attack-rate of .08 for the past three years compares favourably with .5 for the Boroughs and Urban Districts in the West Riding. The death-rate was .02 compared with .02, .02, and .06 in the previous three years.

This encouraging result equalled by only one Borough or Urban District in Yorkshire with a population over 20,000 (and it a health resort) should stimulate even greater activity in abolishing the insanitary conveniences which still pollute our atmosphere.

SUMMER DIARRHOEA.

Since 1911 by instructions of the L.G.B. there are included under this heading a number of conditions variously named epidemic, zymotic or infantile diarrhoea, enteritis and gastro enteritis, gastro-intestinal catarrh, muco-enteritis, colitis, cholera infantum, etc. Cases are sub-divided according as they are under or over 2 years of age.

No estimate can be made of the number of cases, but the deaths from all forms numbered 15. Of these 10 were under 1 year of age, 2 were between 1 and 2 years, 1 was between 2 and 5 years, and 2 were over 65. There is reason to think the two last mentioned were less zymotic than symptomatic in character.

As usually happens the majority of cases were bottle-fed babies. Milk unless rapidly cooled and kept sterile is the favourite medium for the growth of the infective germs, and its use as a substitute for breast-feeding especially during a dry hot summer is attended by considerable risk. Absolute cleanliness unfortunately is rarely attained or even understood by many mothers. The ease with which feeding bottles, tubes, and dummy teats can be contaminated and the danger arising from the transmission of germs by the common house-fly demonstrate the advantage of breast-feeding over all artificial methods.

The death-rate from Zymotic Enteritis for cases under two years was .27; for cases at all ages .33, compared with .13, .59, and .29 for the previous three years.

This satisfactory position—in part due to climatic conditions, is in great measure the outcome of efforts made by the Health Officials and Health Visitors. The former removed insanitary conditions favouring the growth of the specific infective germs—back yards were paved, decaying animal and vegetable refuse was speedily removed, and horse manure, the usual breeding place for flies, from all stables near the centre of the town, was carted away once a week. The latter made special visits to all working class houses where there were young children, instructing mothers in the selection, protection, and preparation of food, pointing out the danger of unsuitable diet, damaged or overripe fruit, and above all dust or germ polluted milk, preaching the doctrine of scrupulous cleanliness and urging for infants the inestimable advantages of breast feeding.

PUERPERAL FEVER.

Only one case of Puerperal Fever was notified in 1913. Fortunately puerperal sepsis has been a diminishing quantity for several years. Aseptic precautions in this connection are of vital importance to the mother, and in only a slightly less degree to the infant. The want of cleanliness and proper attention not unfrequently results in a virulent inflammation of the eyes known as Ophthalmia neonatorum, which in many cases leads to permanent blindness.

On account of the tragic results of this inflammatory condition—results which can be prevented by proper care and treatment—many authorities have made Ophthalmia Neonatorum compulsory notifiable. Every midwife is supposed to be under the legal obligation to report the existence of such cases to the Local Supervising Authority, and to call in medical advice when-

ever any inflammatory condition is detected in the eyes of an infant. Even if such reports were sent to the West Riding County Council as the Local Supervising Authority, much time would be lost before anything could be done for the baby. Better make the complaint notifiable within the borough so that the Health Visitor could render immediate trained assistance where necessary. Last year some 20 cases of virulent ophthalmia were known to have occurred in the town.

Acute Poliomyelitis and Cerebro-Spinal Fever.

No notification of either disease was made during the year. Some idea of the formidable nature of these complaints may be gathered from the following extract from the Report of the Medical Officer of the Local Government Board for 1912-13: "Direct inquiries have secured the information that, in at least 50 per cent. of the total cases of Poliomyelitis, permanent paralysis of one or more groups of muscles occurred. This, combined with the experience of a fatality of 13 per 100 cases (70 per cent. in case of Cerebro-Spinal Fever), enables one to realise the seriousness of a disease which kills or permanently reduces the efficiency of so high a proportion of the total number attacked by it."

E.—PREVALENCE AND CONTROL OF TUBERCULOSIS.

(a) Pulmonary Tuberculosis.

Number of cases notified	...	...	...	96
Number of deaths	...	...	...	36
Death-rate	...	...	...	.81

(i) NOTIFICATION AND DISTRIBUTION.

In my Report for 1912 the increase in the number of known cases was put down to the fact that the voluntary system of notification in the Borough was superseded by the General Order of the L.G.B. making the notification of all forms of Tuberculosis compulsory. A still further increase of numbers in 1913—in my opinion an increase more apparent than real—is largely accounted for by improved methods of diagnosis, greater facilities for examination and treatment, and a growing interest on the part of the public in the campaign against Tuberculosis. In other words the local Tuberculosis Dispensary opened by the West Riding County Council in the early part of 1913, became for many consumptives and contacts a centre or Mecca to which they could go for expert advice, and which existed solely for their physical and material benefit. An increase in notifications therefore from 57 (voluntary) in 1911, to 85 in 1912, and 96 in 1913, does not justify a pessimistic view of local conditions. It should rather lead us to withhold comparison and accept as provisional the statistics of the next few years and the conclusions drawn from them.

The following table gives details of the age and distribution of the cases notified during the year:—

Cases of Pulmonary Tuberculosis notified during the Year 1913.

MONTH.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH WARD.						
	At all Ages.	At Ages—Years.						Central.	East.	North-East.	North-West.	West.	South.	Total.
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards							
January ...	9	...	...	2	3	4	1	2	3	1	...	4	3	9
February ...	16	...	1	2	3	9	1	2	3	4	...	...	3	16
March ...	7	...	...	...	1	5	...	2	1	...	...	...	3	7
April ...	12	...	1	3	4	5	...	3	1	2	...	4	3	12
May ...	10	...	...	2	3	4	...	2	1	2	1	3	1	10
June ...	9	...	...	2	1	5	1	1	2	1	1	3	1	9
July ...	6	...	1	...	2	2	1	...	2	1	2	1	...	6
August ...	6	...	...	...	2	4	...	...	1	2	...	3	...	6
September ...	8	...	...	...	3	5	...	...	1	2	2	2	3	8
October ...	6	...	...	...	...	6	...	...	1	2	...	3	...	6
November ...	6	...	1	...	2	3	...	...	1	...	...	3	2	6
December ...	1	...	...	...	...	1	...	...	...	...	...	1	...	1
Totals ...	96	...	4	11	24	53	4	12	18	15	6	27	18	96

Age: The thing that strikes one is the comparative infrequency with which Tuberculosis affects early childhood and the terrible havoc it makes among adolescents and those in the working period of life. Thus 15 cases were under 15 years of age, 24 between 15 and 25, 39 between 25 and 45, 14 between 45 and 65, and 4 over 65.

Sex: Of the 96 cases notified 54 were male and 42 female—as usual, though not in accord with popular belief, more males than females were affected. The excess, however, was not constant at all ages: thus under 15 there were 6 male, 9 female, between 15 and 25 there were 12 of each sex, between 25 and 45 there were 22 male and 17 female, and between 45 and 65 14 male and 4 female. The numbers are too small to warrant definite conclusions, otherwise one might speculate upon the resisting powers of girls being less than of boys up to leaving school, when afterwards the exigencies of life and the industrial environment of males conduced to their greater liability to attack.

Social Condition: Of the notified cases 43 were married, 22 single, the remaining 31 being under 20 years of age. In only 24 instances were the conditions such that the infected person had a separate bedroom. If we take *all forms* of Tuberculosis only 12 per cent. had a separate bedroom. A previous or present history of Tuberculosis in the family was elicited in 46 of the 96 notified cases—that is in practically 50 per cent.—surely when dealing with Tuberculosis a strong argument in favour of the contention that more than one person in the bedroom constituted overcrowding.

Occupation: The influence of occupation, including of course the character of the workshop, the purity of the atmosphere, ventilation, etc., upon the prevalence of Tuberculosis cannot be determined with accuracy, but investigation following upon compulsory notification will soon elucidate such a problem. The occupation of the 96 cases notified during the year were: factory or mill hands 20 (4 male, 16 female), mechanics 16, outdoor labourers 6, household duties 16, painters 3, joiners 3, tin-smiths 3, carters 3, clerks 2, grocers 2, soldiers 2, mason 1, tram conductor 1, tailoress 1, hairdresser 1, tramp 1, school or home 15.

Housing Conditions: The following facts with regard to the housing of the Tuberculous patients are of interest. Unfortunately, however, one cannot speak with sufficient certainty upon the evil effects of living in back-to-back houses, because it might be objected that the Tuberculosis is not the result, but that poverty, due to Tuberculosis, compelled the invalid to move into a back-to-back house for cheapness. This may have been so in a few instances, but it may be emphatically denied

that it was so in many, and the wisdom of the L.G.B. in forbidding the erection of back-to-back houses as being injurious to health is confirmed by local results.

It may be necessary to explain that the term "semi-through" is applied to those dwellings which have a window opening to the side or back but which have no back door. For example, what are known locally as back-to-backs in blocks of four are of this nature, and houses built on the hill side, back-to-earth on the ground floor, with windows at the back upstairs.

(In each of five houses two cases occurred: Institutions are not included in this table).

Tuberculosis.	Ventilation insufficient.		Ventilation through.	Total houses.
	Back-to-back.	Semi-through		
Pulmonary ...	30 cases	14	51	95
Other Forms ...	37 "	16	27	80
Percentage ...	38 "	18	44	175

Now seeing that 56 per cent. of the notified cases occurred in back-to-back or semi-through houses, and that there are over 10,000 houses in the borough, only 2,900 of which are of the back-to-back type, it is obvious that the incidence of Tuberculosis in that class of house is excessive. The same fact may be illustrated by stating that a case of Tuberculosis occurred in the proportion of 1 in 93 through houses and 1 in 28 back-to-backs.

Investigation into the sleeping accommodation of infected houses of each type—workhouse, infirmary, and common lodging houses excepted—showed:

Type of House.	Number of				Percentage of persons	
	Houses	In-mates	Living rooms	bed-rooms	per room	per bed-room
Back-to-back ...	64	329	66	116	1·8	2·8
Semi-through ...	27	138	34	66	1·4	2·1
Through ..	76	405	139	227	1·1	1·7

In plain language the tendency towards overcrowding is greatest in those houses where ventilation is worst, i.e., the back-to-back. Perhaps more interesting to the general rate-

payer may be an analysis of the housing conditions and incidence of Tuberculosis as found in the several wards:—

Ward.	Popula- tion.	No of Houses	Percen- tage of B. to B. Houses.	Cases of Tuber- culosis.		Attack-rate per 1000.	
				Pulmo- nary.	All Forms.	Pulmo- nary.	All Forms.
Central ..	4800	1083	43	12	24	2.5	5.0
East	7040	1625	27	18	34	2.5	4.8
North-East...	8685	1887	33	15	33	1.7	3.8
North-West.	8895	2230	15	6	12	0.6	1.3
South	8210	1895	28	18	26	2.1	3.1
West	6020	1373	32	27	46	4.5	7.6
Institutions...	360	5	...	...	5	—	—
	44010	10098	28	96	180	2.1	4.0

A reference to the above table shows that the attack-rate per thousand of the population in each ward was for all forms of Tuberculosis six times as high in the W. as in the N.W. Ward, while if the comparison be made with regard to Pulmonary Consumption only it is seven times as great. In 1912 with voluntary notification the proportion was exactly the same.

It should not be inferred that this unhappy prevalence of Tuberculosis is general throughout the whole of the West Ward. The excessive incidence is restricted to the area lying between Damside and West Lane, that is, to the area which I represented officially to the Council in 1899 as an insanitary area, and in which for the last seven years the annual death-rate from Tuberculosis was 5.7 per 1000 compared with an average of 1.1 for the rest of the borough.

(ii) DEATHS FROM PULMONARY TUBERCULOSIS.

There were registered during the year 36 deaths compared with 31, 50, 57, in the previous three years. The steady fall in the death-rate locally and in England and Wales may be gathered from the following quinquennial averages:—

5 year period.	Death rate. Keighley Borough.	Death Rate. England and Wales.
1881-1885	2.4	1.83
1886-1890	2.1	1.63
1891-1895	1.7	1.46
1896-1900	1.6	1.32
1901-1905	1.4	1.22
1906-1910	1.2	1.10
1911	1.1	1.27
1912	.7	1.08
1913	.8	

The following table showing the death-rate from Tuberculosis in the several wards should be of special interest to those investigating the causes favouring the growth and spread of Tuberculous infection in the borough.

Ward	No. of cases		No. of deaths, Pulmonary	Death-rate, Pulmonary	No. of deaths, other forms	Death-rate, other forms	Total death-rate, all forms
	Pulmonary	Other					
Central ...	12	12	5	1'04	2	'41	1'45
East ...	18	16	7	'99	3	'42	1'41
North-East...	15	18	5	'57	6	69	1'26
North-West	6	6	1	'11	2	'22	'33
South ...	18	8	11	1'33	3	36	1'70
West ...	27	24	7	1'16	10	1 66	2'83

The death-rate from Tuberculosis in 1913 is thus more than eight times as high in the West Ward as in the N. West, and as already shown this excessive mortality in one particular part of the town has become notorious. One must again repeat that insanitary home environment even in an insanitary area does not alone account for the greater incidence of Tuberculosis in certain wards. Personal infection and industrial occupation are active causes that must not be overlooked, and when to the possibility of personal infection there is added overcrowding and insanitation, the Tubercle Bacillus may be relied on to leave a well-marked trail behind it. Year after year attention has been drawn to this excessive prevalence of Tuberculosis in Westgate—an incidence so marked that the record of the whole West Ward is spoiled by it.

(iii) MEANS FOR PREVENTION AND TREATMENT.

From the foregoing statistics it will be apparent that the sanitary condition of the home as well as the personal and family history of the patient is investigated as soon as possible after receipt of the notification, and in all but a few instances—inmates of Workhouse Infirmary, tramps, etc., full details were collected.

Directions, verbal and printed, are then given by the Tuberculosis Nurse to members of infected households, and the steps most likely to benefit the patient and protect the others are discussed. The infectious nature of the disease, the dangers of overcrowding, and the advisability of all contacts being thoroughly examined at the Tuberculosis Dispensary are emphasised as well as such matters as the open window, the open fireplace, separate bedroom for the patient, regular hours, avoidance of alcohol, and last, but of most importance, the use of the spittoon and the efficient destruction of the tuberculous sputum.

Last year it was pointed out that the agencies which do most to check the spread of infection are more air and sunlight, less overcrowding, not simply in the home, but in public meetings and picture palaces, absolute cleanliness inside and outside the home and the workshop, and strict supervision of the meat and milk supply. What has been done to further these aims has already been told in other parts of the report, e.g., on Housing, Removal of Nuisances, &c.

The education of the public has been attempted by occasional lectures on Tuberculosis, the distribution of literature on the subject, the exposure of bills on the dangers of spitting, and the free disinfection of sick rooms, especially on the removal or death of a tuberculous person.

The Hospital and Sanatorium accommodation shared with the authorities constituting the Joint Hospital Board, now available for Tuberculosis, amounts to 50 beds at Morton Banks and 17 beds (9 shelters and 8 huts) at the Union Infirmary. The beds at the Sanatorium are supposed to be kept for early cases, but this is not insisted upon.

The provision of treatment seems largely to have become a matter for the West Riding County Council. So far as the Borough is concerned, ample provision is afforded for females in the Keighley and Bingley Joint Sanatorium at Morton Banks, while for males accommodation is secured at the Cardigan Sanatorium, Wakefield. In this way, suitable insured persons and the dependants of insured persons are being dealt with. Further, the Corporation have agreed with the W.R.C.C. to contribute, on the basis of user, towards the expenses incurred by the County Council in providing institutional treatment, a sum equal to one-fourth the cost of patients sent by the Corporation, after taking into account the contribution from the Insurance Committee and any sums received from such patients. Non-insured persons can thus have similar sanatorium treatment, provided the cases are such as in the opinion of the W.R.C.C. are likely to benefit from residence in a Sanatorium. Unfortunately, however, this arrangement takes into consideration the physical condition of the patient more than the urgent necessity there may be for isolation of the patient in the interests of the other members of the household. In this latter contingency, that is where, in the opinion of the Local Authority, the case should be isolated for the sake of others, it appears as if the total cost of the institutional treatment would have to be borne by the Local Authority without any assistance from imperial funds.

There is another matter that cannot be fully developed by the Borough alone, but which requires more attention in order to prevent disappointing, not to say wasteful results, in connec-

tion with the after history of discharged cases. After the three months' treatment and education, some leave the Sanatorium able to resume work, but cannot get it; others less able, perhaps less willing to work, idle away the first few weeks, but almost invariably lose ground. Many have had to return to an unhealthy environment either at home or in the workshop and rapidly succumb to the partially cured disease. Now, there are colonies for epileptics and mentally defectives, and open-air schools for delicate children, but no such provision for discharged consumptives. Many partial invalids would regain health and strength if work on a farm, or even on a hen run could be found for them. Sanatorium treatment seldom cures, though it lays a good foundation for cure, and consequently *after-treatment* on lines which are both preventive and curative should be provided, otherwise the time spent in a Sanatorium becomes little else than an agreeable but expensive interlude.

