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Council of the County Palatine of Durham.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

T. EUSTACE HILL, M.A., M.B., B.Sc., F.I.C.,


INCLUDING A

Summary of the Annual Reports of the District
Medical Officers of Health,

AND OTHER RECORDS,

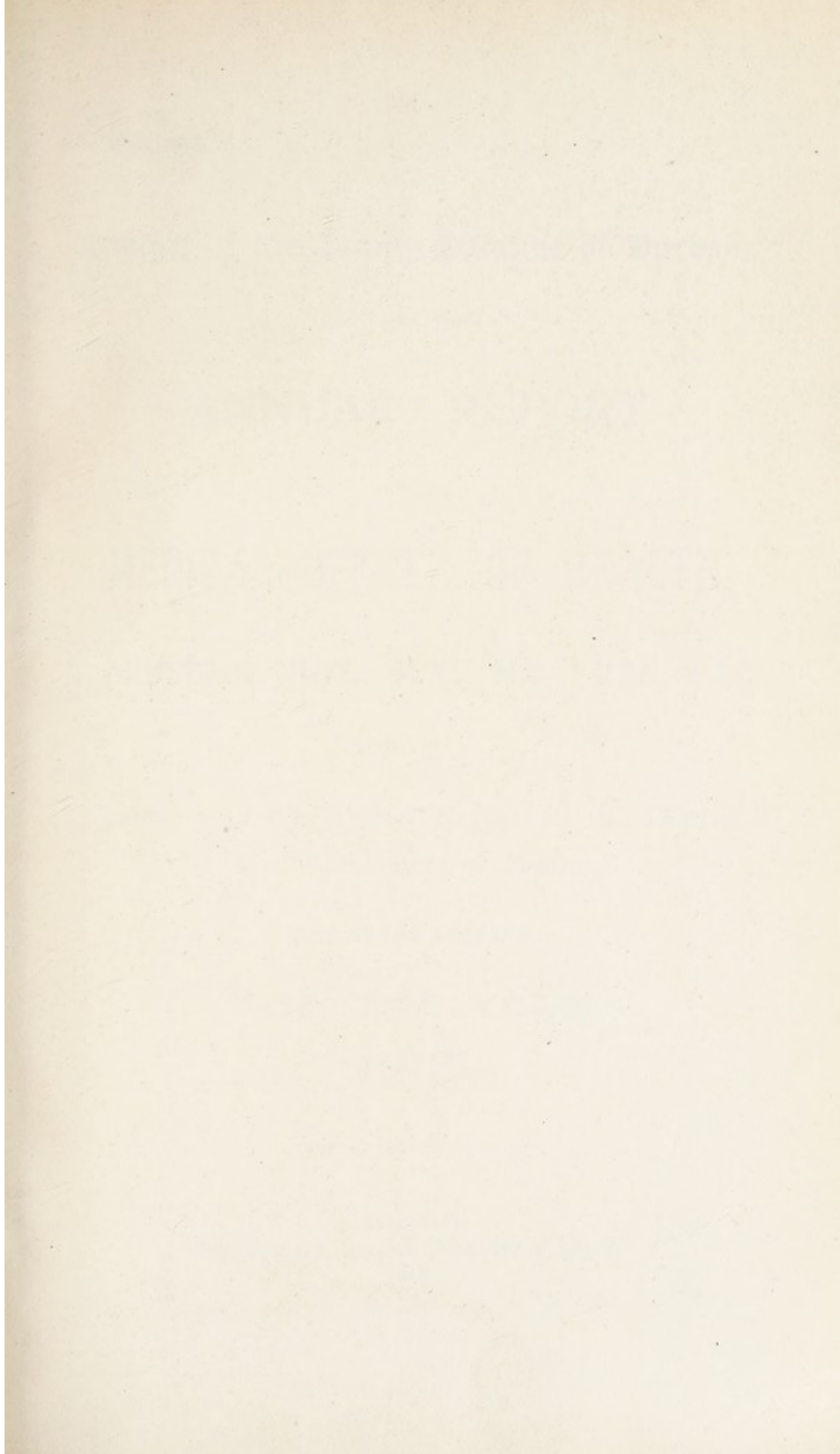
FOR THE YEAR
1912.

SUNDERLAND
POST COMPANY, LIMITED, WEST WEAR STREET.
1914.



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ANNUAL REPORT OF COUNTY MEDICAL OFFICER
OF HEALTH.

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THE COUNCIL OF THE COUNTY PALATINE OF DURHAM.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH
COMMITTEE.

GENTLEMEN,

My Twenty-Second Annual Report, which I now present to you, has two important features; one pleasing in that it records a better state of health, as judged by the mortality statistics, than has ever before been recorded; the other less satisfactory, viz., the late issue of the report. I regret the latter very much as I fully recognise that the value and interest of such a report suffer in proportion to the length of time which elapses between the period it deals with and its publication. I can only make the same excuse as in the two previous years, viz., that other work of a more pressing nature deprived the Annual Report of the immediate attention it ought to have had. An additional excuse perhaps is that the report is much more comprehensive than for some years past and contains some very interesting statistics and observations based on the recent Census population to which Dr. A. G. R. Cameron, my assistant and deputy, has given very careful attention.

As regards the diminished death-rate it is worth stating as a matter of public interest that had the death-rate which obtained in the Administrative County during the five years 1891-5 continued during the year 1912 no fewer than 5,290 more deaths would have occurred in the latter year than were actually recorded.

Healthier houses, improved general sanitation, a better standard of education, and greater temperance have all operated to produce this extraordinary improvement in the public health of the County. All the same I think it can be stated without contradiction that much of the credit of this improvement is due to your Committee and the County Council who have for more than twenty years persistently pressed forward public health reforms and have not hesitated where necessary to bring pressure to bear on defaulting sanitary authorities.

I am glad to say that there is an increasing tendency on the part of the district sanitary authorities to erect workmen's dwellings under the Housing Acts in districts where there is serious overcrowding and where private building enterprise is not likely to remove the deficiency in housing accommodation.

Another matter which specially makes the year 1912 one of exceptional public health interest was the passing of the National Insurance Act and the institution of the County Scheme for the Prevention and Treatment of Tuberculosis.

Once again I have to thank you, Mr. Chairman and Gentlemen, for the kindness and consideration you have invariably shewn to me and I also desire to thank the district sanitary officials for the willing help I have received from them, and between whom and myself the best relations continue.

Your obedient servant,

T. EUSTACE HILL.

February, 1914.

AREA AND DENSITY.

The Administrative County of Durham comprises 30 urban districts, of which 5 are municipal boroughs, 14 rural districts and 2 port sanitary districts.

The area is 637,672 acres (land and inland water) and assuming even distribution the number of persons per square mile at the time of the Census of 1911, was 896 or 0·68 acres per person. If the County Boroughs are included the number of persons per square mile would be 1,383 as against 618 in England and Wales.

ALTERATIONS IN THE AREA.

Since 1911 there has been no alteration either in the area of the Administrative County or in any of the individual sanitary districts, but the following are the principal changes which have occurred during the intercensal period 1901-11:—

By the County Borough of Hartlepool Order, 1902, which came into operation on the 1st October, 1902, West Hartlepool Municipal Borough was created a County Borough. The area of the Borough was 2,684 acres, and its population at the 1901 Census 62,627.

By another order, which came into operation on 9th November, 1901, a part of the South Shields Rural District (part of the civil parish of Harton) was taken over by the South Shields County Borough. This addition was 355 acres in extent and its population at the Census of 1901, 3,595. Between 1901 and 1911 the area of the Administrative County, by these alterations, was therefore reduced by 3,039 acres.

There have been other alterations of boundaries during the period under review, but these have been to individual sanitary districts and have not affected the area of the Administrative County. Thus, by a Local Government Board Order which came into operation on April 1st, 1909, part of the Chester-le-Street Rural District was made an Urban District, and similarly on the 1st October, 1901, part of the Blaydon Urban District was transferred to the Lanchester Rural District and part of the latter district transferred to the former.

The only other important alteration was in Durham where, by an Order which came into operation on the 9th November, 1905,

the Municipal Borough was extended so as to include parts of the civil parishes of Framwellgate Moor and Neville's Cross, which were then in the adjoining Durham Rural District.

POPULATION AT THE 1911 CENSUS.

At the Census of 1901 the population of the Administrative County as enumerated was 768,024, and at the last Census this figure rose to 929,214. There has therefore been an increase in the population of 161,190 or 21·0 per cent. as against 13·9 per cent. in the preceding ten years.

DURHAM.	Area in Acres (Land and Inland Water).	Population.		Increase per cent. in Population in inter-censal periods.	
		1901.	1911.	1891 to 1901.	1901 to 1911.
		Persons.	Persons.		
Administrative County and 4 County Boroughs	649,244	1,187,474	1,369,860	16·8	15·4
Administrative County only	637,672	768,024	929,214	13·9	21·0

The Census returns show that the decennial rate of increase in England and Wales was 10·9 per cent. or 1·28 per cent. less than the preceding ten years; that this rate was the lowest met with since the date of the first Census in 1801; and it is suggested that the decline in the rate of growth of the population was due to loss by emigration.

The Census report gives tables comparing the rate of growth of population in certain Counties which are mainly commercial and industrial and in other Counties classified as agricultural. In the majority of the latter Counties the tables show an accelerated rate of increase, whereas in all but three of the Counties coming under the first category there has been a reduced rate of increase.

In the commercial and industrial group is included the County of Durham, but on referring to the table given above it will be seen

that it is in the Geographical and not in the Administrative County that there has been a reduction in the rate of increase.

In the next table the population of the several sanitary districts in the Administrative County is compared and the rates of increase or decrease during the past decennium are shown. One sanitary district increased over 70 %, 4 increased over 50 %, 2 over 40 %, 4 over 30 %, 5 over 20 %, 14 over 10 %, and 10 under 10 %. One rural district (Weardale) decreased 0·6 %, and 3 urban districts from 1·1 % to 9·3 %, namely Hartlepool (9·3 %), Jarrow (1·7 %), and Tow Law (1·1 %).

Among the urban districts the greatest increase was at Stanley (71·9 %), Blaydon (57·3 %), Seaham Harbour (55 %), and Ryton (53·2 %), while in the case of rural districts, Sedgefield increased 65·5 %, Easington 48·0 %, South Shields 34·2 %, and Chester-le-Street 30·9 %.

URBAN DISTRICTS.	Census Population.		Increase (+) or Decrease (-) of Population between 1901 and 1911.	Percentage of Increase or Decrease.	1911.			
	1901.	1911.			Area in Acres.	Average Number of Persons per Acre.	Number of Private Families.	Average Number of Persons per Private Tenement or Family.
Darlington Borough	44,511	55,631	+ 11,120	25.0	3,956	14.0	12,241	4.4
Durham „	16,151	17,550	+ 1,399	8.7	1,066	16.4	3,677	4.2
Hartlepool „	22,723	20,615	- 2,102	9.3	735	28.0	4,215	4.7
Jarrow „	34,295	33,726	- 569	1.7	783	43.0	6,872	4.8
Stockton „	51,478	52,154	+ 676	1.3	2,935	17.7	10,633	4.8
Annfield Plain	12,481	16,552	+ 4,071	32.6	3,489	4.7	3,140	5.2
Barnard Castle	4,421	4,757	+ 336	7.6	560	8.4	1,041	4.1
Benfieldside	7,457	8,355	+ 898	12.0	1,525	5.4	1,710	4.7
Bishop Auckland	11,969	13,834	+ 1,865	15.6	691	20.0	2,942	4.4
Blaydon	19,794	31,139	+ 11,345	57.3	9,314	3.3	5,822	5.3
Brandon and Byshottles	15,573	17,667	+ 2,094	13.4	6,669	2.6	3,466	5.1
Chester-le-Street	11,753	14,712	+ 2,959	25.2	2,511	5.8	2,956	4.8
Consett	9,694	11,207	+ 1,513	15.6	1,005	11.1	2,229	4.9
Crook	11,471	12,308	+ 837	7.3	4,056	3.0	2,531	4.8
Felling	22,467	25,026	+ 2,559	11.4	2,684	9.3	5,246	4.7
Hebburn	20,901	21,763	+ 862	4.1	1,241	17.5	4,254	5.0
Hetton-le-Hole	13,673	15,678	+ 2,005	14.7	1,617	9.6	3,163	4.9
Houghton-le-Spring	7,858	9,753	+ 1,895	24.1	1,551	6.2	1,971	4.8
Leadgate	4,657	4,990	+ 333	7.2	1,836	2.7	1,025	4.8
Ryton	8,452	12,948	+ 4,496	53.2	5,169	2.5	2,592	4.9
Seaham Harbour	10,163	15,757	+ 5,594	55.0	1,101	14.3	3,153	4.9
Schildon	11,759	13,488	+ 1,729	14.7	1,066	12.6	3,011	4.4
Southwick-on-Wear	12,643	13,784	+ 1,141	9.8	856	16.1	2,764	5.0
Spennymoor	16,665	17,909	+ 1,244	7.5	3,388	5.2	3,575	4.9
Stanhope	1,964	2,010	+ 46	2.3	216	9.3	440	4.3
Stanley	13,554	23,294	+ 9,740	71.9	3,593	6.4	4,500	5.1
Tanfield	8,276	10,101	+ 1,825	22.1	4,779	2.0	2,040	4.9
Tow Law	4,371	4,324	- 47	1.1	477	9.0	929	4.6
Whickham	12,852	18,332	+ 5,480	42.6	5,914	3.0	3,670	4.9
Willington	7,887	8,731	+ 844	10.7	3,793	2.3	1,735	5.0
RURAL DISTRICTS.								
Auckland	51,505	58,338	+ 6,833	13.3	57,334	1.0	11,988	4.8
Barnard Castle	10,924	11,681	+ 757	6.9	79,961	0.1	2,564	4.4
Chester-le-Street	48,799	63,878	+ 15,079	30.9	32,109	1.9	12,763	4.9
Darlington	9,591	10,914	+ 1,323	13.8	42,019	0.2	2,449	4.4
Durham	26,989	30,790	+ 3,801	14.1	30,871	0.9	6,136	5.0
Easington	40,562	60,040	+ 19,478	48.0	37,018	1.6	11,345	5.2
Hartlepool	2,884	3,355	+ 471	16.3	19,090	0.1	498	4.8
Houghton	19,316	25,527	+ 6,211	32.2	13,192	1.9	5,073	5.0
Lanchester	27,081	32,235	+ 5,154	19.0	51,151	0.6	6,093	5.1
Sedgefield	20,355	33,697	+ 13,342	65.5	45,006	0.7	6,232	5.1
South Shields	10,790	14,481	+ 3,691	34.2	12,073	1.1	2,724	4.8
Stockton	14,819	17,530	+ 2,705	18.3	34,539	0.5	3,759	4.6
Sunderland	22,786	29,002	+ 6,216	27.3	6,980	4.1	5,595	5.0
Weardale	9,710	9,651	- 59	0.6	97,753	0.1	2,252	4.2
ADMINISTRATIVE COUNTY	768,024	929,214	+ 161,190	21.0	637,672	1.4	187,014	4.87
5 BOROUGHES	169,158	179,676	+ 10,518	6.2	9,475	18.9	37,638	4.60
25 URBAN DISTRICTS	282,755	348,419	+ 65,664	23.2	69,101	5.0	69,905	4.92
TOTAL URBAN DISTRICTS.	451,913	528,095	+ 76,182	16.8	78,576	6.7	107,543	4.81
TOTAL RURAL DISTRICTS..	316,111	401,119	+ 85,008	26.9	559,096	0.7	79,471	4.95

TENEMENTS AND PRIVATE FAMILIES.

Definition.—A *dwelling* or *tenement* is defined in the report of the Registrar-General “as a place in which any person entitled to receive a schedule usually lives.” The persons regarded as heads of families and entitled to receive schedules were in the instructions issued to the enumerators stated to be :—

(a) Every head of a family occupying the whole or part of a house or flat.

(b) Every separate lodger occupying a room or rooms in a house or flat (where two or more lodgers share a room, or rooms, they were treated for census purposes as a single family).

(c) Every resident caretaker of a house to be let, of a shop or other business premises or of a public building ;

(d) Every outdoor servant (with or without family) occupying separately any building or rooms in a building such as a lodge, gardener’s cottage ;

The families coming under the foregoing headings were regarded as “private families” and the following as “non-private families” :—

(e) Every resident proprietor, manager or head of an hotel, club, business establishment, school, etc.

(f) The chief resident officer of every institution.

(g) The master or person in charge of every barge, boat or other vessel.

N.B.—In the case of those coming under (e) an exception is made and the premises treated as “private” when the domestic members of the occupier’s family exceed the non-domestic (i.e., trade servants, visitors, scholars, etc.).

BUILDINGS USED AS DWELLINGS.

In the table given hereunder it will be seen that the number of inhabited buildings at the time of the Census was 174,747, and of these 160,930 were ordinary dwelling-houses, 6,017 blocks of flats, 5,291 shops, and the remainder hotels, inns, offices, warehouses, institutions, etc.

The table also shows that the population living in these dwellings was 929,214, and that of these 818,521 or 88 per cent. lived in ordinary dwelling-houses, 56,224, or 6 per cent. in flats, 25,806 or 2·7 per cent. in shops, 15,431 or 1·6 per cent. in 334 institutions, and the remainder in hotels, vessels, offices, etc.

The 174,747 inhabited buildings were occupied by 187,805 families or separate occupiers; of these 187,014 came within the definition of "private families," the population of the same amounting to 910,921, the "non-private" being 18,293.

Administrative County.	Number of Inhabited Dwellings.	Separate Occupiers.	Population	Uninhabited.	In course of construction.
Ordinary Dwellings ...	160,930	167,459	818,521	6,563	1,501
Blocks of Flats*.....	6,017	11,893	56,224	161	100
Shops	5,291	5,537	25,806	236	63
Hotels, Inns, Public Houses	1,707	1,715	9,451	23	...
Offices, Warehouses, etc.	167	168	714	9	4
Institutions.....	334	370	15,431	11	8
Others	301	312	1,408	12	8
Vessels, Sheds .....	...	351	1,660	...	...
	174,747	187,805	929,214	7,015	1,684
Separate Flats * included in the 6017 Blocks	11,806	11,893	56,224	1,674	206

TENEMENTS IN THE OCCUPATION OF PRIVATE FAMILIES.

Size of Tenements.—In the table given below the tenements of various sizes in the occupation of "private families" in the Admin-

Administrative County of Durham are compared with England and Wales. The most noticeable feature of this table is the predominance of the smaller tenements in the County.

No. of Rooms per Tenement.	No. of Private Tenements.	Percentage of Total Private Tenements.	
		Durham.	England and Wales.
1	4,004	2.1	3.2
2	40,345	21.6	8.3
3	50,313	26.9	13.9
4	52,496	28.1	25.0
5	19,112	10.2	20.7
6	8,762	4.7	13.7
7	5,040	2.7	5.9
8	2,875	1.5	3.5
9	1,697	0.9	2.0
10 or more	2,370	1.3	3.8
	187,014	100.0	100.0

The table shows that 2.1 % of the tenements in Durham are 1-roomed, 21.6 % 2-roomed, and 26.9 % 3-roomed. The proportion of tenements of less than four rooms is therefore 50.6 % of the total as against 25.4 % in England and Wales.

In only one other County in England and Wales does the proportion of 2 and 3-roomed tenements exceed Durham, and next to Northumberland and London, Durham has the highest proportion of tenements of less than 4 rooms and the lowest proportion of 4 to 6. In the above table it will be seen that the proportion of 4 to 6-roomed tenements is 43.0 % as against 59.4 % for the whole country. In

only six counties is the proportion of 4 to 6-roomed tenements less than half. With respect to tenements of more than 6 rooms, compared with other counties Durham comes lowest with 6·4 per cent., the corresponding figure for England and Wales being 15·2.

A high proportion of small tenements, the Registrar General points out, may be due to (a) a large number of small houses, (b) to a large amount of sub-letting or to both of these causes. In Durham the amount of sub-letting is below the average for the whole country.

The Commonest Size of Tenement.—On referring again to the table it will be seen that the most numerous class of tenement is the 4-, 3- and 2-roomed tenement, the proportion being 28·1 %, 26·9 %, and 21·6 % in the order mentioned. For the country taken as a whole the highest proportions are those of 4 and 5 rooms.

Number of Persons occupying Tenements of various Sizes.—In the following table the number of persons and the proportion per cent. of the total living in the various sized tenements are compared with those in England and Wales.

Amongst other points of interest the table brings out the fact that as in England and Wales the largest proportion of the population of the Administrative County of Durham (30·7 %) live in tenements of four rooms.

No. of Rooms per Tenement.	Number of Persons.	Percentage of the Total enumerated living in Private Tenements.	
		Durham.	England and Wales.
1	10,161	1·1	1·4
2	167,689	18·4	6·1
3	244,845	26·9	12·8
4	280,490	30·7	24·7
5	100,214	11·0	22·4
6	43,422	4·8	14·8
7	25,665	2·8	6·4
8	15,047	1·7	4·0
9	9,043	1·0	2·3
10 or more	14,345	1·6	5·1
Total	910,921	100·0	100·0

The preceding table also shows that although Durham contains a high proportion of small tenements the proportion living in the 1-roomed tenement is only 1·1 % and is less than for the country as a whole.

Size of Families.—In the following table the tenements are classified according to the size of the family occupying them.

No of Persons per Family.	Number of Families.	Percentage of the Total Number of Families.	
		Durham.	England and Wales.
1	4,783	2·6	5·3
2	22,251	11·9	16·2
3	32,813	17·5	19·4
4	33,509	17·8	18·1
5	28,964	15·5	14·4
6	22,549	12·1	10·4
7	16,386	8·8	6·9
8	11,192	6·0	4·3
9	7,049	3·8	2·5
10 or more	7,518	4·1	2·5
	187,014	100·0	100·0

The table shows that only 2·6 % of the families in Durham consist of families of 1 person, as against 5·3 % in England and Wales; that 11·9 % consist of families of 2 persons, 17·5 % of families of three persons, and a nearly equal proportion (17·8 %) of 4 persons, the latter sized family in this County being the most numerous; in England and Wales it will be noted that it is the family of 3 which preponderates. In Durham just over 50 % of the families consist of 5 persons and over—in England and Wales the proportion is about 10 % less. Compared with other counties in England and Wales the Census returns show that while Durham has the smallest proportion of large sized tenements it is one of three counties having the highest proportion of large (over 6 persons) and medium sized (4 to 6) families.

The Population of the various sized Families.—In the following table is a statement showing the number of persons in the various sized families given in the preceding table.

Number of Persons per Family.	Number of Persons in Families of Various sizes.	Percentage of Persons in the various-sized Families to the total in Private Families.	
		Durham.	England and Wales.
1	4,783	0·52	1·22
2	44,502	4·89	7·42
3	98,439	10·81	13·28
4	134,036	14·71	16·64
5	144,820	15·90	16·55
6	135,294	14·86	14·27
7	114,702	12·60	11·15
8	89,536	9·82	7·97
9	63,441	6·97	5·22
10 or more	81,368	8·92	6·28
	910,921	100·0	100·0

On examining the table given above it will be seen that in the Administrative County of Durham the family of 5 contains the highest proportion (15·9 %) of the population, and that the family of 4 and 6 which comes next contains about an equal proportion, namely, 14·7 and 14·8 per cent.

Thus the above table and the preceding one bring out the fact that in Durham it is the families of 4 and in England and Wales the families of 3 which are the most numerous, but that it is the families of 5 in Durham and the families of 4 in England and Wales which contain the largest proportion of the population.

Average number of Occupants per Tenement and per Room.—In the following table the accommodation in the various sized tenements in Durham is compared with England and Wales. The table shows that the average number of persons in the 1 to 9-room tenements was 4·85, in the total "private" tenements 4·87, and in all tenements (i.e., private and non-private) 4·94; in England and Wales the corresponding figures are 4·29, 4·35, and 4·55.

The average number of occupants per room in tenements of 1 to 9 is 1·34, the proportion ranging from 2·54 in the 1-roomed tenement to 0·59 in the tenements of 9 rooms. On comparing the figures with those for the whole country it will be seen that in each of the various sized tenements in the Administrative County the average number of persons is in excess of those of England and Wales, the greatest disproportion being in the tenements of 1 to 5 rooms, the excess amounting to as much as 34 and 31 per cent. in the "tenements" of 1 and 2 rooms.

Table showing the average number of Persons per Tenement and per Room.

Number of Rooms per Tenement	Number of Private Tenements.	Number of Occupants in each Tenement.	Average Number of Occupants per Tenement.		Average Number of Occupants per Room.		Average No. of Occupants per Room, Ratio of Durham to England and Wales, the latter taken as 100.
			Durham.	England and Wales.	Durham.	England and Wales.	
1	4,004	10,161	2·54	1·90	2·54	1·90	134
2	40,345	167,689	4·16	3·18	2·03	1·59	131
3	50,333	244,845	4·86	3·99	1·62	1·33	122
4	52,496	280,490	5·36	4·32	1·34	1·08	124
5	19,112	100,214	5·25	4·75	1·05	0·95	110
6	8,762	43,422	4·98	4·68	0·83	0·78	106
7	5,040	25,665	5·11	4·76	0·73	0·68	107
8	2,875	15,047	5·20	4·88	0·65	0·61	106
9	1,697	9,043	5·31	5·04	0·59	0·56	105
1 to 9	184,644	896,576	4·85	4·29	1·34	0·95	141
10 or more	2,370	14,345	...	...	...	...	...
Private	187,014	910,921	4·87	4·35	...	...	...
Non-Private	791	18,293	...	...	...	...	...
Total	187,805	929,214	4·94	4·55	...	...	...

Compared with other counties Durham has the unenviable distinction of having the highest proportion of occupants per room in tenements of 1 to 9 rooms, the next highest being Northumberland (1·29) and the lowest is the Isle of Wight (0·73), Cardiganshire and the Soke of Peterborough (0·79).

Room Accommodation.—The preceding tables give particulars relating to the number of families and persons living in tenements of various sizes. The inquiry has been pursued further, and the following table shows the number of persons living under various conditions of room accommodation, from which it will be seen (a) that 14·1 % of the occupants of the 1- to 9-roomed tenements are housed under conditions which allow them on an average more than one room each, (b) that 11·4 % have one room each, (c) that 44·4 % have half a room each, i.e., two persons per room, and (d) that 28·5 % of the population are housed in tenements which allow less than an average of one room for every two persons.

On examining the figures relating to England and Wales it will be seen that the average room accommodation of 31·7 % of the population living in tenements of 1 to 9 rooms is more than 1 room per occupant, and that 15 % have one room each, so that 46·7 % of the population in England and Wales, as against only 25·5 % in Durham have house accommodation equal to at least one room per person.

Compared with other parts of the country, no other county has so small a proportion of the population living under such a "standard of comfort" as one person or less per room, and the amount of overcrowding (i.e., over two persons per room) is only exceeded by a decimal fraction in one other county.

Table showing the number of persons and the proportion per cent. of population in private families living under various conditions of Room Accommodation.