The work done in connection with the local Tuberculosis Dispensary will doubtless be reported on by the County Tuberculosis Officer, who will also report on the results of the residence in the Sanatorium of the cases sent there by the W.R.C.C., including the 5 insurance cases belonging to the borough.

(b) Forms of Tuberculosis other than Pulmonary.

Compulsory notification of Tuberculosis other than pulmonary came into force on 1st February, with the result that 84 cases were investigated and followed up. They comprised 34 Tuberculosis of Glands (14 males and 20 females), 20 of bone (11 males, 9 females), 15 of bowel (9 males, 6 females), 6 of skin-lupus (6 males, 0 females), 8 of meninges (4 males, 4 females), and 1 of bladder (1 female).

Details as to age and ward distribution will be found in sub-joined table.

Cases of Tuberculosis other than Pulmonary notified during the Year 1913.

MONTH.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH WARD.							
	At all Ages.	At Ages—Years.					Central.	East.	North-East.	North-West.	West.	South.	Total.	
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65								65 and upwards
January ...	25	...	1	12	6	6	...	3	7	6	2	5	25	
February ...	15	...	1	6	6	2	...	3	4	2	1	3	15	
March ...	9	...	2	4	3	...	...	1	1	3	...	2	9	
April ...	5	1	...	1	2	...	1	1	...	2	...	2	5	
May ...	7	...	1	6	...	...	...	1	...	3	...	3	7	
June ...	4	...	...	...	2	2	...	2	1	1	...	1	4	
July ...	3	...	...	1	1	1	...	...	1	1	...	...	3	
August ...	6	1	2	1	1	1	...	...	1	1	1	...	6	
September ...	3	1	1	...	...	...	...	...	1	1	1	...	3	
October ...	5	...	1	4	...	1	...	...	1	...	...	2	5	
November ...	2	...	...	1	...	1	...	1	1	...	...	1	2	
December ...	...	...	...	...	...	...	...	1	...	...	...	...	...	
Totals ...	84	3	8	36	22	14	1	12	16	18	6	24	8	84

These non-pulmonary forms of Tuberculosis resulted in 26 deaths, compared with 22, 16 and 15 in the previous three years. Tubercular Meningitis was certified as the cause of death in 11 instances, although only 8 such cases were notified. Other details will be found on the previous page.

The death-rate was .59, compared with .59, .36, .31 in the previous three years.

F.—OTHER COMMON DISEASES.

RESPIRATORY DISEASES.

Number of cases	...	...	...	...	Not known
Number of deaths	...	...	...	...	106
Death rate	...	...	...	...	2.40

Under the head of Respiratory Diseases are included Bronchitis, with 43 deaths; Broncho-Pneumonia, with 21; Pneumonia, with 33, and other complaints, such as Asthma, Laryngitis, Pleurisy, &c., with 9 deaths. These diseases are generally associated with climatic conditions and changes, and as one would expect, the majority of deaths occur in the spring. Thus 28 deaths were registered in the first quarter of the year, 39 in the second, 16 in the third, and 23 in the fourth. As a Sanitary Authority, however, you have certain responsibilities even in regard to respiratory diseases. Damp dwellings, dusty occupations, smoky atmosphere, and the like, predispose to respiratory disease, and these causes therefore have to be dealt with by the Local Authority.

For further details of Age and Distribution of Cases see Tables III. and IIIa., pages 298 and 299.

The death-rate from all diseases of the Respiratory System was 2.40, compared with 2.3, 2.7 and 1.9 in the previous three years.

CANCER—MALIGNANT DISEASE.

Number of cases	...	...	...	...	Not known
Number of deaths	...	...	...	...	57
Death-rate	...	...	...	...	1.29

There were 57 deaths registered under the general heading of Malignant Disease, compared with 41, 41 and 53 during the previous three years. Little definite is yet known regarding the nature or cause of the diseases variously named Cancer, Carcinoma, Epithelioma, Sarcoma, &c. The fact that 50 of the 55 deaths occurred after middle life suggests a degenerative process associated with advancing age, but whether, as some think, there is an hereditary predisposition to spontaneous Cancer, or whether there is some zymotic exciting cause is still unknown. Lest, however, there should be some infective organism amenable to sanitary measures free disinfection of houses and clothing is carried out on request.

For details of distribution, &c., of Cancer deaths, see Table III., page 299. Interest is not infrequently shown as to whether Malignant Disease is more common in the N. West Ward than elsewhere. That is not so. An analysis of the Cancer deaths for the past dozen years shows that the incidence has been least in the North East, East, and North West Wards, and most in the Central, South, and West. The deaths from 1901-1913 inclusive per 1000 *houses* (not per 1000 of population) was in the North East, 46; in the East, 50; North West, 55; Central, 60; South, 60; and West, 62.

In former reports references have been made to the possible existence of "Cancer Houses," or rather, Cancer infected houses. To assist in investigating this possibility, I have kept a record of the 512 private houses in the borough in which a death from Malignant Disease has occurred since 1901. In each of 12 instances two deaths from Cancer took place, that is, 2.3 per cent. If any allowance be made for coincidence, this proportion is insufficient to justify the term "Cancer Houses" based on an aetiological connection between the house and the cause of death.

The death-rate last year was 1.29, compared with .93, 1.12, .66, .95, .71 in the previous five years.

HEART DISEASE, &c.

This, the commonest registered cause of death, is too indefinite for comparison or analysis, and few, if any, of the deaths could be debited to preventable causes. Previous Rheumatic Fever, Infectious Diseases, and the express rate at which we now live probably account for most of the cases. Reference has been made in former Reports to the connection between our clay-subsoil and the prevalence of such complaints as Rheumatism and Follicular Tonsillitis, and although Rheumatism was registered as the direct cause of 8 deaths and Tonsillitis only very occasionally proves fatal, it is highly probable that both diseases help to swell the number of those who subsequently die from some form of heart disorder.

Of other common diseases NEPHRITIS and Brights Disease caused 34 deaths—the largest number yet recorded from this cause.

APOPLEXY (Arterial Sclerosis) and SENILE DECAY were debited with 21 deaths each.

The VIOLENT DEATHS numbered 12, many being over 65 years of age.

ACCIDENTS AND DISEASE OF PREGNANCY and Parturition carried off 7 females in the prime of life.

G. INFANT MORTALITY.

Number of births registered	...	...	837
Number of births notified	...	...	802
Number of Infant deaths	...	...	103
Number of still births notified	...	...	26
Infant Mortality	...	...	123

The Notification of Births Act, 1907, has been operative in this borough since January, 1908. During the past year there has been a noticeable falling off in two respects, first in the total number of notifications, and second in the notification of still births. In former years the difference between the number of births notified and that registered represented a leakage of about 4 per cent. Last year 7 per cent. of births were not accounted for. How far this neglect is due to doctors or to midwives need not be discussed here. Suffice it to say that the intimation that certain babies had been born came in the form of their death certificates. The municipality is doing all it can by the appointment of a Health Visitor, the establishment of a Baby's Welcome, etc., to reduce the infant mortality, but all such efforts are futile when the law requiring Notification of Births is not complied with.

The Administration of the Midwives Act 1902, is in the hands of the West Riding County Council.

On receiving notice of a birth from a midwife the Health Visitor pays baby a visit. Advice and help in the form of in-lying outfits are given where necessary, and should baby appear healthy the supervision of the case is entrusted to a voluntary lady visitor, who is expected to visit baby once a month. Should baby not continue to thrive the fact is reported to the Health Visitor who resumes her visits until baby is better or until she can secure the attendance of a medical man.

The following table summarises some of the work done:

Ward	Births re- gistered	Births noti- fied	Prim- ary visits	Revisits	Deaths re- gistered	Infant mor- tality	Average of pre- vious 10 years
Central ...	77	72	74	211	13	169	179
East ...	142	127	113	180	15	105	122
North-East...	164	151	132	292	24	146	122
North-West	141	133	67	71	13	92	94
South ...	167	184	119	202	16	95	123
West ...	146	135	107	271	22	150	149
	837	802	612	1247	103	123	131

There are two points about this table of interest. First, the diminished mortality in all the Wards except the North-East

compared with the average of the previous ten years and, next, the persistent and deplorable waste of infant life which continues to characterise the Central and West Wards.

CAUSES OF INFANT DEATHS.

It may be seen from Table IV that **Developmental Causes** were debited with nearly one half of the deaths under one year, namely, 46 out of a total of 103. Premature birth with 24 deaths, congenital malformation with 4, Marasmus and Debility from birth with 9, constitute a list which compels one to wonder why so many babies are born either premature or with so little vitality that they cannot carry on existence longer than a few weeks. In former reports an attempt was made to find a connection, if not an explanation, in the maternal employment. The causes and conditions are, however, so varied that one hesitates to formulate a theory based on insufficient data.

Respiratory Diseases (Bronchitis and Pneumonia) with 19 deaths, was the next most frequent cause of death. It is noticeable, however, that nearly all the deaths from inflammatory conditions of the lungs occurred between the age of 6 weeks and 6 months, whereas the deaths from developmental causes naturally took place under 6 weeks. This would suggest that mothers are not sufficiently careful to guard their infants against a dusty atmosphere or rapid changes of temperature, say, in taking them from a hot stuffy room either upstairs or out of doors.

Diarrhoea and Enteritis caused 9 deaths between the ages of 4 weeks and 9 months. The large majority of these babies were bottle-fed. Mothers seem slow to understand that Diarrhoea, when not directly due to grossly unsuitable food, is caused by infective germs which get into the milk or artificial food as the result of insufficient protection or uncleanness. So long as milk is absolutely pure there is no need to treat it by boiling as one would do if it were contaminated by filth or contained the germs of disease. Until, however, one can rely on one's supply being genuine, i.e., free from filth and disease, it is a wise precaution, especially in hot weather, to sterilise or at least pasteurise an infant's food.

Of the 103 infants dying under 1 year old, 31 died under 3 days from causes not connected with dieting, of the remainder 25 were breast-fed and 47 bottle fed.

Of **Infectious Diseases** Whooping Cough with 5 deaths was the only one responsible for increasing the infant mortality.

Under this heading might also be included **Tuberculous Meningitis** with 3 deaths, and **Abdominal Tuberculosis** with 2 deaths, were it not that one gets accustomed to think of all forms of "Surgical Tuberculosis" as more likely to be connected with milk than with personal infection.

Congenital Syphilis was registered as the cause of 3 deaths, compared with 1, 5, and 7 in the previous three years.

Health Visitor's Report.

(a) Infant Aid Society.

"Although there has been a further decrease in the number of babies born, cards regarding 567 new babies have been sent to the Voluntary Helpers during the year. These new cases have previously been visited by me once or twice, and the visits of the Helpers are for the most part so greatly appreciated by the mothers that I have been asked to arrange for the visitor to continue her visits when the family has removed to a new address, and many regrets have been expressed when told a strange visitor would look them up in their new quarters.

It is to be regretted that so many deaths among babies of a few months old are due to Bronchitis, but when we consider the style and material of the ordinary baby's clothing—I refer to the low necked cotton shirt and low barrow—it is not to be wondered at that babies get Bronchitis with such inadequate warmth over the lungs. Besides the number who succumb, how many grow up with weakness of the chest from that same cause? These same babies, because of this weakness, are not taken out enough—In fact I know of several who have never been out of the stuffy living-room till four months old. We want to begin our preventive measures against Consumption from the earliest days.

An appeal was made to the Helpers in regard to the introduction of woollen vests among babies, and we are grateful to these Voluntary Helpers for the large number of knitted vests sent to the Welcome. Many mothers not only bought one but bought wool and pins and made another to match, so that now on weighing days at the Mansion House many little woollen-covered plump bodies may be seen waiting by the fire to be weighed.

Additional Voluntary Visitors who will take an interest in two or three babies will be gladly welcomed.

The Society's milk fund continues doing very practical work among mothers and babies, especially in homes where there are many feeble rickety children. During the year milk orders to the following amounts were issued in the various wards:—

Central	...	...	...	...	...	£3	7	11½
East	...	...	...	...	...	4	1	10½
North-East	...	...	...	...	...	12	7	1
North-West	...	...	...	...	...	0	7	7
South	...	...	...	...	...	7	10	6
West	...	...	...	...	...	6	17	6½
						£34	12	6½

Several expectant mothers benefited by dinners supplied by the Society. The amount thus spent was £3 8s.

(b) The Babies' Welcome.

The attendance at the weekly meeting on Wednesday afternoons has been very encouraging. For instance, during the past two months there have been 288 attendances of mothers and 279 weighings of babies. The average number of babies present is 36 and the largest number 42, and the fact that these mothers with their babies, and frequently with a toddler as well, pour weekly into the Welcome testifies to the interest they take in it.

It is to be deplored that the work done in this connection is still going on without the help of the medical profession. Keighley seems to be a progressive town and surely the progress is not to be confined to this generation, but to be continued by the coming one. Therefore the health of the infants around us to-day must vitally affect that progress.

During the Diarrhoea season in September, which was responsible for 11 deaths among babies under 2 years, not one of the victims could be removed from the fly-infected area, as there was no airy cool place to take them to. What are the Authorities going to do in preparation for such a crisis next summer? Now is the time of year to answer this vital question in a practical manner.

In the Report of the National League for Physical Education it is stated that "depth of work counts for more than area in this sphere of social effort," and why should not the Keighley Babies' Welcome be noted *not* for the hundreds who attend it, but for being developed in many directions and for thoroughly looking after its young members until they are of school age and come into the care of the School Medical Officer?

If babies are healthy, well nourished and well cared for there will not be so many defectives when they enter school, and even during infant days it is not too early to proceed with the work of prevention, especially in relation to Consumption. The healthy early months of a child's life are the fundamental necessities of a healthy adult.

Recently at the Welcome a second meeting was started on Tuesdays for expectant mothers to sew and plan for the anticipated event. Already we have met with moderate success. There is no other branch of Babies' Welcome work from which so much practical benefit is derived, and during my experience no other branch gives so much satisfaction in the working, even although the numbers attending are small. In looking back I can recall many mothers to whom that Tuesday afternoon

brought the brightest two hours in the week, and that for many reasons: on account of the rest away from the home; associating with other expectant mothers and all working with the same end in view; the refreshing cup of cocoa and bun to invigorate them for the walk home, and lastly because each afternoon found something attempted, something done, which brought them nearer the end of their preparations.

There is another meeting I should like to see started. We care for babies till they are one year old and nod our approval if at that age they have cut 8 or 10 teeth, are of average weight and satisfactory all round. But babies' troubles are far from over then. During their second year many go backwards or come to a standstill. For such, a separate meeting or clinic ought to be instituted and children should be brought to be weighed every quarter until they are passed into the hands of the School Medical Inspector."

H.—VITAL STATISTICS.

BIRTHS.

The Births registered as actually occurring within the borough were 838, compared with 911 in the previous year. This is the smallest number registered since 1885, that is, for 28 years, and is striking proof of the falling birth-rate.

To arrive at the correct number of births belonging to the borough it is necessary to add 2 inward transfers and deduct 3 outward transfers, the parents of the former living temporarily outside and those of the latter inside the borough. This leaves a corrected total of 837 births, 428 being males and 409 females.

The Birth-rate, therefore, on an estimated population of 44,010 for the middle of the year, is 19.01.

The steady fall in the birth-rate is seen from the following:

Birth-rate for the 10 years	1881-1890	averaged	30.3	per 1,000
"	"	1891-1900	"	28.2 "
"	"	1901-1910	"	23.8 "
"	3 "	1911-1913	"	20.1 "

For England and Wales the rate for the past year was 23.9, for the 96 large towns, that is those with a population over 50,000, the rate was 25.1, while for the 145 smaller towns and boroughs it was 23.9. In every section the rate was considerably higher than in the borough.

The following table enables one to compare the birth-rates

in the several Wards. As in most former years, the rate is lowest in the N.-West and highest in the East and West.

Ward	Population	No. of births	Birth-rate	Average No. of births in previous 10 years
Central ...	4,800	77	16.0	113
East ...	7,040	142	20.1	170
North-East ...	8,680	164	18.8	189
North-West ...	8,890	141	15.8	149
South ...	8,230	167	20.2	168
West ...	6,010	146	24.2	165
Institutions ...	360	—	—	—
	44,010	837	19.0	957

The *Illegitimate Births* numbered 29, or 3.4 per cent. of the total, compared with 3.5, 3.1 and 4.4 during the previous three years. As in former years, the smallest number occur in the S. and N.W. and by far the largest number in the West Ward.

The Sanitary Authority is not concerned with illegitimacy as a social problem, except in so far as it affects the infant mortality rates. That it does materially increase those may be seen from the fact that the mortality rate among illegitimates was 208, whilst among legitimates it was 120.

DEATHS.

The deaths registered as actually occurring in the borough were 668, an increase of 50 over the previous year. When, however, the necessary corrections are made we get a correct total of 643. These corrections consist in adding 11 deaths of *residents* in the Fever Hospital, 12 in Menston Asylum, 4 in neighbouring Hospitals, and 7 of persons away temporarily on holiday. Next there have to be deducted the deaths of 51 *non-residents* brought into the borough for treatment in the Victoria Hospital and Union Infirmary, and of 8 persons who were temporarily staying in the town.

The total thus corrected is 643, and comprised 336 males and 307 females. On an estimated population of 44,010 this yields a death-rate of 14.61, compared with 13.89, 15.2 and 13.8 in the previous three years.

For England and Wales the death-rate was 13.7, for the large towns 14.3, and for the smaller towns 12.8; all lower than in the borough.

A comparison of the rate in the several Wards may be made from the following table:—

Ward	Population	No. of deaths	Death-rate	Average of previous 10 years
Central	4,800	76	15·8	19·0
East ...	7,040	98	13·9	14·4
North-East ...	8,680	118	12·4	12·8
North-West ...	8,890	121	13·6	12·1
South ...	8,230	112	12·1	16·1
West ...	6,010	118	19·6	19·6
Institutions ...	360	—	—	—
	44,010	643	14·61	15·5

Deaths at Different Age-periods and their Cause.

Of the 643 deaths, 33 occurred under 1 week, 45 under 4 weeks and 103 before the infants were 1 year old. The chief causes of death has already been referred to under the heading of Infant Mortality.

In the period 1-2 years 21 died, Whooping Cough, Scarlet Fever, Diphtheria and Broncho-Pneumonia being the principal causes.

Between 2 and 5 years there were 30 deaths, the causes just mentioned being again most common.

Between 5 and 15 years there were 24 deaths, and between 15 and 25 years 33 deaths, Tuberculosis and Zymotic Diseases being the most frequent cause.

During the age period (25-65) Tuberculosis claimed 32 lives, Cancer 35, Bright's Disease 23, Heart Disease 39 and Pneumonia 18.

The most fatal complaints of advancing years, 65 upwards, were Heart Disease 38 deaths, Cancer 20, Bronchitis 20, Apoplexy 14, Bright's Disease and Pneumonia each 10 deaths.

A comparison with former years shows unmistakably a decrease in the number of deaths under 5 years and an increase in those over 65, in other words the expectation of life is steadily improving *and compared with 20 years ago is 5 years longer.*

ZYMOTIC DEATHS.

The seven diseases generally included under this heading, Small Pox, Measles, Whooping Cough, Scarlet Fever, Typhoid Fever and Diarrhoea, were registered as the cause of 41 deaths, compared with 59, 73 and 33 in the previous three years.

It may appear strange to remark that the number of deaths in each instance was in inverse proportion to the generally recognised serious nature of the disease. Thus Typhoid Fever caused 1 death, Scarlet Fever 6, Diphtheria 8, Whooping Cough 13, and Diarrhoea 14.

Of the 41 deaths 34 were of children under 5 years of age. Year after year attention is drawn to the fact that the longer so-called infantile diseases are postponed the less likely are they to prove fatal, yet mothers forget the oft-repeated fact as they stand, baby in arms, watching the removal of an infectious case from a neighbour's house, and then go in before the house is disinfected to offer their children as playmates until the invalid's return.

The death-rate from Zymotic Diseases was .95, compared with an average of 1.25 in the previous 10 years. For England and Wales the rate was 1.20, for the large towns 1.5, and for the smaller towns 1.2. The death-rate therefore from the seven principal Zymotic Diseases in the borough compares very favourably with that elsewhere.

UNCERTIFIED DEATHS AND INQUESTS.

There were 22 deaths informally registered, compared with 22, 23 and 24 in the previous three years. In such cases certificates for burial are granted by the Registrar without the cause of death being certified by a medical man or by the Coroner. The percentage of uncertified deaths, 3.1, is considerably above the average of most towns.

The Inquests held numbered 22, compared with 20, 21 and 17 in the previous three years.

STILL BIRTHS.

There were 39 still born children interred in the Cemetery last year, compared with 39, 49 and 53 in the previous three years.

The number so interred greatly exceeds that notified by Doctors and Midwives, and in this respect it is disappointing the Notification of Births Act is not better complied with. Legal action to enforce compliance is sympathetically avoided at such a time, yet strict compliance is necessary if full benefit of the enactment is to be derived.

Table Showing Comparative Statistics for past 34 years.

Year.	Estimated Popula- tion.	Births.	Birth- rate.	Deaths.	Death rate.	Zym'tic Death- rate.	Infant Mort- ality
1880	25,180	481	33.3	559	22.2	2.1	177
1881	25,333	792	31.2	608	24.0	2.5	183
1882	25,883	768	29.6	567	21.9	2.9	162
1883	26,404	724	27.4	536	20.3	1.4	172
1884	26,935	865	32.1	586	21.7	2.0	190
1885	27,477	781	28.4	560	20.3	1.9	177
1886	28,030	878	31.3	567	20.2	1.4	132
1887	28,594	914	31.9	666	23.3	3.4	174
1888	29,168	849	29.1	637	21.8	4.0	146
1889	29,756	878	29.5	602	20.2	1.9	163
1890	30,354	989	32.5	707	23.3	2.9	158
1891	30,965	970	31.3	664	21.4	2.1	165
1892	31,530	907	28.4	601	19.0	1.7	158
1893	32,070	922	28.7	616	19.2	2.2	158
1894	32,750	862	26.3	600	18.0	1.8	190
1895	33,202	899	27.0	639	18.4	1.1	177
1896	38,000	1156	28.4	695	17.7	1.5	163
1897	38,800	1128	29.0	662	17.0	1.6	139
1898	40,000	1195	29.8	739	18.4	2.2	171
1899	40,900	1127	27.5	790	19.3	2.7	170
1900	41,020	1066	26.0	875	21.3	3.4	164
1901	41,564	1120	26.9	707	17.0	1.9	142
1902	41,750	1129	27.0	667	15.9	1.1	155
1903	41,940	1023	24.3	663	15.8	.6	140
1904	42,130	1017	24.1	774	18.3	2.8	156
1905	42,320	1029	24.3	638	15.0	.8	132
1906	42,510	943	22.1	664	15.5	1.1	149
1907	42,700	986	23.0	619	14.4	.9	116
1908	42,910	946	22.4	667	15.5	1.8	134
1909	43,100	959	22.2	626	14.2	.6	108
1910	43,300	886	20.4	601	13.8	.6	101
1911	43,550	902	20.6	667	15.2	1.6	150
1912	43,750	911	20.8	611	13.8	1.3	100
1913	44,010	837	19.0	643	14.6	.9	123

L.G.B. Table II.

BOROUGH OF KEIGHLEY.

Cases of Infectious Disease notified during the year 1913.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH WARD.						NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.								
	AT AGES.—YEARS.						Central	East	North-East	North-West	West	South	Total	Central	East	North-East	North-West	West	South	Total	
	Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards															
Smallpox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ...	...	...	...	...	...	...	7	20	16	8	6	9	66	3	16	13	3	6	7	48	
Diphtheria and Memb. Croup	66	...	...	...	...	...	5	4	3	6	10	7	35	13	40	52	35	14	28	182	
Erysipelas	35	...	...	...	...	...	15	46	63	50	16	34	224	13	40	52	35	14	28	182	
Scarlet Fever	224	1	62	123	29	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Typhus Fever	...	...	...	...	...	...	2	...	...	...	...	...	...	2	...	...	...	...	...	2	
Enteric Fever	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal Fever	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
Acute Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cerebro-Spinal Fever	96	...	4	11	24	53	12	18	15	6	27	18	96	...	...	...	...	...	...	...	
Lungs	...	...	...	...	...	...	12	16	18	6	24	8	84	...	...	...	...	...	...	...	
Tuberculosis } Other	84	3	8	36	22	14	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
Totals	508	4	99	203	87	108	7	53	104	115	76	84	76	508	18	56	65	38	20	35	232

L.G.B. Table III.

Borough of Keighley.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1913.

[illegible]

L.G.B. Table III. (Continued.) Borough of Keighley.**CAUSES OF, AND DISTRIBUTION OF DEATHS IN 1913.**

CAUSES OF DEATH.	NET DEATHS IN WARDS (AT ALL AGES)								DEATHS IN PUBLIC INSTITUTIONS	
	All Ages	Central	East	N. East	N. West	South	West	No Fixed Abode	Residents	Non- Residents
I	2	3	4	5	6	7	8	...		
All Causes { Certified	623	73	93	113	120	108	116	...	124	51
{ Uncertified	20	3	5	5	1	4	2	...	...	...
Enteric Fever	1	1	...	...	...	...	...	...	1	...
Small Pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	6	1	...	2	3	...	...	...	4	...
Whooping Cough	13	4	1	5	2	...	1	...	...	...
Diphtheria and Croup	8	...	3	3	...	1	1	...	6	...
Influenza	10	1	2	1	2	1	3	...	2	2
Erysipelas... ..	1	...	...	...	...	...	1	...	1	...
Cerebro-Spinal Fever	...	...	...	...	...	...	...	...	...	...
Meningitis (non-Tubercular)	8	1	4	2	1	...	...	...	1	...
Heart Disease	79	6	15	18	15	14	11	...	8	1
Phthisis (Pulmonary Tuberculosis)	36	5	7	5	1	11	7	...	3	1
Tuberculous Meningitis... ..	11	...	1	5	1	...	4	...	2	...
Other Tuberculous Diseases	15	2	2	1	1	3	6	...	6	...
Rheumatic Fever	8	...	...	3	...	4	1	...	1	...
Cancer, Malignant Disease	57	3	8	8	12	18	8	...	11	6
Bronchitis... ..	43	7	3	8	8	4	13	...	4	1
Broncho-Pneumonia	21	4	3	2	...	5	7	...	7	4
Pneumonia (all other forms)	33	8	2	6	7	4	6	...	4	...
Other Respiratory Diseases	9	5	1	1	2	...	...	...	6	...
Diarrhoea and Enteritis... ..	14	2	1	3	...	5	3	...	2	2
Appendicitis and Typhlitis	4	1	...	...	...	2	1	...	...	2
Alcoholism	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	2	1	...	...	1	...	...	...	1	...
Nephritis and Bright's Disease	34	4	6	...	12	3	4	...	5	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Other Accidents and Diseases of Preg- nancy and Parturition	7	...	1	...	1	5	...	...	1	1
Congenital Debility and Malformation and Premature Birth	46	5	8	7	8	8	10	...	5	3
Violent Deaths	12	1	1	2	4	3	1	...	2	...
Suicide	1	...	...	...	1	...	...	...	...	1
Apoplexy	21	1	5	1	6	4	4	...	1	2
Old Age	21	2	4	3	7	1	4	...	5	7
Other Defined Diseases	122	11	20	27	26	16	22	...	35	18
Diseases Ill-defined or Unknown	...	...	...	...	...	...	...	...	...	...
	643	76	98	118	121	112	118	...	124	51

L G.B. Table IV. KEIGHLEY BOROUGH.
INFANT MORTALITY.

1913 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	1-3 months	3-6 months	6-9 months	9-12 months	Total Deaths under 1 year
All causes	Certified.				Uncertified.	27 6	2	6	4	39 6	20	14 1	13 1	9	95 8
Small-pox															
Chicken-pox															
Measles															
Scarlet fever															
Whooping-cough											2	2		1	5
Diphtheria and Croup															
Erysipelas															
Tuberculous Meningitis													2	1	3
Abdominal Tuberculosis												2			2
Other Tuberculous Diseases															
Meningitis (<i>not Tuberculous</i>)														2	2
Convulsions						1				1	1				2
Laryngitis												1			1
Bronchitis								1		1	2	3	2	1	9
Pneumonia (all forms)											1	2	3	3	9
Diarrhoea											1	2	1		4
Enteritis... ..											2	1	2		5
Gastritis... ..						1				1	1				2
Syphilis									1	1	2				3
Rickets															
Suffocation, overlying... ..						1				1					1
Injury at birth						1				1					1
Atelectasis						2				2					2
Congenital Malformations						3		1		4	1	1			6
Premature birth... ..						20		2	2	24	4				28
Atrophy, Debility and Marasmus						4	2	2	1	9	2	1			12
Other causes												1	3	1	5
						33	2	6	4	45	20	15	14	9	103

Nett Births in the year { legitimate 808
illegitimate 29

Nett Deaths in the year of { legitimate infants 97
illegitimate infants 6

HOME OFFICE TABLES.

1. Inspection of Factories, Workshops and Workplaces INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises. (1)	Number of		
	Inspections (2)	Written Notices (3)	Prosecutions (4)
Factories (Including Factory Laundries)	104	11	...
Workshops (Including Workshop Laundries)	292	5	...
Workplaces (Other than Outworkers' premises including in Part 3 of this Report)	6	1	...
Total ...	402	17	...

2. Defects found in Factories, Workshops and Workplaces.

Particulars. (1)	Number of Defects			Number of Prosecu- tions. (5)
	Found (2)	Remedied (3)	Referred to H.M. Inspector (4)	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness	...	...	...	...
Want of ventilation	1	1	...	...
Overcrowding	...	...	...	...
Want of drainage of floors ...	...	...	...	...
Other nuisances	8	8	...	...
Sanitary accommodation :				
Insufficient	6	6	...	...
Unsuitable or defective ...	7	7	...	...
Not separate for sexes ...	4	4	...	...
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of under- ground bakehouse (s. 101) ...	...	...	...	...
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	...	...	...	...
Other offences	...	...	...	...
Total ...	26	26	...	...

3. Home Work.

Nature of Work.	Lists of Outworkers sent by Employers twice a year.	Number of Workmen.	Failure to keep or send lists.
Boot Repairing	2	2	0

4. Registered Workshops.

Workshops on Register at the end of year.	Number.
Tailors and Hosiers	40
Dressmakers, Milliners, Drapers	75
Shoemakers and Cloggers... ..	61
Plumbers and Tinsmiths	13
Watchmakers and Jewellers	8
Cabinet Makers, &c.	6
Blacksmiths, Cycle Repairers, etc.	9
Pork Butchers	13
Tripe Dressers	4
Bakers and Confectioners (under ground)	18
" " (above ground)	61
Various others	32
Total...	340

5. Other Matters.

CLASS. (1)	No. (2)
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133)	17
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	
Notified by H.M. Inspector ...	6
Reports (of action taken sent to H.M. Inspector) ...	6
Other	0
Underground Bakehouses (s. 101) :—	
Certificates granted during the year... ..	0
In use at the end of the year	18

Meteorology—Rainfall.

"The following table shows the rainfall for each month of the year 1913 and for the whole year at the Knowle, Keighley; at Ivy Cottage, Long Lee; at Victoria Park, Keighley; at East Morton; at the Filter Beds, Oldfield; and at the Watersheddes Reservoir:—

	The Knowle. Inches.	Ivy Cottage Inches.	Victoria Park. Inches.	Filter Beds. Inches.	Water sheddes Inches.	Average of 29 years. Inches.
January	4.25	4.45	3.60	4.41	4.70	3.65
February	1.67	1.59	1.71	2.20	3.43	2.79
March	5.67	4.86	5.75	6.20	7.12	2.91
April	4.02	3.70	3.65	4.59	5.37	2.39
May	2.97	2.89	2.57	3.26	3.55	2.34
June	1.83	1.45	1.66	2.09	3.01	2.62
July	0.80	0.69	0.75	1.30	1.30	2.87
August	1.10	1.58	1.27	1.55	2.02	3.39
September ...	1.40	1.47	1.35	1.52	1.61	2.56
October	1.97	2.10	1.94	2.32	2.20	4.18
November	3.34	3.19	3.15	5.20	6.60	3.21
December ...	2.74	2.59	2.65	3.36	4.43	3.85
	31.76	30.56	30.05	38.00	45.35	36.76

In respect of rainfall the year 1913 has presented a marked contrast to its predecessor, the year 1912. The last-named was remarkable for its excessive downpour, whilst 1913 was equally noticeable for its light and sparing rainfall. In 1913 there were five months in which the rain was in excess of the average for that month, namely—January, March, April, May, and November. June, July, August, September, and October had not only light rainfalls but the deficiency was unusually large. A curious feature of the season, however, was the fact that, though rain was so small in bulk and duration, the summer, in the neighbourhood at all events, was remarkable for its cloudy and threatening skies. There was consequently a lack of bright sunshine and temperatures were lower than is customary in dry summers."

In presenting this Report I heartily express my indebtedness to my colleagues and the whole staff of the Health Department for their able and conscientious co-operation in the Public Health Service.

I am,

Yours obediently,

WILLIAM SCATTERTY.

REPORT
OF THE
BOROUGH SANITARY INSPECTOR
FOR THE
YEAR ENDING 31ST DECEMBER, 1913.