Tenements of 1 to 9 Rooms. Average Number of Persons per Room.	Number of Persons.	Proportion per cent.	
		Durham.	England and Wales.
Up to and including a $\frac{1}{2}$...	33,704	3.7	9.7
Over $\frac{1}{2}$ but less than 1.....	94,736	10.4	22.0
1 person per room	103,845	11.4	15.0
Over 1 but not over $1\frac{1}{2}$...	192,204	21.1	23.2
" $1\frac{1}{2}$ " 2 ...	212,245	23.3	15.9
" 2 " $2\frac{1}{2}$...	111,132	12.2	4.8
" $2\frac{1}{2}$ " 3 ...	84,716	9.3	2.8
" 3 but less than 4 ...	35,526	3.9	0.8
4 persons per room and over	28,238	3.1	0.7
Tenements of over 9 rooms	14,575	1.6	5.1
	910,921	100.0	100.0

Overcrowding.—In the following table the statistics relating to overcrowding are gone into more fully, and the various sized tenements, housing more than two persons per room (28.5 % of the population in private families) are shown.

On examining the table it will be seen that of the 187,014 tenements occupied by private families, 34,757 or 18.58 % contained more than two persons per room, as against 5.4 % in England and Wales. The tenements so occupied are chiefly the 2 and 3-roomed tenements representing 8.10 % and 5.96 % of the total private tenements, as against 1.7 % and 1.6 % in England and Wales.

At the time of the Census the tenements with more than two occupants per room housed 28.5 % of the *population* living in private families; in England and Wales the proportion was 9.1 %. The overcrowded 2-roomed tenement housed 93,961 persons, and the 3-roomed tenement 89,817; the two together, representing 70 % of the overcrowded tenements, housed 20.17 % of the population living in private families.

In ten sanitary districts in this County the overcrowding amounted to 10 to 20 per cent. of the population living in private families, in 15 districts it was from 20 to 30 per cent., in 14 districts it ranged from 30 to 40 per cent., and in 5 districts it was over 40 per cent. The overcrowding was greater in the rural than in the urban districts.

Number of Rooms per Tenement	Number of Tenements.	Private Families—Tenements with more than two occupants per room.					
		Number.	Proportion per cent. to total Private Tenements.		Population.	Proportion per cent. to total Population in Private Families.	
			Durham.	England and Wales.		Durham.	England and Wales.
1	4,004	1,763	0.94	0.72	6,796	0.74	0.61
2	40,345	15,152	8.10	1.70	93,961	10.31	2.32
3	50,313	11,045	5.96	1.63	89,817	9.86	2.91
4	52,496	6,163	3.29	1.03	61,521	6.75	2.29
5	19,112	587	0.31	0.28	6,903	0.75	0.75
6	8,762	43	0.02	0.00	580	0.06	} 0.16
7	5,040	4	0.00	0.00	60	0.00	
8	2,875	...	...	...	...	...
9	1,697	...	...	...	...	...	...
10 or more	2,370	...	...	...	...	...	...
	187,014	34,757	18.58	5.4	259,633	28.5	9.1

SUMMARY.

1.—In Durham, as in England and Wales, the most numerous class of tenement is the 4-roomed tenement.

2.—In Durham, as in England and Wales, the largest proportion of the population live in 4-roomed tenements.

3.—In Durham, families of 4 persons are the most numerous, whereas in England and Wales it is the family of 3.

4.—In Durham, the families of 5, and in England and Wales the families of 4, are responsible for the largest proportion of the population.

5.—In Durham, as in England and Wales, the 2-roomed tenement is the most numerous class of tenement, housing more than two persons per room.

6.—Durham is the third highest on the list of counties in England and Wales with tenements of less than 4 rooms.

7.—Durham, as compared with other counties, has the smallest proportion of large tenements and the third largest proportion of large and medium sized families.

8.—Durham, with one exception, has a higher proportion of overcrowding than any other county in England and Wales.

9.—In Durham the "Rural" districts are more overcrowded than the Urban.

AGE AND SEX CONSTITUTION OF THE POPULATION.

Age Constitution.—A comparison of the recent census returns with those of previous censuses, remarks the Registrar-General, reveals the most striking changes in the age-distribution of the population. In 1877 the birth-rate began to fall, and since then the proportion of children and young persons has diminished to an extraordinary extent. Naturally this diminution has affected mostly the youngest ages, since, "owing to the progressive nature of the fall in the birth-rate, the older children represent the survivors of births, whose frequency differed less from that of former years than is now the case."

At the 1881 census, the proportion of children was up to the average of previous censuses, but 10 years later, when the 1891 census was taken, it was found that the fall in the birth-rate had reduced the numbers living at the first two quinquennial age periods, and this diminution of young people in the population of the country has progressed during the past twenty years. Thus, in 1901 the reduction had extended from the first two to the first four quinquennial age periods, and, at the last census, to the first six. The reduction, commencing at the youngest ages, has therefore extended to young adults of 25 to 30 years. "It is evident," says the Registrar-General, "that if the fall in the birth-rate continues a further decrease may be expected in childhood and early adult life with a compensating further increase in the proportion living at higher ages. . . . The effect of the fall in the birth-rate has hitherto been in a sense temporarily advantageous in that it

“has increased the proportions living at the working ages,” but the Registrar-General also points out “that a tendency to the reversal of this effect has already set in and may be expected to develop as time goes on.” Thus the first effect of the changes which have occurred in the age group 20-25, was to increase considerably the proportion living at that age period, but this temporary advantage has since been lost. Similarly the first effect on the next age group, 25-30, was to raise its proportion in 1891 and especially in 1901, but a decline from the latter position has already set in and may be expected to continue. “These fluctuations are not without importance,” continues the Registrar-General, “in their bearings upon the probable future proportion in our population of workers at the most economically efficient ages, and especially upon the supply of recruits to military services in future years.”

The figures relating to the population of this County at the 1881 and 1891 Censuses have not been worked out, but it is not improbable that the same changes have taken place during these years in this County as in England and Wales, for if the following figures, which relate to the age constitution of the population of this County, in 1901 and 1911 be examined, it will be seen that, as in England and Wales, there were proportionally fewer persons in the first six age periods in 1911 than in 1901, and, as a result, an increased proportion of persons at other ages.

The table also shows that in 1911 25 % of the population were under 10 years of age, 46 % were under 20 years, 77 % were under 40 years, and that the remainder (23 %) were 40 years and over.

Table giving in quinquennial groups of ages the number of persons in 100,000 of the population enumerated in the Administrative County at the Censuses of 1901 and 1911 :—

	1901	1911	Ratio, 1911 to 1901, the number in each age group in 1901 taken as 100.
All Ages.	100,000	100,000	
Under 5	13,481	13,348	99
5-10	12,043	11,936	99
10-15	11,206	10,743	95
15-20	10,290	9,778	95
20-25	9,451	8,924	94
25-30	8,518	8,270	97
30-35	6,983	7,463	107
35-40	6,070	6,745	111
40-45	5,101	5,456	107
45-50	4,424	4,593	104
50-55	3,671	3,723	101
55-60	2,914	3,017	103
60-65	2,336	2,296	98
65-70	1,592	1,726	108
70-75	1,034	1,110	107
75 & over	886	872	98

In the next table and in diagrams I, II and III., the population of the Administrative County at the 1901 and 1911 Censuses is compared with England and Wales. From these it will be seen that in 1901 there were, compared with England and Wales, proportionally more persons in Durham at the first four age periods, ranging from 18 % in the under 5 age period to 3 % in the 15 to 20 age period, and that in 1911 there was still a further increase affecting the first five age periods. Thus in 1911 the excess under 5 amounted to 25 % as against 18 % in 1901, and in the next age period 16 %, as against 12 % in 1901.

In the 20 to 25 age period, it will be noted, that in 1901 there were proportionally fewer persons in Durham, amounting to a deficiency of 2 %, and that there is now at this age period an increase of 1 %.

	Population.				Ratio, Durham to England and Wales, the number in each age group of the latter taken as 100.	
	1901		1911			
	England and Wales	Durham	England and Wales	Durham		
All Ages	100,000	100,000	100,000	100,000	1901	1911
Under 5	11,426	13,481	10,687	13,348	118	125
5	10,721	12,043	10,249	11,936	112	116
10	10,273	11,206	9,703	10,743	109	111
15	9,980	10,290	9,250	9,778	103	106
20	9,595	9,451	8,804	8,924	98	101
25	8,683	8,518	8,536	8,270	98	97
30	7,475	6,983	7,976	7,463	93	94
35	6,596	6,070	7,245	6,745	90	93
40	5,689	5,101	6,189	5,456	89	88
45	4,836	4,424	5,339	4,593	91	86
50	4,086	3,671	4,443	3,723	90	84
55	3,236	2,914	3,545	3,017	90	85
60	2,738	2,336	2,828	2,296	85	81
65	1,936	1,592	2,236	1,726	82	77
70	1,372	1,034	1,535	1,110	76	72
75 & over	1,358	886	1,435	872	65	61

The foregoing tables, therefore, demonstrate the fact that although the number of children and young adults in this County has declined during the past ten years, the decrease has not been as rapid as in the country taken as a whole, consequently there are now, in comparison to England and Wales, proportionally more children and young adults in Durham than there were in 1901.

Sex Constitution.—In the table which follows, the proportion of males to females in this County and in England and Wales is given, from which it will be seen that in England and Wales, except in the first three age periods, there is an excess of females throughout life, while in Durham, in every age period except the second, there is an excess of males until the advanced age of 70 is reached.

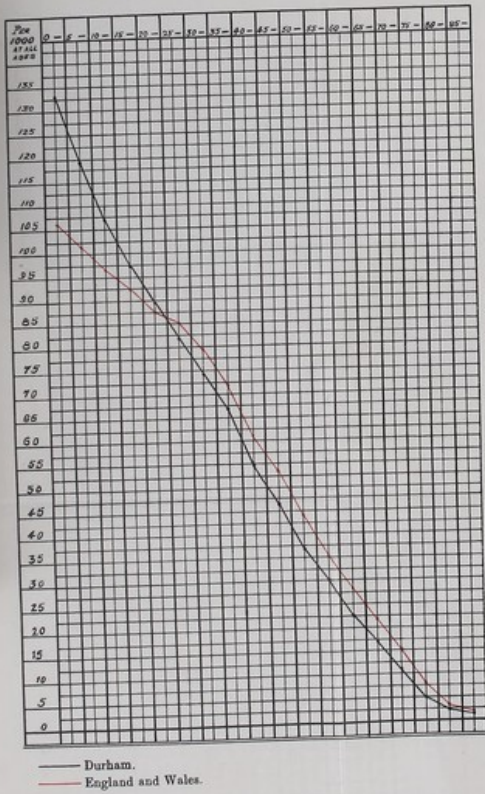
In England and Wales to every 100 males there are 106·8 females, whereas in Durham the proportion is 95·5 females to every 100 males.

AGE CONSTITUTION OF THE POPULATION IN THE ADMINISTRATIVE COUNTY AS COMPARED WITH ENGLAND AND WALES.

I.

Number of persons in 1,000 of the population at each age group shown in the diagram.

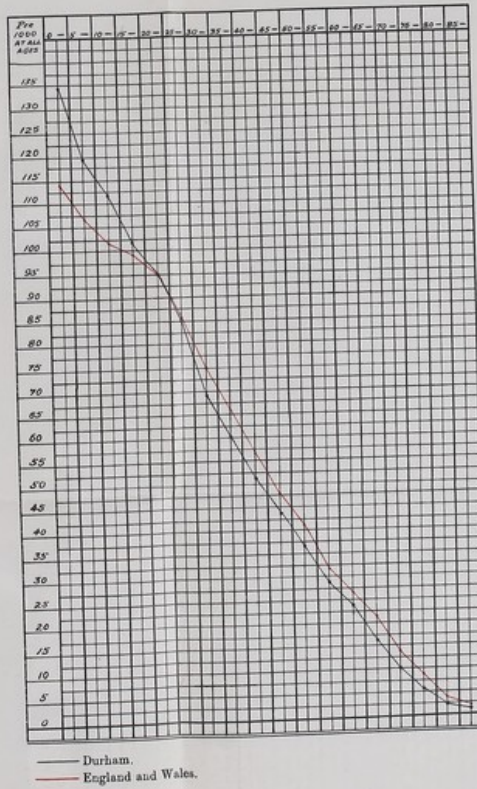
CENSUS 1911.



II.

Number of persons in 1,000 of the population at each age group shown in the diagram.

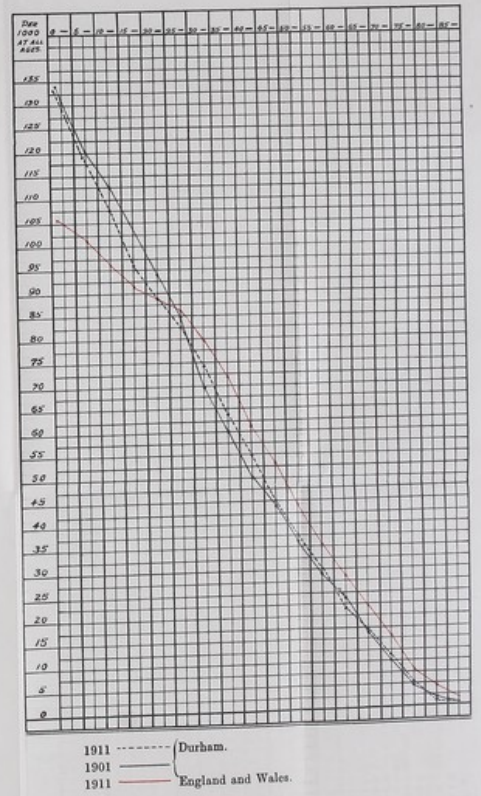
CENSUS 1901.



III.

Number of persons in 1,000 of the population at each age group shown in the diagram.

CENSUS 1901 AND 1911.



AGE CONSTITUTION OF

Number of persons in 1,000 of the popu-

lation shown in the diagram

1911



The table also shows that in the County of Durham, in the first three age periods, the proportion of males and females is practically the same, but that in the next age period (15-20) there is a considerable fall in the proportion of females. In England and Wales there is also a fall, but it occurs in the 20-25 age period, and instead of females it is in the proportion of males. This is explained by the absence of soldiers and sailors on foreign service, while in the case of Durham, the decrease in the proportion of females is probably due to emigration.

The principal fact brought out by this table is that while in England and Wales there is from the age of 15 years an excess of females, in Durham there is a preponderance of males at practically all ages.

	Number of Males and Females in 100,000 of the Population of the Administrative County.			Proportion of Females to 100 Males.	
	Persons.	Males.	Females.	Durham.	England and Wales.
Under 5	13,348	6,707	6,641	99	99
5-10	11,936	5,955	5,981	100	100
10-15	10,743	5,400	5,345	99	100
15-20	9,778	5,049	4,729	94	101
20-25	8,924	4,565	4,359	95	111
25-30	8,270	4,218	4,052	96	111
30-35	7,463	3,836	3,627	94	109
35-40	6,745	3,501	3,244	93	107
40-45	5,456	2,833	2,623	93	107
45-50	4,593	2,394	2,199	92	108
50-55	3,723	1,971	1,752	89	108
55-60	3,017	1,620	1,397	86	110
60-65	2,296	1,237	1,059	85	113
65-70	1,726	904	822	91	120
70-75	1,110	553	557	101	134
75 & over	872	404	468	116	150
Total	100,000	51,147	48,853	95.5	106.8

In the following table and in the accompanying charts IV. and V. the proportion of males and females in the County is compared with England and Wales. On examining the charts, where the facts are brought out more clearly, it will be seen that there is an excess in Durham, as compared with England and Wales, of males up to the

age of 35 and females up to 20. From 35 to 40 years the proportion of males in Durham is the same as in England and Wales, but after this age there is a deficiency of males. In the case of females there is a very marked deficiency in this County commencing at the age of 20 years.

	In 100,000 of Population.				Ratio, Durham to England and Wales, the number in each age group of the latter taken as 100.	
	Males.		Females.		Males	Females
	England and Wales	Durham	England and Wales	Durham		
	48,365	51,147	51,635	48,853	106	95
Under 5	5,368	6,707	5,319	6,641	125	125
5-10	5,121	5,955	5,128	5,981	116	117
10-15	4,845	5,400	4,858	5,343	111	110
15-20	4,588	5,049	4,662	4,729	110	101
20-25	4,166	4,565	4,638	4,359	110	94
25-30	4,036	4,218	4,500	4,052	105	90
30-35	3,814	3,836	4,162	3,627	101	87
35-40	3,497	3,501	3,748	3,244	100	87
40-45	2,980	2,833	3,209	2,623	95	82
45-50	2,568	2,394	2,771	2,199	93	79
50-55	2,130	1,971	2,313	1,752	93	76
55-60	1,686	1,620	1,859	1,397	96	75
60-65	1,326	1,237	1,505	1,059	94	70
65-70	1,014	904	1,222	822	89	67
70-75	657	553	878	557	84	63
75 & over	572	404	863	468	70	54

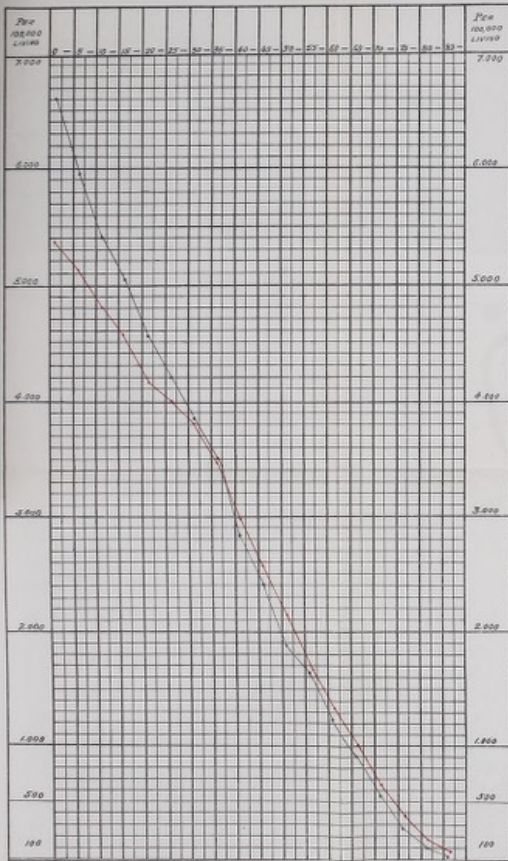
In the next table, where the same facts are brought out in another way, the proportional numbers, representing the age and sex constitution of the population of the County, are contrasted with a standard population of 50,000 persons in England and Wales, undistinguished as regards sex, but having an age distribution typical of the country as a whole. In the last two columns of the table is given the excess or deficiency of males and females in Durham above this standard population.

In diagram VI., the common standard (Col. 2) and the proportional numbers of males and females (Cols. 3 and 4) are shown, and in diagram VII. the ratio per cent. (Cols. 5 and 6) by which these numbers exceed or fall short of the standard.

SEX CONSTITUTION OF THE POPULATION.

Diagram showing the number of Males in the several age groups in 100,000 of the population of the Administrative County as compared with England and Wales.

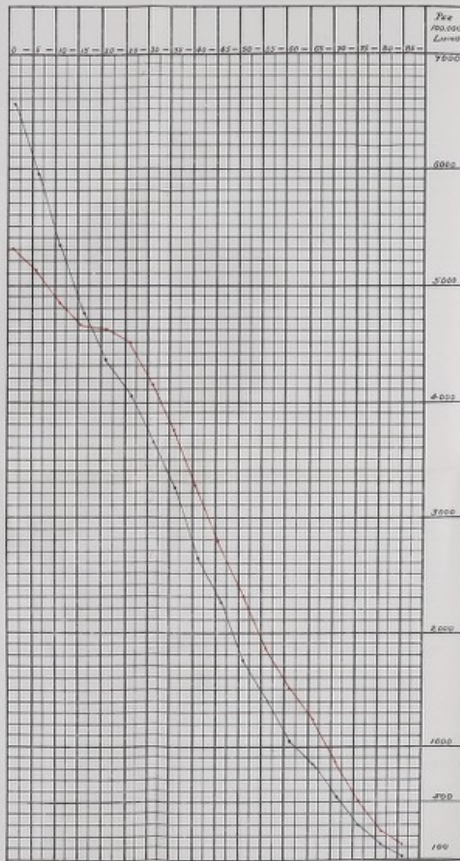
IV.
MALES.



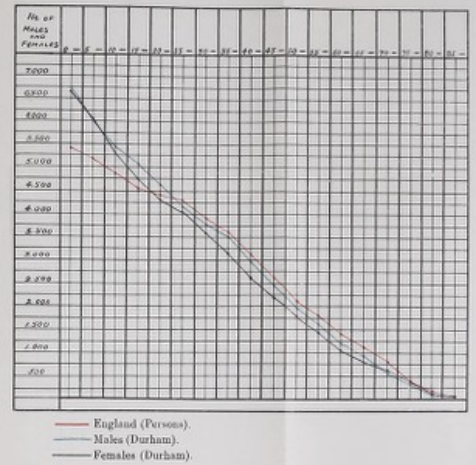
— England and Wales.
- - Durham (Administrative County).

Diagram showing the number of females in the several age groups in 100,000 of the population of the Administrative County as compared with England and Wales.

V.
FEMALES.

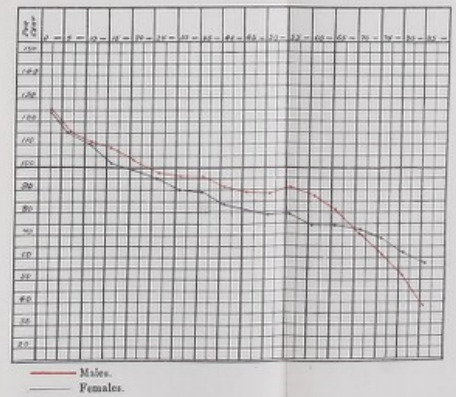


VI.
Diagram showing the number of Males and Females in each of the several age groups in 100,000 of the population of the Administrative County as compared with 50,000 persons of both sex in England and Wales.



— England (Persons).
- - Males (Durham).
... Females (Durham).

VII.
Diagram showing the percentage excess or deficiency at the various age groups in 100,000 of the population of the County as compared with 50,000 persons of both sex in England and Wales. Ratio to Persons (50,000) in England and Wales.



— Males.
- - Females.

Diagram VI. shows that both in childhood and early adult life the proportion of both males and females in Durham exceeds the standard, but later on in life there is a marked deficiency of old persons, the deficiency being greater in the case of females and commencing earlier than in males.

In diagram VII. it will be seen that the curves representing the two sexes approximate closely in childhood, but that soon after school life they diverge, the separation gradually increasing until the ages of 55 to 65.

After this the proportion of males diminishes, and at the age of 70 and upwards the female population for the first time exceeds the male.

	Age distribution of 50,000 Persons in England and Wales.	Age and Sex Distribution of 100,000 Persons in Durham.		Ratio per cent. Males and Females in Durham, to Persons (in 50,000) in England and Wales at the same ages.	
		Males.	Females.	Males.	Females.
Under 5	5,342	6,707	6,641	125·7	124·2
5—10	5,012	5,955	5,981	116·2	116·6
10—15	4,851	5,400	5,343	111·3	110·1
15—20	4,625	5,049	4,729	109·1	102·2
20—25	4,402	4,565	4,359	103·7	99·4
25—30	4,268	4,218	4,052	98·8	94·9
30—35	3,988	3,836	3,627	96·2	90·9
35—40	3,622	3,501	3,244	96·6	89·5
40—45	3,584	2,833	2,623	91·5	84·7
45—50	2,669	2,394	2,199	89·6	82·3
50—55	2,221	1,971	1,752	88·7	78·8
55—60	1,772	1,620	1,397	91·4	78·8
60—65	1,413	1,237	1,059	87·4	74·8
65—70	1,118	904	822	80·8	74·1
70—75	767	553	557	72·0	72·5
75—80	429	266	293	61·9	68·2
80—85	199	104	125	52·1	62·6
85 and up	88	34	50	38·4	56·5
	50,000	51,147	48,853	102·3	97·7

The factors determining an age and sex distribution, such as is found in Durham, would be accounted for (1) by a relatively high birth-rate, infant mortality and general death-rate, (2) by the absence of any demand for female labour, such as domestic service, leading to the migration of females, and (3) the provision of employment for males, as is the case in the mining and industrial centres in this County.

ESTIMATED POPULATION.

On the assumption that the population has been uniformly increasing by geometrical progression at the same rate since the Census of 1911 as prevailed during the ten years preceding it, the population to the middle of 1912 is estimated at **951,750**, and on this figure the birth and mortality-rates in this report are calculated.

The population of the urban districts, which include the municipal boroughs, is estimated at 538,540 and the rural districts at 413,210.

BIRTHS AND BIRTH-RATES.

The number of children born of parents who reside in the County was 29,671, which, in proportion to the total population, is equal to a birth-rate of 31·17 per 1,000 living, and a fertility-rate, i.e., ratio of births to females aged 15 to 45 years, of 133·7 per 1,000. In England and Wales in 1911 the fertility-rate was 97·8, and in the five years 1906-10 it was 105·3; the figures for 1912 are not available.

Of the 29,671 births, 15,238 were males and 14,443 females, the number of illegitimate being 1,112 (552 males and 560 females).

In the Administrative County of Durham 55·1 per cent. of the female population aged 15 to 45 years are married, as against 47·1 per cent. in England and Wales. Calculating the birth-rate on the number of married and unmarried women aged 15 to 45 years the legitimate birth-rate was 240·3 per 1,000 and the illegitimate 11·5; in England and Wales (1906-1910) the corresponding rates were 212·9 and 8·1.

In the table given hereunder the birth-rate, per 1,000 of the population during the past 5 years, is compared with England and Wales.

	1908.	1909.	1910.	1911.	1912.
Administrative County	...35·49...	33·83...	32·58...	31·7...	31·2
England & Wales.....	25·5	...25·6	...25·1	...24·4...	23·8

In the following table the birth-rates of 1911 and 1912 are compared with the rates which prevailed during the preceding twenty years. The period under review is divided into four quin-

quennial periods, and on examining the table it will be seen that during the first two periods the birth-rate fell from 36·92 to 35·16 per 1,000, which is equivalent to a decrease of 4·7 per cent., that in the next five years the rate increased to 35·59 per 1,000 or 1·2 per cent., and that between 1901 and 1910 it fell again from 35·59 per 1,000 to 33·97 or 4·5 per cent. Further, if the mean birth-rate of the first five years (1891 to 1895) be compared with the last five years (1906 to 1910) it will also be seen that during those twenty years the birth-rate fell from 36·92 to 33·97 or 8 per cent. In England and Wales the birth-rate during the same period declined 13·8 per cent.

The birth-rate in 1912 is the lowest recorded in this County and is 3·54 per 1,000 living or 10·2 per cent. below the average of the ten years 1901-10.

	Mean Population.	Mean Annual Number of Births.	Mean Annual Birth-rate.
1891-95	695,589	25,686	36·92
1896-00	742,321	26,102	35·16
Mean for 10 years	718,955	25,894	36·01
1901-05	801,974	28,547	35·59
1906-10	882,188	29,913	33·97
Mean for 10 years	842,081	29,230	34·71
1911	933,780	29,643	31·7
1912	951,750	29,671	31·2

DEATHS AND DEATH-RATES.