Sanitary Inspector's Office,
Town Hall,
April, 1914.

TO THE MAYOR, ALDERMEN AND COUNCILLORS,
GENTLEMEN,

I have pleasure in presenting for your consideration my fifth Annual Report as Borough Sanitary Inspector and Cleansing Superintendent.

The duties in connection with these two specific offices are not the only ones referred to, as I hold several other appointments, as, for instance, Inspector of Shops, Housing Inspector, etc., but the duties in all of these what may be termed minor appointments, are essentially sanitary in character, and in consequence are correctly commented upon in my report as Borough Sanitary Inspector.

The report, for the sake of convenience, is built up on the same plan as its immediate predecessors. An index is provided at the end, and may be found convenient when immediate reference to any of the many matters reported upon is required.

An increase in the work of the Department has again to be recorded, this time in consequence of the administration of the Tuberculosis Order of 1913. A further increase is in prospect, as the Fabrics (Misdescription) Act of 1913, which I have been appointed to administer, comes into force on January 1st, 1914.

The additional work thus imposed upon the Department is not great when compared with that entailed by such Acts as

the Housing, Town Planning, etc., Act of 1909, and the Shops Act, 1912.

All forms of Tuberculosis were made notifiable in the year 1913, and this appreciably increases the amount of disinfection work which now requires to be carried out.

The various tables contain figures which I hope will prove of interest. It may be noticed, for instance, that the inevitable nuisance arising from the presence of so many excreta tubs in the town has been materially reduced. Over 500 new water closets were provided during the year to replace these insanitary conveniences. A good step was thus taken towards making Keighley a water carriage town.

There was continued activity in drainage matters, and many important, though small, schemes were carried into effect under our supervision.

The nuisance from the fly pest was, I think, less acute during the autumn of 1913, and I hope this was due to the more frequent cleansing of manure middens. There is no form of nuisance which offers a more ready means of abatement, yet none is more difficult to obtain.

A marked increase took place in the number of private sanitary surveys made at the request of occupiers or prospective occupiers of houses. These surveys, which include the preparation of a special report and sketch plan, are charged for, unless it can be proved that the presence of insanitary conditions justify the person in making the request. Where no charge is made no special report is submitted to the occupier.

The routine inspection work was well maintained as the staff again remained unchanged throughout the year. If the Department has achieved any success during recent years in systematic administration, I attribute it very largely to the fact that for three years the staff has remained the same.

Sanitary Inspections and Improvements.

Inspection Work.

The following Table shows the amount of routine inspection work performed by your Sanitary Inspectors :

Table I.

	In- spections	Re- Inspec- tions.
Dwelling-Houses :—		
No. Inspected and particulars recorded (H.T.P., &c., Act, 1909)	96	297
No. found to be totally unfit for human habitation ...	18	11
No. found to be not in all respects fit for human habitation	78	189
No. Inspected (Ordinary Inspections)	3555	3277
No. „ re Infectious Diseases	400	377
No. „ re other Diseases	5	...
No. „ re Water Supply	5	15
Schools :—		
Elementary, No. of visits	58	2
Secondary	16	19
Factories :—		
No. of Inspections	86	14
Workshops :—		
Ordinary	23	3
Domestic	275	7
Laundries	4	3
Outworkers	1	...
Bakehouses :—		
Retail	51	4
Underground	23	2
Cowsheds :—		
No. of	336	20
Dairies and Milkshops :—		
Dairies	10	3
Milkshops	5	3
Ice Cream Premises :—		
No. of	33	...
Food and Drugs :—		
No. of Samples (Ordinary)	49	...
„ „ Examined Bacteriologically	0	...
„ „ Examined Microscopically	12	...

DETAILS OF INSPECTION WORK.

[illegible]

Table II.
Sanitary Improvements made and Defects
remedied under the supervision of
the Sanitary Inspectors.

	By Notice	Without Notice
Houses :—		
Dwelling Houses improved	542	16
Provided with sufficient sanitary accommodation ...	503	8
Provided with a sufficient supply of water	4	2
Roofs, etc., repaired	27	4
New floors laid or repaired... ..	19	...
Yards re-paved	221	6
Yard pavements repaired	31	2
Water spouts fixed or repaired	60	11
Down spouts disconnected from drain	43	9
Cleansed and limewashed	1	2
Overcrowding abated	1	1
Disinfected	...	284
Number of Rooms disinfected	...	396
Nuisances abated arising from keeping of swine and other animals	4	...
Schools :—		
Disinfected	0	...
No. of Classrooms disinfected	0	...
Sanitary condition improved	1	2
Sanitary conveniences improved and cleansed	3	3
Factories :—		
Provided with new water supply	0	...
New Sanitary Conveniences provided	8	0
Sanitary conveniences improved	4	1
Sanitary conveniences cleansed	7	1
Workshops :—		
Cleansed or limewashed	220	8
Light and ventilation improved	0	1
Found with no abstract fixed	17	...
Workplace, separate and sufficient W.C's. provided ...	1	...
Outworkers :—		
Work stopped <i>re</i> Infectious Disease	0	...
Failure as regards list of Outworkers	0	...
Bakehouses (Retail) :—		
Cleansed or limewashed	91	...
No. found in insanitary condition	1	...
Common Lodging Houses :—		
Limewashed and cleansed	3	2
Nuisances found and abated	3	..
Houses Let in Lodgings :—		
Sanitary condition improved	3	...
Limewashed and cleansed	3	...
Cowsheds :—		
New Sheds built	0	...
Light and ventilation improved	11	2
Floors repaired or re-paved with impervious material	6	...
Walls rendered	2	...
Middens removed to suitable position	2	...
Farm yards paved	5	...
New drains constructed	4	...
Drains inside abolished	3	...
Limewashed	210	10

Sanitary Improvements made and defects remedied—(Table II. continued).

	By Notice	Without Notice
Dairies and Milk Shops :—		
Sanitary condition improved	1	...
Limewashed or cleansed	10	...
Ice Cream Manufacturers :—		
New apparatus provided	0	...
Cleansed	20	...
Sanitary condition improved	1	...
Drains improved	1	...
Fried Fish Shops :—		
Cleansed or limewashed	0	40
Sanitary condition improved	2	...
Slaughter Houses :—		
Sanitary condition improved	0	...
Light and ventilation improved	0	...
Drains improved	0	...
Buildings repaired	0	...
Floors repaired or relaid	1	...
Walls rendered with cement... ..	0	...
Limewashed	22	...
Closed or discontinued	0	...
Drains :—		
Opened out for inspection	173	39
Constructed (new)	877	57
Reconstructed	24	22
Cleansed or repaired	129	164
Disconnected from sewer	27	17
Ventilated	7	2
Inspection chambers built	10	13
Under house abolished	4	2
Openings removed from inside buildings	9	4
Cesspits abolished	2	...
Self-cleansing gullies provided	461	27
Sub-soil drains provided	1	...
Sinks :—		
New sinks fixed	13	...
Wastepipes trapped or renewed	61	15
Wastepipes disconnected	35	5
Sanitary Fittings :—		
Wastepipes ventilated and improved	...	4
New fittings	...	3
Urinals :—		
Cleansed	60	...
Improved structurally	2	...
Water Closets (Ordinary) :—		
To replace other forms of closet (Tubs or Middens)	295	1
Reconstructed	4	3
Repaired	32	6
Light and ventilation provided or improved	3	2
Limewashed or cleansed	59	3
Additional provided to number of closets previously obtaining	216	11
Soil pipes repaired or renewed	8	...
Provided with a sufficient supply of water	547	35
New flush pipes fixed	517	12
New cisterns fixed	518	12
Abolished	...	1

Sanitary Improvements made and defects remedied—(Table II. continued).

	By Notice	Without Notice
Waste Water Closets :—		
Converted to ordinary water closets	22	...
Nuisances abated arising therefrom	10	17
Repaired	11	8
Latrine Closets :—		
Repaired or cleansed	12	18
Tub Closets :—		
Abolished (apart from number converted to W.C's.) ...	0	...
Repaired or cleansed	5	10
Midden Privies :—		
Converted into water closets... ..	1	...
Repaired	0	...
Ashpits :—		
Abolished	1	3
Cesspools constructed	2	...
Ashplaces :—		
New Portable receptacles provided	171	11
Furnished with proper doors and coverings	503	9
Offensive Trades :—		
Premises improved	1	...
Limewashed	1	70
Offensive Accumulations :—		
Removed	17	3
Stables cleansed	15	...
Stables improved	1	...
Miscellaneous :—		
Not classified above	28	3

Notices.

There are two kinds of Notices served from this Department, the Statutory or legal notice, and the Preliminary or intimation notice. The particular kind of notice served, depends of course, upon the circumstances of the case. 380 Statutory Notices and 323 preliminary notices were served during the period under review. 526 of these notices were fully complied with, the remaining 177 were partially complied with or the works were in progress, or ordered to be executed, at the end of the year.

Scope of Administration.

The various Acts of Parliament, Orders, etc., administered from this Department are as follows:—

Public Health Act, 1875.

Public Health Act Amendment Act, 1890 (part).

Public Health Acts Amendment Act, 1907 (part).

Housing, Town Planning, etc., Act, 1909.
Keighley Improvement Act, 1824.
Keighley Waterworks Improvement Act, 1867.
Keighley Waterworks Extension and Improvement Act, 1869.
Keighley Corporation Act, 1898.
Keighley Corporation Act, 1908.
Contagious Diseases of Animals Acts, 1894, etc.
Rag Flock Act, 1911.
Employment of Children Act, 1903.
Shops Acts, 1912-1913.
Infectious Diseases Prevention Act, 1890.
Infectious Diseases (Notification) Act, 1889.
Factory and Workshop Act, 1901.
Sale of Food and Drugs Acts, 1875 to 1899.
Poisons and Pharmacy Act, 1908.
Rivers Pollution Act, 1876, etc.
Fabrics (Misdescription) Act, 1913.
Poultry Act, 1911.
The Protection of Animals Act, 1911.
Tuberculosis Order, 1913.
Regulations made with respect to Dairies, Cowsheds, and Milkshops.
Byelaws made with respect to Nuisances.
Byelaws made with respect to Common Lodging Houses.
Byelaws made with respect to Houses let in Lodgings.
Byelaws made with respect to Tents, Vans, and Sheds.
Byelaws made with respect to Offensive Trades.

Private Improvement Works.

The amount of Private Improvement Works executed by your staff is now comparatively small. The whole of the work carried out during the year only represents an expenditure of £39 os. 8d., all of which is recoverable from the persons giving orders for the execution of the work.

It is a matter of everyday occurrence for owners of property and others to request us to execute some structural sanitary work at their expense, because, they say, when it is done by the Corporation "it is done right." This is quite true, but it has to be done "right" when contractors do the work, as it is done under official supervision. When the Corporation carry out

private sanitary works it is commonly supposed that the work done will last for ever, or that the Corporation will maintain it in good repair for all time.

It is better for all concerned that the Department should confine itself to supervision, and leave structural works to private contractors. In the case where a nuisance arises from some simple cause such as choked drains, we do accept instructions from owners to cleanse the same. In fact we find it more expeditious to carry out the work even at the risk of not recovering the cost, especially when the owners number perhaps a score, which is often the case. Experience has taught us that it costs more in postage, to say nothing of time, to get such nuisances abated, than it does to send one of our own workmen to do the work.

The Town's Food Supply.

The responsibility for a pure and wholesome food supply is regarded as a heavy one. It is essential that nothing but sound food should be retailed. Quite apart from any idea of fraud, the health of the community demands this, and the Local Authority should tolerate nothing less.

We have, to-day, perforce, to say and write much about the importance of good housing, so much in fact, that it would appear occasionally that this were the only desideratum.

It is not so. Good housing accommodation is of supreme importance, but I doubt if it is paramount to that which should be attached to a wholesome food supply.

Much more food inspection work is carried out in the Borough than is usually supposed. Whilst I am sorry that the importance of the work may be under-estimated, I am glad to think that it is performed in a quiet and unobtrusive manner, such as affords very little cause for complaint. It is well known that the "bump" of complaining—if there be such a one—is, at the moment, developed to an enormous extent, and to many people nothing appears more congenial than complaining about an Inspector.

I do not desire to convey the idea that food inspection in the town is perfect, it is not. So far as meat and milk are concerned the work is systematic and regular, but owing to limitation of opportunity, the staff cannot inspect other food stuffs, especially "canned" goods, in the efficient manner that I think such goods require to be inspected. A substantial amount of this work, however, is done every week.

The inspection of hawkers' goods is another difficulty which does not afford a ready solution, and in this case we do what we can.

In former reports I have divided the subject of food inspection into sections, and propose to do so again, giving, for the purpose of easy reference, the same titles to the various subdivisions.

Meat Inspection.

By meat is meant butcher's meat only. In our routine work no less than 1157 visits were paid to local slaughterhouses and 839 to meat shops. This work, as will be gathered from the figures submitted in the report, is very important, and consumes a lot of time. It is scarcely to be expected of the ordinary individual that he should acquaint himself with the dangers attending the consumption of diseased meat; the established fact that certain diseases are common to both man and animal, and intercommunicable, causes him no concern. It is for the Sanitary Authority to afford him proper protection.

We are still without a public abattoir worthy of the name, and so long as the work has to be performed under present conditions, it cannot be considered satisfactory, or performed to give the maximum protection to the consumer. In other words, we cannot free him from the amount of risk we ought to be able to do.

This must not be misunderstood; it does not reflect upon our meat traders in the least, a butcher is a butcher, not a meat inspector, and he may find himself with a diseased animal—even though he has paid the highest market price—and not know that the carcase is diseased. The lesions may be such as to require expert inspection in order to reveal them. This happens again and again. What can the tradesman do?

He proceeds to sell his goods, and thinks no more about it, and he may be justified under these circumstances. If the inspectors cannot see every carcase because of the distance between the killing places, it is not the tradesman's fault, but that of the local authority.

I hope a consideration of the figures for last year, when no less than nearly eight tons of diseased meat had to be condemned, will bring to the notice of the Council the urgent necessity of providing a well-placed, up-to-date, public abattoir.

The various tables printed below will be found of interest as illustrating not only the amount of work done, but its importance. Supposing for a moment that no inspectors had been in existence, and that the meat traders had not considered the meat

diseased, it would have been possible for a great deal of diseased meat to have been sold, and probably not one purchaser in a thousand would have had the least suspicion even when the meat was in his possession.

The amount of meat condemned in 1913 was greater than that in 1912. The increase in the number of pigs found to be affected with generalised tuberculosis was especially notable, an increase of 33 per cent. over the figures for the previous year being recorded. These diseased pigs, with one exception, were all well-fed, fat pigs, and in many instances we were of opinion that the infection was due to the ingestion of tubercular milk.

Oft-repeated warnings appear to make very little impression upon some feeders of pigs, who persist, notwithstanding the great risk attaching to it, in feeding pigs on raw milk from suspicious cows.

There is no surer way of ruining a pig than to give it raw milk from a tuberculous animal, and if the feeder had to stand the loss, instead of the butcher, I am confident that he would very soon change his methods.

The beef animals inspected were all fairly well-fed, and had been purchased in the open market at the ruling value. "Screws" were not seen in any slaughterhouse with the exception of four which I had removed to the Westgate slaughterhouse for the purpose of slaughter under the Tuberculosis Order of 1913.

This speaks well for the meat supply of our town, and the desire of the butchers to retail a good article. At the same time it demonstrates, when so much meat has to be condemned, after being purchased under the best conditions, that a universal system of meat inspection is absolutely essential in the interests of public health.

Total weight of condemned meat.

TABLE III.

	Tons	Cwts.	Qrs.	Lbs.
Beef in carcase ...	2	15	3	11
Pork in carcase...	2	7	3	3
Veal ...	0	0	2	4
Mutton ...	0	0	2	21
Meat not in carcase ...	0	6	3	7
Organs ...	2	4	2	20
Total ...	7	16	1	10

Tuberculosis in Food Animals.

The above tables again emphasise the unnatural prevalence of Tuberculosis amongst food animals. This disease appears almost to have run riot in our milk cattle and pigs. We know that it is decreasing in the human, but I cannot record, from personal slaughterhouse observation, any material decrease in Tuberculosis of the bovine type. It would be a great pleasure and relief to be able to do so.

Cattle.

The estimated number of beasts slaughtered for human food in the Borough does not vary much, and may generally be put down at 3,000 per annum. Probably a figure of 500 would cover the number of carcasses introduced in a frozen or chilled condition.

Of the number slaughtered 2.7 per cent. were found to be tubercular, more or less. In 9 instances the whole carcass was cut down as the disease was generalised throughout the body. In each of the remaining 72 cases surrender of a part of the carcass or one or more organs was considered sufficient to meet the case.

Calves.

The number of calves slaughtered cannot be given accurately, but it is interesting to notice this year that no calf inspected was found to be affected with Tuberculosis in any degree.

Pigs.

I again estimate that 3,500 pigs were slaughtered during the year. So far as I know no pork is introduced in a frozen condition, but tradesmen have recently commenced to import Danish pork. Again, pork is brought into the town by hawkers who retail it from flat carts.

Meat imported in this and other ways cannot be inspected in the same way as that killed in the Borough, and I am of opinion that powers should be given to local authorities to establish clearing houses, to which all imported meat should be brought for inspection prior to distribution to the various shops. Such a system would only serve to protect the interests of the local tradesmen who retail meat of good quality, and would have been effected locally had we been successful in obtaining the clauses inserted into the last Parliamentary Bill.

It will be remembered that these clauses were withdrawn, and, notwithstanding the assurances of the National Federation of Meat Traders to the contrary, I am of opinion that the inter-

ests of local meat traders would have been better served by the enactment of these clauses than they have been by their deletion. It was intended to make the importation of uninspected meat impossible. It is not impossible under the present arrangement, and cannot be made so.

I have already noted the unusually heavy increase in the number of pigs found to be tubercular, no less than 27 cases of generalised tuberculosis being discovered. Further to this, in 29 instances it was necessary to require the surrender of certain parts or organs of various pig carcasses.

Sheep.

This animal is peculiarly fortunate inasmuch as it is practically immune from the ravages of the *Tubercle Bacillus*. Diseases which exhibit lesions not unlike tuberculosis are occasionally seen, but not very often. During the year it was only necessary to condemn one sheep from any cause, and that was not tuberculosis.

Notification of Disease in Food Animals.

Surrender of Diseased Meat.

The Slaughterhouse Regulations make it obligatory on meat traders to notify all cases of disease found in animals on slaughter. This is an extremely useful provision.

I received during the year 152 notifications from meat traders, and no less than 39 cases of diseased conditions were found by the inspectors, or came to my knowledge in other ways.

It is quite reasonable to suppose that in a number of cases the disease was so slight that it had escaped the butchers attention, but this does not apply to the whole of the 39; there certainly were cases where I think it reasonable to state that the butcher should have noticed the disease.

With a single exception the whole of the meat condemned was formally surrendered by the various owners. These surrenders, moreover, were mostly completed within a reasonable time, which means the same day or the day following. There were, however, occasions when unwarrantable delay occurred. Such delay interferes with the routine work of the office, and often results in a serious waste of one or more of your official's time. The various tradesmen concerned, have been spoken to in the matter, and I hope for an improvement in this direction.

Early and prompt surrender may, conceivably, be less soothing to the troubled mind than a surrender immediately following the shock produced by the loss in cash, but in the end

it all comes to the same thing so far as the trader is concerned, whereas from a departmental point of view delay in this matter is costly.

Much difficulty attending butchers losses—and they are often very considerable—would be avoided if the local insurance scheme, now in operation for compensation in cases of condemned carcases, were extended to cover losses of smaller value, even of separate organs.

At the present time a man insures an animal prior to slaughter, and if that animal is found to be so extensively diseased as to be totally condemned, he is, I understand, compensated to the full value occasioned by his loss. If a part of a carcase is condemned he receives compensation pro ratio, but if some or perhaps the whole of the organs are condemned the insurance fund affords him no assistance whatever, not even the return of his insurance fee. I may be wrong, but I think the butchers, as business men, ought to be able to compass a difficulty of this kind, that is, of course, if they desire to do so.

I have said that all the surrenders were voluntary. They were, but in one or two instances it was merely to obviate formal seizure, the owner expressing himself as being quite willing to sell the diseased meat if we would allow it. The offender on each occasion was the same man, and I have no desire to attach any blame to the great majority of the butchers, in fact, I am quite prepared to accord to them their just due by stating that, on the whole, they met their losses in a spirit which was highly commendable.

This work of saving the public from diseased meat is very unpleasant to the inspector, and extremely disappointing and costly to the butcher, but still it cannot be relaxed one jot.

On one occasion when diseased meat was actually found to be exposed for sale in a shop I could not consider voluntary surrender a suitable punishment for an offence so serious. I therefore recommended that legal proceedings be taken, and the defendants were fined £10 and costs in two cases.

Slaughterhouses.

My report under this heading is, to me, a source of disappointment. I had hoped to remark on the progress of the new abattoir buildings, but I am not able to comment upon the progress of the idea.

Meat Inspection work is thought too little of, with the result that we are not yet provided with a place in which to properly carry on our work. I do not think it necessary to again detail the unsatisfactory structural conditions prevailing

in our own and other local slaughterhouses, they are already very well known.

In addition to such defects some are badly overcrowded, and the Inspector finds it almost impossible to perform his work satisfactorily during the process of killing. No reasonable facilities for inspection in the way of apparatus are provided at any slaughterhouse.

Our work has to be done, usually with the floor as a table, and as one bends to his work he is irritated by drops of thick blood from the overhanging and dripping heads which have been lately removed from the carcasses. The butcher cannot help it, he has to hang his goods in the only place provided, and that unfortunately is the place where we have to perform our duties.

If one thing is more necessary than another in inspection work it is good light, yet in some places it is necessary to grope about with a wax candle even at high noon. Many objections could be offered to this method of inspection by artificial light—and very poor artificial light at that. But it is not necessary. One might, however, record in passing, that it is not very agreeable to have candle grease added to the numerous blood stains and grease spots already on one's clothing as a result of the small overcrowded slaughterhouses.

The number of slaughterhouses remains as before, eleven private and one public. One of the eleven, I understand, is to be discontinued at an early date, and as it is one of the most insanitary from every point of view, it affords me considerable pleasure to report this fact.

Touching the abattoir, I merely desire to reiterate the urgency of this question. Quite independent of the need for a hygienic slaughtering hall and a proper place for cooling and hanging meat prior to removal for sale, which is I think, granted, much could be said against the present system of placing animals awaiting slaughter in pens actually inside the slaughter house, leaving them in full view of all that is taking place.

Suitable and satisfactory lairage accommodation is absent from most of our slaughter houses, and many of the existing lairs are dark, stuffy, insanitary places, and, in my opinion, unfit to keep animals in.

The slaughterhouses were visited 1157 times by your inspectors, whose visits are now recognised and expected by the tradesmen, again with one exception. The particular tradesman thus referred to appears to take pains to cause the maximum amount of difficulty in the inspection of his goods.

Westgate Abattoir.

This place is under my management, and an endeavour has been made to keep it clean. It is worth keeping clean certainly, but it has nothing to commend it as a suitable place for the preparation of meat for sale for food.

Below is a table shewing the number of animals slaughtered at Westgate Public Slaughterhouse:—

TABLE VII.

Year.	Cattle.	Sheep.	Calves.	Pigs.
1912	772	2919	69	993
1913	755	2863	60	720
Decrease	17	56	9	273

Return shewing number of animals slaughtered at Westgate Abattoir during 1913 and found to be affected with Tuberculosis:—

TABLE VIII.

Animals.	Total No. Slaughtered	No. of Animals found to be affected with Tuberculosis.	Tuberculous Animals.	
			Totally Condemned.	Condemned in part only.
Cattle	755	31 or 4'10%	3 or '39%	28 or 3'7%
Pigs	720	2 or 28%	1 or '14%	1 or '14%

Return shewing number of animals slaughtered without the Westgate Abattoir during 1913 and found to be affected with Tuberculosis:—

TABLE IX.

Animals.	Total No. Slaughtered. (approx.)	No. of Animals found to be affected with Tuberculosis	Tuberculous Animals.	
			Totally condemned.	Condemned in part only.
Cattle	2,245	50 or 2.2 %	6 or '27 %	44 or 2'0%
Pigs	2,780	54 or .2 %	26 or '90 %	28 or 1'0%

Tuberculosis Order of 1913.

This is one of the most important Orders issued from the Department of Agriculture during my recollection.

It has for its main object the protection of the public against tuberculosis as conveyed by milk from tubercular animals. It has achieved much success, but not the maximum amount. It

is strong but not strong enough. It gives protection in one place, and in another leaves us exposed to danger. The reason for this is that it is not sufficient merely for an animal to be distinctly tubercular to be condemned.

The disease must take one or more of three forms which are definitely specified, or else the Order does not apply. Where there is Tuberculosis of the udder, or where tubercular milk is yielded, or where the disease is present in an already emaciated animal, slaughter of the diseased animal is inevitable unless it be valued at more than £30, which is very unlikely except in the case of prize stock.

Where an animal is known and certified to be tubercular, and the above symptoms are absent, it may still be sold to be used for human food if a butcher can be found who is ready to take risks. Unfortunately, when dressed by the skilful hands of those crafty persons who are ready at all times to purchase such animals, the superficial evidence of the disease may be so carefully removed that a part, at any rate, of the animal may be sold without causing suspicion to the ordinary purchaser, notwithstanding the fact that the meat may be heavily charged with tubercle bacilli.

The Tuberculosis Order which, I understand, is shortly to be amended, would be very much simplified in operation if its provisions could be so extended as to give discretionary power to the Local Authority to insist upon the slaughter of all animals definitely certified as being tubercular and in such a condition as to warrant slaughter.

If after slaughter it was found possible to pass any part of the carcase of an animal, then such part should be handed over to the owner, who would be at liberty to dispose of it in the usual way, or the present compensation scheme could be extended to cover such cases.

This, at any rate, would ensure a great improvement in the matter of securing not only a milk, but a meat supply free from Tuberculosis.

At present there is nothing to prevent a man transferring a tubercular animal from one district to another and disposing of it for sale for human food.

The Health Committee considered it wise to forward to the Board of Agriculture certain suggestions for consideration when the amendment of the Order was discussed, and, no doubt, these suggestions, the purport of which is indicated in the preceding paragraphs will receive due and careful consideration at an early date, as the President of the Board has publicly declared his intention of improving the Order almost immediately.

The Order at work.

Four cows were notified during the year as suffering from Tuberculosis within the meaning of the Tuberculosis Order. In three instances the animals were in a poor and emaciated condition, whilst in the other case the animal was in fair condition but certified to be yielding tuberculous milk.

All four animals, after having been valued according to the Order, were removed and slaughtered at Westgate Abattoir, the disease in three instances being found to be "generalised," and in the remaining instance "localised."

Where the disease is "generalised," or in other words, where the disease is found to be present in all or nearly all parts of the animal, the compensation is always thirty shillings. This was the sum awarded in the three instances referred to. In these circumstances thirty shillings is a good price, as the animals are only useful for sale to a knacker, who would probably pay less for them. In cases where the disease is "localised" or less extensive, the compensation payable represents three-quarters of the amount at which the animal was valued prior to slaughter. In the case we dealt with under this provision the amount of compensation paid to the farmer was nine pounds.

One half of all compensation is paid by the Board of Agriculture, the other half being paid by the Corporation. The cases referred to during the year cost the ratepayers £4 18s. 9d. for compensation.

The whole of the cost of administration has to be paid out of the Borough Fund, and the expenditure during the year 1913, or that part of the year during which the Order was in force, was £15 19s. 3d.

Disinfection.

The sheds from which the several tuberculous animals were removed were subsequently disinfected, the materials being supplied free of charge from this Department. The work was also carried out under supervision.

Keighley Fair.

All bovine animals brought to the half-yearly fairs are inspected under this Order by your Veterinary Surgeon and Sanitary Inspector.

At the Spring Fair, one cow was found to be suffering from Tubercular Mastitis. The owner of the animal was ordered to remove it to the place whence he had brought it to the fair, and to notify it to the Local Authority concerned.

At the Autumn Fair everything was found to be satisfactory.

The Milk Supply.

Milk.

It is a pleasure to report on the supply of milk produced in the town. The exceptionally high standard of quality reached in 1912 was well maintained during 1913. Compared with many towns we are fortunate in that our milk supply is direct from the farm to the home. There is no rail transit, no delay of any kind, therefore only the minimum danger of contamination between leaving the farm and its reception at the dwelling house. There is plenty of risk of contamination, however, in some of the houses.

Your Veterinary Surgeon, Mr. G. W. Carter, F.R.C.V.S., has submitted to the Health Committee three reports on the health of the 600 cows usually kept in the various sheds. These reports have been exceptionally good, the cattle having been found in a healthy condition, and on no single occasion did Mr. Carter consider it necessary to submit a sample of milk from a suspected animal to the County Laboratory for bacteriological examination.

This is a record. In previous years it has usually been found necessary to submit a number of samples from suspected animals, and what is more, many such samples have proved positive, so that I think we may regard this as evidence of distinct progress. Mr. Carter himself examined 12 samples microscopically, but none was proved to be diseased.

Such a return from a gentleman occupying the high position in the veterinary profession that Mr. Carter does, and having regard to his wide and almost unique experience, is indeed satisfactory.

The milk supply, in the light of present-day knowledge, is a vital matter. During a time when we are bemoaning a great diminution in the birth-rate, it is important that the children born should, if possible, be reared, and everyone knows of what value milk is in this connection. Many know, also, what injury, especially to child life, can be done by diseased milk.

Cowsheds.

The result recorded by Mr. Carter has not been achieved by chance. It is largely, if not wholly, the outcome of the changed and improved environment of the cattle. Our cowsheds, of which we have 105, are now, with but one or two exceptions, in splendid sanitary condition, and I hope that before the next Report is written these exceptions will have disappeared. The sheds are provided with good light and efficient ventilation, the walls and floors are washable, and the stalls likewise; many of the middens have been removed from immediately under the

windows to suitable places in the foldyard, and a number of these yards are now paved, and can be easily and properly cleansed.

The milk cattle housed in the sheds have been given a chance, and have improved upon it. Only a single instance of Tuberculosis was found in the number of cows removed from the local cowsheds to the slaughterhouses for slaughter.

The significance of this will be seen when it is recorded that from 25 per cent. to 30 per cent. of the milk cattle of this country are estimated to be more or less tubercular.

The four cows reported under the Tuberculosis Order were animals new to the sheds, and in each instance were probably infected before they arrived in the town.

Notwithstanding all the improvement that one is pleased to record, it must not be thought that finality has been reached in the matter of the milk supply. Respecting purity we have done well, but in the matter of cleanliness we can do better yet.

All cattle should be groomed. I am pleased to record that this is done in some of the sheds. The method known as "wet milking" must be discontinued, and we must insist that the hands of the milker shall be washed before the commencement of the operation. Not only the inside, but the outside of the sheds, the yard, midden, &c., must all receive regular and careful attention if the public are to have what they have a right to demand, a perfectly clean milk supply.

Dairies.

We have only two retail dairies on our Register and these were conducted in a cleanly and satisfactory manner.

Milkshops.

If one recorded that there were no milkshops in the town, it would scarcely be an exaggeration. Apart from dairies, we have 6 shops from which small quantities of milk are retailed. In several instances the sale does not reach one quart per day. The amount sold, however, is not the main point, it is a question of contamination, and this is hard to avoid when we consider the thousand and one things, varying from dried fish and vegetables to paraffin and firelighters; which are usually sold by general dealers in small shops.

In many cases the shop is part of the dwelling house and the business may even be conducted in the living room.

Covered receptacles, made of white enamelled iron, are provided at every shop from which milk is sold, and this is all that

can be done. As a method of storage it is fairly satisfactory so long as the lid is kept in its proper place, but I am afraid that it is often out of its place for hours together.

Food and Drugs Acts.

The work under the above Acts is shared by the Food and Drugs Inspector of the County Council and myself. As at present arranged, I sample milk only, and the County Council pay the cost of apparatus and analysis.

The work of sampling foods generally is left with Mr. Randerson, who, as usual, has kindly supplied me with his return for the year under review, which is as follows:—

	No. of Samples.		No. of Samples.
Black Beer ...	1	Jam ...	1
Borax ...	1	Lard ...	4
Butter ...	15	Milk ...	41
Buttered Tea Cake ...	1	Margarine ...	1
Cheese ...	1	Mustard ...	1
Coffee ...	1	Olive Oil ...	1
Compound Tincture of		Pearl Barley ...	1
Rhubarb ...	2	Pepper ...	1
Compound Bismuth		Rice ...	3
Lozenges ...	1		—
Flour ...	2		
Golden Syrup ...	1		
		Total	80

Mr. Randerson reports that all the samples were reported by the County Analyst to be genuine.

In addition to the above, I took 47 samples of new and 2 of old milk. As the Analyst's certificates in these cases are forwarded for the information of the Health Committee I am in a position to give a summary of the same.

Of the 47 samples of New Milk, 46 were returned as genuine and one as containing 2.1 per cent. of added water. This latter case was not considered by the County Council to be one where legal proceedings were necessary and the vendor escaped with a caution.

The County Council conducts all prosecutions in the Borough under the Sale of Food and Drugs Acts, whether the samples are taken by the County Inspector or myself.

The samples were, on the whole, very good, the standard of the Board of Agriculture for New Milk was surpassed by 11.3 per cent. as regards the amount of solids, and by 6.7 per cent. in the amount of solids not fat. This is very satisfactory.