After making the usual adjustments for "Residents" and "Non-Residents" in accordance with the scheme introduced by the Registrar General, the number of deaths of persons belonging to the County was 13,111, corresponding to a rate of 13·7 per 1,000 of population.

The death-rate of 1912, like the birth-rate, is the lowest recorded for this County, the next lowest being in 1910, when the rate was 14·3.

In the following table the death-rates in 1911 and 1912 are compared with those of the preceding twenty years, which have been divided into periods of 5 years, that the results may be more easily compared.

	Mean Population.	Mean Annual Number of Deaths.	Mean Annual Death-rate.
1891-1895	695,589	13,450	19·33
1896-1900	742,321	13,515	18·20
Mean 10 years	718,955	13,483	18·75
1901-1905	801,974	14,206	17·71
1906-1910	882,188	14,001	15·87
Mean 10 years	842,081	14,103	16·74
1911	933,780	15,338	16·4
1912	951,750	13,111	13·7

On examining the table it will be seen that the death-rate in the first five years of the period under review was 19·33 and in the last five years 15·87. In these 20 years the death-rate has therefore fallen 3·46 per 1,000 or 18 per cent. During the same period the death-rate of England and Wales fell from 18·7 to 14·7 or 21·4 per cent.

The foregoing figures, therefore, bring out the fact that while the death-rate in this County has considerably decreased it has not fallen so fast as in the country at large.

The Standard Death-Rate.—As is generally known the death-rate is not the same at all periods of life or for both sexes, but is highest amongst infants and old persons and higher for males than for females. For example, under the age of 5 years the death-rate of England and Wales (1901-05) was 46·0 per 1,000 of the popula-

tion, at 55 and 65 years it was 28·1 and 58·8 respectively, while from 10 to 40 years it ranged from 2·1 to 8·3 per 1,000. As regards males and females the death-rates were 16·3 and 14·2 respectively.

In a preceding section it was shown that compared with England and Wales there were wide differences in the age and sex constitution of this County. That while there were comparatively few old people there was an unduly large proportion of infants and many more men than women.

It will therefore be obvious that equally healthy districts, but dissimilar in the constitution, will have different death-rates and that their rates would not admit of comparison unless allowance is made for the variation in the constitution of their respective populations and the rates reduced to a common standard.

For this purpose the Registrar-General now supplies for each district a "standardizing factor" which, when multiplied by the crude death-rate of the district, brings it to the rate which would have obtained, had the sex and age distribution of the population of the district under consideration been the same as that of England and Wales in 1901.

Where the population is more favourably constituted than the standard, the factor has the effect of increasing the crude rate, while in other cases when the opposite conditions prevail, it lowers it.

In the Administrative County the large proportion of infants, with its attendant high mortality and the relatively large proportion of males, is compensated by the deficiency of old people and the relatively large proportion of persons aged 5 to 25. The net result is that the factor required to standardize the death-rate of this County is only 1·0210 or just over unit, and the effect of applying this to the crude death-rate is to raise the rate very slightly—in the present year from 13·77 to 14·05 or 0·28 per 1,000.

The following table gives the crude death-rates for the County and for the urban and rural districts during the past five years,

together with the standardized death-rate for 1912, and these are compared with those of England and Wales:—

Crude Death-rate per 1,000 of the Population.						Stan- dardized Rate.
	1908	1909	1910	1911	1912	1912
England & Wales ...	14·7	14·5	13·4	14·6	13·3	13·3
Administrative						
County	16·7	14·9	14·3	16·4	13·77	14·05
Urban Districts ...	16·3	14·9	14·3	16·7	14·47	14·63
Rural Districts ...	17·4	14·8	14·2	16·0	13·10	13·30

NATURAL INCREASE OF THE POPULATION.

In 1912 the number of births was 29,671 and the deaths 13,111; the natural increase by excess of births over deaths was therefore 16,560.

The following table gives for each year the natural increase since 1901:—

	BIRTHS.	DEATHS.	Excess of Births over Deaths.	Birth-rate per 1000 living.	Death-rate per 1000 living.	Annual rate of Increase per 1000 living.
1901	27,990	14,915	13,075	36·27	19·32	16·95
1902	27,813	13,155	14,658	35·36	16·72	18·64
1903	28,370	14,072	14,298	35·38	17·55	17·83
1904	28,585	14,721	13,864	34·98	18·01	17·14
1905	29,977	14,166	15,711	35·99	17·00	18·99
1906	29,007	14,459	14,548	34·17	17·03	17·14
1907	28,993	14,205	14,788	33·50	16·41	17·09
1908	31,297	14,811	16,486	35·49	16·79	18·70
1909	30,410	13,422	16,988	33·83	14·93	18·90
1910	29,858	13,108	16,750	32·58	14·30	18·28
mean of 10 years	29,230	14,103	15,126	34·71	16·74	17·97
1911	29,643	15,338	14,305	31·7	16·4	15·3
1912	29,671	13,111	16,560	31·2	14·0	17·5

The table shows that the natural increase in 1912 exceeded 1911 by 2,255, and the mean of the 10 years 1901-10 by 1,434.

In the following table the mean annual rates of increase per 1,000 living during the twenty years 1891 to 1910 and in 1911 and 1912, is compared with England and Wales:—

	Mean Annual Death-rate.	Mean Annual Birth-rate.	Mean Annual Rate of Increase per 1,000 Living.	
			Durham.	England and Wales.
1891-95.....	19'33	36'92	17'59	11'8
1896-00.....	18'20	35'16	16'96	11'6
1901-05.....	17'71	35'59	17'88	12'1
1906-10.....	15'81	33'97	18'16	11'6
1911	16'4	31'7	15'3	9'8
1912	13'7	31'2	17'5	10'5

The table shows that in 1896-1900 the birth-rate fell proportionately faster than the death-rate, and a diminution of the natural increase resulted. In the next ten years the fall in the death-rate more than compensated for that in the birth-rate, and as a result there was a gain in the population by excess of births over deaths. In 1911 the birth-rate fell lower than in any of the preceding years and the death-rate at the same time increased, consequently the natural increase reached a lower level than it had ever done before. In 1912 there was a great recovery in the rate of natural increase, but, as will be seen in the previous table, the rate falls short of 1908, 1909, and 1910 and the mean of the ten years 1901 to 1910.

Examining the figures relating to England and Wales, the table shows that the fall in the death-rate has been just sufficient to make up for the fall in the birth-rate; during the past four years, however, the returns of the Registrar-General show that the natural increase is steadily decreasing.

The foregoing statistics relating to the birth and death-rates, to summarize briefly, show that although the birth-rate in this County has fallen it is not declining so rapidly as in the country

NOTIFICATION OF BIRTHS ACT.

As has been pointed out from time to time, although the improvement in the sanitary circumstances of the County has been the means of materially reducing the general mortality, and more particularly during recent years, its effect on the death-rate amongst infants has not been so marked. This is no doubt due to the fact that, although housing and general sanitation have an important bearing on the mortality amongst infants, there are other equally important factors to be taken into account, and of these perhaps the most potent are improper feeding, the lack of knowledge of the rearing of infants, domestic uncleanness, and antenatal conditions, including intemperance.

Hitherto this aspect of the question has received comparatively little practical attention, although it will be apparent that the remedying of these social and domestic conditions is dependent more on educational advancement than on improved sanitation. In time this want may possibly be met by the training of our scholars, and more especially the older girls, in domestic economy and hygiene, but in the meantime the only practical way of imparting this most necessary education, and thereby checking the high infant mortality, is by means of properly trained Health Visitors, whose duty it would be to visit the homes of the people and advise the mothers as to the rearing of infants and on matters of domestic hygiene.

To enable Sanitary Authorities to deal more effectually with infant mortality, the Notification of Births Act, which provides for the early notification of births, was passed in August, 1907. Up to the end of 1911, however, in only six Sanitary Districts in this County was the Act in operation, and in four of these it had only been adopted by the Local Sanitary Authority conditionally to the County Council appointing and maintaining Health Visitors to carry out the provisions of the Act in their respective districts.

Where these nurses have been engaged, their timely advice and assistance in the management of infants has been sought after by the mothers, and their visits to the homes greatly appreciated. The District Medical Officers of Health also report most favourably on the excellence of their work, and, as will be seen in the following

statement, since 1909, when the Health Visitors were appointed, the infant mortality-rate in the 6 districts has been lower than the "rest of the County," although prior to the adoption of the Act, exactly the opposite conditions obtained. The beneficial effect of their work in 1911, which may be regarded as a test year on account of excessively high mortality amongst infants in all parts of the country, is indeed most striking, for the figures in that year, relating to the rest of the County, lead one to believe that but for the Health Visitors the infant mortality in these six districts would have risen to about the same height as in 1897-01, or at least as high as the rest of the County in 1911.

Infant Mortality per 1,000 Births.	Six Districts in which the Act was adopted.	Rest of Administrative County.
1892-1896	169	161
1897-1901	185	165
1902-1906	159	155
1907-1911	139	139
1909	118	125
1910	127	126
1911	146	161
1912	94	108

In view of the excessive infant mortality, in the latter part of 1911 a letter was addressed to the several sanitary authorities in the County, with reference to the adoption of the Notification of Births Act, but the replies were by no means satisfactory, for they showed that while a few were willing to adopt the Act the majority either were not in favour of doing so or had decided to take no action. Consequently the County Medical Officer of Health, in March, 1912, submitted a further report on the subject to the County Health Committee, and recommended the County Council to adopt the Act for the whole County, except in the case of Stockton and Whickham where the Act was already in operation, and Hartlepool and Jarrow who themselves wished to adopt and administer the Act and to appoint Health Visitors.

It was suggested, in order to avoid overlapping, that the duties under the Notification of Births Act, the visiting of persons suffering from tuberculosis, and the "following up" of school children found

on medical inspection to be suffering from physical defects requiring attention or treatment, should all be undertaken by one and the same Health Visitor. To adequately cover the whole County, it was estimated that 40 Health Visitors would be necessary, the basis of the estimate being one Health Visitor to every 25,000 persons.

Up to the end of the year the official sanction of the Local Government Board to the adoption of the Notification of Births Act had not been given, but since then the Act has come into operation. A Superintendent Nurse and 25 Health Visitors have been appointed, and it is proposed to engage ten more as soon as the County Tuberculosis Scheme is in full operation.

ZYMOTIC MORTALITY.

The total number of deaths from the seven principal zymotic diseases in 1912 was 1,332. One was due to smallpox, while the others were caused by scarlet fever (99), diphtheria (157), enteric fever (63), measles (496), whooping cough (259), and diarrhœa (257). In proportion to the estimated population, the 1,332 deaths are equal to a rate of 1·39 per 1,000.

The zymotic death-rate of 1912 is lower than the rate in any other year on record.

In 1911 the zymotic death-rate in the County of Durham, as throughout the whole country, was exceptionally high, but if the 1912 rate be compared with the five years 1906-10, which were years of average zymotic incidence, it will be seen in the table which follows that to every 100 deaths in the five years immediately preceding 1911, there were 70 deaths in 1912; that is to say the zymotic death-rate of 1912 was 30 per cent. below the average.

The death-rate from measles was 0·521 per 1,000 and from scarlet fever 0·104, which, compared with the 1906-10 rate, were 58 and 37 per cent. respectively above the average. Diphtheria (0·165 per 1,000) was a little below the average, and whooping cough (0·272 per 1,000) declined 15 per cent. The diseases in which the greatest reduction occurred were enteric fever and diarrhœa.

The death-rates from these two diseases were lower in 1912 than in any other year on record. From enteric fever there were 63 deaths in 1912, as against 159 in 1911, and an average of 125 per annum in the five years immediately preceding it. In the case of diarrhœa there were 257 deaths as against 1,547 deaths in 1911 and an average of 817 during the five years 1906-10. The death-rates from these diseases are given in the table, and it will be seen that to every 100 deaths in 1906-10 from enteric fever and from diarrhœa there were in the order mentioned 46 and 29 in 1912. The death-rates from enteric fever and diarrhœa in 1912 are therefore 54 and 71 per cent. respectively below the average.

**ZYMOTIC MORTALITY IN 1912 AS COMPARED WITH
THE MEAN RATE FOR 1906-1910.**

Seven principal Epidemic Diseases.	Rate per 1000 living.			Ratio, 1912 to 1906-10, the latter taken as 100.
	Mean rate, 1906-10.	1911.	1912.	
Small-pox .....	...	...	0'001	...
Scarlet Fever	0'076	0'07	0'104	137
Diphtheria	0'177	0'16	0'165	93
Enteric Fever	0'141	0'17	0'066	46
Measles	0'329	0'44	0'521	158
Whooping Cough	0'317	0'39	0'272	85
Diarrhœa	0'926	1'65	0'270	29
	1'97	2'90	1'39	70

These figures show that the zymotic rate for 1912 is an exceptionally low one, but if the rates extending over a period of years

be examined it will be seen that the number of deaths from zymotic diseases has been steadily diminishing for some time.

MORTALITY FROM ZYMOTIC DISEASES.

Seven principal Epidemic Diseases.	Mean Annual Rate per 1000 living.		Ratio of the Death rate in 1901-05 to 1906-10, the former taken as 100.
	1901-05.	1906-10.	
Small-pox	0'015	...	0
Scarlet Fever	0'192	0'076	39
Diphtheria	0'257	0'177	68
Enteric Fever	0'179	0'141	78
Measles	0'441	0'329	74
Whooping Cough	0'366	0'317	87
Diarrhœa	0'867	0'926	107
	2'317	1'976	85

On examining the preceding table, which gives in quinquennial periods the average death-rates during the ten years 1901-10, it will be seen that the death-rates for the several diseases, in the second half of the decennium, are with one exception considerably lower than the first half. To every 100 deaths from scarlet fever in 1901-5 there were only 39 in 1906-10—a reduction of 61 per cent. Similarly, to every 100 deaths from diphtheria in 1901-5 there were only 68 in 1906-10—a reduction of 32 per cent., while in the case of measles and whooping cough the table shows that the rates have fallen 26 and 13 per cent. respectively.

From typhoid fever it is gratifying to note that the death-rate fell from 0'179 to 0'141 per 1,000, which is a reduction of 22 per cent.

With respect to diarrhoea, which is dealt with more fully elsewhere, the death-rate during the second half of the decennium shows an increase of 7 per cent.

The foregoing facts so far are satisfactory, but the number of deaths from zymotic diseases in this County is still very excessive for, as the following table shows, the zymotic rate for 1912 was 40 per cent. above the average for the whole country, exceeding the average in the case of scarlet fever and typhoid fever by 100 and 50 per cent. respectively, and in the case of diphtheria, measles, diarrhoea and whooping cough, by 45, 44, 35, and 17 per cent. in the order mentioned. It must, however, be borne in mind when comparing these figures, that the majority of the diseases given in the table affect chiefly children and young adults, and that in Durham, compared with the country as a whole, there is an unduly large proportion of children and adults up to the age of 25 years.

	Zymotic Mortality 1912, Rate per 1,000 Living.							Total.
	Smallpox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Measles.	Whooping Cough.	Diarrhoea.	
England & Wales	0'00	0'05	0'11	0'04	0'36	0'23	0'20	0'99
Durham	0'00	0'10	0'16	0'06	0'52	0'27	0'27	1'39
Ratio, Durham to England & Wales, the latter taken as 100	100	200	145	150	144	117	135	140

TABLE GIVING FOR EACH YEAR THE NUMBER OF DEATHS AND THE DEATH-RATE
FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES DURING THE TEN YEARS,

1901 TO 1910 AND IN 1911 AND 1912.

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Mean of 10 years.	1911	1912
Estimated Population ...	771,690	786,540	801,680	817,120	832,840	848,870	865,210	881,870	898,840	916,150	842,081	933,780	951,750
Small-pox	3	1	29	28	2	...	..	...	...	...	6.3	...	1
Scarlet Fever ...	205	159	198	131	77	68	55	62	80	70	110.5	74	99
Diphtheria	144	200	235	237	210	168	169	152	149	150	181.4	155	157
Enteric Fever ...	221	116	99	121	164	188	87	159	107	85	134.7	159	63
Measles	389	286	254	447	393	138	581	236	324	176	322.4	417	496
Whooping Cough	260	310	195	348	345	248	268	452	217	224	286.7	365	259
Diarrhoea	1142	255	580	767	734	1164	497	1217	506	702	756.4	1547	257
TOTAL	2364	1327	1590	2079	1925	1974	1657	2278	1383	1407	1798.4	2717	1332
Rate per 1,000 Living	3.06	1.68	1.98	2.54	2.31	2.32	1.91	2.58	1.53	1.53	2.13	2.90	1.39

THE PREVALENCE OF NOTIFIABLE DISEASES.

Excluding 1,832 cases of pulmonary tuberculosis, the number of cases of infectious disease notified during 1912 was 7,903, which is equal to an attack rate of 8.30 per 1,000. The rate is 1.6 per 1,000 above 1911, and 2 per 1,000 of the population or 30 per cent. above the average in the five years 1906-10.

In the table given below it will be seen that the high attack rate in 1912 was due to the increased incidence of scarlet fever. To every 100 cases of scarlet fever notified in 1906-10, there were 180 in 1912, which is equal to an increase above the average of 80 per cent. With respect to the other notifiable diseases, the table shows that they are below the average, and that in the case of enteric fever there is, compared with 1906-10, a decrease amounting to 56 per cent.

Notifiable Diseases.	Attack rate per 1,000 living.			Ratio, 1912 to 1906-10, the latter taken as 100.
	1906-10	1911	1912	
Small-pox.....	0.00	0.00	0.00	0
Scarlet Fever ...	3.30	3.48	5.94	180
Diphtheria	1.35	1.40	1.31	97
Enteric Fever ...	0.84	0.98	0.37	44
Continued Fever	0.04	0.03	0.00	0
Relapsing Fever	...	...	...	...
Typhus Fever ...	...	...	...	...
Puerperal Fever	0.037	0.02	0.023	62
Erysipelas	0.78	0.68	0.62	79
	6.36	6.63	8.30	130

Extending this inquiry into the incidence of infectious disease in the County over a more prolonged period, it will be apparent on examining the table given below, that since 1901 there has been a remarkable decline in the number of cases of infectious disease.

In the five years 1901-5, there were 43,000 cases, and in the next five years 28,088, which, in proportion to the total population, is equal to an annual attack rate of 10.7 and 6.36 per 1,000 respectively, or a reduction of 41 per cent. Representing the facts in

another way, had the same proportion of persons been attacked in the five years 1906-10 as in the five years immediately preceding them, instead of 28,088 cases there would have been 47,300 or over 18,000 more cases than actually occurred.

On examining the table more in detail, it will be seen that puerperal fever and scarlet fever have dropped nearly one-half, and enteric fever (including continued fever) nearly one-third (31 per cent.).

	Mean Annual Attack Rate per 1,000 living.		Ratio, 1906-10 to 1901-05, the latter taken as 100.
	1901-05	1906-10	
Small-pox.....	0·26	0·00	0
Scarlet Fever	6·47	3·30	51
Diphtheria	1·53	1·35	88
Enteric Fever	1·14	0·84	} 69
Continued Fever.....	0·13	0·04	
Relapsing Fever .....	...	...	...
Typhus Fever .....	...	...	...
Puerperal Fever	0·07	0·037	52
Erysipelas.....	1·09	0·78	72
	10·72	6·36	59

INFECTIOUS DISEASE (NOTIFICATION) ACT

Weekly Statement of notifiable diseases reported during 1912.

Week ended	Small-Pox	Scarlet Fever	Diphtheria	Fever					Cholera	Erysipelas	Pulmonary Tuberculosis
				Enteric or Typhoid	Typhus	Relapsing	Continued	Puerperal			
January 6	...	78	25	13	...	...	...	...	...	8	113
" 13	...	131	31	12	...	...	1	1	...	13	108
" 20	...	110	24	14	...	...	...	...	...	13	67
" 27	...	97	37	13	...	...	...	1	...	8	51
February 3	...	110	33	11	...	...	...	...	...	13	46
" 10	...	139	25	9	...	...	...	...	...	14	43
" 17	...	131	34	9	...	...	...	...	...	10	41
" 24	...	113	17	8	...	...	...	1	...	8	43
March 2	...	99	34	6	...	...	...	...	...	18	42
" 9	...	101	38	7	...	...	...	1	...	12	37
" 16	...	89	26	8	...	...	1	1	...	14	37
" 23	...	79	22	1	...	...	...	1	...	11	30
" 30	...	101	20	6	...	...	...	2	...	13	35
April 6	1	80	20	5	...	...	...	...	...	4	23
" 13	1	70	19	8	...	...	...	1	...	12	30
" 20	1	85	15	4	...	...	1	1	...	14	23
" 27	...	107	17	8	...	...	...	1	...	11	37
May 4	...	78	22	1	...	...	...	1	...	14	45
" 11	1	70	21	7	...	...	...	1	...	9	43
" 18	...	114	32	6	...	...	1	1	...	13	36
" 25	...	79	14	4	...	...	...	...	...	14	33
June 1	...	90	18	7	...	...	...	...	...	13	43
" 8	...	99	22	5	...	...	...	1	...	6	33
" 15	...	81	11	4	...	...	...	2	...	10	37
" 22	...	84	31	2	...	...	...	...	...	11	27
" 29	...	96	17	1	...	...	...	1	...	16	26
July 6	...	87	18	5	...	...	...	1	...	4	36
" 13	...	101	41	1	...	...	1	...	...	8	35
" 20	...	77	28	5	...	...	...	...	...	7	19
" 27	...	101	24	6	...	...	...	1	...	10	24
August 3	...	80	24	5	...	...	...	...	...	10	27
" 10	...	88	15	6	...	...	...	1	...	4	17
" 17	...	118	26	7	...	...	...	...	...	11	27
" 24	...	115	19	15	...	...	...	...	...	16	23
" 31	...	98	20	7	...	...	...	...	...	15	24
September 7	...	122	33	12	...	...	1	1	...	15	27
" 14	...	114	28	9	...	...	...	1	...	16	32
" 21	...	174	21	10	...	...	1	...	...	5	27
" 28	...	185	27	6	...	...	...	...	...	12	23
October 5	...	120	23	10	...	...	...	...	...	10	24
" 12	...	135	32	8	...	...	...	1	...	12	41
" 19	...	130	24	9	...	...	...	1	...	19	39
" 26	...	138	23	11	...	...	...	...	...	10	24
November 2	...	150	28	3	...	...	...	...	...	10	26
" 9	...	150	27	4	...	...	...	1	...	12	39
" 16	...	119	18	7	...	...	1	...	...	20	22
" 23	...	129	19	7	...	...	...	1	...	18	33
" 30	...	128	18	4	...	...	...	...	...	14	27
December 7	...	129	27	3	...	...	...	...	...	10	23
" 14	...	132	23	6	...	...	...	1	...	12	24
" 21	...	111	28	7	...	...	...	...	...	5	27
" 28	...	116	13	5	...	...	...	...	...	9	13
Total for the year	4	5658	1252	357	...	...	8	28	...	596	1832

CASES OF INFECTIOUS DISEASES NOTIFIED IN THE ADMINISTRATIVE
COUNTY, 1901-1910 and in 1911 and 1912.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	Total of 10 years, 1901-10.	1911.	1912.
Small-pox	22	34	462	421	136	8	2	2	1	4	1,092	19	4
Scarlet Fever.....	6,572	5,883	5,462	4,603	3,448	2,621	1,234	2,567	3,737	3,419	40,546	3,253	5,658
Diphtheria	599	1,129	1,467	1,400	1,547	1,298	1,108	1,146	1,152	1,258	12,104	1,310	1,252
Enteric Fever ...	1,546	667	550	809	1,014	1,090	449	1,048	668	490	8,331	917	357
Continued Fever.	256	75	58	54	93	70	19	38	24	19	706	33	8
Relapsing Fever.	...	3	2	2	3	...	...	1	...	...	11	...	...
Typhus Fever ...	...	...	...	...	...	...	...	1	...	...	1	...	...
Puerperal Fever...	53	60	60	48	64	36	30	29	32	38	450	21	28
Erysipelas.....	829	840	936	904	889	746	706	624	722	651	7,847	638	596
Total.....	9,877	8,691	8,997	8,241	7,194	5,869	4,548	5,456	6,336	5,879	71,088	6,191	7,903
Attack Rate per 1,000 Living...	10.5	10.3	10.6	9.7	8.5	6.9	5.4	6.4	7.5	6.9	8.4	6.6	8.3

SMALLPOX.

Only four cases of smallpox were notified, and these occurred during the second quarter of the year in the Borough of Hartlepool.

The prompt steps taken in dealing with the outbreak prevented the disease extending on this occasion, but Dr. Dickinson Leigh draws attention to the fact that owing to the want of vaccination they have in their midst a large quantity of "inflammable material" which is liable at any minute to result in a serious disaster." The hospital accommodation is commented on, and the Medical Officer of Health recommends his Council to take steps to provide, either by themselves or in conjunction with other authorities, suitable accommodation for the isolation of smallpox cases.

	Number of Cases	Number of Deaths.	Case Mortality per cent.	Annual Death-rate per 1,000 Population.
1901—05	1075	63	5·8	0·015
1906—10	17	0	} 2·5	...
1911	19	0		...
1912	4	1		0·001

In the table given above it will be seen that the County has been very free from smallpox in recent years, and that since 1905 there have been only 40 cases and 1 death as against 1,075 cases and 63 deaths in the preceding 5 years (1901-05).

SCARLET FEVER.

Of the 9,735 cases of infectious disease notified in 1912, 5,658 were cases of scarlet fever, which is equal to an attack rate of 5·94 per 1,000. The rate is 2·46 per 1,000 higher than in 1911 and 2·64 per 1,000 or 80 % above the average for the five years 1906-10. In no other year since 1902 have so many cases of scarlet fever been notified. But, although the number was above the average, the disease was mild in character.

The table below gives the case mortality of scarlet fever in 1912, in 1911, and in quinquennial periods since 1901. In 1912 it will be seen that there were 5,658 cases and 99 deaths, which is equal to a case mortality of 1·74 %; in 1911 the proportion of deaths to cases corresponded to a rate of 2·27, and in the five-yearly periods 1901-05 and 1906-10 the average rates were 2·9 and 2·3 respectively. Had the disease in 1912 been as fatal as in the first five years under consideration, instead of 99 deaths there would have been about 165.

	Total Number of Cases.	Total Number of Deaths.	Case Mortality per cent.	Annual Death-rate per 1,000 of Population.
1901—05	25,968	770	2·9	0·192
1906—10	14,578	335	2·3	0·076
1911	3,253	74	2·27	0·07
1912	5,658	99	1·74	0·104

The districts in which scarlet fever was most prevalent in 1912 are given hereunder:—

	Number of Cases.	Attack Rate per 1,000 of Population.
URBAN DISTRICTS—		
Shildon	356	25·9
Willington	215	24·3
Stanhope	37	18·2
Barnard Castle.....	84	17·4
Spennymoor	249	13·8
Crook.....	148	11·9
Houghton-le-Spring	95	9·5
Darlington	508	8·8
Benfieldside	56	6·1
Hetton-le-Hole.....	90	5·6
Brandon and Byshottles	93	5·1
RURAL DISTRICTS—		
Bishop Auckland.....	1,123	18·9
Easington	507	8·0
Darlington	81	7·4
Lanchester	171	5·2
Sedgefield	177	5·1

The table shows that the Shildon and Wellington Urban Districts had, in proportion to the size of their respective populations, the largest number of cases, and that in the Bishop Auckland Rural District there were as many as 1,123 cases or close upon one-fifth of the total number notified throughout the County.