Referring to separated milk, the standard of the Board of Agriculture was well complied with.

Average Composition of Samples of Milk.**New Milk.**

	Total Solids	Solids not fat.	Milk Fat.
Board of Agriculture Standard	11.5	8.5	3.0
Average of 46 <i>genuine</i> Samples of New Milk	12.81	9.07	3.73
One <i>adulterated</i> sample	...	8.31	3.32

Separated Milk.

Board of Agriculture Standard	9.0	...	...
Average of 2 samples of <i>Separated</i> Milk ...	9.60	9.07	...

Fish.

The fish exposed for sale in the public market and that used in the fried fish shops was inspected as far as practicable, and we found none to which it was necessary to take exception. I received complaints about the quality of fish sold by hawkers, but nothing was seen by your Inspectors which was considered unfit for food. This is again a record. I have not before had the pleasure of reporting a clean sheet with respect to fish.

Fruit and Vegetables.

Here again a part of the produce exposed in the market and various shops was inspected, but it is quite impossible to inspect the whole of the fruit and vegetables brought into the town, especially the goods exposed in the interior of the smaller shops or sold from hawkers' barrows.

Not a single complaint was received concerning the quality of any fruit or vegetables which had been sold. On one occasion five barrels of pears were surrendered by the Midland Railway Company having been delayed in transit sufficiently long for decomposition to commence. The fruit was quite unfit for human food. This was the only food, coming under this heading, which was condemned throughout the year.

Poultry and Rabbits.

The poultry exposed was inspected and found to be of good quality and free from disease. With rabbits things were different. In the majority of cases the animals were found to be in good condition, but many of those imported in a frozen condition were found, on being thawed out, to be only just passable. None was actually condemned, but I am satisfied that many of them could not have had a very high nutritive value.

Whatever the cause, the present day demand for cheap articles of food to be deplored, as it opens the door to the sale of questionable goods. Quantity is the motto of many, who would, I am convinced, be better served with lesser amounts of superior quality. That is when the purchasing power is limited, but this is not the only reason, or in my opinion the main reason why people demand cheap food.

Local Housing Conditions.

The Housing problem has now become acute in nearly all parts of the country, and Keighley is no exception.

Various reasons, both economical and political, are assigned as the actual cause, but I do not consider it my duty to discuss these questions, my only concern is that we have a dearth of houses which can be let at from 3/- to 5/- a week. It will be agreed that houses must be provided, and if local enterprise fails, then the remedy would appear to rest with the Local Authority, who, in my opinion, should receive Government assistance in the matter.

Inspection Work.

As your officer appointed to make inspections under the Housing, Town Planning, &c., Act, 1909, I have to report that inspection work during the year has brought to notice a number of instances where more than one family were found to be occupying a single cottage. This is distinctly unsatisfactory, not only from a health, but a moral point of view.

It does not necessarily lead to illegal overcrowding of the houses within the meaning of the Public Health Acts, owing to the exceptionally large sleeping rooms which are found in most of the older houses, but the houses are overcrowded nevertheless, and this unsatisfactory arrangement will continue and increase unless more houses are forthcoming or something occurs to bring about a depletion in the number of inhabitants, with the consequent vacation of houses.

The moral side of the housing problem is often lost sight of, but it is very real, and quite equal in importance to the purely sanitary aspect; in fact, I am of opinion that it is the most important factor in the whole problem.

Closing Orders.

As will be seen from the tables, 18 houses were closed during the year as being unfit for human habitation. It was because these houses were totally unfit and likely to be immediately dangerous to the health of those living in them that closing orders were made. In every case the houses were inspected by the Medical Officer of Health, the Health Committee and myself, and unanimity of opinion prevailed in respect of every house.

Prior to closure, nine of these houses were already unoccupied, seven of which were cellar dwellings. Nine houses

were ordinary inhabited at the time of inspection, and these included four cellar dwellings.

The owners of all these houses were given an opportunity of appearing before the Committee for the purpose of stating their reasons, if any, as to why closing orders should not be made. They were also given an opportunity of submitting schemes for the reconstruction or alteration of the houses in order to render the same in all respects fit for human habitation, but only in respect of five cottages did the owners avail themselves of this offer.

Demolition of houses.

Two old and dilapidated cottages in Beck Street, one in Westgate, one in Turkey Street, and three tenement dwellings in Allison Square were demolished during the year, following the issue of demolition orders.

The most common defects in houses.

The most common and perhaps the most important defect found in local cottage property is undoubtedly the absence of proper food stores, or places suitable for making into food stores.

Other common defects are dampness in walls and floors. Not excessive in the majority of cases, but sufficient to impair the value of the houses from a sanitary point of view. The causes of these conditions are several. Many of the older houses are built back to the earth, and water from the adjoining land gains access to the walls which, notwithstanding that many of them are built hollow, become damp on the inner as well as the outer side.

It is not difficult to remedy this defect when the adjoining land belongs to the same owner, but as a rule it does not, and, what is more, cannot be purchased.

Another cause is the entire absence of damp proof courses in the house walls. All houses are built with local stone, and at the time when the older houses were erected it was not considered necessary to put in damp courses. This defect is not difficult to overcome when the walls are coursed, but many of the older houses have walls of rubble, and remarkably random at that.

Flagged floors laid directly on the soil are often damp by reason of the absorption of ground water. These floors are often insanitary, but can be made satisfactory without great expense. Where defective at the joints,—a common thing—these floors also provide suitable outlets for ground air which escapes into the living room. This is a defect far more serious than one is able to get owners to comprehend.

Many houses are provided with windows which cannot be opened, but in many more instances windows which may be opened are not. The fear of the open window is surprising; there are people who are far more afraid of fresh than foul air, and only education will remove this anomaly. The worst feature is that such people are unwilling scholars and refuse, not only to be taught, but to be advised.

I would again draw attention to the use of half-attic bedrooms—places where beds are placed on a shelf above those of the ordinary bedroom. These rooms are insanitary places, and I hope an edict will go forth closing them as soon as we are in a position to house all the people without recourse to the use of such rooms as sleeping places. Many have been discontinued by arrangement with owners and occupiers.

Other common defects, such as drainage, etc., are dealt with, not under the Housing Act, but under the Public Health Acts. This course is more expeditious and in my opinion more satisfactory from an administrative point of view.

Cleanliness.

On the whole the houses in the town, or at least those within the ken of the Inspector, are kept fairly clean. The great majority are very clean, and it is comparatively rare to find one in such a state as to constitute an actionable nuisance, but there appears to be a sort of half-way stage to cleanliness, a condition where the house is not scrupulously clean or ostensibly dirty. Such houses, however good structurally, cannot be entirely healthy until the occupants of these places are brought to a knowledge of the great value of soap and water sanitation.

Too much confidence is placed in strong smelling disinfectants. These fluids are used often to cover up a smell which elbow grease would remove. In this connection the teaching of hygiene in the schools should tend indirectly to change the conception of many householders as to the value of domestic sanitation.

Housing, Town Planning, &c. Act, 1909.

Inspection Work during 1913.

Total number of houses specially inspected under the Housing, Town Planning, &c., Act, 1909	96
Number of reports made to the Local Authority re houses not in all respects fit for human habitation	96
Number of reports acted upon by the Local Authority	
Under Section 17 (Closing Orders)	18
Under Section 15 (Orders to make fit)	48
Number of houses dealt with under Public Health Acts	30
Total	96

SANITARY INSPECTOR'S REPORT, 1913.	329
Number of Closing Orders determined during the year	0
Number of Closing Orders made in respect of inhabited dwellings	9
Number of Closing Orders made in respect of uninhabited dwellings	9
Total	18
Number of houses voluntarily closed by owners	6
Number of Demolition Orders issued	11
Number of houses demolished	7*
Number of Notices under Section 15 carried forward from 1912 and complied with in 1913	11
Number of Notices carried forward to 1914	8

* 4 Demolition Orders not enforced. The houses in question will be demolished in connection with the Westgate Improvement Scheme.

Improved Houses.

Total number of houses made in all respects fit for human habitation under Section 15, or the Public Health Act, 1875	39
Number of houses where works were in progress or ordered at the close of the year	36

NOTE.—The estimated number of occupied dwelling houses coming within the meaning of Section 15 of the Housing, Town Planning, &c., Act, 1909, is 6,000.

Sanitary History of Dwelling Houses.

For several years, prior to the passing of the Housing, Town Planning, &c., Act, 1909, I had in operation a system for collecting and recording the sanitary details of houses which we found it necessary to visit for any purpose.

Records are now filed, more or less complete, respecting 6,518 of the houses within the Borough. During the year under review we collected some particulars concerning 1,308 houses.

**Details of Improvements Effected (under the
Housing, and Town Planning &c., Act, 1909,) during the year 1913.**

TABLE X

	TOTALS.	
	By Notice.	Not ice Without
Dwelling Houses (General Improvements) :—		
Circulation of air provided or improved...		
Lighting and ventilation improved	15	
Supplied with pure water supply... ..		
Rendered free from dampness	16	5
Provided with special store for food	5	
" " improved means for food storage		
Roofs reconstructed or repaired	20	4
Walls (outside) pointed and repaired	31	16
Provided with separate and sufficient water closet accommodation	7	
Provided with proper refuse receptacle and place to keep same	6	
Provided with new sinks or other sanitary fittings...	13	
" " paved yards	19	
" " improved yard pavements	8	1
" " proper means of drainage	22	
Demolished as unfit for human habitation	5	
Living Rooms :—		
Light and ventilation improved	25	
New windows provided	13	
Old windows improved	8	
Dampness in walls prevented	39	4
Walls and ceilings repaired or re-plastered	9	
Floors repaired or re-laid	16	
New fireplaces provided	3	
Sleeping Rooms :—		
Light and ventilation improved	17	
New windows provided	14	
Old windows improved	3	
Dampness in walls prevented	19	3
Walls and ceilings repaired or re-plastered	13	
New fireplaces provided	2	
Cellars or Basement Rooms :—		
Light and ventilation improved		
Dampness in walls prevented	11	5
Walls and ceilings repaired or replastered		
Floors repaired or relaid		

Houses Closed as Unfit for Human Habitation during 1913.

145	South Street.	Occupied.
147	"	Unoccupied cellar dwelling.
149	"	Unoccupied cellar dwelling.
151	"	Unoccupied cellar dwelling.
153	"	Unoccupied cellar dwelling.
155	"	Occupied.
173	"	Occupied cellar dwelling.
175	"	Unoccupied cellar dwelling.
133	"	Unoccupied cellar dwelling.
139	"	Unoccupied cellar dwelling.
179	"	Occupied cellar dwelling.
181	"	Occupied cellar dwelling.
181a	"	Occupied cellar dwelling.
183	"	Unoccupied.
185	"	Unoccupied.
47,	Beck Street.	Occupied. Single roomed house.
32,	Braithwaite Edge.	Occupied. 4 roomed cottage.
33,	" "	Occupied. 4 roomed cottage.

Houses Voluntarily Closed by Owners.

Chapel Lane.	3 Cottages. 2 occupied; 1 used as saddler's workshop. (Since demolished.)
No. 73, West Lane.	Unoccupied back to back house; used as a store room.
No. 68, Leeds Street.	Occupied back to back house.
No. 27, Eastwood Square.	Unoccupied semi through house

Houses Compulsorily Demolished.

No. 2, Beck Street.
No. 4, Beck Street.
No. 93, Turkey Street.
No. 20, Allison Square, Chapel Lane.
No. 22, Allison Square, Chapel Lane.
No. 24, Allison Square, Chapel Lane.
Unnumbered house, Westgate.

Common Lodging Houses.

I have to report a diminution in the number of these places, one having been closed during the year as unfit for human habitation. The one referred to was a very old established house in Upper Green. This house, and others adjoining, have now been purchased by the Corporation, and will be demolished during the progress of the Westgate Improvement Scheme.

Another lodging house, the one in Allison Square, has been altered and improved under the Housing, Town Planning, etc., Act, 1909, but at the time of writing is still incomplete, notwithstanding that it has been in progress on and off for many months.

This delay is very unsatisfactory, but the house, so far as its sanitary condition is concerned, has been greatly improved, and is more satisfactory now than ever before.

The two remaining houses, the Borough Model and the New Model, are in a good state of repair. All the houses have been conducted satisfactory.

75 visits to lodging houses were made either in the day-time or at night.

It was not necessary to institute proceedings in connection with any of the Bye-laws with respect to the Common Lodging Houses during the year 1913.

Accommodation in the three lodging houses is provided for 323 males and 8 females. There are 45 cubicles for male lodgers with 8 for couples or women only.

The number of deputy keepers on my register is 21.

Houses Let in Lodgings.

We have but 4 of these on the register, and they are all composed in one block in Allison Square. They have been maintained in a fairly satisfactory condition, a fact I attribute to the presence of the keeper of the adjoining common lodging house who resides on the premises. This lodging house keeper also lets the houses let in lodgings.

Van Dwellings.

The coming of hawkers' vans into the Borough is always a source of trouble, but still they come. The occupiers, careless of the comfort of others, immediately proceed to dump their refuse on the ground adjoining the van and appropriate unto themselves the use of adjoining water closets, with disastrous results. They also assist themselves, without stint, to the town's water.

On many occasions have we had to cause these peripatetics to move on, and on more than one occasion they have done so, but only from one end of the town to the other.

Hitherto much delay has ensued because I have had to wait for a meeting of the Committee before I could institute legal proceedings for contraventions of the bye-laws.

This has now been altered, the Council having empowered me to act in the matter as I consider necessary.

In the case of the vans visiting the town on fair days the circumstances are quite different. Arrangements are made with the gentleman who practically runs the fair, for the hire from this Department of proper portable sanitary conveniences. Arrangements are also made for the supply of water for the occupants of the vans.

The point to be carefully watched in respect of incoming vans is whether or not they have on board any case of infectious disease, or whether they have come from an area where infectious disease is epidemic. Careful enquiries were made of the occupiers of the vans coming into the town during the year, and in no case had we any reason to suspect that the presence of the vans was likely to assist in the dissemination of any infectious disease.

Factory and Workshop Sanitation.

Factories.

The sanitary inspection of factories is, in the first instance, the duty of His Majesty's Inspector of Factories, but where any defect remediable under the Public Health Act is found, then matter is referred by the Inspector to the Local Authority to deal with. A number of reports were received from the Factory Inspector during the year as follows:—

Walls and ceilings of bakehouses dirty	...	...	3
Sanitary accommodation insufficient	...	...	1
Sanitary accommodation dirty	...	...	2
			6

On making my inspection of the various premises, and following interviews with the several proprietors, the various improvements suggested were obtained. I must say that I consider that all the complaints thus referred to by H.M. Factory Inspector were justified.

In some instances the work of improvement was put in hand forthwith, whilst in other cases it is in progress at the time of writing.

I am forced to the opinion that regular sanitary inspection of the sanitary conveniences at the various mills and factories is very desirable. These places, even after reconstruction, are often neglected, and found to be in such a state as to be a nuisance. The difficulty appears to be that it is nobody's duty to keep the same in a cleanly condition.

One difficulty which often occurs when the conveniences of the older factories have to be brought up-to-date, is that of securing separate approaches to the sanitary conveniences for male and female workers. This can only be done in some cases at great expense, but your Committee consider it to be a matter of such importance that they feel compelled to insist upon its provision.

Workshops.

The Town Council is primarily responsible for the sanitary condition of workshops, of which there are 339 on the register. It will be at once recognised that no small part of your Inspectors' time is occupied by this duty.

I have nothing unusual to report for the year 1913. The various workshops were inspected, and except for the insanitary condition of certain sanitary conveniences, and the absence of efficient means of ventilation to a number of the workshops, they were found to be kept in a fairly satisfactory condition. The limewashing and cleansing regulations were fairly well observed.

Particulars as to the trades carried on in these workshops will be found in the tables given below, the only difference from last year being an increase of 26 in the number of workshops, where the following trades are carried on:—

Tailor 1, Drapers, etc., 9, Shoemakers 4, Plumbers, etc., 2, Bakehouses 7, Carpet Seaming 3.

TABLE XI.
REGISTERED WORKSHOPS.

Tailors	40	Carried forward...	208
Drapers, Dressmakers and Milliners	75	Cycle and Motor Repairers ...	7
Hosiery, Shirtmakers and Under-clothing	7	Pork Butchers	13
Shoemakers, Cloggers and Saddlers	61	Bakehouses (ordinary)... ..	61
Plumbers, Tinsmiths, &c. ...	13	do. (underground) ...	18
Watchmakers and Jewellers ...	8	Cabinet Makers and Polishers	6
Tripe Dressers	4	Blacksmiths	2
	208	Electrical Engineers	3
		Miscellaneous Trades	19
		Carpet Seaming	3
			340

TABLE XII.
NEW WORKSHOPS NOTIFIED BY THE FACTORY INSPECTOR DURING 1913.

Baking	6	Carried forward...	11
Dressmaker, &c....	3	Milliners	2
Furniture Repairing	1	Boot Repairers	2
Plumber	1	Tailor	1
	11		16

Domestic Workshops.

As implied by the title, these workshops are those where the only persons employed are members of the domestic circle, and usually resident on the premises. Of these we have 64, and the trades carried on there are as follows:—

TABLE XIII.

Bakers (ordinary)	28	Carried forward...	56
Bakers (underground)	6	Pork Butchers	5
Tailors	6	Jeweller	1
Shoemakers	4	Laundress	1
Dressmakers	12	Saddler	1
	56		64

Offensive Trades.

In my last report I referred to the fact that the list of trades coming within this definition was about to be extended. On the first of April, 1913, an Order was made by the Town Council, and was afterwards duly confirmed by the Local Government Board, on the 13th July.

The effect of this order was to extend the number of trades scheduled as offensive, and therefore requiring additional inspection.

A complete list of offensive trades together with the number of business carried on in the Borough in each trade is given below:—

TABLE XIV.

Tanners	5	Carried forward...	55
Tallow Melter	1	Glue Makers	0
Tripe Boilers	4	Size Makers	0
Gut Scraper	1	Leather Dressers	6
Fish Friers	40	Breeder of maggots from putrescible matter	1
Rag and Bone Dealers	3	Rabbit Skin Drier	1
Blood Driers	0	Manufacture of manure from fish or other offal	0
Hide and Skin Dealers	1		
	55		63

No regulations concerning the newly added trades have yet been framed, but some are necessary, especially with respect to fish frying.

The whole of the premises have been inspected from time to time and no contraventions of any bye-law or Statute have been recorded. I received no complaints whatever concerning the conduct of any offensive trade within the Borough.

In the matter of cleanliness—which is the important point—the premises have been kept fairly satisfactory. Permission was

given during the year to a leather-dresser to commence business in Greengate Road, subject to the business being carried on in a satisfactory manner.

Air Pollution by Coal Smoke.

I believe the figures under this heading for 1913, constitute a record for Keighley.

Never have we had less factory smoke, and the mills and factories were all carried on full time. The amount of steam raised was no less than in former years, but it was produced with very much less smoke. This is significant, and proves the old argument that smoke is essential to efficiency in work, to be all wrong. It proves more, for it demonstrates that a more complete combustion of fuel has been found to be possible.

Better combustion means more heat from a given quantity of fuel, and this in turn means greater economy in working costs. A reduction in the smoke nuisance is, therefore, advantageous not only to the community, but to the manufacturer.

All should be well satisfied that progress is being made, and the Local Authority should insist on the total abatement of what is after all, in the great majority of cases, a very serious and quite unnecessary nuisance.

In the special printed report recently issued to the members of the Council, I have dealt at some length with the many and varied phases of the smoke nuisance problem, and there is no need to reiterate these points here, but I should like to again refer to the nuisance from dwelling house chimneys.

One has only to look over the town from one of its many elevated situations to notice the thick cloud of smoke overhanging all the lower parts of the Borough. This cloud of dirty, greasy vapour, is present on Sundays as well as weekdays, so that the mills and factories are not altogether to blame for it. In fact, it is only a little less dense on Sundays, when the mills are standing, than it is on ordinary weekdays.

This goes to prove that the chimney of the private house is responsible for the greater part of the smoke nuisance, and, should the present efforts to produce a smokeless coke fuel prove successful, I hope that our Gas Committee will find it commercially successful to instal the necessary plant, in order that the inhabitants may enjoy the double benefits of a clean, bright fuel and a clean, pure air.

The two remedies for smoke-producing domestic grates are as, I have already indicated, abolition of the grate in favour of a new pattern, hygienic, gas fire, or better still, the adoption of a smokeless fuel in place of raw coal.

During the year, I have received a number of complaints from householders concerning the smoke nuisance. Strange to say many of the complaints have come from those districts where there are practically no factory chimneys, and I have always found it extremely difficult to persuade these complainants that the nuisance complained of, which was that clean washed clothes were frequently covered with thick black spots or smuts, was entirely due to chimneys of private dwelling-houses, probably their own.

The year's Record of observations and action taken was as follows. The figures for 1912 are given for comparison.

TABLE XV.

Particulars of Smoke Observations.	1913.	1912.
Number of chimneys of which observations were taken	123	121
Number of observations taken	3208	2244
Number of observations shewing little or no black smoke	3070	2077
Number of observations of 60 minutes' duration, shewing black smoke	134	166
Number of observations of 30 minutes' duration, shewing black smoke	4	1
Average number of minutes of black smoke per chimney during the above 138 observations	2'1	3'3
Number of observations shewing black smoke at or above the maximum of 4 minutes per hour	15	50
Average number of minutes of black smoke per hour from the chimneys exceeding the maximum	5'1	6'8
Maximum number of minutes of black smoke emitted by any one chimney during a 60 minutes' observation	7	18
Number of Notices Served	10	15
„ Letters written	4	18

Infection and Disinfection.

It will be noticed from the report of the Medical Officer of Health that the ordinary Infectious Diseases rate for 1913 is much lower than for the preceding year. There was a marked diminution in the number of cases reported in all notifiable diseases save one—Tuberculosis. Here the notifications increased by 95,—from 85 to 180,—due to making the disease compulsorily notifiable. The only point I desire to mention in connection with this is, that as disinfection is now compulsory in all house from which Tuberculosis is notified, the increase in the number of cases reported means a permanent increase in the amount of routine disinfection work.

Tuberculosis.

Coming to details, the number of separate houses from which the 180 cases were notified was 167. As usual, the great majority of these were ordinary working class houses let at 5s. per week or less.

Disinfection of all the infected houses took place, care being taken to perform this work as thoroughly as possible, as we have reason to believe that disinfection is of great value in connection with this disease. Only a few years ago, many people had a great prejudice against disinfection after cases of Consumption, they frequently referred to it as a "fad," but to-day they seek our help and we give it freely. *Experientia docet.*

Typhoid or Enteric Fever.

This disease may be said to constitute a sanitary barometer for the town. So sensitive is it to the presence of insanitary conditions.

Fortunately Enteric is now reduced, in Keighley, almost to the irreducible minimum, and last year there were two cases only. This I believe to be a record, and is a good testimonial to the sanitary condition of the town.

Accidents are always possible with milk and water supplies, so far as Typhoid is concerned, and these cannot always be foreshadowed, but there can be no doubt that the privy midden or the excreta tub have previously been very potential factors in the distribution of the disease.

I have before pointed out that the reduction in the incidence of Enteric Fever has been coincident with the abolition of the tub closet system, and as we are hopeful of seeing the last of these "beastly buckets" within measurable distance, I hope also that we shall hear the last of Typhoid in the town.

The two cases referred to were reported from two different houses, both of which were thoroughly disinfected. At one house, insanitary conditions were found, but were not considered to be of serious moment, and were forthwith remedied.

Scarlet Fever.

The 224 cases reported by the Medical Officer occurred in 176 houses. At 24 insanitary conditions were found and forthwith remedied. It is no longer thought that there is any direct connection between insanitary conditions and Scarlet Fever. The whole of the houses concerned were disinfected, and all precautions possible were taken to prevent the spread of the disease.

Diphtheria.

There were 66 cases of this disease notified from 59 houses. At 21 insanitary conditions were complained of. Unlike Scarlet Fever, this is a disease where domestic sanitation can produce grave results. In each instance where we found insanitary conditions at infected houses, the defects were remedied without delay.

' Septic ' Throat.

Under this heading I should like to refer to cases of Septic or Diphtheretic Throat. Many houses were referred to me for inspection on the recommendation of Medical Practitioners because of cases of Septic Throat. A notable incidence of this occurred in Castle Road, whence I received simultaneously four complaints from as many occupiers, each complainant being unaware of the others' action. On inspection, the conditions of the drains at these houses were found to be very unsatisfactory indeed, and I am pleased to report that the owner, at my request, readily consented to improve the drains at every house in the road. He also effected a further improvement by abolishing the existing waste water closets in favour of ordinary clean water closets. Since this improvement was made, I have not received a single complaint of any kind from any of the houses, and this applies equally to many other houses referred to me under exactly similar conditions.

TABLE XVI.

Return of Disinfection Work.	1912.	1913.
Inspections and re-inspections of infected houses	822	782
No. of infected houses disinfected ...	502	284
No. of infected rooms disinfected... ..	711	396
No. of houses disinfected after Phthisis ...	35	31
No. of rooms disinfected after Phthisis ..	54	55
No. of School classrooms disinfected ...	339	0

TABLE XVII.

Disinfectants used, and for what purpose.	1912.	1913.
Disinfectant Fluid distributed to occupiers of infected houses or sold ...	240 galls.	169 galls.
Formaldehyde (40% Solution) used in spraying rooms and schools ...	12 galls.	4 galls.
Small fumigators, for vapourising Formalin Tablets ...	288	360
"Cofectant" ...	12 lbs.	2 galls.

The above quantities do not include disinfectants used at the Sanitary Depot.

Public Cleansing Work.

The work of keeping the town clean is undertaken by the Health Department. By this arrangement the Committee have an opportunity of practising cleanliness as well as preaching it to property owners and occupiers.

There were never so few complaints concerning this work as during 1913, so that one may suppose that the efforts put forth to make our public sanitation exemplary were considered fairly satisfactory.

Street cleansing work, so simple to the casual observer, is daily becoming more difficult. The advent of motor traffic has brought about new conditions. The dust nuisance is aggravated, and mud is made more quickly. What is more, when paving is defective, and mud or water is collected in hollows or even in wide joints of pavers, fast travelling motors transfer this water or mud not only on to the footpath but on shop windows, and in considerable quantities.

This is a source of great annoyance and shopkeepers complain greatly. It is difficult to see what can be done, except keep the road surfaces in absolutely perfect condition, which is costly.

From a cleansing point of view a good surface can be cleansed more cheaply than a defective one, and is obviously better all round, but to keep perfect surfaces in these days of heavy, and fast motor traffic, must be difficult.

In order to cope properly with motor traffic we require motor appliances ourselves and the Committee will soon be called upon to consider the introduction of motor traction for cleansing purposes. The old horse brush can do good work, but it is slow and occupies the streets too long. Now that traffic is increasing motor traction will, moreover, probably be found to compete successfully as to cost. The dust nuisance also may be solved by quickly moving motor sprinklers.

Full details as to the miles of streets swept, gullies cleansed, &c., will be found on page 344.

Street Gullies.

The work of cleansing street gullies is now fairly satisfactory. The new system of using pails for conveying the contents to the carts being an improvement on the old method of collecting the slurry from the street surface. The work is done a little more slowly, but, on the whole, the new arrangement is much more satisfactory. The gullies in the centre of the town are emptied once a week, the remainder monthly.

Street Orderlies.

The introduction of adult street orderlies has been a success and I have had applications from shopkeepers to appoint more of these men, so that more of the principal shopping thoroughfares can receive constant attention. The several districts for which these men have been made responsible have been kept practically free from horse droppings, waste paper, and litter of all kinds.

Handbill Distribution.

The handbill nuisance is one which requires some regulation. It is not right that thousands of these bills should be thrown about on the streets immediately after cleansing operations are completed. Some bill distributors do not appear to care what happens to the bills so long as they get rid of them, and this makes them very generous with them.

Sanding and Ashing.

We have continued the use of Bridport Grit for wood pavements with successful results. The effect of this flint grit has been to bring about a discontinuance of slippery pavements in wet or showery weather. Sanding and ashing is, of course, only necessary in frosty weather. For this purpose the contour of our district renders it necessary to have many stations where clean ashes can be stored in readiness for use on steep gradients. The stations are charged during the summer months, and are thus ready for winter emergencies.

Watering.

In our attempt to lay the dust we spread 400,160 gallons of water from the water carts during the summer. This nuisance as I have already remarked will probably be settled at an early date by motor sprinkling machines. There are such machines in use to-day, but in small towns it will be necessary to have a machine with an interchangeable body in order that the chassis can be used in other operations. This is the machine we are waiting for.

Refuse Removal.

We continue to receive complaints about this phase of our work. At the present time the refuse from some of the suburbs is only removed fortnightly, and this causes dissatisfaction. Many complain on the score that the highest rated property receives least attention, whilst others are concerned from the hygienic point of view. Something can be said for the present system. Every house has its own properly built and closed ashes place, with a portable receptacle fitted inside. No refuse is therefore exposed to view or even to flies if the doors are kept fastened. It would be different if we worked on the principle of the 'galvanised tin in the yard,' which, surrounded by quantities of refuse, often looks untidy and is usually dilapidated more or less.

But when all things are considered, I am strongly of opinion, notwithstanding the splendid arrangements we have for storage, that all refuse should be removed from every house at least once a week.

In the Newtown area and in certain other parts like Wellington Street district, we remove the refuse three times weekly, and in the central area we cleanse all receptacles weekly. There are 9,002 receptacles in use, about 7,000 are cleansed weekly or oftener, and 2,000 fortnightly.

Residents continue to misuse refuse receptacles. Much combustible matter is placed therein which ought to be burned on the kitchen fire. Worse than this, in some areas a large quantity of liquid is found in the receptacles. This is very unsatisfactory and causes a nuisance, which, usually, a neighbour complains of. It is a dirty habit and should be stopped. Notices have been posted threatening legal proceedings, but detection of the actual offender is difficult, unless a great deal of time is spent in watching.

Covered Refuse Wagons.

I am pleased that the Committee have found it possible to tackle the problem of dust from the open refuse collection carts. A new covered wagon has been designed which completely cures the evil. Refuse is loaded through hinged doors of which there are four, and there is no reason for the exposure of the refuse at all, except during the process of placing it in the wagon. I hope, ere the next report is presented, that we shall have a complete fleet of these wagons in use.

Trade refuse.

Refuse coming within this definition is removed and destroyed at 2s. 6d. per load. During the year we received from this source £56 1s. 4d.

Nightsoil removal.

It is still necessary to send out two carts every night to cleanse the remaining tub closets. The number of these primitive and obsolete conveniences now stands at 2,569, and from these tubs 1,562 tons of crude excrement was removed during the year. All closets now receive attention once a week.

The work of abolition proceeds apace, and five hundred new water closets were constructed last year at houses where previously pails had been in use. By the time the new water scheme is completed there should be scarcely a pail closet to be found.

The usual batch of complaints concerning the "dreadful night carts" found their way to the office, but nothing better can be done than to change the system as soon as possible. Improvement of apparatus is out of the question.

Snow Removal.

There were eight occasions during the year, January 11th, 12th, 13th and 14th, and December 28th, 29th, 30th and 31st, when it was necessary to remove snow or ice from the streets or footpaths.

A very heavy fall of snow occurred on January 11th and on the two succeeding days, but the fall in December was comparatively light.

In order to cope with the first fall, we had to employ 251 extra men and 67 extra teams in order to assist our own staff.

During the fall in December, we were able to cope with the work without the employment of any additional workmen.

During the two falls we removed from the streets in the centre of the town 1,483 loads of snow. The work was done without accident and almost without complaint.

It is quite impossible to form any idea, when the estimates are prepared, as to what the cost of snow removal during the year may be; there may be no snowfall, or there may be sufficient to cause an outlay of £400 or £500. It is usual to estimate £100, and this figure proved to be very near the mark during 1913, when the actual cost was £106 14s. 1½d.

General Improvements.

The public mortuary at the Sanitary Depot has been altered and newly fitted. In place of an old stone flag a new up-to-date operating table has been fixed and the necessary apparatus and tables provided. Additional windows have been added, and the room newly decorated. A new impervious floor has been laid, and the mortuary is now lighted by electric light.

Labour.

During the year we had to meet increased labour charges. The price of team labour was raised from 8s. 6d. to 9s. per day, and the Committee at the same time insisted on all contractors giving an undertaking to pay standard wages to all drivers in their employ.

The wages of sweepers were increased from 5½d. to 5¾d. and those of the nightsoil collectors from 26s. to 27s. per week. The refuse collector's wages were advanced from 6d. to 6¼d. per hour. The estimated cost of these increases during the year was £219 16s. 5d.

There were no labour troubles during the year.

TABLE XVIII.

The following is a return of the work done :	1913.	1912.
Streets swept	1,500 miles	1,530 miles
Street Sweepings collected and disposed of	1,664 tons	1,901 tons
Street Gullies emptied	51,150	51,000
Street Gully Refuse collected and disposed of	709 tons	766 tons
Sand and Ashes used on the streets	109 tons	299½ tons
Water used on the streets... ..	400,160 gals.	426,085 gals.
Number of Ashtubs emptied	400,050	399,500
Domestic Refuse collected and disposed of	9,462 tons	9,228 tons
Excreta Tubs emptied	137,800	142,012
Nightsoil collected and disposed of	1,562 tons	2,011 tons
Refuse from Privy Middens	134 tons	145 tons
Trade Refuse collected	421 tons	417 tons
Snow collected and removed	1,483 loads	1,501 loads
Grit used on Wood Pavements	14½ „	15 tons

Shops Act, 1912-1913.