DIPHThERIA.

In 1912, the number of cases of diphtheria notified was 1,252, which is equivalent to an attack rate of 1·31 per 1,000 of population as against 1·40 in 1911, and on referring to the table on page 39 it will be seen that the mean annual attack rate during 1901-05 was 1·53 and in the next 5 years 1·35, which is equivalent to a reduction of 12 % in the ten years.

Diphtheria in this County has declined in prevalence during recent years, but to a less degree than any of the other notifiable diseases.

As regards the case mortality it will be seen in the table given below that from 1901-05 the average annual case mortality of diphtheria was 16·7 per cent., that from 1906-10 it was 13·2 per cent., and during the last two years 11·8 and 12·5. From 1901-10 there has therefore been a reduction in the case mortality of diphtheria by 21 %. During the same period the case mortality of scarlet fever also fell 21 %, but while its zymotic mortality (rate per 1,000 persons) fell 61 %, in the case of diphtheria the reduction in the zymotic mortality only amounted to 32 %. This is explained by the difference in the prevalence of the two diseases. In the case of diphtheria, as stated above, the incidence of disease during the ten years 1901-10 declined 21 %, whereas in the case of scarlet fever it amounted to 49 %. A fall in the zymotic mortality may, therefore, be caused by a decrease in prevalence or by a reduction in the case mortality or, as in the present case, both causes may operate to bring about this result.

	Total Number of Cases.	Total Number of Deaths.	Case Mortality per cent.	Annual Death-rate per 1,000 of Population.
1901—05	6,142	1,026	16·7	0·257
1906—10	5,962	788	13·2	0·177
1911	1,310	155	11·8	0·16
1912	1,252	157	12·5	0·165

The urban and rural districts in which diphtheria was most prevalent during 1912 are shown in the table given hereunder:—

	Number of Cases.	Attack Rate per 1,000 of Population.
URBAN DISTRICTS—		
Willington	47	5·3
Tanfield	45	4·2
Crook	45	3·6
Whickham	36	1·8
Blaydon	56	1·7
Stanley	44	1·7
Shildon	21	1·5
RURAL DISTRICTS—		
Weardale (Stanhope)	36	13·2
Sunderland	103	3·4
Barnard Castle	25	2·1
Stockton	34	1·9
Bishop Auckland	100	1·6
Durham	49	1·5

In the remaining districts the attack rate was less than 1·5 per 1,000. As stated above, the average attack rate for the County in 1912 was 1·3 per 1,000.

ENTERIC FEVER.

During the 52 weeks ended December 28th the returns of 357 cases of enteric fever were received, which, calculated on the total estimated population of the County, are equivalent to an attack rate

of 0·37 per 1,000. In 1911 the rate was 0·98, and in the five years 1906-10, which may be regarded as years of average prevalence, the rate was 0·84.

In a table in a preceding section it was shown that during the decennium 1901-10 the attack rate from enteric fever fell from 1·14 per 1,000 in 1901-5 to 0·84 in 1906-10, or if "continued fever," which is probably a mild form of enteric fever, be included from 1·27 to 0·88, which is equal to a reduction in the attack rate of 31 %. In the present year the attack rate is 56 % below the average annual attack rate of 1906-10. But while the prevalence of the disease has diminished the disease has apparently increased in severity. This is shown in the table given below. In the five years 1901-05 the case mortality of enteric fever was 15·7 and, with "continued fever" included, 14 %; in the next five years it was 16·7 % (15·9 with "continued fever"), in 1911 it rose to 17·3 %, and now it is 17·6.

In the case of scarlet fever and diphtheria it was shown that the mortality had declined and that this was due to the decrease in the prevalence as well as in the fatality of the diseases. In the case of enteric fever the foregoing facts show that the fall in the zymotic mortality, which amounted to 20 % during the 10 years 1901-10, cannot be attributed to any decrease in the fatality but to the lessened incidence. Had the case mortality in 1912 been the same as the average for the five years 1901-05, instead of 63 deaths in 1912 there would have been 50, and the zymotic mortality 0·050 instead of 0·065.

	Total Number of Cases.	Total Number of Deaths.	Case Mortality per cent.	Annual Death-rate per 1,000 of Population.
1901—05	4,586	721	15·7	0·179
1906—10	3,745	626	16·7	0·141
1911	917	159	17·3	0·17
1912	357	63	17·6	0·065

The sanitary districts in which the disease was most prevalent in 1912 are here given:—Stockton Borough (33 cases), Blaydon (16),

Brandon (17), Hetton-le-Hole (10), Shildon (10), Spennymoor (9), Whickham (12), Durham Rural (23), Houghton Rural (24), and Lanchester Rural (19).

The following table gives particulars of the incidence of, and mortality from, enteric fever during each quarter of the year, in the Administrative County of Durham:—

1912.	No. of Cases.	No. of Deaths.	Case Mortality per cent.	Death-rate per 1,000 population per annum.
1st QUARTER ...	117	22	18·8	0·09
2nd ,, ...	62	12	19·3	0·05
3rd ,, ...	94	15	15·9	0·06
4th ,, ...	84	14	16·6	0·06
THE YEAR ...	357	63	17·6	0·06

CONTINUED FEVER.

During the year 8 persons were notified to be suffering from "continued fever," as against 33 cases in 1911. In the following table it will be seen that continued fever is becoming less frequent and promises to disappear entirely, possibly owing to better facilities for diagnosis:—

	Total Number of Cases of Continued Fever.	Attack-rate per 1,000 of Population.	Ratio, Cases of Continued Fever to Enteric Fever, the latter taken as 100.	Mortality.
1901—05	536	0·13	11·4	Nil.
1906—10	170	0·05	4·5	„
1911	33	0·03	3·6	„
1912	8	0·00	2·2	„

One of the characteristics of the disease, at least in this County, is that its years of maximum and minimum prevalence almost invariably coincide with that of enteric fever, but during recent

years the proportion of cases of continued fever to enteric fever has diminished very considerably. Referring again to the table, it will be noted that, during the five years 1901-05, to every 100 cases of enteric fever there were 11·4 of continued fever. In the next five years the proportion was 4·5, and in 1911 and 1912 3·6 and 2·2 respectively. The table also shows that since 1901 there have been no deaths from continued fever.

Of the 8 cases notified 4 occurred in the Easington Rural District, 2 in the Ryton Urban District and 1 each in the Blaydon Urban District and the Sedgefield Rural District.

PUERPERAL FEVER.

In 1912 the number of cases of puerperal fever notified was 28, and of these 22 died. All cases which occurred in the practice of midwives were specially enquired into by the County Medical Officer, and appropriate precautions taken to prevent the disease from spreading. The following table gives, in quinquennial periods, the number of cases and deaths in 1901-10 and in 1911 and 1912:—

	Total Number of Cases Notified.	Total Number of Deaths.	Annual Attack-rate per 1,000.	Annual Death-rate per 1,000 of Population.
1901—05	285	278	0·071	0·069
1906—10	165	164	0·037	0·037
1911	21	33	0·022	0·034
1912	28	22	0·029	0·023

It will be observed, on referring to the table, that practically only the cases that died were notified, and that in 1911 there were more deaths from puerperal septic affections than cases notified. But the figures give some indication of the relative prevalence of the disease in the first half of the decennium and at the present time. The last column also shows that during the 10 years 1901-10 the death-rate has fallen nearly 50 %, and that the death-rate in 1912 is 38 % below the mean annual rate of 1906-10.

ERYSIPELAS.

During the year 596 cases of erysipelas were notified, which is equivalent to an attack rate of 0·62 per 1,000 of the population, as against 0·68 in 1911. During the five years 1901-15 the mean annual attack rate was 1·09 per 1,000, and in the next quinquennium the mean rate was 0·78, which is a difference of 28 %. Since 1910 there has been a further decrease of 21 %.

The case mortality has also declined. In the table given below it will be seen that from 1901-05 the annual case mortality was 3·6 per 1,000, and that from 1906-10 it was 3·1. In 1911 and 1912 the rates fell to 2·0 and 1·2 per 1,000.

The effect of the decrease in the prevalence and in its fatality is brought out in the figures relating to the death-rate of this disease. In the five years 1901-05 the average number of deaths was 32 and the death-rate 0·04 per 1,000 of population; in the next five years the average number of deaths per annum was 21·6 and the rate 0·024, which is nearly half the rate of the preceding quinquennium. In 1911 there were 13 deaths and in 1912 only 7, and the respective rates 0·013 and 0·007.

	Total Number of Cases Notified.	Total Number of Deaths.	Attack-rate per 1,000 of Population.	Case Mortality per cent.	Annual Death-rate per 1,000 of Population.
1901—05	4,398	161	1·09	3·6	0·040
1906—10	3,449	108	0·78	3·1	0·024
1911	638	13	0·68	2·0	0·013
1912	596	7	0·62	1·2	0·007

MEASLES.

Measles is not included amongst those diseases which, by the provisions of the Infectious Disease Notification Act, are required to be notified. Consequently its case mortality cannot be accurately estimated, but the number of deaths gives some general indication of its prevalence.

In the accompanying table is given, in quinquennial periods, the number of deaths and the death-rate during the ten years 1901-10 and in 1911 and 1912:—

	Mean Annual Number of Deaths.	Mean Annual Death-rate per 1,000.
1901—05	354	0·441
1906—10	291	0·329
1911	417	0·446
1912	496	0·521

The table shows, on comparing the two five-year periods, that the death-rate fell from 0·441 to 0·329 per 1,000 living, or 26 per cent., but in 1911 the number of deaths greatly increased and, on referring to the table, it will be seen that the 1912 death-rate is still higher, rising to 0·521 per 1,000, which is 58 per cent. above the average for the five years 1906-10.

The deaths from this disease in 1912 were most numerous in Stockton Borough (33), Blaydon (54), Felling (29), Hebburn (29), Shildon (30), Stanley (20), Whickham (16), Lanchester Rural (25), and Sedgfield Rural (28).

WHOOPING COUGH.

Whooping cough, like measles, is a non-notifiable disease, so that the prevalence of the disease must be gauged by the death-rate.

The table given below shows that the death-rate from whooping cough fell from 0·366 in the five years 1901-05 to 0·317 or 13 per cent. in the succeeding five years, that in 1911 there was a considerable increase in the number of deaths, and that in 1912 the death-rate fell again to 0·272 per 1,000, which is a decrease on the average for the five years 1906-10 of 15 per cent.

	Mean Annual Number of Deaths.	Mean Annual Death-rate per 1,000 Population
1901—05	294	0·366
1906—10	280	0·317
1911	363	0·39
1912	259	0·272

The number of deaths and the sanitary districts in which the death-rate in 1912 from this disease was highest are here given:—Jarrow (18), Hebburn (22), Spennymoor (9), Whickham (8), Chester-le-Street (29), Easington Rural (33), Houghton Rural (17), and South Shields (8).

DIARRHŒA.

In 1912 the number of deaths from diarrhœa was 257, and of these 200 were under 1 year of age. The 257 deaths are equivalent to a death-rate of 0·27 per 1,000. As stated in my last report, the classification of diarrhœa has been altered to meet the requirements of the Registrar-General, who, early in 1911, issued the "Manual of the International List of Causes of Death," adapted for use in England and Wales and based on the second decennial revision by the International Commission held in Paris, in 1909.

Diarrhœa now includes all deaths under the age of *two years* from dyspepsia, gastro-enteritis (infective or otherwise), colic and ulceration of the intestines whereas until 1911 deaths from diarrhœa *at all ages* were included and only deaths from enteritis under one year of age unless certified as infective.

The effect of climatic conditions on the prevalence of diarrhœa is exemplified by the mortality returns of 1911 and 1912. The summer of 1911 was abnormally warm and dry, with the result that the number of deaths from diarrhœa was higher than in any other year since the beginning of the century, whilst in 1912, when the opposite climatic conditions prevailed, the death-rate from this disease was the lowest yet recorded in this County.

But while climatic conditions are important in determining the prevalence of epidemic diarrhœa, it should be pointed out that where proper attention is paid to the care and feeding of infants, and where the interior as well as the surroundings of the dwellings are maintained in a proper sanitary condition, the disease is largely preventable.

The mortality returns relating to diarrhœa are certainly disappointing, for it will be seen in the table given below that, apart

from the exceptional rates of 1911 and 1912, the death-rate from diarrhoea since 1901 has not, like the other principal epidemic diseases, shown any tendency to decrease but if anything bears evidence to the contrary.

	Annual Number of Deaths.	Annual Death-rate per 1,000 of Population.
1901	1,142	1.48
1902	255	0.32
1903	580	0.72
1904	767	0.93
1905	734	0.88
Mean 1901-05	696	0.867
1906	1,164	1.37
1907	497	0.57
1908	1,217	1.38
1909	506	0.56
1910	702	0.76
Mean 1906-10	817	0.926
1911	1,547	1.65
1912	257	0.27

In the following districts in which the disease, in 1912, was prevalent, the number of deaths are here given:—Jarrow (14), Blaydon (12), Chester-le-Street Urban (11), Felling (13), Hebburn (15), Seaham Harbour (14), Spennymoor (18), Auckland Rural (30), Chester-le-Street Rural (32), and Lanchester Rural (16).

BACTERIOLOGICAL EXAMINATIONS.

The following table gives for each year the number of specimens examined since 1909 and the results of those submitted in 1912 :—

	Number of Specimens submitted.				Results in 1912.		
	1909	1910	1911	1912	Posi- tive.	Nega- tive.	Incon- clusive
Diphtheria .....	...	1375	1070	1046*	377	629	37
Enteric Fever .....	...	168	351	222	84	138	...
Tuberculosis (Phthisis, etc.) .....	...	475	541	977	290	687	...
	1086	2018	1962	2245	751	1454	37
Positive Cases (proportion per cent.)	44·1	32·6	39·6	33·4	...	...	...

* 3 Specimens were contaminated.

By arrangement entered into between the County Council and the Durham University College of Medicine, all specimens sent to the bacteriologist are examined and reported on. This privilege extends to medical practitioners practising in the County, to whom no fee is charged where the patients are unable to afford the expense.

The number of specimens examined in 1912 was 2,245, which is considerably above the average of the preceding three years, but it will be seen that the increase is due to the large number of suspected cases of tuberculosis. Of the 2,245 specimens from suspected cases 33·4 per cent. or a little over one-third proved to be positive. In the case of diphtheria and enteric fever the proportion of positive cases was 36 and 38 per cent. respectively, while a similar result was obtained in 30 per cent. of the suspected cases of tuberculosis.

ISOLATION HOSPITALS.

During the year the enlargement of the Durham Rural District Council's Hospital for infectious diseases was completed. On May 7th the Local Government Board held an inquiry into the application of the Bishop Auckland Joint Hospital Board for sanction to borrow £6,600 for the extension of the Joint Board's Hospitals at Tindale Crescent and Helmington Row. The loan has since been sanctioned and the work is now in progress. An inquiry was also held on July

24th into the application of the Sunderland Rural District for sanction to raise a loan of £6,000 for the extension of their hospital. The loan has been granted and the work is in progress. The Local Government Board also held an inquiry on July 9th, relative to the application of the Chester-le-Street Rural District Council for sanction to borrow £2,400 for the purpose of extending their hospital for infectious diseases; the loan has been sanctioned. Up to the end of the year the Brandon and Byshottles Rural District Council had not succeeded in obtaining a suitable site for the erection of an isolation hospital. A site, however, has since been obtained near Langley Moor, and plans and estimates are being prepared. The Stanhope and Weardale Joint Hospital was ready for occupation in the early part of the year.

I have again to record that efforts to induce the Southwick and South Shields Joint Hospital Board to provide isolation accommodation for diphtheria cases have been unsuccessful. During the year the Joint Committee met and decided against the proposal. Attention is also drawn to the fact that the only accommodation for cases of infectious disease occurring in the County Borough of West Hartlepool, the Borough of Hartlepool, and the Hartlepool Rural District is at the hospital of the Tees Port Sanitary Authority, and it is not only most inadequate but is far too close to the smallpox hospital buildings.

Reporting on the outbreak of smallpox in the Borough of Hartlepool, the Medical Officer of Health draws attention to the unsatisfactory arrangements for the isolation of cases of infectious disease, including smallpox, and, quoting Dr. Manby's report to the Local Government Board, writes as follows:—

“ In view of this case the remarks made by Dr. Manby in his
 “ report to Local Government Board, on the sanitary condition of
 “ West Hartlepool will be read with interest; referring to the
 “ hospital he says—‘ The Port Sanitary Authority's hospital for
 “ ‘ ordinary infectious diseases comprises two wooden pavilions,
 “ ‘ affording accommodation for fourteen or sixteen patients in each,
 “ ‘ and that for smallpox is a similar building containing sixteen beds.
 “ ‘ The two hospital sites adjoin, and I consider that the Town Coun-

“ ‘cil of West Hartlepool are accepting a serious responsibility in
 “ ‘continuing to send cases of smallpox there when cases of other
 “ ‘infectious disease are under treatment in the neighbouring build-
 “ ‘ing and *vice-versa.*’ ”

“ These remarks apply equally to our own town; in the very
 “ near future the whole question of Hospital accommodation for
 “ infectious diseases for the two Hartlepoons and perhaps the Rural
 “ District will have to be thrashed out. The present arrangement is
 “ only a make-shift, and in view of the constant danger of an out-
 “ break of smallpox I recommend this Council to take steps to provide
 “ either by themselves or in conjunction with other authorities,
 “ suitable accommodation for the treatment of small-pox cases,
 “ certainly NOT adjacent to a neighbouring hospital, and preferably
 “ as far removed from all dwellings as possible.”

PHTHISIS AND OTHER FORMS OF TUBERCULOSIS.

In 1912 the number of deaths from all causes was 13,111, and of these 1,173 were due to tuberculosis in one form or another, which are equivalent to a death-rate of 1·23 per 1,000 living.

Of the 1,173 deaths from tuberculosis 868 were due to phthisis (defined or otherwise, and including deaths from miliary tuberculosis), which, calculated on the total estimated population, is equal to a crude death-rate of 0·91 per 1,000 and a standardized rate of 0·95.

The deaths from tuberculosis during 1912 formed 8·9 per cent. of the mortality from all causes, and from phthisis alone 6·6 per cent.

In the following table are given the number of deaths and the death-rate from pulmonary tuberculosis in each year since 1901, and in quinquennial periods from 1901 to 1910.

	Number of Deaths.	Death-rate per 1,000.
1901	868	1·12
1902	833	1·06
1903	868	1·07
1904	861	1·05
1905	814	0·97
Mean 1901-05	849	1·05
1906	904	1·06
1907	817	0·94
1908	808	0·92
1909	780	0·86
1910	767	0·83
Mean 1906-10	815	0·92
1911	838	0·89
1912	868	0·91

The table shows that the death-rate from phthisis during the past 10 or 12 years has been steadily declining, and that, although the rate in 1912 is higher than those of the three preceding years, it is slightly below the average for the five years 1906-10.

The mortality rates for England and Wales for 1912 are not yet available, but the phthisis death-rate in 1911 was 1·06 per 1,000 and in 1906-10 it was 1·11, which is higher than the corresponding rates in Durham.

In the following statement the death-rates from phthisis in the boroughs and the urban and rural districts of this County are compared :—

Rate per 1,000 Living.	1910.	1911.	1912.
Boroughs	1·10	1·17	1·22
Other Urban Districts.....	0·84	0·91	0·95
Rural Districts.....	0·70	0·74	0·74
Administrative County ..	0·83	0·89	0·91
England and Wales ...	1·08	1·06	...

when they came into force, all cases of pulmonary tuberculosis, with certain exceptions which need not be mentioned here, are required under penalty to be notified. In compliance with these regulations 1,832 cases were notified in the Administrative County during the 52 weeks ended December 28th, 1912.

The number of deaths from this disease during the year was 868, and the average number for the past ten years has been over 800. As the average duration of illness of such cases is estimated at five years, it will be apparent that very many cases, possibly over 50 per cent., are not brought to the notice of the sanitary authorities, which is probably due to the fact that the patients do not seek advice until the disease is advanced and when they are almost, if not entirely, incapacitated from working. The difficulty in recognising the disease in the early stage may, however, partly account for the comparatively small number of notified cases.

Powers of Sanitary Authorities.—Under the foregoing regulations sanitary authorities may provide or contract for the use of tuberculosis dispensaries; may appoint medical officers and health visitors to carry out treatment; may provide open-air shelters and spitting flasks for the use of patients; may arrange or provide facilities for the detection of cases of pulmonary tuberculosis, and means for bacteriological examinations or otherwise; may make regulations for the prevention of promiscuous spitting; may publish leaflets giving information respecting tuberculosis and its prevention, and may arrange for the disinfection of houses where there have been cases of tuberculosis.

Sanitary authorities have also powers under the Public Health and Housing Acts to inspect premises and to deal with conditions which are injurious to health and favourable to infection, such as dark and damp and insanitary dwellings, overcrowding, insufficient means of scavenging and sewage disposal.

They have also special powers over slaughter-houses and dairies and cowsheds, and may seize tuberculous or other diseased meat and prohibit the sale of milk from tuberculous cows.

In the prevention of pulmonary tuberculosis sanitary authorities have, therefore, extensive powers, and much valuable work in this direction has been done in this County, not so much perhaps in the

application of direct measures for its prevention, but by the enforcement of general sanitary measures, of which the most important has been in connection with the improvement of the housing of the working classes.

The Provision of a County Sanatorium.—To complete the local public health administration in dealing with this disease, the County Medical Officer in 1910 submitted a special report to the County Council on the prevention of pulmonary tuberculosis, together with a scheme for providing suitable sanatorium treatment for early cases, and hospital or isolation accommodation for advanced cases.

Under section 131 of the Public Health Act, 1875, local sanitary authorities are empowered to provide for the use of the inhabitants of their districts hospitals or temporary places for the reception of the sick. They may either build hospitals themselves or contract with others for the use of such places.

In deciding to recommend the County Council to undertake the provision of sanatoria it was felt that, having regard to the different classes of institutions which a complete scheme would require, this work could be more efficiently and more economically carried out under a central authority, and that it would be impracticable for each sanitary authority to provide its own institutions and make separate provision.

At that time, however, the notification of pulmonary tuberculosis only applied to the Poor Law cases, and it was considered essential to the success of any scheme that information as to the cases should be obtained in the early stages of the disease, and for this purpose that all cases should be made notifiable.

The question of forming a voluntary combination of the several sanitary authorities, or the constitution of the whole or part of the Administrative County as a hospital district for phthisis, under the Isolation Hospital Acts, also presented some difficulty. Consequently, although certain of the sanitary authorities retained beds at sanatoria, while others made provision at their isolation hospitals for a limited number of cases, the county scheme for a time remained in abeyance. But since the presentation of that report the difficulties in the way of a comprehensive scheme have been considerably overcome by the passing of the National Insur-

ance Act, 1911, and by the financial assistance given by Parliament for the building of sanatoria and for the provision of dispensaries. Moreover, as already stated, all cases of pulmonary tuberculosis are now required to be notified.

The National Insurance Act requires insurance committees, constituted under the Act, to make arrangements for treatment in institutions or otherwise of insured persons suffering from tuberculosis. The committees may not provide institutional treatment themselves, but they may make an arrangement for such

(a) with persons or

(b) with local authorities (other than Poor Law Authorities) having the management of sanatoria or other institutions, and

(c) with local authorities (other than Poor Law Authorities) undertaking the provision of treatment otherwise than in sanatoria or other institutions.

The institutions, which include sanatoria, hospitals and dispensaries must be approved by the Local Government Board, and the arrangements for the treatment must be to the satisfaction of the Insurance Commissioners.

In the early part of 1912 the scheme for dealing with pulmonary tuberculosis was taken up afresh and elaborated, and in March a further report on the subject was submitted to the County Health Committee. Details of this scheme have been given in a separate report, but I may say here that it will be available for the whole community (i.e. insured and uninsured) and that it provides for

(1) The establishment of tuberculosis dispensaries.

(2) A sanatorium for early cases.

(3) Hospital beds in various parts of the County for educational purposes and for the treatment and isolation of other cases.

(4) The appointment of tuberculosis medical officers.

(5) The appointment of additional health visitors who, besides attending the dispensaries and visiting the homes of persons suffering from tuberculosis, will carry out the duties of

school nurse, as well as health visitor in connection with the administration of the Notification of Births Act, which has been adopted by the County Council.

(6) Facilities, as hitherto, will also be provided for the detection of early cases by means of bacteriological examinations.

On February 22nd a Departmental Committee was appointed by the Treasury "to report, at an early date, upon the consideration of "a general policy in respect of the problem of tuberculosis in the "United Kingdom in its preventative, curative, and other aspects, "which should guide the Government and local bodies in aiding or "making provision for the treatment of tuberculosis in sanatoria "and other institutions or otherwise." The Committee issued their report early in May, and I am glad to say their recommendations did not necessitate the modification of the county scheme in any material respect.

On the 15th July, 1912, the National Health Insurance Act came into force, and on the 25th July the National Health Insurance Commission (England) issued a Memorandum (Med. 1) to Insurance Committees setting forth the procedure which should be followed in connection with the administration of the "Sanatorium Benefit" to insured persons.

On the following day, July 26th, the Local Government Board issued regulations prescribing the manner and conditions under which treatment otherwise than in sanatoria or other institutions for insured persons was to be carried out.

It was then arranged for the County Medical Officer of Health to act as Adviser to the Insurance Committee and to inaugurate the provisional scheme for treatment of persons suffering from tuberculosis.

Immediate steps were taken to secure beds in sanatoria, and for this purpose an agreement was entered into with the County of Durham Society for the Prevention and Cure of Consumption for the reception of patients at their sanatoria at Stanhope and at Wolsingham, situated in this County.

Similar arrangements were made with Felix House Sanatorium, Dinsdale, and at a subsequent date with the Philipson Children's Sanatorium, at Stannington, Northumberland.

All applications for sanatorium benefit were carefully considered and a report on each case was furnished by the patient's medical attendant. Suitable cases were sent to sanatoria, while others were given domiciliary treatment by special arrangements entered into with the medical profession practising in the County.

The total number of applications for sanatorium benefit up to the 31st December, 1912, was 114, and of these 91 were insured persons, the remainder being either uninsured (17) or dependants (6) of insured persons. All applicants received treatment in one form or another, and between 30 and 40 were sent to sanatoria by the County authorities, while several obtained letters of admission to sanatoria from other sources.

In the meantime steps were taken to secure the services of a tuberculosis officer. On November 1st Dr. E. Watt, who was appointed to this post, commenced his duties, and up to the end of the year the time was fully occupied in organizing the dispensaries, appointing health visitors, selecting a site for the erection of a sanatorium, and in completing the arrangements for a permanent scheme.

WATER SUPPLY.

The greater part of the County derives its supply from public undertakings, of which the principal are the Weardale & Consett Water Co., the Newcastle & Gateshead Water Co., The Sunderland and South Shields Water Co., and the Tees Valley Water Board. The Borough of Hartlepool is supplied by the Hartlepool Gas and Water Co., three or four of the District Councils own their own works, and in several of the villages there are local supplies owned by the Colliery Companies. In the North-Eastern and Eastern areas of the County the source of the supply is mostly from deep wells in the magnesian limestone, which yields a very hard water, while in the rest of the County the supply is upland surface and river water. The former is somewhat discoloured from the presence of peat but is soft and excellent in quality. The same, unfortunately,

cannot be said of the river waters which supply the towns of Darlington, Bishop Auckland, to a large extent the Borough of Stockton, and a number of villages in the Darlington and Stockton Rural Districts, for above the intake where these places obtain their supply, the rivers are polluted by sewage and, although filtered before distribution, which has the effect of reducing the number of dangerous micro-organisms, the water cannot be regarded as safe for drinking or domestic purposes.

During the year a large number of samples from the wells and reservoirs of the Sunderland and South Shields Water Co. were examined by the County Bacteriologist on behalf of a Joint Committee representing the County Council and the Councils of the Boroughs of Sunderland and South Shields, but his investigations have not yet been completed.

The insufficiency of the supply in several localities in the rural districts, and the advisability of laying on the public supply to houses in some of the urban districts, are referred to in several reports of the Medical Officers of Health. At Blaydon there are still 200 houses which obtain water from wells (52), springs (125), and colliery workings (22). At Thistly Hill, in the Southwick Urban District, the public supply has not yet been provided; at Middleton, in the Barnard Castle Rural District, an increased supply is urgently needed, and there is also a great scarcity of water at Cockfield in the same district. In the Chester-le-Street Rural District, houses at Lamesley referred to in previous reports are still in need of a better supply, but for Great Lumley and Little Lumley a scheme for the supply of these parishes was submitted to the Local Government Board and application made for sanction to borrow £1,380 for the purpose. At Neasham, in the Darlington Rural District, where the public well was found to be unsatisfactory, arrangements have been made with the Tees Valley Water Board to supply this village, and the same company are also to supply Great Burdon village. At Old Cassop, Quarrington Hill, Cassop Colliery and Kelloe, in the Durham Rural District, the supply is inadequate and unwholesome, and the Medical Officer of Health also again draws attention to the insufficiency of water at Old Quarrington Hill, Whitwell Moor, Cassop Grange and other parts of the district. At Wheatley Hill, in

have been prepared and will be submitted to the Local Government Board at an early date. Plans for the drainage of Deaf Hill, Wingate Station, Hutton Henry, Castle Eden, Castle Eden Colliery, High Hesleden and Blackhalls, have been completed and application made to the Local Government Board to sanction the loan to carry out the necessary works. New sewers have also been laid in other parts of the Easington Rural District. In the Sedgefield Rural District, it is proposed to construct a joint disposal scheme at Coxhoe Bridge, and to enlarge the works at Trimdon Colliery, Windlestone Row and Sedgefield. In the South Shields Rural District, a drainage scheme for the parish of Boldon is practically decided upon. In the Stockton Rural District, filtration works are to be provided for the treatment of the sewerage of the village of Carlton.

The objectionable open channels which are used for the conveyance of slop and waste water, and which exist in many colliery villages throughout the County, are gradually, if slowly, being replaced by properly constructed covered drains. These open sewers are at times a serious nuisance and are undoubtedly dangerous to health, for the soil in their vicinity, in the course of time, becomes grossly polluted as the result of breakages, and from carelessness in disposing of slop water. Moreover the channels have been proved to be the means of conveying infection from one end of its course to the other, and in consequence have given rise to serious epidemics. To replace these channels, 170 yards of sewers for the drainage of 53 houses were laid at Brandon, and at Quarrington Hill, in the Durham Rural District, open channels were replaced by a covered sewer for the drainage of 70 houses.

In several districts the reports of the Medical Officers of Health draw attention to the necessity for improving the present system of drainage by providing additional works. At Barnard Castle the Local Government Board has suggested additional works for the improvement of the sewage farm; at Lumley Bridge, in the Chester-le-Street Rural District, a sewerage system is immediately required; at Billingham, in the Stockton Rural District, some form of purification scheme at the outfall is required, and at Haverton Hill, Wolviston and Whitton, in the same rural district, improvements to the present system are necessary. An efficient sewerage scheme is also

required at Ryhope Colliery, Ryhope, New Silksworth, and Tunstall, in the Sunderland Rural District.

In the accompanying tables will be found a statement of the notices served and legal proceedings taken during 1912 under the Rivers Pollution Prevention Acts; also a list of the sewage disposal works provided, the places where the sanitary authorities have undertaken to provide sewage disposal works, and the places for which sewage disposal works are necessary.

A Statement of Statutory Notices served during 1912, and Results.

Defendants.	Place.	Stream Polluted.	Date of Notice.	Result of Notice without Legal Proceedings.
Auckland R.D.C.	Hunwick and Hunwick Lane Ends	River Wear	26/1/12	Plans being prepared.
Chester-le-Street R.D.C.	Pelton Village	Stanley Burn.....	26/7/12	The D.C. have decided to proceed with the construction of works.
Stockton R.D.C.	Carlton Village	Letch Beck	26/7/12	A contract for new works has been entered into.
Chester-le-Street U.D.C.	Pelton Fell Colliery	Stanley Burn.....	26/7/12	The District Council are negotiating for the construction of joint works.

There were no County Court proceedings during 1912.

SEWAGE DISPOSAL WORKS PROVIDED DURING 1912:—

Auckland Rural District.—Byers Green.

Durham Rural District.—Sunderland Bridge.

Bishop Auckland Urban District.—Bishop Auckland.

LIST OF PLACES WHERE THE DISTRICT COUNCIL AT THE END OF 1912

HAD UNDERTAKEN TO PROVIDE WORKS:—

Auckland Rural District.—Witton Park; West Auckland, &c.; Byers Green; Tod Hills; Hunwick; Sunnybrow.

Chester-le-Street Rural District.—Pelton Village; Pelton Fell Colliery; Witton Gilbert.

Darlington Rural District.—Whessoe.

Easington Rural District.—Wingate, Murton, South Hetton Colliery, &c. (trunk sewers to the sea).

Blaydon Urban District.—Blackhall Mill and Chopwell Colliery; Rowlands Gill; Barlow Village.

Spennymoor Urban District.—Spennymoor (whole district).

OTHER POLLUTIONS STILL REQUIRING ATTENTION:—

RIVER GAUNLESS AND TRIBUTARIES.

Auckland Rural District.—Butterknowle; Copley Bent; Low Evenwood; The Oaks and a portion of Evenwood.

RIVER SKERNE AND TRIBUTARIES.

Darlington Rural District.—Aycliffe.

RIVER BROWNEY AND TRIBUTARIES.

Lanchester Rural District.—Lanchester; Ushaw Colliery; Hamsteels Colliery and Railway Terrace.

Crook Urban District.—Peases' West, Stanley.

RIVER WEAR AND TRIBUTARIES.

Auckland Rural District.—Binchester Blocks; Gommer Terrace, Toronto.

Chester-le-Street Rural District.—Plawsworth; Plawsworth Bar; Nettlesworth, &c.

Durham Rural District.—East Hetton; California; Coxhoe; Kimblesworth.

Weardale Rural District.—Daddy Shield; Eastgate; West end of Westgate, &c.

RIVER TEAM AND TRIBUTARIES.

Chester-le-Street Rural District.—Urpeth, Pelaw Grange and Brown's Buildings; Bewicke Main Colliery; Kibblesworth; Beamish.

SEWAGE DISPOSAL WORKS FOUND TO BE INADEQUATE OR FREQUENTLY UNSATISFACTORY DURING 1912.

Auckland Rural District.—Challies Row, Newfield; Riseburn Village.

Chester-le-Street Rural District.—Birtley; New Lambton.

Easington Rural District.—Deaf Hill and Trimdon Foundry; Shotton Colliery; Murton Colliery.

Houghton-le-Spring Rural District.—William Henry Pit; Fence Houses.

Lanchester Rural District.—Esh Winning; Derwent Cottages; Malton Colliery; Holmside; Langley Park.

Sedgefield Rural District.—Coxhoe; West Cornforth; Sedgefield.

Benfieldside Urban District.—Shotley Bridge.

Brandon and Byshottles Urban District.—West Sleetburn (East Side).

Chester-le-Street Urban District.—Chester-le-Street Sewage Farm.

Houghton-le-Spring Urban District.—Houghton-le-Spring.

Spennymoor Urban District.—Ox Close, Spennymoor.

Stanhope Urban District.—Stanhope.

Stanley Urban District.—South Moor; Stanley.

Tanfield Urban District.—Tantobie and White-le-Head.

Tow Law Urban District.—Tow Law.

Willington Urban District.—Willington and Page Bank.

SEWAGE DISPOSAL WORKS.

I have nothing to add to the brief description of the sewage purification works in operation in this county, and to the general remarks thereon which appeared in my annual report for 1910, beyond stating that during the past year the following works have been provided and should be added to the list:—

AUCKLAND RURAL DISTRICT.

Byers Green.—Tanks and percolating filters usually satisfactory.

DURHAM RURAL DISTRICT.

Sunderland Bridge.—Tanks and percolating filters usually satisfactory.

BISHOP AUCKLAND URBAN DISTRICT.

Bishop Auckland.—Tanks and percolating filters usually satisfactory.

EXCREMENT DISPOSAL AND REMOVAL.

The conservancy method of excrement disposal is the one most widely adopted throughout the County, but it is satisfactory to record that during the year a large number of insanitary ash-pit-privies, which at one time were almost universally in use, were replaced by a less insanitary type of convenience, and in other cases by water-closets. As to the relative merits of water-closets and ash-closets, there can now be very little doubt that the former, on sanitary grounds, are vastly superior. The ash-closet is admittedly a great advance on the privy-midden; it is less offensive and, provided it is properly constructed, is more easily cleansed, but what is its chief advantage, namely, that it is small and will only hold a small quantity of refuse, necessitating its frequent emptying, is also one of its serious drawbacks. In several of the reports of the Medical Officers of Health, attention is drawn to the insanitary and revolting practice of depositing the house refuse and excrementitious matter on the footpaths and roadways, which, in some cases, is left there during the daytime until the scavengers' carts can conveniently remove it. But even in districts where better arrangements are made it is practically impossible, during the operations of the scavenger, to prevent the germ-laden dust from being disseminated broadcast, and the nuisance is enhanced by the fact that in the vicinity of these ash-closets it is no uncommon occurrence to find the soil polluted either by the leakage of the contents or as the result of the carelessness of the scavenger. In certain districts the conservancy system may be the best practical means of excrement disposal, but in districts provided with an adequate water supply and an efficient system of drainage, the water-carriage system should invariably be adopted, for under the best circumstances the ash-closet cannot but be a nuisance and a potential source of danger.

The relationship between these insanitary conveniences, and more particularly the privy-midden type, and such diseases as typhoid fever and diarrhœa has many times been referred to in these reports and is emphasized again in several of the reports of the Medical Officers of Health, who urge the abolition of the privies and ash-closets. Thus, Dr. Mostyn, Medical Officer of Health of the Borough of Darlington, remarks that these midden-privies and midden-steads in connection with stables are a menace to the public health and the principal source of diarrhœa, from which infants die in large numbers during the summer months.

“With an unlimited supply of water,” writes Dr. McCullagh, of Bishop Auckland, “I can see no reason why all new houses should not have water-closets. The ash-closets are an improvement on the old privy-ashpit, but at the best they are bad.”

Dr. J. W. Smith, Medical Officer of Health for Ryton, says “every opportunity is being taken to substitute water-closets for other methods of disposal of excreta, and until that system has become universal throughout the district, ideal sanitary conditions will not have been attained.”

Dr. Morison, of Annfield Plain, in the following extract taken from his report, also advocates the introduction of the water-carriage system, which he considers would be less expensive than the present conservancy system.—

“It would ultimately be more economical and certainly more sanitary, and in every other respect a more convenient method of disposing of the privy-middens, the most objectionable feature in the sanitation of our district and mining districts generally. The privy-middens are breeding grounds during the hottest and most dangerous season of the year, for the house-fly, and were it only to prevent the plague of diptera during these months, and thus indirectly the evil consequences which result through their agency it would in itself be an advantage to the health and comfort of the district.”

Dr. S. Fielden, Medical Officer of Health for Shildon, recommends his Council to abolish the privies with the least possible delay, for, “however carefully they are emptied and cleansed, they are an everlasting source of danger to the public health.”

In the Bishop Auckland Rural District Dr. Macdonald draws attention to the fact that the contents of a number of ash-closets have to be deposited in the public streets, and that it is common to see soiled paper blowing about and thus creating a nuisance. He trusts his Council will take advantage of their powers under Section 39 of the Public Health Acts Amendment Act, 1907, to enforce the provision of water-closets.

In the Borough of Stockton, where the nightsoil is collected once a week "a considerable portion of the material is necessarily deposited upon the street pavement before it is finally carted away." Here, after pursuing a policy of vacillation for many years, the Council have recently resolved that the existing privy-middens, pan-closets and pail closets in the Borough shall be systematically converted into water-closets in pursuance of their powers under Section 39 of the Public Health Acts Amendment Act, 1907.

In about half of the urban and rural districts the scavenging is let out to contractors, but an increasing number of sanitary authorities are now employing their own staff and directly supervise the work, which is said to give more satisfactory results; in a few localities in the purely rural districts the owners or occupants of the houses make their own arrangements.

The difficulty of satisfactorily disposing of the nightsoil and house refuse is one of the disadvantages of the conservancy system. In most cases it is deposited on tips which at times are a serious nuisance. In other cases it is disposed of to farmers in the neighbourhood; in one or two cases it is sent by rail, which is not an entirely satisfactory method of disposal. At Hebburn and Jarrow the refuse is sent out to sea, while at Stockton, Hartlepool, Felling, and Shildon the difficulty has been got over by the provision of a refuse destructor.

In the table on page 76 is given approximately the number of various types of closets in the Administrative County, and the number of conversions of ash-pit-privies into ash-closets and water-closets.

District.	Total number in District.			Ashpit-Privies converted into		Ash-Closets converted into Water-Closets.
	Water-Closets.	Ash-Closets.	Ashpit-Privies.	Ash-Closets.	Water-Closets.	
URBAN.						
Darlington Borough ...	4347	5652	2170	...	461	1
Durham	2581	93	625	...	64	...
*Hartlepool .....	...	...	...	...	...	...
Jarrow	636	4974	...	...	...	36
Stockton	6345	5370		...	576	...
Annfield Plain	417	1007	1367	9	...	...
Barnard Castle	807	83	92	...	13	3
Benfieldside	334	370	869	42	8	...
Bishop Auckland	1860	766	670	40	12	...
Blaydon	1279	3241	1129	...	135	14
Brandon & Byshottles.	50	3022	250	306	..	...
Chester-le-Street	1311	1710	114	37	17	7
Consett	770	678	589	...	...	...
Crook	190	1711	196	132	6	18
Felling	416	4203	44	5	8	2
Hebburn	227	4081	60	...	...	7
Hetton-le-Hole	218	2350	168	35	2	4
Houghton-le-Spring ..	392	644	789	298	77	...
Leadgate	127	104	426	...	13	...
Ryton	475	1191	866	36	14	...
Seaham Harbour	1430	134	740	...	12	...
Sildon	647	2415		...	36	4
Southwick-on-Wear ...	1038	781	666	...	56	..
Spennymoor	271	2763	683	10	5	...
Stanhope	135	188	15	6	19	...
Stanley	497	2793	1241	127	...	1
Tanfield	87	1266	796	75	2	...
Tow Law	36	397	267	15	1	...
Whickham	164	2999	4	...	1	...
Willington	150	1300	321	110	1	...
RURAL						
Auckland	461	8556	1793	218	17	1
Barnard Castle	387	850	1364	54	29	1
Chester-le-Street	1495	8924	3162	204	62	24
Darlington	396	412	1494	24	...	...
Durham .....	...	...	...	...	...	...
Easington	413	8512	3104	331	12	...
Hartlepool .....	...	...	...	...	...	...
Houghton	125	3900	600	120	...	3
Lanchester .....	...	...	...	169	5	...
Sedgefield	182	4377	1732	204	3	...
South Shields	927	2551	203	27	...	...
Stockton	586	2494	132	4	2	...
Sunderland	817	3907	700	26	126	2
Weardale	88	64	967	2	3	...

* Water-closet town.

NOTE.—In several instances the figures given are only approximate, but more definite information is promised, and no doubt in subsequent years this table will be more complete and reliable.

In the Auckland Rural District there is a scarcity of houses in the townships of Byers Green, Coundon, Coundon Grange, Hunwick, Helmington, and Helmington Row, and there is also a scarcity of houses at Staindrop, in the Barnard Castle Rural District, owing to the opening of a colliery close to Winston station.

In their endeavour to meet the demand, and thus in some measure to mitigate the overcrowding, several sanitary authorities have already provided houses, whilst others are seriously considering the advisability of doing so.

In 1907 the Sunderland Rural District Council formulated a scheme under Part III. of the Housing Act, 1890, for the erection of 60 houses in each of the parishes of Ryhope and Silksworth, and in the following year the houses were completed. In 1907 the County Council made application to the Local Government Board to borrow a sum of £12,000 for the purchase of land and the erection of houses in the parish of Usworth, in the Chester-le-Street Rural District. The application was granted, and in 1910, 50 houses, forming the first half of the scheme for the erection of 100 houses was completed. In both cases the schemes have been self-supporting and the rents charged compare favourably with those of other dwellings in the respective districts. The Chester-le-Street Rural District Council have since taken over the County Council's scheme, and on October 9th, 1912, the Local Government Board held an inquiry into an application made by the District Council for sanction to borrow a further sum of £12,200 and £630 for the erection of 57 more houses at Usworth. For the purpose of building houses at Washington, in the same rural district, application was made to the Local Government Board, in 1911, for sanction to borrow £9,630. "Forty-two houses have been erected in the parish of Washington," says the Medical Officer of Health, "and a further number of houses in this township are in different stages of completion." The Medical Officer of Health also reports that owing to the great scarcity of houses and the fact that private enterprise cannot be relied upon, his Council are also considering two other schemes, one to erect 113 houses in the village of Pelton, and the other to erect about 100 near Newfield Inn.

At Murton, in the Easington Rural District, the Council have decided to erect 101 houses, and on the 24th October, 1912, the Local Government Board held an inquiry respecting the application of the District Council for sanction to borrow £23,700 for the purpose. The building of the houses is now proceeding.

At Southview, Trimdon, in the Sedgefield Rural District, a site has been chosen and, subject to the approval of the Local Government Board, the District Council propose to provide 20 workmen's dwellings at an early date.

In the Annfield Plain Urban District it is proposed to build 60 houses. Application was made to the Local Government Board for sanction to borrow £14,400, and on July 23rd, 1912, one of the Board's Inspectors visited the district and held a local inquiry.

Similarly, the Durham City Council made application to the Local Government Board for sanction to borrow £1,025 for the erection of workmen's dwellings under Part III. of the Housing of the Working Classes Act, 1890, and for their consent to the appropriation of certain lands situated in Providence Row.

In the Borough of Hartlepool some old property has been acquired and demolished by the Council, and it is proposed to build four workmen's dwellings on the site. The houses will be let at 7/- per week.

In the Blaydon Urban District it is proposed to build 20 houses at Tongue Burns Farm, Chopwell, and application was made during the year for sanction to borrow £5,220 for the purpose. This has since been granted and the houses are being erected.

The Chester-le-Street Urban District Council contemplate building workmen's dwellings, and have the option of the purchase of 17 acres of land on advantageous terms.

The Medical Officer of Health of the Houghton Urban District also reports that his Council is preparing a scheme under Part III., and for the present it is proposed to build 50 houses. Here only 10 were built in 1912 and there is no likelihood of private enterprise

meeting the demand. From the report of the Medical Officer of Health we learn that "there are no empty houses to be had in the district, and it is no uncommon thing for persons to spend days together in a fruitless effort to find accommodation for themselves and families."

In the Urban District of Seaham Harbour, 42 houses were condemned in 1912, and representations were made to the Authority to close 25, but in only one instance was the closing order made. In this district the population, between 1901 and 1911, increased by 55 per cent., and the Census returns showed that tenements having more than two persons per room are occupied by 32·4 per cent. of the population. With respect to the houses condemned, the Medical Officer of Health states that "closing orders were recommended in regard to the exceptionally bad houses only, as if houses are closed at present the occupiers are driven away from the town and thrown out of employment." Here it is proposed to erect, in the first instance, 69 houses, and application will be made for a loan of £14,909. It is proposed to charge 6/- a week for rent, and those who are best able to judge are confident that the scheme will not be a charge on the rates.

In the abstracts of the annual reports of the Medical Officers of Health, given in alphabetical order at the end of this report under the headings of Boroughs, Urban Districts, and Rural Districts, much information will be found relating to the sanitary circumstances of the districts, and the steps taken by the several sanitary authorities to remedy sanitary defects and improve generally the housing conditions.

Under Section 17 of the Housing, Town Planning, Etc., Act, 1909, local authorities are required to cause to be made, from time to time, an inspection of their district, and they and every official of the local authority are required to comply with such regulations and to keep such records as may be prescribed by the Local Government Board. On September 2nd, 1910, the Board accordingly issued regulations, and under Article I. local authorities are required

- (a) To make arrangements for the thorough inspection of the dwelling houses or localities in their district, and

(b) To cause their Medical Officer of Health, or someone acting under his direction, to submit a list of houses or areas which require early inspection.

Article II. provides that the inspection shall be made by the Medical Officer of Health, or someone acting under his direction and supervision, and enumerates the matters in relation to which the inspection should be made, such as the condition of the dwelling house in regard to light, free circulation of air, dampness and cleanliness, particulars as to the water supply, closet accommodation, drainage, the means of disposal of refuse and ashes, the condition of the yard, &c.

Article III. prescribes that the records of inspection must be kept either in a book, or on separate sheets, or on cards, and on these records must be entered, in addition to those particulars enumerated above,

- (a) The action taken by the Medical Officer of Health, or other officer of the local authority,
- (b) The result of any action taken, and
- (c) Any further action which should be taken.

Under Article IV. the local authority must, at their ordinary meetings, take these records into consideration, and must take such action within their power, whether it be under the Housing Acts, or the Public Health Acts, or any bye-laws and regulations in force in the district, as may be necessary to remedy the defects (if any) referred to therein. The directions of the authority are required to be entered on the inspection record.

Lastly, the Medical Officer of Health is required (Article V.) to include in his annual reports information and particulars, in a tabular form, in regard to:—

- (1) The number of dwelling houses inspected.
- (2) The number of dwelling houses which on inspection were considered to be unfit for human habitation.
- (3) The number of representations made to the local authority with a view to the making of a closing order.

(4) The number of dwelling-houses with respect to which closing orders were made.

(5) The number of dwelling-houses the defects in which were remedied without the making of a closing order.

(6) The number of dwelling-houses made habitable after the making of closing orders, and a statement as to the general character of the defects found.

A copy of the "Inspection Record" used in the Auckland Rural District is given on pages 88 to 91.

From the foregoing, therefore, it will be clear that the systematic inspection of the district, the keeping of the records, and the observance of the regulations of the Local Government Board are not optional, as some of the reports of the Medical Officers of Health might lead one to believe.

The table on page 86 gives, for each district, the number of inspections and other particulars required in Article V. of the Housing (Inspection of District) Regulations, 1910, and the table on page 87 shows the ratio per cent. of houses inspected to private tenements. The tenements there given and on which the calculations are made are as enumerated at the 1911 Census. The number has since increased, but the figures will, I believe, for the purpose of this table be found sufficiently near to enable a comparison to be made of the several districts. If greater accuracy is required the number of new houses occupied during 1912 will be found in the table on page 86.

The first table shows that in 1912, 10,292 inspections were made in the County, or between 5 and 6 per cent. of the total private tenements; that 1,395 or 13.5 per cent. were considered unfit for human habitation; that 740 closing orders were asked for, and that in only 601 instances were closing orders made. After the making of the closing orders, 116 houses were made habitable and the orders determined, and with respect to 1,338 houses, the defects were remedied without making an order. The table is incomplete

in some respects, and does not fully represent the amount of work which has been accomplished, as will be seen by a perusal of the abstract of the reports on the various districts. In several, the number of dwellings in which defects were remedied is not stated, but the results are expressed in terms of "defects" remedied, which accounts for some of the omissions in column 8 of the table; in others many of the alterations and improvements were in hand and not completed at the end of the year; whilst in a number of instances houses put into proper state of repair as the result of action taken under the Public Health Acts were not included in the returns.

As regards the number of houses inspected, it will be seen on referring to the table on page 87 that there is a wide difference in the proportion of houses inspected to total private tenements, ranging from 0·2 per cent. in the Borough of Stockton and 0·8 in the Rural District of the same name, to 20·6 in the Urban District of Crook and the Rural District of Sunderland, while in the Borough of Hartlepool, the Urban Districts of Hetton, Leadgate, and Barnard Castle, and the Rural Districts of Houghton, Darlington and Weardale the number of inspections is not given.

In the Borough of Hartlepool, where much valuable work has been accomplished during the year, a house-to-house inspection, the Medical Officer of Health states, is shortly to be instituted.

In the Hetton-le-Hole Urban District (pop. 15,678) there is a difficulty in dealing with insanitary property owing to the scarcity of houses; comparatively few notices were served under the Public Health Acts to remedy defects to houses, and the officers appear to be reluctant to recommend the closure of houses known to be unfit for "it is a common complaint," writes the Medical Officer of Health, "that houses cannot be got, and it would be a great hardship for a man with a family to be turned into the streets and perhaps have to seek work elsewhere." Leadgate is another district where the regulations apparently are not carried out, and the reason given is that the Consett Iron Company are the largest owners of workmen's dwellings and are gradually improving them, consequently "there has been no need for putting into force Article V. of the Housing (Inspection of District) Regulations, 1910." The population in

1911 was 4,990, and the amount of overcrowding, as already mentioned, 43·6 per cent. In the Barnard Castle Urban District very little is said under this heading in the report of the Medical Officer of Health. In the report of the Houghton Rural District (pop. 25,518) the impression one gets is that a good deal is left, as at Leadgate, to the good offices of the Colliery Company, who are the chief owners of the cottage property. But in addition to "the substantial improvements effected by the Colliery Company," a number of notices with respect to defective houses have been served, nuisances abated, ash-closets provided in place of open-privies, and certain improvements to individual property are mentioned. In the case of the Darlington Rural District, although the number of houses inspected is omitted in the report, other particulars required in the regulations are furnished together with particulars of improvements effected. With respect to the Weardale Rural District, the Medical Officer of Health reports that although the district is inspected, systematic inspection, as required by the Housing, Town Planning, Etc., Act, 1909, and the regulations made thereunder, is not yet carried out.

In several districts, such as the urban districts of Stockton, Consett, Hebburn, Stanley and Tanfield and the rural districts of Stockton, Barnard Castle, and Durham, the number of houses inspected was very small and in some of these districts, as will be seen on referring to the table, the inspections were practically limited to houses unfit for human habitation, whilst in one or two instances, although a fair number of houses were inspected, as in Shildon and the South Shields Rural District, comparatively little information is given relative to the housing generally of the district.