My experience of the Shops Act, 1912, is that it is an Act which is greatly appreciated locally. Various classes of tradesmen have petitioned for weekly half holiday or closing orders, until we have, at the present time, eleven such orders in operation, and several others in course of enactment.

These orders are made at the request of the tradesmen concerned, and until they move in the matter the Corporation take no action. It may be argued, I think, since so many orders have been made in a comparatively small town, that the Act is meeting a felt need.

The orders made during 1913 include weekly half holiday and closing orders for Boot Retailers, and a weekly half holiday order for Grocers. The Grocers also petitioned for a closing order, and a great majority of the tradesmen in the centre of the town were favourable to the proposal, but the smaller shopkeepers considered it not to be to their interest and submitted a counter petition. Whilst the signatories to the original petition had a majority, they did not constitute the necessary two-thirds majority so that the order was not made.

I had on two occasions to institute legal proceedings following contraventions of the Meat Traders' Closing Order, and on one occasion following a contravention of the Newsagents' Half Holiday Order. In the case of the meat traders, both defendants pleaded guilty, and were fined, but in the case of the newsagent the summons was withdrawn on payment of costs after the defendant had given a written undertaking to faithfully comply with the terms of the order in future.

There were 43 cases of contravention through failure to observe the requirements as to the fixing of notices; 10 for failing to close the shop at the prescribed time; 2 for failing to give shop assistants the prescribed interval for meals, and 2 for shop assistants being employed on the day of the weekly half holiday.

With the exception of the cases already mentioned as having been taken to court, the whole of the persons against whom these contraventions were reported immediately took steps to comply with the requirements of the Act after receipt of a warning.

There are on my register about 1,100 shops to which this Act applies in some one or more particulars, and from this it will be seen that considerable inspectorial work is entailed.

A new Act, known as the Shops Act, 1913, came into force during the year. Unlike the Act of 1912 it is very short and simply applies to hours and holidays of employees in licensed or refreshment houses.

Under the Act of 1912 every shop assistant must be given one half day holiday in every week, except in towns which are holiday resorts, and which are specially provided for.

The Act of 1913 enacts that every person employed in licensed or refreshment houses shall be given 32 days holiday during the year, six of which must be given consecutively with full pay as an annual holiday. The remaining holidays must be given at the rate of two holidays per month. Half-holidays must not commence later than 3 p.m. Further than this assistants must not be employed for more than 65 hours per week and must be given 26 holidays on Sundays during the year.

Proprietors of refreshment or licensed houses must choose whether they will observe the provisions of the Act of 1912 or the Act of 1913, but when they have declared under which Act they will work, they must observe the provisions of that Act for a period of not less than 12 months. After this they may again change.

The matter is a little complicated, but I am not aware of any special difficulty having arisen. Some of the proprietors of licensed and refreshment houses have chosen the Act of 1913, whilst others are still working under the Act of 1912.

TABLE XIX.
Summary of Orders made under the Shops Acts, 1912-1913.

No. and Title of Order.	Date of Petition.	No. of signatures (shops) in favour.	No. of Shops on Register.	Half Holiday Closing Day.	Date Order made.	Secretary of State's Confirmation	Remarks.
7. Boot and Shoe Retailers Weekly Half - Holiday Order, 1913.	5. 2. 13	28	49	Tuesday, 1 p.m.	29. 4. 13	Not necessary	None declared against.
8. Boot and Shoe Retailers Closing Order, 1913	5. 2. 13	26	49		29. 4. 13	20. 6. 13	3 were opposed and 2 declared neutral. Doubtful 5.
9. Grocers Weekly Half-Holiday Order, 1913	5. 2. 13	112	113	Tuesday, 1 p.m.	29. 4. 13	10. 6. 13	1 declared against. In 34 cases there was a question as to principal trade.

NOTE — The initiative in all Closing or Weekly Half-Holiday Orders is taken by the tradesmen themselves, not by the Corporation.

Employment of Children.

The employment of children and young persons is at the moment engaging much attention, and a special committee of the House of Commons is considering the need, or otherwise, for further legislation in the matter. There are those who think that the present regulations should be made more comprehensive and rigid, whilst others are of opinion that the restrictions should be relaxed or removed. Experience in Keighley would go to prove that no relaxation should be considered.

So far as employment of children for street trading purposes is concerned, my experience has convinced me that some restrictions are necessary in the best interests of the children. Such employment may be honourable and right, and in some instances I have known a widow's income be sufficiently augmented to keep the wolf from the door, but at the same time it must not be overlooked that it is a business which is fraught with temptation from which young children ought, as far as possible, to be protected.

There was, and is yet, a tendency for young children to earn and spend money without the parents' knowledge. This cannot happen under the present Bye-laws, as a child must first obtain the parents consent before being licensed.

Young children, under the age of 11, have been found to be employed as agents for others about 15 or 16 years of age, who increase their profits at the cost of the younger child's health. What I regret most, however, is the difficulty of persuading some of these children to make truthful statements. Until it became understood that all statements made were subsequently verified it was appalling to hear the yarns some of the youngsters could spin.

The number of boys licensed to trade in the streets is 64. Quite a number of newspaper boys appeared very careless as to their observance of the bye-laws, and it was only after the Committee took strong measures to ensure full compliance that these boys even tried to keep within bounds.

During the year the inspectors had to report no fewer than 90 contraventions of the bye-laws. The Committee in considering these reports found it necessary to institute legal proceedings against two boys, and to suspend 15 others for varying periods. In 48 instances, written warnings were sent, and two boys were warned verbally by the Committee. I am sorry to report that we had to go to court, and that we had to suspend so many, but the offences committed demanded this treatment.

An interesting fact is the number of changes which occur among the boys, no less than 99 badges being returned and re-issued during the period under review.

Arrangements were made for the issue of temporary licences to boys, who desired to sell gala programmes and 50 such licences were issued.

I am satisfied of one thing, that is, with less experienced officers than Mr. Day and Mr. Connelly to look after their interests, many more boys would have been in trouble, but the officers always exercised a wise discretion and where an interview or good advice offered to a boy or a parent would meet the case, it was always left at that.

Of the boys employed in shops, there is little to report. So far as we know the bye-laws were duly observed with few exceptions, which were immediately attended to at our request.

Rag Flock Act, 1911.

This Act, like the Shops Act, appears to be working very smoothly. The effect of it has been to stop the use of much of the filthy rag flock which was formerly sold and used for bedding, stuffing of furniture, &c. In place of this a clean sterile material is now used, and it is better for all concerned.

The person making up the goods is saved from the inhalation of quantities of extremely offensive dust, whilst the person using the articles is assured that he is not resting on beds or furniture stuffed with offensive material.

Prior to the passing of this Act, it was quite a common thing for the poorer people to have beds containing rag flock which, if soaked in water, would yield a solution containing more impurities than the liquid ordinarily found in the sewers of Keighley. This is changed now.

Most of the local tradesmen now insist upon all Rag Flock supplied to them being guaranteed to conform with the standard prescribed in this Act, but there are those who prefer to take risks. In two instances during the year rag flock samples were found to contain an excessive amount of impurities, and the vendors were warned. In seven other cases where samples were taken, the samples were found to conform with the requirements, and were therefore satisfactory.

The standard of purity prescribed by the Act is that no sample shall contain more than 30 parts of soluble chlorides in 100,000 parts by weight of solution. The average sample taken during the year was 26.77 parts by weight of soluble chlorides. It only needs to be said that the presence of soluble chlorides is, in all probability, due to the presence of urine or sewage, and the usefulness of the Act is apparent.

Diseases of Animals Acts and Orders made thereunder.

The diseases usually reported upon under this heading are Swine Fever, Anthrax, Foot and Mouth Disease, Sheep Scab and Parasitic Mange.

Swine Fever.

No less than 45 suspected outbreaks of this disease were reported. Park Lane Allotments supplied 13 of these, Brigg's Allotments, 4; Gasworks Allotments, 5; piggeries at Bradford Road (adjoining Stockbridge Finishing Company's premises), 6; and 17 came from various parts of the Borough.

In 7 instances, or 15 per cent., the suspicions were confirmed by the Board of Agriculture, the actual cases occurring, in Park Lane district, 2; Gasworks Allotments, 1; Brigg's Allotments, 1; Corn Mill, South Street, 1; Glen Lee, 1; Eastwood Plantation, 1. The remainder of the notifications were found to be false alarms.

When Swine Fever is proved to exist on premises, drastic measures are immediately taken. Your Inspector is expected to forthwith order the closing of the premises and of those adjoining where swine are kept. The Board of Agriculture as a rule, require the whole of the remaining pigs on the infected premises to be slaughtered, the premises being cleared and afterwards kept clear for a period of several weeks or months as the case might demand. The whole of the pig-cotes are disinfected, which work has to be done by the occupier, who receives payment for the same from the Board of Agriculture.

In connection with the 7 outbreaks reported, at least 68 "contact" pigs were slaughtered in addition to those actually known to be infected. Most of these pigs were slaughtered at Westgate Abattoir and the carcasses were submitted to us for inspection, those passed being sent away to Bradford or Leeds for sale, those condemned being destroyed by the Corporation. No evidence of Swine Fever was found in any of the animals presented for inspection after slaughter.

The unsatisfactory condition of the erections, together with the outbreak of swine fever in Parkwood Allotments, was the cause of the whole of these allotments being closed by an Order of the Board of Agriculture, termed the Keighley Allotment

Gardens (Swine Fever) Order of 1913, dated 19th June, 1913. Under this Order, no pigs could be removed from these allotments except for slaughter, and this only to a slaughter-house within the Borough.

This was a hardship ultimately recognised by the Board, who issued an amending Order under the title of the Keighley Allotment Gardens (Swine Fever) Order of 1913. (No. 2). This Order was dated 1st September, 1913, and made it possible for owners to remove pigs to specified markets or slaughterhouses either inside or outside the Borough.

Whilst these Orders were in operation, movement of pigs from this area for breeding purposes was totally suspended. The Orders were finally withdrawn on the 3rd November, 1913, after being in operation for 20 weeks.

The Health Committee also took measures to restrict the movement of swine at Gasworks' Allotments, owing to the insanitary condition of the pigcotes. This action was the means of effecting a very considerable sanitary improvement at these premises, and the restrictions were ultimately withdrawn.

Outbreaks, or suspected outbreaks, of Swine Fever entail a considerable amount of Inspectorial work. Many visits have to be made and various notices and licences issued. Some idea of the amount of work may be gathered from the following table.

Swine Fever in Keighley in 1913.

NOTICES SERVED :—		No. of Notices	No. of pigs affected.
Form A.	Closing suspected premises ...	45	577
„ B.	Closing adjoining premises ...	90	774
„ C.	Withdrawing Form B. ...	90	730
LICENCES ISSUED :—			
Form A.	Movement of store pigs into the Borough ...	46	287
„ A.	Movement of swine for breeding purposes ...	35	46
„ A.	Movement of swine off Park Lane Allotments ..	7	22
„ D.	Movement of swine required to be marked for slaughter ...	92	384
„ F.	Movement of swine within the Borough ...	140	534
	Movement of swine from premises closed under Notice Form B to slaughterhouse	22	88
	Movement of swine into premises closed under Notice Form B. ...	8	44

Swine Fever appears to have now established itself in England as a sort of perpetual pest. Notwithstanding severe restrictions and drastic measures, it continues to flourish and appears to be but little affected by all the Orders which are made to suppress it. During 1913 it is estimated that over 30,000 pigs were slaughtered in consequence of 2,073 outbreaks of Swine Fever.

Keighley Agricultural Show.

Owing to the prevalence of Swine Fever, the Borough was declared on the 9th May, 1913, to be an infected area. This meant that no swine could be brought into or removed from the Borough except under special conditions and by licence. These conditions made it difficult for the local agricultural committee to hold classes for swine at the annual show.

The Health Committee made application to the Board of Agriculture for special permission, but the Board did not grant their request. There were, in consequence, no pigs shown at the Agricultural Show of 1913.

Foot and Mouth Disease.

I received, on one occasion, notification that a cow had been brought into the town which had been in contact at a market where animals affected with Foot and Mouth Disease had been exhibited.

Notices were served detaining the animal, which was afterwards examined by your Veterinary Surgeon and kept under observation. The animal, however, did not contract the disease, and in due course the restrictions were removed.

Sheep Scab.

As in the case of Foot and Mouth Disease, I received one notification that Sheep Scab "contacts" had been brought on to a farm in the town, but on inspection it was found that the farmer had again sold the sheep before they had been brought on his premises, and that they had not been in the Borough at all.

Parasitic Mange.

One case of this disease—the first for a number of years—was notified from a stable at Ingrow. Only one horse was affected and it died. Isolation and treatment of the animal was carried out under the supervision of your Veterinary Inspector. Following the death of the animal, we undertook to see that the stable was efficiently disinfected.

Dogs Act, 1908.

Mr. J. H. Birkhead, Superintendent of Police, has kindly supplied the following figures relative to the above Act.

TABLE XX.

No. of Dogs seized.	No. of Dogs restored to owners.	No. of Dogs sold.	No. of Dogs destroyed.	No. of Dogs destroyed at Owner's request.
15	3	5	7	149

Petroleum Acts and Orders.**Petroleum.**

Petroleum spirit in the form of Petrol, Benzoline, Benzol, etc., is now used somewhat extensively in the Borough, and there are at present no less than 30 stores licensed for the purpose of storing an aggregate amount of 6,738 gallons of this highly inflammable spirit. This is an increase of 504 gallons over the aggregate permissible amount in 1912.

The whole of the spirit kept in licensed stores is used for commercial purposes, and is exclusive of that stored by owners of private motor cars, who, so long as the spirit is entirely for their own use, enjoy the privilege of storing an amount not exceeding 60 gallons without any licence whatever.

The whole of the licensed spirit stores have been inspected from time to time, and, with one exception, have been found on the whole to be generally kept in a satisfactory condition.

The exception referred to is the store at the motor omnibus depôt in South Street. I consider this store to be quite unsatisfactory as regards construction and position, but I am informed that the Tramways Committee do not propose to erect a new store, in view of the fact that it has now been decided to dispense with the necessity, by the discontinuance of motor omnibuses in favour of the trackless trolley vehicles.

Many of the older stores are not so designed as to secure the absolute minimum of risk in case of fire, but great care is taken in the construction of new stores, the Committee having adopted strict regulations concerning the same.

One matter of very great importance in the storage of inflammable spirit is the proximity or otherwise of drain or sewer openings. I do not think it possible for spirit to escape from any licensed store in the town into any drain or sewer.

The charge for a licence to store petroleum is five shillings, the revenue being retained by the Corporation and credited to the Borough Fund.

Calcium Carbide.

There were four applications to store Calcium Carbide—an increase of one,—and in each instance a licence was granted after inspection of the place of storage.

Here, again, with a single exception, I have no comment to make respecting the condition of the stores found on inspection. In one instance, however, I found that the place of storage had been changed without notification being given. This was a contravention of the regulations and, in the event of an accident, might have given rise to some difficulty. The firm concerned now proposes to erect a new permanent building for the storage of carbide.

Poisons and Pharmacy Act, 1908.

I have to report that the Licences of three shopkeepers who retail poisonous substances under the above Act were renewed during the year 1913.

Books required to be kept by these tradesmen and also the place of storage for poisonous substances were inspected from time to time, and everything was found to be in a satisfactory condition.

Legal Proceedings.

The following proceedings were instituted by the Health Committee during the year 1913:--

TABLE XXI.

Nature of Offence.	Date of Hearing.	Result.
Engaging in Street Trading without licence	24th Feb., 1913	Fined 5/-, including costs
Do. do.	10th March, 1913	Fined 7/6 including costs
Exposing for sale diseased side of Pork	18th March, 1913	Fined £10 and costs
Exposing for sale diseased piece of Pork	...	Fined £10 and costs
Selling Raw Meat after 10-30 p.m. (Saturday) Keighley (Raw Meat Retailers) Closing (No. 6) Order	1st July, 1913	Fined 5/- and costs
Selling Raw Meat after 10-30 p.m. (Saturday) Keighley (Raw Meat Retailers) Closing (No. 6) Order.	26th Aug., 1913	Fined 1/- and costs
Selling Newspaper and Post-card after 1-30 p.m. on Tuesday	23rd Dec., 1913	Summons withdrawn on payment of costs

I hope this Report will be accepted as evidence of sound, sanitary progress in the town. If it is so accepted, then much of the credit must be given to the Chairman and Members of the Health Committee, who have, at all times, shown a marked and practical interest in the work of effecting sanitary improvements.

To the staff I would also accord my best thanks, for they have, one and all, worked untiringly in order to further the important work of improving the sanitary condition of the Borough.

I am, gentlemen,
Your obedient servant,
J. C. DAWES,
Chief Sanitary Inspector and
Superintendent of Public Cleansing.