The following table gives the number and distribution of houses erected and occupied in the Administrative County during 1912, together with a statement of work done under the Housing (Inspection of District) Regulations, 1910:—

District.	Number of New Houses Erected.	Number of New Houses Occupied.	Housing (Inspection of District) Regulations, 1910.					
			Number of Dwellings Inspected.	Number of Dwellings unfit for habitation.	Number of Representations made.	Number of Closing Orders made.	Number of Dwellings in which the defects were remedied without the making of Closing Orders.	Number of Dwellings made habitable after Closing Orders.
1	2	3	4	5	6	7	8	9
URBAN.								
Darlington Borough	275	275	457	...	...	...	41	...
Durham	20	20	136	11	9	9	2	1
Hartlepool	23	23	...	...	...	...	...	...
Jarrow	9	4	309	21	21	21	...	7
Stockton	97	97	18	4	4	4	8	...
Annfield Plain	56	50	282	34	34	34	...	...
Barnard Castle	5	3	...	24	...	24	...	7
Benfieldside	11	11	54	34	34	34	23	22
Bishop Auckland	28	25	150	15	15	13	19	...
Blaydon	136	136	439	25	25	25	414	21
Brandon and Byshottles	20	12	406	...	...	...	...	...
Chester-le-Street	38	38	134	6	6	6	16	...
Consett	38	38	39	14	19	14	20	...
Crook	12	12	522	2	2	2	...	...
Felling	29	29	147	59	58	58	15	2
Hebburn	1	1	95	...	...	20	...	...
Hetton-le-Hole	48	48	...	...	...	...	...	...
Houghton-le-Spring	10	8	259	39	18	1	205	..
Leadgate	19	15	...	...	...	...	...	...
Ryton	64	62	111	6	6	6	37	...
Seaham Harbour	138	138	400	42	25	1	65	...
Schildon	4	4	406	...	...	...	...	...
Southwick-on-Wear	2	2	300	5	5	5	18	...
Spennymoor	18	18	225	6	6	1	5	...
Stanhope	2	2	13	...	...	...	...	...
Stanley	212	212	48	48	48	32	16	...
Tanfield	17	17	27	27	6	6	21	...
Tow Law .....	...	...	38	...	...	...	...	...
Whickham	23	23	229	3	...	3	6	...
Willington	55	55	54	...	...	1	1	...
RURAL.								
Auckland	120	120	851	136	32	27	16	...
Barnard Castle	17	16	37	13	13	13	10	1
Chester-le-Street	238	234	533	327	172	67	142	...
Darlington	10	9	...	10	10	10	9	2
Durham .....	...	...	126	110	9	58	15	12
Easington	503	503	853	120	84	31	...	39
Hartlepool .....	...	...	45	...	...	...	7	...
Houghton	183	180	...	...	...	...	...	...
Lanchester	57	57	730	174	7	3	...	1
Sedgefield	424	424	383	53	53	53	60	...
South Shields	50	24	217	16	16	16	147	1
Stockton	7	7	32	8	...	...	...	...
Sunderland	9	8	1157	...	...	...	...	...
Weardale	3	8	...	3	3	3	...	...
Administrative County..	3031	2968	10292	1395	740	601	1338	116

Table showing the number and proportion of houses inspected and the percentage of over-crowded tenements.

District.	Number of tenements occupied by Private Families.	Housing Inspection Regulations.		Ratio, per cent. of persons living in overcrowded tenements to persons living in private families.
		Number of Houses Inspected.	Proportion per cent. to Private Tenements.	
1	2	3	4	5
URBAN.				
Darlington Borough	12,241	457	3·7	12·8
Durham „	3,677	136	3·7	27·2
Hartlepool „	4,215	...	...	28·3
Jarrow „	6,872	309	4·5	37·8
Stockton „	10,633	18	0·2	10·9
Annfield Plain	3,140	282	8·9	41·4
Barnard Castle	1,041	...	...	14·8
Benfieldside	1,710	54	3·1	28·2
Bishop Auckland	2,942	150	5·0	18·1
Blaydon	5,822	439	7·5	41·2
Brandon and Byshottles ..	3,466	406	11·7	32·2
Chester-le Street ..	2,956	134	4·5	29·7
Consett	2,229	39	1·7	28·9
Crook	2,531	522	20·6	26·9
Felling	5,246	147	2·8	37·0
Hebburn	4,254	95	2·2	42·1
Hetton-le-Hole	3,163	...	...	24·8
Houghton-le-Spring	1,971	289	14·6	27·0
Leadgate	1,025	...	...	43·6
Ryton	2,592	111	4·2	32·1
Seaham Harbour	3,153	400	12·6	32·9
Shildon	3,011	406	13·4	15·9
Southwick-on-Wear	2,764	300	10·8	41·5
Spennymoor	3,575	225	6·3	22·1
Stanhope	440	13	2·9	23·2
Stanley	4,500	48	1·0	34·2
Tanfield	2,040	27	1·3	39·9
Tow Law	929	38	4·1	33·7
Whickham	3,670	229	5·9	32·3
Willington	1,735	54	3·1	29·4
RURAL.				
Auckland	11,988	851	7·1	24·9
Barnard Castle	2,564	37	1·4	16·9
Chester-le-Street	12,763	533	4·1	33·9
Darlington	2,449	...	...	11·1
Durham	6,136	126	2·0	30·5
Easington	11,345	853	7·6	37·6
Hartlepool	498	45	9·0	11·2
Houghton	5,073	...	...	30·7
Lanchester	6,093	730	12·0	36·6
Sedgefield	6,232	383	6·1	24·3
South Shields	2,724	217	7·9	24·4
Stockton	3,759	32	0·8	11·9
Sunderland	5,595	1,157	20·6	28·8
Weardale	2,252	...	...	19·4
Administrative County...	187,014	10,292	5·4	28·5

RURAL DISTRICT COUNCIL OF AUCKLAND.

Dwelling House Inspection Record.

(HOUSING TOWN PLANNING ACT, &c., 1909.)

Township..... Locality.....

Street.

(give here name or number of dwelling).

Owner's Name.....

„ Address.....

If leased give also name.....

and address of lessee.....

Occupier's Name.....

Cleanliness..... Did Tenancy began before 1910?.....

Particulars of Rent { If part of remuneration equivalent amount.....per.....
 exclusive, inclusive { Rent.....per.....
 of rates.

Size of House :.....

INMATES.			Num- ber of Fami- lies.
ADULTS.		CHILDREN UNDER 14 YEARS.	
M.	F.		

AVERAGE PERSONS PER ROOM
(including Children.)

AVERAGE PERSONS PER ROOM
(2 Children considered equal
to 1 Adult.)

Reference to entries in other report books.		
Date.	Folio or Number.	Book.
These spaces are ruled faint.		

Presented to the General Purposes Committee.	
Date.	Chairman's Signature.
These spaces are ruled faint.	

Sketch of Building.

This space is ruled in squares (sectional).

Type of Dwelling Was it erected under Bye-Laws?

(detached, semi-detached, row, or back to back).

ROOF.		WALLS (external).		SPOUTING.		DOWN SPOUTS.	
Structure.	Condition.	Structure.	Condition.	Structure.	Condition.	Structure.	Condition.

Does surface water get into foundations? Is damp proof course present?

Does roof " "

GROUND FLOOR.

ROOM.	HEIGHT.	FLOOR AREA.	WINDOWS.			STRUCTURE AND CONDITION OF			
			Area (lighting)	Area made to open.	Condition.	Walls (internal).	Ceiling.	Floor.	Fireplace.
Kitchen									
Scullery (if any)									
Pantry (if any)									
Parlour									

Is there through Ventilation?

Is there a front and back entrance? Condition of doors

Is any room applicable to section 17 (7)? Other Defects :

.....

.....

Structure and Condition of Staircase :

FIRST FLOOR.

Bed-room.	Height if lowest and highest.	Floor Area.	WINDOWS.			STRUCTURE AND CONDITION OF			
			Area (lighting)	Area made to open.	Condition.	Walls.	Ceiling.	Floor.	Fireplace.

Is there Through Ventilation? Other Defects :

.....

.....

Is there a Back Street to Dwelling?

Open space about Dwelling for light and circulation of air. { Front
Back
Sides

YARD.

Self-Contained or Common.	Does it extend length of House	Breadth in narrowest part.	Area paved or Cemented.	Condition of Surface.	Is it contrary to Bye-Laws ?	Sanitary Condition.

Is there a Garden attached to House ?..... Drainage arrangement for surface water.....

Closet Accommodation and Refuse Disposal.

No.	Type.	Position.	Ventilation.	Structural Condition.	Means of access for Scavenging.	No. of Families using same.

Receptacle for deposit of Refuse and Ashes..... Arrangement for Scavenging.....

Out-Houses belonging to or occupied with the Dwelling.

Used as.	Position.	Paving.	Drainage.	Structure and Condition	Is it contrary to Bye-Laws ?	Sanitary Condition.

DRAINAGE. { Are drains properly constructed ?..... Were drains smoke tested.....
 Arrangement for disposal of slop and waste water
 Do drains discharge into sewer, cesspool, or on land
 Distance of Cesspool or out-flow from House.....
 Construction of cesspool (if any).....
 How often emptied ?.....

WATER SUPPLY. { It is from mains without a Cistern ?..... Position (with sink).....
 If Well, position.....
 Depth..... Construction.....
 Nature of Soil..... Quality of Water..... Sufficiency.....
 Possible source of contamination.....

Summary of Defects :.....

GENERALLY.—Is House or any room unfit for Human Habitation.....

Date of Inspection..... Signed.....
 (Inspector).

Action taken by Medical Officer of Health or
Inspector

Result of such Action :

Recommendation of Committee :

Action taken by Officer on the Direction of
Local Authority

Result of such Action :

Date of Re Inspections :

Progress Made :

Further Action (if any) taken :

Result of such Action :

The most objectionable type of dwellings are the old colliery cottages, which are still to be found in many parts of the County. On the ground floor is a living room opening on to a footpath separating the houses from roughly constructed roadway termed the "front street," and at the back of this room is a small lobby, on one side of which is a cupboard or "pantry" used for keeping food and miscellaneous articles, and on the other side a door communicating with the "back street." In some cases the means of access to the rear of the premises is closed by the erection of a roughly constructed wooden coalshed, so that the ventilation of the lower room is impeded, for there is seldom a window at the back of the kitchen, and only occasionally a diminutive one in the pantry. The walls have no damp-proof course, and the floors are usually flagged and defective, with the result that the living rooms are both damp and cold and insufficiently lighted.

Above this room is an attic intended to be the sleeping room but not uncommonly, for reasons which will be explained, it is used instead for keeping lumber, for which it is best fitted. In many cases the upper room is approached by a ladder, although during recent years many of the ladders have been replaced by staircases, and in some cases the stairheads have been enclosed so as to prevent the direct passage of vitiated air from the lower to the upper room. The height of this room is from 6 ft. 9 in. to 7 ft. in the centre for a width of about 9 feet, falling back and front to the eaves where the ceiling comes to within 5 ft. 3 in. of the floor. On one side there is a window about 2 ft. 6 in. square, half of which is made to open, placed midway between the eaves and the floor. As a rule this is the only means of ventilation and lighting, but in some cases a small opening is made in the opposite wall, while in others, though very exceptionally, there is an additional window, or skylight.

In most of the old houses of this type the woodwork is dilapidated, the window sashes broken, there is evidence of damp in the ceiling, and the guttering and down pipes, if any, are defective.

A feature of these colliery houses is the large insanitary midden-privies or collection of ash-closets placed at intervals in front of the houses and looking like huge sentry boxes mounting guard over the rows of dwellings.

Those in one of the streets in the Benfieldside Urban District should be specially mentioned, as the houses they adjoin were the subject of a Local Government Board inquiry and will be referred to again. Here they surmount a bank which rises abruptly from the footpath skirting the houses, to a height of from 8 feet to 10 feet, obstructing the light and the circulation of air, making hideous the surroundings, as well as vitiating the atmosphere for some considerable distance. Each midden-privy, which is approached by a flight of steps, is used by several families and, besides being devoid of all privacy, is placed at an inconvenient distance from some houses and dangerously near to others.

With respect to the drainage, this is of a most primitive type. Immediately in front of the entrance to the dwellings is an open channel, running the whole length of the rows, which is often used for the conveyance of slop and waste water. To add to the squalor the back street, which in most of the colliery rows is the principal means of access to the houses, is unpaved, the surface of the roadway irregular, and at intervals there are large open gullies intended to carry off surface water and slops and containing, except perhaps after heavy storm, black putrescent material.

After years of patient and persistent work in endeavouring to educate public opinion in this County and to persuade sanitary authorities as to the necessity for improving the conditions under which the working classes are housed, it has become generally accepted that the minimum housing standard for a working man and his family should be a healthy, well-lighted and ventilated bedroom and a similar living room, which should be so constructed as to prevent the vitiated atmosphere of the living room passing into the sleeping room. In most districts a considerably higher standard is aimed at by the sanitary authorities, and many of the owners of property in dealing with these old colliery houses have voluntarily either demolished them and built new houses, or raised the upper room to an average height of at least 8 feet. But in some instances, to obviate the raising of the roof, an endeavour has been made to make the attic habitable by providing a dormer window. The result, however, has been anything but satisfactory for, although the larger window provides more light and perhaps a better circulation of air, the greater part of the ceiling is close up to the roof,

which makes the room insufferably hot in summer and extremely cold in winter. This, coupled with the fact that the occupants have to grope about in a stooping posture, does not add to their comfort, and it is only natural that many of them prefer not to use these places as sleeping rooms but to crowd together in the living room.

With respect to houses of this type the County Council have been urging the Benfieldside Urban District Council for several years to carry out the necessary improvements to them, with the result that in many instances closing orders were made by the District Council, but these were determined although the houses had not been made reasonably habitable. Consequently the County Council felt compelled to make a representation to the Local Government Board under Section 10 of the Housing, Town Planning, &c., Act, 1909.

The main point at issue between the County Council and the District Council was with reference to the raising of the height of the upper rooms. The District Council contended that if any further improvements were necessary, all that could be reasonably required was the provision of dormer windows.

As a result of the action of the County Council, on the 4th May, 1912, one of the Inspectors of the Local Government Board visited Benfieldside and inspected the houses in question, and on the 12th May the Board addressed a communication to the District Council, in which they stated:—

“ The Board do not consider that, in regard to these houses, the
 “ alteration which they understand the Urban District Council are
 “ prepared to require to be made would suffice to make the houses
 “ reasonably fit, and they are disposed to consider that the sugges-
 “ tions of the County Council in regard to raising the upper rooms
 “ to an average height of 8 feet, and the improvement of ventilation
 “ by providing windows of reasonable size, cannot be regarded as
 “ excessive under the circumstances of the cases. Moreover, the
 “ Board are of opinion that in order to make the improvements
 “ effective there should be an additional requirement that the stair-
 “ case be properly enclosed and provided with a door, preferably at
 “ the ground level so as to entirely shut off the air of the living room
 “ from the bedroom.

“The Board consider that the Urban District Council should “endeavour to secure these alterations being made in all cases.”

Subsequently the Board in a letter to the District Council, dated the 3rd July, 1912, confirmed the opinion expressed in their letter of the 12th May, and declined to state whether the provision of a large dormer window to the upper rooms would make the houses habitable.

The direction of the Local Government Board was not acted upon, and in February, 1913, the Board held an enquiry at Benfieldside with reference to the County Council's complaint that the District Council had failed to exercise their powers under Part II. of the Housing of the Working Classes Act, 1890.

The result of the enquiry was not made known until 23rd August, 1913, when a further communication was sent to the County Council and to the District Council in which the Local Government Board very materially modified their previously expressed opinion. In this letter they state that although they are still of the opinion that the most satisfactory procedure to render the upper rooms fit for human habitation is to increase the height of the upper rooms, they are not prepared to hold that the result could not be obtained without the roof being raised, and that they consider it would be difficult to justify the continuance of a closing order if the owner of a house of the type in question provided a large dormer window and an efficient air-outlet by means of a window or fireplace suitably placed, and also made such alterations as would prevent foul air from the living room rising to the upper room.

It is difficult to reconcile the views of the Local Government Board as expressed in these two letters. Their recent decision is certainly very disappointing and might have had a retrograde effect on sanitary progress in the County, had not the County Council the support of public opinion and that of the most enlightened sanitary authorities, who realize the necessity for securing to the working man and his family a minimum housing standard such as has been laid down by the County Council.

In many of the reports of the District Medical Officers reference is made to insanitary areas and property in their respective districts.

In the Borough of Jarrow the inspections, as in the previous year, were carried out mostly in the Central Ward, where many of the houses of the cottage type are in a very insanitary state. Owing to the lack of damp-proof foundations, most of the walls are saturated with moisture, the dampness rising 18 to 24 inches above the floor level. The dampness is most marked in the off-shoot rooms where the walls are only 9 inches thick. These rooms, which are intended for sleeping rooms, have been abandoned, and the families are now using the kitchen for the purpose.

In the Chester-le-Street Urban District, although a certain number of improvements have been carried out, the district Medical Officer of Health draws attention to the inadequate bedroom accommodation in a large number of houses at Pelton Fell, and recommends that the attics of 183 wooden houses should be closed and the attics raised of another 138 houses which are made of brick.

In the Barnard Castle Urban District sanitary progress is delayed at Bridgegate owing to the want of a sewerage system for the area, and the Medical Officer of Health again draws attention to a number of insanitary dwellings referred to in a previous report.

At Lintz Colliery and Friarside in the Tanfield Urban District the Medical Officer of Health again recommends the District Council to carry out improvements to the property in this area.

In the Blaydon Urban District, though much has been done to remedy defective houses, the Medical Officer of Health is of opinion that much still could be done to hasten needful improvements in certain areas in the district.

In the Lanchester Rural District a large number of houses were inspected and reported on by the Medical Officer, but many of his recommendations relating to insanitary property and contained in his annual report for 1911 had not, up to the end of 1912, been attended to.

At Burnmoor, in the Chester-le-Street Rural District, there are many poor houses which require attention in the near future; at Harraton many of the houses are past repair; at Great Lumley many of the houses are quite unfit for human habitation, but with respect

to these the owners are pulling down the old houses and replacing them by a really good class of house; at Urpeth many of the houses mentioned in the previous year's report are old, very low, and are far from being healthy and should be either closed or heightened; at Birtley some of the houses there require similar treatment.

At Usworth some of the houses belonging to the Colliery Company are in a very insanitary condition, and those in Middle High Row, Taylor's Row and the north side of the Square "remain monuments of the old insanitary colliery house." There is a great scarcity of houses in this parish. At Washington, although many improvements have been carried out, there are still many houses of a poor type which should be closed.

In the Durham Rural District there are many houses at Belmont which are in an insanitary condition; at Back Double Row, Quarlington Hill, nothing has been done to remedy the defective closets; attention is again drawn to the insanitary condition of the houses and conveniences at East Hetton; at Framwellgate Moor the Inspector states that the insanitary state of 16 old cottages mentioned in his last annual report has not been attended to. The streets at some of these places are also specially mentioned as being insanitary.

In the Easington Rural District, improvements have been carried out to houses in the village of Murton, but improvements to other houses here are urgently needed; the matter is receiving the consideration of the Council.

In the Sunderland Rural District in many of the old houses at Ryhope belonging to the Coal Company, dampness is noticeable both on the ground floor and the first storey. Here the Coal Company have promised to comply with the Medical Officer of Health's recommendations and to improve the property.

In the Weardale Rural District some of the houses, says the Medical Officer of Health, are structurally dilapidated and insanitary, and although, comparatively speaking, a fairly high rental is obtained and they are seldom unoccupied, the minimum amount is expended in maintaining them reasonably fit for human habitation.

The tenant is sometimes blamed for the insanitary condition in which property is maintained, and it has been suggested that while there are tenants who are thriftless, irresponsible and destructive,

owners have some justification in neglecting their property. But most sanitarians will agree with the Medical Officer of Health for Hartlepool that where insanitary property exists undesirable persons congregate. Reporting on the sanitary condition of the Borough, Dr. Dickinson Leigh says "undoubtedly there is a large amount of undesirable property which is not only unremunerative from an assessment point of view, but which, by attracting an undesirable class of occupiers, depreciates the value of adjoining property. The decrease in the population of the Borough is largely attributed to the fact that the decent class of workmen demand, and rightly, clean wholesome houses, and at present we are unable to supply their wants."

The association between undesirable tenants and insanitary property is also discussed by the Medical Officer of Health of the Hetton Urban District, who is of opinion that "the character and disposition of the tenant has a great deal to do with the cleanliness and healthiness of a house," but, referring to the old insanitary houses in the district, he very pertinently remarks that "a tenant who would be considered desirable would not willingly take a room or rooms in the majority of tenements in your district." In the City of Durham a number of thriftless and undesirable workmen of migratory habits find accommodation in the town and are responsible for much of the overcrowding. One of the chief difficulties which the Medical Officer of Health has to contend with is in connection with this class of tenant. The remedy is surely, as Dr. Leigh suggests, "a town planning scheme, taking a district at a time, acquiring and demolishing old property and building on the area suitable houses."

During the year the County Council exercised its statutory powers under Sec. 45 (2) of the Housing of the Working Classes Act, 1890, with respect to 3 houses at Middle Rainton, in the Houghton-le-Spring Rural District, and with respect to 65 houses at Usworth Colliery, in the Chester-le-Street Rural District.

Sanitary surveys of the Urban Districts by the Assistant County Medical Officer were continued, and reports on the sanitary circumstances of Leadgate, Chester-le-Street, and Seaham Harbour submitted to the County Council.

STREETS.

Not many years ago it was by no means an uncommon practice in rural as well as in the urban districts for rows or streets of houses to be erected without any real attempt being made to carry out street works, and very little provision was made for taking off the surface water, or otherwise rendering impervious the curtilages of the houses. Even at the present time, in the case of new property, streets are frequently left unmade long after the houses have been erected and occupied. The result is that throughout the County there are many streets in a most insanitary condition. In parts of the urban districts and in many of the colliery villages the streets in winter become almost impassable, whilst in the summer the soft and porous earth, impregnated with organic matter, becomes an admirable breeding ground for germs of disease. Happily, the injurious effect of these unmade streets and unpaved yards on the health of the community is now becoming generally recognised, and many of the reports of the Medical Officers of Health, and more particularly those relating to the urban districts, show that during the year many improvements were effected in this direction, whilst in other districts important contracts had been entered into for the carrying out of works under the Private Street Works Act, 1892.

DAIRIES, COWSHEDS AND MILKSHOPS.

In the majority of the reports, and more particularly those of the urban districts, brief reference is made to the structural condition and sanitary circumstances of the dairies and cowsheds, and in comparatively few is the information given such as would lead one to believe that a systematic and efficient supervision was carried out. In two or three reports the unsatisfactory condition of the premises from which milk is sold is adversely commented on by the Medical Officer of Health. In Southwick and in the Sunderland Rural Districts the dairy cows were inspected by a veterinary surgeon. In the former district 31 out of 63 cows were tested with tuberculin, and the sale of milk from one which was found to be suffering from tuberculosis of the udder was stopped; in the latter district 534 cows were inspected, and of these 4 were found to be diseased.

SLAUGHTER HOUSES.

In most of the reports some reference is made to the slaughter-houses which are regularly inspected and, having regard to the character of many of the premises, are said to be on the whole well kept. During the year a number of improvements were carried out, and the use of some of them for the purpose of slaughtering was discontinued. In several instances carcasses of diseased animals were seized and destroyed, but in many cases the slaughter-houses are far apart and for this and other reasons it is found impracticable to adequately supervise the slaughtering. To meet this difficulty, and in view of the fact that in many instances the premises are old in construction and otherwise unsuitable for the purpose, a number of Medical Officers of Health recommend the provision of public slaughter-houses. The use of the patent killer in the slaughtering of animals, which is said to be quite as effectual and much less painful than the present method of slaughtering, is also suggested and should receive consideration.

FACTORIES AND WORKSHOPS.

The Factories, Workshops and Workplaces throughout the County appear to have been inspected regularly, and where nuisances were found steps were taken under the Public Health Acts to abate them. Uncleanliness and overcrowding were found in a number of instances, and from 12 to 14 notices were served to provide additional sanitary accommodation. In only a few of the reports is the condition of the bakehouses discussed at any length, but very few appear to be underground. Some of the largest urban districts received lists of "out-workers," but judging from the information supplied very few persons in the County undertake home work of the kind scheduled under the Factory and Workshop Act. Copies of the Schedules supplied to the Secretary of State accompanied the reports of the district Medical Officers of Health.

MIDWIVES ACT.

The total number of births registered in the County in 1912 was 29,358, and of these approximately 4,259 were attended by midwives.

In the quarter ended December 31st, the number of registered midwives was 243, and of these 151 notified their intention to

practice. The number of midwives in the County holding certificates of having passed the examination of the Central Midwives Board or some other recognized authority was only 84.

The number of notifications of still-births received was 94. Medical help was sent for on 170 occasions, and the deaths of one mother and five children occurred in the practice of midwives; in all cases of deaths enquiries were made by the County Midwives Inspector.

Seven cases of puerperal fever occurring in the practice of midwives were reported to the County Medical Officer, who is the Executive Officer under the Act. Each case was carefully enquired into, the medical officer of health of the district in which the case occurred was notified, and appropriate steps taken for dealing with each case.

During the year the deaths of 7 midwives occurred; 21 relinquished practice on account of ill-health, 3 for other reasons, and 2 took up their residence in another county.

Formal warnings for breaches of the rules of the Central Midwives Board were sent to 12 midwives, 90 visits with respect to complaints of alleged illegal practising of midwifery by 88 women who were not qualified to do so by certificate of the Central Midwives Board were made, and 22 formally warned of the consequences of continuing such practice.

One representation was made to the Central Midwives Board in the case of a certified midwife for neglect and misconduct; the charges were proved and the midwife severely censured. Another midwife, whose name was removed from the Roll during the year, has since died.

Proceedings were taken against an unqualified woman for practising habitually and for gain otherwise than under the direction of a qualified medical practitioner. One of the charges preferred was proved, but the magistrates held that the other charges were in respect of attendances in emergency and that habitual practice was not proved and dismissed the case. At the end of the year other proceedings were pending.

There are undoubtedly a large number of unregistered women in this County who habitually break the law and carry on a considerable midwifery practice, but the defects in the Midwives Act and

the difficulty in obtaining satisfactory evidence makes it easy for those who have some knowledge of the law to keep within its jurisdiction. An unqualified woman will explain to her prospective patient that although quite competent to act she can only do so if a doctor is engaged. Provisional arrangements are then made for medical attendance, but when the confinement takes place no doctor is sent for.

FOOD AND DRUGS.

Including 235 sent by the local officials of the Boroughs of Stockton, Darlington and Jarrow, the number of samples submitted to the County Analyst during the year ended 31st December, 1912, was 1,149, and of these 98 or 8·52 % were certified to be adulterated, or to be below the standard. The number examined each quarter is here given:—

	Samples Examined.		Not Genuine.		Proportion per cent.
1st Quarter	267	...	28	...	10·48
2nd Quarter	285	...	22	...	7·71
3rd Quarter	308	...	30	...	9·74
4th Quarter	289	...	18	...	6·22
	—		—		—
	1,149	...	98	...	8·52

Of the 1,149 samples, 800 were foodstuffs, 238 wines and spirits, and 111 drugs; the number and proportion per cent. in each of these quarters found to be either adulterated or to be below the standard are given in the following table:—

	Samples Examined.		Not Genuine.		Proportion per cent.
Foods	800	...	75	...	9·3
Spirits	238	...	15	...	6·3
Drugs	111	...	8	...	7·2
	—		—		—
	1,149	...	98	...	8·5

The 800 articles of food submitted to the Public Analyst included 421 samples of milk, and in the following table, which gives in quarterly periods the results of the analyses, it will be seen that during the first nine months of the year a uniformly large proportion

of the samples of the milk were below the standard, but that during the fourth quarter for some unaccountable reason only a comparatively small proportion were found otherwise than genuine:—

	Samples Examined.		Below the Standard.		Proportion per cent.
1st Quarter	99	...	19	..	19·2
2nd Quarter	108	...	21	...	19·4
3rd Quarter	104	...	21	...	20·2
4th Quarter	110	...	9	...	8·2
	—		—		—
	421	...	70	...	16·4

In his report for the quarter ended 30th September, 1912, the Public Analyst points out that in view of the recent complaints that a 3 per cent. standard for fat in milk pressed unjustly upon the farmers and milk-sellers of the County, the composition of the milk submitted to him for analysis during that quarter was of more than ordinary interest, for while 1912 was one of the wettest years for more than 50 years, and the three months under consideration especially so, only 2 out of 103 samples analysed fell substantially below 3 per cent. The County Inspector of Weights and Measures also remarks on the excellent quality of almost every sample, the fat ranging as high as 5·25 per cent., while samples containing 4 per cent. of fat and above were quite common. When samples were found to be below the standard it was chiefly in the non-fatty solids, showing that the commonest form of sophistication was the addition of water. Other articles of food submitted to the analyst included butter (92), lard (56), pepper (44), ginger (34), cheese (27), ground almonds (19), cinnamon (15), jam (14), yeast (13), meal and flour (8), malt (5), olive oil, lemon curd, rice, arrowroot, baking powder (4 each), golden syrup, margarine, cloves, coffee (3 each), and mustard, mince-meat, beef suet, marmalade, cocoa essence, rolled oats, tapioca (1 each).

The administration of the Act in the Non-County Boroughs is undertaken by their local officials, while the taking of samples in the rest of the Administrative County is carried out by the Chief Inspector of Weights and Measures, who reports directly to the Executive Committee of the County Council.

In the Non-County Boroughs 327 samples were taken for analysis and 34 or 10·1 per cent. were reported to be adulterated or below the standard.

LOCAL GOVERNMENT BOARD ENQUIRIES.

The following Local Government Board Enquiries were held during the year into applications from local authorities in the County for loans for sanitary purposes and other matters of sanitary import:—

1912.	Applicant.	Amount.	Purpose.	Result.
Feb. 13	Durham Rural District Council	£3,600	Works of Sewerage and Sewage Disposal for village of East Hetton, in Township of Coxhoe.	Application granted.
May 7	Auckland, Shildon, and Willington Joint Hospital Board	£6,600	Extension of their Infectious Diseases Hospitals at Tindale Crescent and Helmington Row.	Application granted.
May 24	Durham County Council	...	Complaint under Section 299 of the Public Health Act, 1875, that the Rural District Council of Easington have made default in not providing the Village of Wingate with sufficient sewers and in maintaining existing sewers.	R.D.C. undertook to provide Sewerage scheme, etc.
July 9	Chester-le Street Rural District Council	£2,400	Erection of an additional pavilion at their Infectious Diseases Hospital.	Application granted.
July 30 (Post- poned from July 16)	Barnard Castle Urban District Council	£2,971	<p>(a) Works of Sewerage in the Bridgegate and Thorngate District.</p> <p>(b) Works of Street Improvement in Upper and Lower Galgate.</p> <p>(c) Works of Water Supply in Bridgegate.</p> <p>(d) The provision of Underground Sanitary Conveniences in the Market Place, opposite the "King's Arms" Hotel, and in Lower Galgate, opposite the Commercial Hotel.</p>	<p>Decision pending.</p> <p>Loan of £450 sanctioned</p>

1912.	Applicant.	Amount.	Purpose.	Result.
July 23	Annfield Plain Urban District Council	£14,400	For the purposes of a scheme under Part III. of the Housing of the Working Classes Act, 1890, and for the purchase of land and the erection of working class dwellings.	Loan of £14,308 sanctioned.
July 24	Sunderland Rural District Council.	£6,000	Extension of Infectious Diseases Hospital.	£5,283 sanctioned for Buildings, and £682 for Furnishing, £35 for Linen refused.
Oct. 9	Chester-le-Street Rural District Council	£12,200 and £630	For the purposes of a scheme under Part III. of the Housing of the Working Classes Act, 1890, for the provision of working class dwellings in the Township of Great and Little Usworth.	Application granted.
Oct. 15	Chester-le-Street Rural District Council	£1,383	Works of Water Supply for for the Townships of Great Lumley and Little Lumley.	Decision pending.
Oct. 24	Easington Rural District Council	£23,700	For the purposes of a scheme under Part III. of the Housing of the Working Classes Act, 1890, for the purchase of land and the erection of working class dwellings at Murton Colliery.	Application granted.
Oct. 25	Stockton Rural District Council.	£450	Works of Sewerage for the Parish of Norton, including the execution of works in the Borough of Stockton-on-Tees.	Application granted.
Dec. 6	Durham City Council.	£1,025	Erection of working-class dwellings; also for consent to the appropriation of certain lands, situated in Providence Row, for purposes of Part III. of the Housing of the Working Classes Act, 1890.	Application granted.

COUNTY COUNCIL ENQUIRIES.

The following enquiries bearing on public health administration were held by the County Council during 1912:—

1912.	Applicant.	Subject of Enquiry.	Result.
Nov. 5	Lanchester R.D.C. and Lanchester Parish Council.	Petitions against the Confirmation of the Order made by the County Council on 15th February, 1912, for the transfer of a part of the Parish of Lanchester to the Urban District of Stanley and the Parish of South Moor.	Petitions allowed. County Council Order not confirmed.
Dec. 4	Hetton-le-Hole U.D.C.	Extension of the Urban District by the inclusion of parts of the Townships of Great Eppleton, Little Eppleton, and Pittington.	Application refused. No Order made.

On the following pages will be found tables giving the chief vital statistics of the Administrative County, a chart showing for each month the number of deaths from the seven principal epidemic diseases, and a table giving the monthly average rainfall in certain stations in the north-east of England. At the end of the summary are tables relating to the vital statistics of the several sanitary districts.

TABULATED STATEMENT OF THE CHIEF VITAL STATISTICS OF THE ADMINISTRATIVE COUNTY OF DURHAM,
 COMPILED FROM THE MONTHLY RETURNS SUPPLIED TO THE COUNTY MEDICAL
 OFFICER BY THE REGISTRARS 1912.

	Estimated Population.	Births Nett.	Deaths All Causes Nett.	Deaths from Zymotic Diseases.	Rate per 1,000 of the Population.					Deaths under 1 year per 1000 Births.	Percentage of Un-certified Deaths to Total Deaths.
					Births nett rate.	Deaths all causes nett rate.	Deaths all causes standardized rate.	Zymotic Disease.	Pulmonary Tuberculosis.			Bronchitis, Pneumonia, and Pleurisy.
Boroughs ...	181,050	5,266	2,735	200	29.08	15.10	1.10	1.22	2.40	96	3.3
Other Urban Districts	357,490	11,432	4,960	591	31.98	13.87	1.65	0.95	2.30	107	3.2
Rural Districts ...	413,210	12,973	5,416	541	31.39	13.10	1.31	0.74	2.01	109	2.4
Administrative County	951,750	29,671	13,111	1,332	31.17	13.77	1.39	0.91	2.19	106	2.9
England and Wales ...	36,539,636	872,800	486,982	36,123	23.8	13.3	0.99	...	...	95	1.3

TABLE SHEWING, FOR EACH MONTH, THE NUMBER OF BIRTHS, THE NUMBER OF DEATHS FROM ALL CAUSES,
AND THE NUMBER OF DEATHS FROM THE CHIEF ZYMOTIC DISEASES IN THE ADMINISTRATIVE
COUNTY OF DURHAM, DURING 1912.

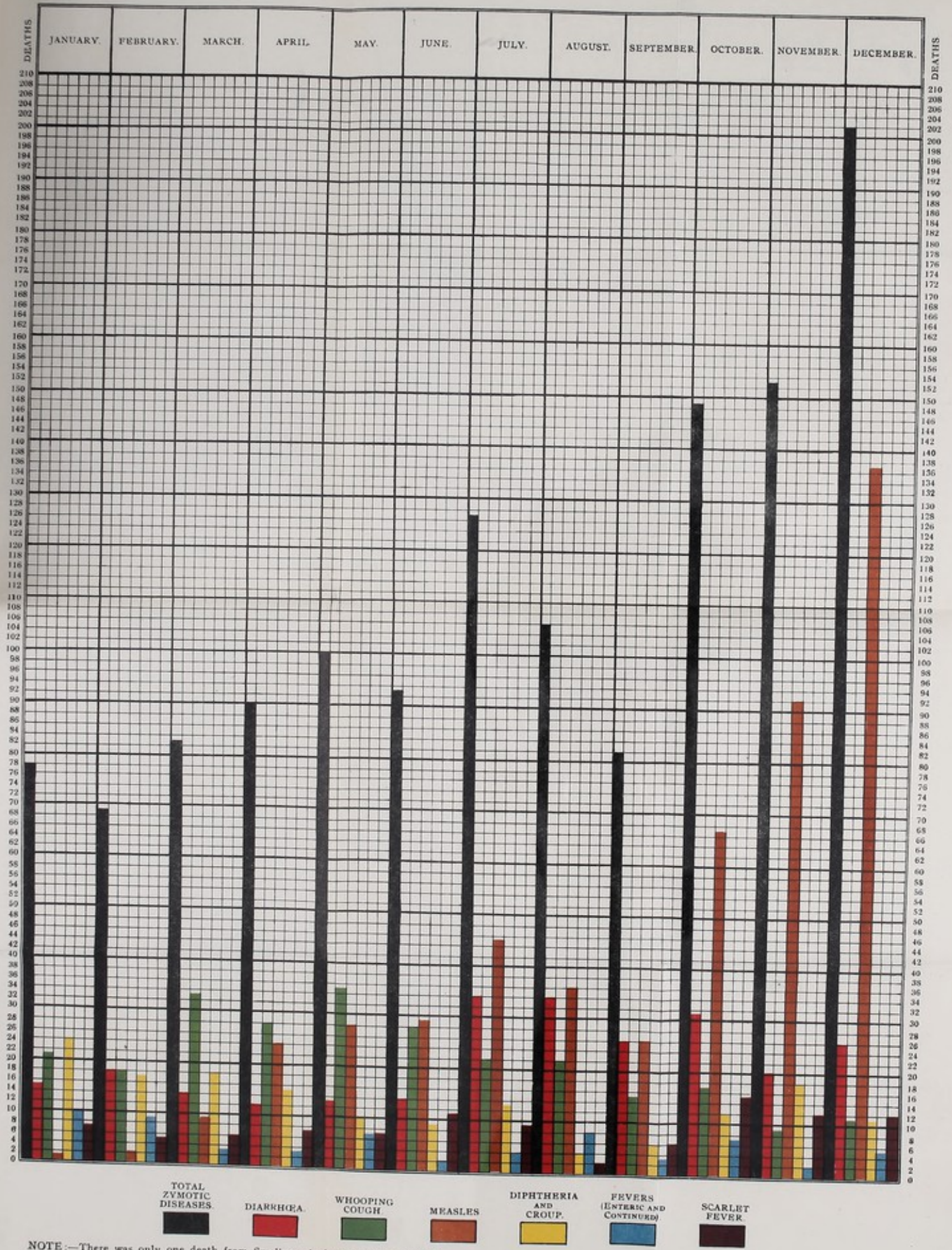
	Births.	Deaths.	Deaths under 1 year.	Total Zymotic Deaths.	Small-pox.	Scarlet Fever.	Diphtheria and Croup.	Fevers (Enteric and Continued).	Measles.	Whooping Cough.	Diarrhoea and Enteritis (under 2 years.)
JANUARY	2604	1325	359	78	...	7	24	10	1	21	15
FEBRUARY	2386	1172	256	69	...	5	17	9	2	18	18
MARCH	2520	1047	267	83	...	6	18	3	9	33	14
APRIL	2568	1123	262	90	1	7	15	3	24	28	12
MAY	2478	1100	273	100	...	7	10	7	28	35	13
JUNE	2329	923	206	93	...	11	9	2	29	28	14
JULY	2639	1012	253	127	...	9	13	4	45	22	34
AUGUST	2479	898	207	106	...	2	4	8	36	22	34
SEPTEMBER	2344	890	198	82	...	6	6	3	26	15	26
OCTOBER	2578	1113	265	149	...	15	12	7	67	17	31
NOVEMBER	2305	1123	249	153	...	12	18	2	92	9	20
DECEMBER	2441	1385	375	202	...	12	11	5	137	11	26
TOTALS	29671	13111	3161	1332	1	99	157	63	496	259	257

TABLE GIVING THE RAINFALL AND OTHER FORMS OF PRECIPITATION DURING 1912 IN CERTAIN CLIMATOLOGICAL STATIONS IN THE NORTH EASTERN DISTRICTS OF ENGLAND.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Above Average.
Shields	2.33	2.03	1.95	0.14	3.00	4.91	3.51	5.19	2.07	3.88	1.97	1.32	32.30	8.26
Tynemouth	2.31	2.30	1.80	0.11	2.55	4.36	4.25	4.45	2.04	3.80	1.75	1.29	31.01	...
Durham	3.12	1.93	1.93	0.09	2.26	4.41	3.53	4.17	1.68	2.57	1.99	1.51	33.21	1.95
Chopwell Wood.....	4.11	3.21	2.20	0.19	2.83	4.98	4.66	6.23	2.74	2.56	1.63	2.06	37.40	...
Ushaw	3.27	2.41	3.65	0.08	2.63	4.75	3.68	5.27	1.43	2.61	1.72	1.92	33.42	...
England, N.E.	2.85	1.49	2.27	0.13	2.58	4.82	3.70	4.56	1.70	2.62	2.37	1.92	35.01	6.12

	MOST IN ONE DAY.												Largest Daily Rainfall.	
Shields	0.73	0.48	0.38	0.04	1.05	0.96	0.55	0.93	0.69	0.99	0.61	0.31	May ..	1.05
Tynemouth	0.27	0.49	0.36	0.03	0.84	0.86	0.77	0.66	0.65	1.01	0.51	0.31	October	1.01
Durham	1.32	0.52	0.26	0.06	0.66	0.52	0.56	0.58	0.42	0.72	0.52	0.39	January	1.32
Chopwell Wood.....	0.69	0.60	0.41	0.06	0.88	0.81	0.83	1.09	1.00	0.79	0.44	0.52	August.	1.09
Ushaw	0.56	0.64	0.71	0.07	0.74	0.52	0.75	0.80	0.62	0.79	0.43	0.48	August.	0.80

CHART SHEWING THE NUMBER OF DEATHS DURING EACH MONTH OF 1912 FROM THE SEVEN CHIEF ZYMOTIC DISEASES



NOTE:—There was only one death from Smallpox during the year—in April.

BOROUGH.

DARLINGTON.

S. G. MOSTYN, M.B., D.P.H., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	57,104	55,911	Total notifications	748	824
Birth-rate	25.50	26.76	Smallpox	nil	nil
Death-rate	12.48	14.97	Scarlet fever	506	719
Zymotic death-rate	0.98	1.82	Diphtheria	68	57
Phthisis death-rate	0.94	1.07	Fevers (Enteric, &c.)	10	19
Total Tuberculosis death-rate	1.40	1.48	Puerperal fever	1	1
Respiratory diseases death-rate ..	1.55	2.05	Cases treated at hospital ..	539	725
Infant mortality-rate per 1,000 births	84	135	Measles	(14)	(11)
			Whooping cough	(15)	(12)
			Diarrhoea and Enteritis (under 2 years)	(8)	(54)

Lowest death rate and infant mortality rate recorded in the Borough.

GENERAL SANITATION.

Water Supply.—The water supply of the Borough is obtained from the River Tees. At the works, which is the property of the Corporation, it is purified by passing it over sand filter beds, and to counteract any plumbo-solvent action the water is treated with lime.

Samples were tested regularly by the County Analyst, who reported that the results of the analyses were entirely satisfactory.

Sewerage.—The sewage of the town is treated at the sewage farm situated in the Skerne Valley about a mile south of the town. The scheme for improving the sewers and the method of sewage disposal Dr. Mostyn hopes will soon be carried out.

Scavenging.—The total number of privy-ashpits in the Borough is 5,652, the number of midden-privies 2,170, and the number of water-closets 4,347. In 1912, 459 midden-privies were replaced by water-closets, and at the end of the year the conversion of 286 more privies was in hand.

The small ashpit-privies are emptied once a week, the large midden-privies once a month.

Referring to these midden-privies and the midden-steads in connection with stables, Dr. Mostyn, in his annual reports, draws attention to the fact that they are a menace to the public health. He also

points out that "the principal source of epidemic diarrhœa, from which many infants die yearly in hot weather, is through germs from decomposing organic matter being carried to the food by dust and flies." Dr. Mostyn hopes that the efforts of the Public Health Committee and the Press in drawing attention to the serious danger arising from flies in hot weather will be successful in diminishing this danger to health.

Housing.—(a) *New Houses:* 275 were built and occupied. The total number of inspections under the Housing (Inspection of District) Regulations during the year was 457, and the number of notices served for remedying defects 55, as against 201 and 25 respectively in 1911. The number of notices complied with was 41; in some cases the notices were still outstanding at the end of the year as the time under the notice had not yet expired.

No houses were closed during the year.

(b) *Insanitary Property:* The conversion of the foul, insanitary privies, of which there are still a large number in the Borough, is receiving the earnest attention of the Sanitary Authority.

Nuisances.—The number of informal and formal notices served to abate nuisances was 1,832 and 1,644 respectively, and the number of nuisances abated 1,853. With respect to structural defects to houses 906 notices were served, and with respect to drainage 659. With respect to houses not provided with sufficient sinks and slop stones, 8 informal and 179 formal notices were served; of these, the nuisance was abated in 77. With respect to ashpits and privies, 905 notices were served, and of these 743 were taken under Section 36 of the Public Health Act, 1875, for the substitution of water-closets and ashbins for privy-middens.

Common Lodging Houses.—There are 10 registered common lodging houses with accommodation for 481 lodgers. They are regularly inspected. Notices to abate nuisances were served in 10 instances.

Dairies, Cowsheds and Milkshops.—There are 25 registered cow-keepers and dairymen and 98 retail purveyors of milk. The cowsheds are fairly well kept, and there is some improvement in the milk shops.

Slaughter-houses.—The whole of the slaughter-houses (38) were regularly inspected during the year. They were found to be kept in a fairly satisfactory condition, having regard to their position, construction and general arrangements, which in many cases are insanitary.

Offensive Trades.—The offensive trades carried on in the Borough are: bone boiler (1), fellmonger (1), gut scraper (1), fat extractors and tripe boilers (4), tripe boiler only (1), fat extractor only (1), fish fryers (33), and rag and bone dealers (11). These premises were regularly inspected.

Power to include in the list of offensive trades "fat melter or fat extractor, fish fryer, gut scraper, rag and bone dealer and candle-maker" was obtained in May, 1911, by Order of the Local Government Board, under Section 51 of the Public Health Acts Amendment Act, 1907.

Food and Drugs.—During the year 131 samples of food and drugs were submitted to the analyst, which is equal to a rate of 2.29 per 1,000 of the estimated population or one sample for every 436 persons. Of the 131 samples 74 were taken formally and 57 informally. The number of samples which proved to be adulterated was 18, namely, milk 8, coffee 1, tincture of ginger 1, cream of tartar 3, and spirits 5.

The results of the analyses of the 72 samples of milk showed that the percentage of fatty and non-fatty solids was well above the standard of the Board of Agriculture.

In the case of the 8 found to be adulterated the percentage of fat was above the 3 per cent. standard of the Board. It was the non-fatty solids that were deficient, indicating that water had been added.

Legal proceedings were taken in 6 instances, while in other cases warning notices were sent by the Town Clerk.

About 25,000 animals were slaughtered in the Borough during the year and about three-fourths of these were inspected at the time of slaughtering. The total food surrendered and destroyed during

the year was over $8\frac{1}{2}$ tons. The whole of this was voluntarily surrendered to the Inspector.

Factories and Workshops.—The total number of factories and workshops on the register is 356, and these were inspected regularly. Notices were served in 54 instances to remedy certain defects or to abate nuisances; all, with one exception, were complied with.

23 notices were received from His Majesty's Inspector of Factories with reference to defects remediable under the Public Health Acts. In each case the defect was attended to. There is one underground bakehouse in the Borough.

SANITARY REQUIREMENTS.

The general adoption of the water-carriage system and the abolition of the insanitary ashpit-privies.

To the report of the Medical Officer of Health is appended the report of the Inspector of Nuisances, from which some of the foregoing particulars have been abstracted.

DURHAM.

A. M. VANN, M.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	17,550	17,550	Total notifications.. .. .	88	41
Birth-rate	24.78	26.89	Smallpox	nil	nil
Death-rate	13.96	17.09	Scarlet fever	18	12
Zymotic death-rate	0.85	1.59	Diphtheria	16	17
Phthisis death-rate	1.02	0.74	Fevers (Enteric, &c.)	9	5
Total Tuberculosis death-rate	1.25	1.13	Puerperal fever	nil	nil
Respiratory diseases death-rate	1.99	3.07	Cases treated at hospital ..	28	19
Infant mortality-rate per 1,000			Measles	(4)	(2)
births	101	150	Whooping cough	(4)	(4)
			Diarrhoea and Enteritis (under		
			2 years)	(2)	(18)

GENERAL SANITATION.

Water Supply.—The supply is from the Weardale and Consett Water Company, whose gathering grounds are in the Wear Valley district. To counteract its plumbo-solvency the water is treated. It is analysed twice yearly; the supply is continuous and of good quality.

Sewerage.—"The disconnection of house drains from the "sewers," writes Dr. Vann, "is by no means complete, and although much has been done many cases still remain requiring "attention." In 1912 the number of disconnections carried out was 24.

The number of ash-closets in the City is 93 and ashpit-privies 625. The question of converting these insanitary privies into water-closets has received much consideration by the Medical Officer of Health and the Health Committee, and as a result of their action 64 ashpit-privies have been converted into water-closets.

Scavenging.—No mention is made.

Housing.—(a) New Houses: The number of new houses erected in 1912 was 20, as against 21 in 1911 and 27 in 1910.

The number of houses inspected under the Housing (Inspection of District) Regulations was 136, and of these 11 were certified to be unfit for human habitation. In 9 cases closing orders were made; the remaining 2 were put into a proper state of habitation as the result of action taken under Section 15 of the Housing, Town Planning, Etc., Act, 1909.

During the year the Sanitary Inspector has extended and amplified his records of the houses in the City, making notes of alterations carried out during the year and generally bringing the housing inspection cards and registers up-to-date. (b) Insanitary Property: Dr. Vann again draws attention to the number of old disused and uninhabited buildings in a more or less ruinous condition, which, besides being a disfigurement, seriously interfere with the lighting and air space about those dwellings which are inhabited. He hopes that something will be done during the coming year to deal with these obstructive buildings and also with respect to the demolition of those houses which have been more recently closed under the Housing and Town Planning, Etc., Act, 1909.

Nuisances.—The number of nuisances abated during the year was 1,189, and in all but 81 informal notices were served. For structural defects to dwelling-houses, 317 informal and 8 formal

notices were served; with respect to water-closets, 220 and 12 respectively; and with respect to general nuisances, 314.

Common Lodging Houses.—The number of common lodging-houses (8) is the same as in the previous year. 7 formal notices were served to abate nuisances in connection with defective paving, water-closet accommodation, defective walls and ceilings, and with respect to uncleanness.

Dairies, Cowsheds and Milkshops.—There are now 4 cowsheds occupied in the City as against 6 in 1911. To cleanse and white-wash, 2 notices were served.

Slaughter-houses.—The number of slaughter-houses is now 14 as against 15 in 1911. To comply with the bye-laws 14 notices were served. The desirability from a sanitary standpoint of providing a public slaughter-house is again urged by the Medical Officer of Health to the City.

Food and Drugs.—The number of samples submitted to the public analyst was 206, equal to 1.1 per 1,000 of the estimated population, or one sample to every 875 persons. No proceedings were taken, but 2 purveyors of milk were cautioned.

Factories and Workshops.—The number of factories and workshops on the register is 185, and this includes 7 bakehouses (1 underground). To these places 314 inspections were made and, with respect to certain minor defects 18 notices were served. Notice to provide sufficient sanitary accommodation was served in 1 case.

The number of outworkers in the City is 5.

SANITARY REQUIREMENTS.

- 1.—The abolition of the insanitary ashpit-privies.
 - 2.—The demolition of certain disused buildings to provide better means of lighting and air space to dwellings in their vicinity.
 - 3.—The provision of a public slaughter-house.
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HARTLEPOOL.

J. DICKINSON LEIGH, M.D., F.R.C.S., D.P.H.,

Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	21,050	20,956	Total notifications	83	38
Birth-rate	30·73	31·11	Small-pox	4	nil
Death-rate	17·05	20·04	Scarlet fever	29	28
Zymotic death-rate	0·71	1·81	Diphtheria	6	8
Phthisis death-rate	0·61	1·67	Fevers (Enteric, &c.)	nil.	1
Total Tuberculosis death-rate	1·94	2·62	Puerperal fever	nil.	nil.
Respiratory diseases death-rate	2·47	2·86	Cases treated at Hospital	10	8
Infant mortality-rate per 1,000 births	106	161	Measles	(10)	(3)
			Whooping cough	(nil.)	(2)
			Diarrhoea and Enteritis (under 2 years)	(4)	(28)

GENERAL SANITATION.

Water Supply.—For domestic purposes the water supply, which is the property of the Hartlepool Gas and Water Coy., is derived from a series of borings in the limestone in the neighbourhood of Middleton Road, West Hartlepool. The borings are 6 in. in diameter and are carried to a depth of 150 to 250 feet. The water rises to within 25 feet of the surface and from the several borings it is conducted by means of a culvert to a central well on the site. It is then pumped to overhead tanks and to an open reservoir.

The tanks serve the town, while the reservoir is reserved for the farms, cottages, etc., in the rural neighbourhood.

The results of the chemical analysis and the bacteriological examination of the water show it to be somewhat hard (40·3 per 100,000) but of a high degree of purity.

For trade purposes a separate supply is provided.

For domestic purposes 26 gallons per head per diem are supplied; for trade purposes 16.

Sewerage.—No mention is made except the fact that all the sewage of the town is conveyed away from the dwellings by a water-carriage system.

Scavenging.—All house refuse is removed to a destructor.

Housing.—(a) New houses: Erected in 1912, 23; all were occupied. (b) Insanitary Property: A house-to-house inspection by the Inspector of Nuisances is shortly to be instituted. The Council are at present demolishing a site with a view to building 4 new houses, and it is proposed to let them at 7/- a week. Referring to the large amount of insanitary property in the town, Dr. Dickinson Leigh writes “undoubtedly there is a large amount of undesirable “property which is not only unremunerative from an assessment “point of view, but which, by attracting an undesirable class of “occupiers, depreciates the value of adjoining property. The “decrease in population in the Borough is largely due to the fact “that the decent class of workmen demand, and rightly, clean, “wholesome houses, and at present we are unable to supply their “wants.” Dr. Leigh advises a comprehensive town planning scheme, taking a district at a time, acquiring and demolishing old property, and building on the area suitable houses.

Nuisances.—The number of nuisances abated was 507, and with respect to these 461 informal and 46 formal notices were served. Amongst the nuisances abated were the following:—defects in the structural condition of dwelling-houses, 69; yard paving, 22; house drainage, 85; water-closets, 83; and 11 notices were served with respect to overcrowding.

Common Lodging Houses.—There are 7 common lodging houses. From a structural point of view they leave much to be desired; the floors are bad and so is the lighting. Dr. Leigh hopes that the provision of a municipal lodging house will form part of the Council’s scheme should one be undertaken. During the year as many as 243 visits of inspection were paid to the lodging houses.

Dairies, Cowsheds and Milkshops.—There are 39 registered purveyors of milk in the town; in 2 cases the business is confined to the sale of milk, 5 are dairy farmers, one is a cow keeper, while the remaining persons carry on miscellaneous trades such as confectioners (5), general dealers (15), grocers (4), butcher (1), and fruiterers (3). Dr. Leigh draws attention to the undesirability of allowing milk to be stored on such premises, and the difficulty of enforcing the provisions of the Dairies, Cowsheds and Milkshops Order.

Slaughter-houses.—There are 23 slaughter-houses; 13 are registered and 10 are licensed. In 7 instances the shop is used as a slaughter-house. The present arrangements are objectionable, and it is impossible to adequately supervise the slaughtering.

Offensive Trades.—No mention is made.

Food and Drugs.—The number of samples submitted to the analyst was 72; one was found to be adulterated. Several samples of margarine contained from 14 to 25 grains per lb. of boracic acid. Four seizures of unwholesome food were made.

Factories and Workshops.—8 inspections of factories and 237 of workshops were made during the year. Action under the Public Health Acts was taken with respect to cleanliness in 10 cases, with respect to nuisances in 6, and with respect to the sanitary accommodation in 2.

No list of outworkers was received. There are 2 underground bakehouses; one of them was certified during the year. The number of workshops on the register is 50 and include 12 places where fish curing is carried on.

SANITARY REQUIREMENTS.

1.—The provision of better housing conditions for the working classes.

2.—Improvements to the common lodging houses, and the provision of a Municipal Lodging House.

3.—Improved conditions for the sale of milk and for the slaughtering of animals.

JARROW-ON TYNE.

J. M. NICOLL, M.B., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	34,400	33,732	Total notifications ..	219	146
Birth-rate	32·06	31·18	Smallpox	nil.	nil.
Death-rate	16·71	16·71	Scarlet fever	59	77
Zymotic death-rate	1·39	1·77	Diphtheria	43	42
Phthisis death-rate	1·16	1·36	Fevers (Enteric, &c.)	10	9
Total Tuberculosis death-			Puerperal fever	nil.	nil.
rate	1·80	2·13	Cases treated at hospital ..	75	69
Respiratory diseases death-			Measles	(13)	(11)
rate	3·66	2·99	Whooping cough	(18)	(nil.)
Infant mortality-rate per			Diarrhoea and Enteritis (under		
1,000 births	116	126	2 years)	(12)	(37)

GENERAL SANITATION.

Water Supply.—The water is supplied by the South Shields and Sunderland Water Co. and is derived from wells sunk in the magnesian limestone.

Sewerage.—The sewers and drains of the Borough are adequate. There are 7 outfalls, namely, 4 into the River Tyne and 3 into the Don. The sewage is not treated before it is discharged. There are 636 water-closets and 4,974 earth-closets in the Borough. There are no ashpit-privies.

Scavenging.—The scavenging is carried out satisfactorily; house refuse and the contents of earth-closets are removed once a week and disposed of at sea.

Housing.—(a) New Houses: 9 were erected and 4 occupied during the year. For the last few years very few new houses have been built, for the population, as shown by the census returns since 1891, is practically stationary, and the housing accommodation is sufficient for the needs of the town. (b) Insanitary Property: Under the Housing (Inspection of District) Regulations, 309 houses were inspected; of these 21 were considered unfit for human habitation and closing orders made; after the closing orders were made 7 houses were put into habitable condition. The defects found included bad roofs and chimneys, defective ceilings, floors, and windows, damp foundations and walls, damp bedrooms and decayed brickwork; also dilapidated sculleries, wash-houses, and closets. Under the foregoing Regulations, a large number of the defects enumerated were remedied.

In the Inspector's report which is appended, it is stated that the year's work has been carried out chiefly in the Central Ward; also that "owing to lack of proper damp-proof foundations, most of the walls of these houses show signs of heavy capillary action, reaching from 18 to 24 inches above the floor level, especially in the small off-shoot bedrooms, which in many instances are only $4\frac{1}{2}$ in. walls. Thus these rooms are more readily saturated than those possessing thicker walls. In some cases the mortar is decayed, consequently it acts as an absorbent instead of a resistant to dampness. The result is that most of these bedrooms have been discarded as sleeping rooms and used instead for storing lumber, the families sleeping in the kitchen. In order to remedy this the bad joints in the brickwork require to be properly restored, more ventilation allowed beneath the floors and the front areas cemented all over to prevent percolation underneath the houses."

Nuisances.—The number of nuisances abated was 1,212. These included structural defects in dwelling-houses (41), defective yard paving (50), defective house drainage (125), defective ash-closets (161).

Dr. Nicoll again draws special attention to the insanitary condition of the cobble-paved back streets which, in their present condition, cannot be properly cleansed and consequently are a serious danger to the public health; he advises that they should be macadamised or the surface otherwise improved.

Common Lodging Houses.—There are 9 common lodging houses; to five, considerable improvements were carried out during the year. They are all now in a very satisfactory condition and are well equipped.

Dairies, Cowsheds and Milkshops.—There are 5 dairies and 80 milkshops in the Borough; they are all stated to be in a satisfactory condition. No notices to abate nuisances appear to have been served.

Slaughter-houses.—There are 25 slaughter-houses in the Borough, namely, 17 for the slaughter of large cattle and 8 for swine. 50 informal notices to abate nuisances were served.

Offensive Trades.—No mention is made.

Food and Drugs.—63 samples of food were submitted to the Public Analyst, and 10 were found to be adulterated. Summonses were taken out in the two worst cases but these were dismissed by the magistrates. No serious case of selling unwholesome food was brought to the notice of the Sanitary Authority.

Factories and Workshops.—There are 64 workshops, including 14 bakehouses. To the factories and workshops 192 visits of inspection were made and 4 defects found which were remedied. 2 outworkers' lists, under section 107, were received. There are 3 homeworkers, all of whom are engaged in making wearing apparel.

SANITARY REQUIREMENTS.

The macadamising of the back streets.

STOCKTON.

THOMAS HORNE, M.B., Medical Officer of Health.

<i>Vital Statistics</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	52,244	52,175	Total notifications	476	412
Birth-rate	30·66	29·43	Smallpox	nil	nil
Death-rate	15·59	16·67	Scarlet fever	188	240
Zymotic death-rate	1·24	2·45	Diphtheria	73	83
Phthisis death-rate	1·22	1·13	Fevers (Enteric, &c.)	32	22
Total Tuberculosis death-rate	1·99	1·99	Puerperal fever	2	1
Respiratory diseases death-rate	2·47	3·31	Cases treated at hospital ..	227	264
Infant mortality-rate per			Measles	(33)	(26)
1,000 births	91	134	Whooping cough	(8)	(27)
			Diarrhoea and Enteritis (under		
			2 years)	(12)	(57)

GENERAL SANITATION.

Water Supply.—The supply is from the Tees Valley Water Board. It is partly upland and partly derived from the river Tees. It is filtered through sand and gravel, stored in reservoirs at Long Newton, Sadberge, and Fighting Cocks, from whence it is delivered by gravitation to the Borough.

Sewerage.—The sewers, though old, are said to be efficient. The sewage is discharged into the river Tees, without being subject to any form of treatment. There are 7 principal and several minor

outlets. The majority of the larger outfalls discharge at levels below the ordinary low tide, but the smaller outfalls discharge on to the foreshore.

There are still 4,821 houses (41 per cent. of the total number) with insanitary privies, 269 with open closets, 37 share privies and 252 have privies in addition to water-closets.

Scavenging.—The method of removal is dependent upon the character of the refuse. In the case of houses provided with water-closets the house refuse or "dust" is collected at intervals of a week to fourteen days or longer according to the size of the receptacle and whether it is fixed. The work is done during the day, and the receptacles are emptied direct into covered carts and taken to the destructor.

Where the houses are provided with midden-privies and open closets the house refuse, together with the night soil, is collected once a week between the hours of 12 midnight and 7 a.m.

"A considerable portion of the material is necessarily deposited upon the street pavement before it is finally carted away."

Weather permitting, "the soiled street surfaces are afterwards washed and sprinkled with a deodorant."

The night-soil is afterwards taken by rail to customers, or it is either sent to farms in the locality or to a refuse tip situated some distance from the Borough.

Over 6,000 tons of night-soil were sent by rail.

Housing.—(a) *New Houses:* The number of new houses built in 1912 was 97, as against 142, 97, 142, 157 and 243 in the 5 preceding years. There is ample house accommodation in Stockton-on-Tees. All the houses erected since 1907 are provided with water-closets only. Of those built during 1912, 80 per cent. have patent tipping ashbins, and all but 3 are provided with some form of bath. (b) *Insanitary Property:* The number of houses inspected under the Housing (Inspection of District) Regulations, 1910, was 18; the

number considered unfit for human habitation 4, the number made habitable after a closing order was made 0, the number of houses in which the defects were remedied without making a closing order 8.

During 1912 Dr. Horne records that considerable progress was made in the conversion of "insufficient" sanitary conveniences into water-closets. Altogether 620 conversions were made. In 502 cases notices were served under Section 36 of the Public Health Act, 1875.

Nuisances.—The number of nuisances abated and sanitary improvements effected during the year was 4,348. The defects were found on 978 premises, of which 24 were with respect to dwelling-houses. In all about 2,622 visits of inspection were paid.

Common Lodging Houses.—There are 17 common lodging-houses, or one less than last year. 10 were registered under Section 69 (2) of the Public Health Acts Amendment Act, 1907, the remaining 7 under the Public Health Act, 1875. For males there are 521 single beds, for families 8 single beds, and for married couples 14.

The largest lodging-house has 10 bedrooms, the smallest 3. The number of day visits paid during the year was 676, and in addition to these, there were many night visits.

Dairies, Cowsheds and Milkshops.—The number of registered persons engaged in retailing milk is 248, and of these 17 have their premises outside the Borough. The number of visits of inspection paid to these premises was 119. Dr. Horne records in his annual report that "with the exception of a comparatively small number of dairies, the milkshops in the Borough are mainly small establishments where a trade in heterogenous commodities is conducted."

Slaughter-houses.—There are 27 registered or licensed slaughter-houses. With one exception the several premises were maintained in a reasonably satisfactory condition. Dr. Horne again directs attention to the unsatisfactory conditions under which the slaughtering is conducted and the urgent need for reform in the methods of slaughter in this district.

The number of visits of inspection paid to the slaughter-houses was 1,073.

Offensive Trades.—There are 20 premises in the Borough in which offensive trades are carried on. The trades are here given: tripe boiling (4), tripe boiling and gut scraper (6), gut scraping alone (8), skin and hide factor (which, by a recent order of the Local Government Board, was declared an offensive trade) (2).

Bye-laws for the regulation of these trades are in force in the district and, speaking generally, they are observed.

Food and Drugs.—The number of samples submitted to the analyst was 41, and of these 3 were found to be adulterated. One sample contained added water to the extent of 10 per cent. No proceedings were taken, but the vendors were warned that if it occurred again the Council "will reluctantly feel compelled to institute proceedings against them."

Factories and Workshops.—There are 51 factories, 220 workshops, 64 workplaces, and 63 bakehouses. To these 142 inspections were made and 10 notices were served.

The defects found included insufficiency of sanitary accommodation (3), unsuitable or defective accommodation (4), want of separate accommodation for the sexes (2). 6 out-workers' lists were received. The number of notices received from His Majesty's Inspector with respect to matters remediable under the Public Health Acts was 28. As many of the bakehouses as was practicable were inspected. Lime-washing and cleansing was enforced during the months of April and October, and in some few instances, on additional occasions.

SANITARY REQUIREMENTS.

Improvements in the method of slaughtering and likewise in the conditions under which the business is conducted.

URBAN DISTRICTS.

ANNFIELD PLAIN.

W. M. MORISON, L.R.C.P., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	17,000	16,800	Total notifications	116	79
Birth-rate	36.76	32.26	Smallpox	nil	nil
Death-rate	10.53	18.39	Scarlet fever	42	34
Zymotic death-rate	1.36	3.45	Diphtheria	18	8
Phthisis death-rate	0.76	0.88	Fevers (Enteric, &c.)	10	13
Total Tuberculosis death-rate	1.29	1.25	Puerperal fever	1	nil
Respiratory diseases death-rate	1.88	3.21	Cases treated at hospital ..	64	37
Infant mortality rate per			Measles	(4)	(10)
1,000 births	74	188	Whooping cough	(4)	(11)
			Diarrhoea and Enteritis (under		
			2 years)	(5)	(82)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage and Scavenging.—Not mentioned.

Housing.—(a) New Houses: 56 were built and 50 were occupied; 48 of these houses were provided with water-closets, the remaining 8 being provided with ash-closets, as drainage was not available for water-closets. A scheme for the erection of 60 houses under the Housing of the Working Classes Act, 1890, Part III., is under consideration. The carrying out of this scheme should assist materially in relieving the overcrowding which has existed in this district for some time. Dr. Morison is of opinion that “the water-carriage system should be, if not at once, at least gradually introduced into your district. It would be, ultimately, more economical, and certainly more sanitary, and in every other respect a more convenient method of disposing of the privy-middens, the most objectionable feature in the sanitation of our district, and mining districts generally. There is an ample supply of water provided by the Weardale and Consett Water Co., laid on to each house or its curtilage, and this fact at once disposes of the initial difficulty which would arise in introducing the water-carriage system into the district. These privy-middens are a breeding ground, during the hottest and most dangerous season of the year, for the house-fly, and were it only to prevent the plague

“of diptera during these months, and thus indirectly the evil consequences which result through their agency, would in itself be an advantage to the health and comfort of the district.”

(b) *Insanitary Property*: 282 houses were inspected, and repairs are being made in 139 instances. 16 of the Wood Houses, Dipton, were closed, leaving 14 still in occupation; and 16 out of the remaining 19 wooden huts at South Pontop Colliery were closed and demolished. 2 houses were demolished at Weston's Buildings. The district still contains 1,367 ashpit-privies, and unsatisfactory progress was made with their abolition, only 9 being dealt with.

Nuisances.—514 were abated, a similar number of informal notices being served.

Common Lodging Houses.—Not mentioned.

Dairies and Cowsheds (18).—Improvements were made with regard to drainage, lighting, ventilation and floors in some instances.

Slaughter-houses (9) were fairly well conducted.

Unsound Food.—19 seizures were made, chiefly consisting of organs of cattle, sheep and pigs affected with parasitic diseases.

Factories (9) and *Workshops* (25) received 27 and 75 inspections respectively, and 5 notices were served for uncleanness (3), overcrowding (1), and insufficient sanitary accommodation (1).

SANITARY REQUIREMENTS.

The abolition of the privy-middens and the introduction of the water-carriage system.

BARNARD CASTLE.

H. WEIGHTON, M.D., Medical Officer of Health.

Vital Statistics.	1912.		1911.		Infectious Diseases—Cases and (Deaths).	1912.		1911.	
Estimated Population	4,801	4,766			Total notifications	101	30		
Birth-rate	22.91	19.30			Smallpox	nil.	nil.		
Death-rate	15.62	16.15			Scarlet fever	84	2		
Zymotic death-rate	0.42	1.25			Diphtheria	2	nil.		
Phthisis death-rate	2.08	2.09			Fevers (Enteric, &c.)	nil.	nil.		
Total Tuberculosis death-rate	2.70	2.51			Fuerperal fever	nil.	nil.		
Respiratory diseases death-rate	1.87	2.72			Cases treated at hospital	18	nil.		
Infant mortality-rate per 1,000 births	45	141			Measles	(1)	(26.)		
					Whooping Cough	(nil.)	(nil.)		
					Diarrhoea and Enteritis (under 2 years)	(nil.)	(nil.)		

GENERAL SANITATION.

Water Supply.—No shortage was experienced. A portion of the main has been relaid with iron pipes which will diminish considerably the leakage which occurred near the source. It is recommended that this work should be continued.

Sewerage.—The sewerage at Bridgegate has not yet been taken in hand, and the delay is interfering with sanitary progress in that part. The Local Government Board have suggested additional works for the improvement of the sewage farm.

Scavenging was satisfactorily done under the direction of the Surveyor.

Housing.—(a) New Houses: 5 were erected and 3 occupied. (b) Insanitary Property: 7 houses were rendered habitable as a result of the service of notices, and 10 houses were demolished. In 2 instances demolition was carried out by the Council at the owner's expense. Dr. Weighton again refers to certain dwellings in Horse Market, Market Place, The Bank and Thorngate which require improvements. During the year water-closets were substituted for ashpit-privies (13) and ash-closets (3).

Common Lodging Houses, Dairies and Slaughter-houses were maintained satisfactorily.

Factories and Workshops were inspected and found free from any serious nuisance. The usual tables of inspections are not given.

SANITARY REQUIREMENTS.

None mentioned.

BENFIELD SIDE.

W. M. ALLEN, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.	1912.	1911.	
Estimated Population	8,500	8,250	Total notifications	90	30
Birth-rate	23·82	25·81	Smallpox	nil.	nil.
Death-rate	12·24	15·87	Scarlet fever	57	2
Zymotic death-rate	0·70	2·90	Diphtheria	9	9
Phthisis death-rate	0·70	1·33	Fevers (Enteric, &c.)	1	2
Total Tuberculosis death-rate	0·94	2·06	Puerperal fever	nil.	nil.
Respiratory diseases death-rate	2·23	2·18	Cases treated at hospital	60	10
Infant mortality-rate per 1,000 births	65	154	Measles	(nil)	(3)
			Whooping Cough	(2)	(4)
			Diarrhoea and Enteritis (under 2 years)	(1)	(12)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewage Disposal.—Application is to be made for a loan to erect new sewage disposal works at Westwood Farm, near Ebchester.

Scavenging is done by contractors.

Housing.—(a) New Houses: 11 three-roomed houses were erected and occupied. (b) Insanitary Property: It is stated that "A good many houses of what we now call the Bottle Bank type have been repaired and improved in ventilation. An inquiry by the Local Government Board has been held to settle the question of the raising of the roofs, but the report of the Commissioners is not yet known. Till this matter is settled repairing cannot be undertaken to any great extent, as it may not be considered sufficient or final." Of 54 houses inspected, 34 were considered unfit for habitation and closing orders were made for the same, with a result that 22 of the houses have since been rendered habitable. In 23 other houses the defects were remedied without the making of closing orders. Closing orders were determined for houses in Walton Street (10), Plantation Street (10), Durham Road (1), and Cutler's Hall Road (2). One house in Backstone Burn and 12 houses in Bottle Bank are to be demolished, and the same action will have to be taken with respect to 1-6, Armstrong Street, 1, Buckham Street, and 76 and 77, Durham Road unless improvements are made. During the year 42 midden-privies were replaced by water-closets (8) and ash-closets (42), but there still remain 869 privies in the district.

Nuisances.—122 were abated; 45 formal and 86 informal notices were served.

Common Lodging House (1).—A closing order was issued for these premises, which have since been thoroughly overhauled and provided with extra windows.

Dairies and Cowsheds.—2 cowsheds were rebuilt, and there are a number of others which require similar improvements.

Factories and Workshops received 123 inspections and were found in good sanitary condition.

SANITARY REQUIREMENTS.

None mentioned.

BISHOP AUCKLAND.

T. A. McCULLAGH, M.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	14,092	13,886	Total notifications	136	62
Birth-rate	25·68	27·50	Smallpox	nil	nil
Death-rate	17·59	15·69	Scarlet fever	53	9
Zymotic death-rate	1·20	1·80	Diphtheria	20	31
Phthisis death-rate	0·78	0·96	Fevers (Enteric, &c.)	7	4
Total Tuberculosis death-rate	1·49	1·87	Puerperal fever	nil	nil
Respiratory diseases death-			Cases treated at hospital .. .	24	8
rate	1·42	1·96	Measles	(10)	(3)
Infant mortality-rate per			Whooping cough	(2)	(11)
1,000 births	104	130	Diarrhoea and Enteritis (under		
			2 years)	(2)	(7)

GENERAL SANITATION.

Water Supply was constant and good.

Scavenging was the subject of some complaints, which ceased on more supervision being given to the work of the contractors.

Sewerage.—Not mentioned.

Housing.—(a) New Houses: 28 were erected and 25 occupied. (b) Insanitary Property: Of 150 houses inspected, 15 were considered unfit for habitation, and closing orders were made in 13 instances. The defects in 19 of the houses were remedied without the making of closing orders. Houses were demolished in Bankwell Yard (4), Wilkinson's Yard (3), and Chandler's Yard (3). Ashpit-privies were

replaced by water-closets (12) and ash-closets (40). Dr. McCullagh says "With our unlimited supply of water I can see no reason why "all new houses should not have water-closets. The ash-closets are "an improvement on the old privy-ashpits, but at the best they are "bad."

Nuisances.—91 were abated; 128 formal and 328 informal notices were served. Dr. McCullagh has again reason to complain of the firing of chimneys instead of sweeping them, and of the habit of spitting on the pavements.

Common Lodging Houses were kept clean and in good repair. Improvements were made in one instance.

Milk Supply.—The greater portion of the milk used in the town comes from the rural districts. The premises situated within the district are in good condition and clean.

Slaughter-houses were well maintained except in one instance where the occupier has since taken new premises, the license being transferred.

Factories and Workshops (68) received 45 inspections. 2 nuisances arising from overcrowding were abated.

SANITARY REQUIREMENTS.

Provision of water-closets and the abolition of ashpit-privies.

BLAYDON.

H. MORRISON, M.B., B.S., B.Hy., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population	32,500	31,500
Birth-rate	33.72	35.42
Death-rate	14.00	17.07
Zymotic death-rate	2.49	4.25
Phthisis death-rate	0.68	0.79
Total Tuberculosis death-rate	1.01	1.36
Respiratory diseases death-rate	2.77	2.03
Infant mortality-rate per 1,000 births.. .. .	129	185

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	219	235
Smallpox	nil	nil
Scarlet fever	92	59
Diphtheria	55	61
Fevers (Enteric, &c.)	14	99
Puerperal fever	nil	nil
Cases treated at hospital	113	147
Measles	(53)	(10)
Whooping cough	(5)	(19)
Diarrhœa and Enteritis (under 5 years)	(12)	(77)

GENERAL SANITATION.

Water Supply.—The Western and part of the Eastern Wards derive their supply from the Consett and Weardale Water Co., while the area bordering on the Tyne is supplied by the Newcastle and Gateshead Water Co.

There are still about 200 houses which have not yet the public supply and obtain water in 52 instances from wells, in 125 from springs, and in 22 from colliery workings. During the year the public supply, in lieu of well or spring water, was laid on to 20 houses, and similar action is being taken with respect to 41 houses.

Sewerage.—Dr. Morrison reports that the nuisance arising from the discharge of sewage into the burn at Bridge Street still continues. The outfall works at Rowlands Gill, Tongue Burns, and Chopwell are giving very satisfactory effluents.

Scavenging is now done weekly; the work is carried out more satisfactorily.

Housing.—(a) New Houses: 136 were built and occupied. (b) Insanitary Property: Under the Housing, Town Planning, Etc., Act, 1909, 439 houses were inspected, and 5 were considered unfit for human habitation; with respect to 25, representations for closing orders were made; 21 were remedied after making the order, 5 were voluntarily demolished, and 414 were remedied without the necessity of making a closing order.

In Spen Ward much has been done to improve the housing conditions, but Dr. Morrison mentions again that Hawdon Place and Cuthbert Street Courts are greatly in need of sanitary improvements, and that Derwent Place and Old Mill Lane, Winlaton, also require attention. The general defects found were: the absence of through ventilation, defective sanitary conveniences, no proper pantries, insufficient drainage, defective floors, roofs and walls.

During the year 135 ashpit-closets and 14 ash-closets were converted into water-closets. There are still over 1,000 insanitary ashpit-privies in the district.

Nuisances.—2,451 nuisances were abated after notice. Of these 399 were with respect to structural defects of dwelling houses, and 10 with respect to overcrowding. Nuisances arising in connection with defective yard paving were abated in 188 instances and with respect to house drainage in 1,552.

Common Lodging-houses.—There is one common lodging house; it is kept in good order.

Dairies, Cowsheds and Milkshops.—Two dairies and two cowsheds were registered during the year. 5 cowsheds were refused registration owing to their defective condition. With respect to dairies and cowsheds, 9 notices were served to abate nuisances. The number of dairies and cowsheds in the district is not given, nor any information as to their sanitary condition or requirements.

Slaughter-houses.—There are 20 slaughter-houses; 2 notices were served to abate nuisances. No further information is given.

Offensive Trades.—Not mentioned.

Food and Drugs.—In one instance diseased meat was voluntarily surrendered and subsequently destroyed.

Factories and Workshops.—91 visits to factories and 10 to workshops were made and 5 informal notices served to abate nuisances under the Public Health Acts; of these 3 were with respect to smoke nuisances.

There are 50 workshops registered in the district.

There are 7 bakehouses which are kept in good order.

SANITARY REQUIREMENTS.

- 1.—Improvement to the outfall sewer at Blaydon.
 - 2.—Improvements to the housing accommodation and more especially Hawdon Place and Cuthbert Courts.
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BRANDON AND BYSHOTTLES.

HENRY SMITH, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	17,970	17,748	Total notifications	135	54
Birth-rate	32·28	32·62	Smallpox	nil	nil
Death-rate	11·58	16·84	Scarlet fever	93	12
Zymotic death-rate	1·00	4·17	Diphtheria	6	10
Phthisis death-rate	0·39	0·95	Fevers (Enteric, &c.)	17	26
Total Tuberculosis death-rate	0·55	1·56	Puerperal fever	nil	nil
Respiratory diseases death-rate	2·56	2·25	Cases treated at hospital ..	44	24
Infant mortality-rate per			Measles	(3)	(14)
1,000 births	91	157	Whooping cough	(3)	(10)
			Diarrhoea and Enteritis (under		
			2 years)	(5)	(41)

GENERAL SANITATION.

Water Supply.—The Weardale and Consett Water Company supply the whole of the district with the exception of a few farms and isolated places.

Sewerage.—The various works acted efficiently. A new sewer has been laid to convey sewage from Langley Moor to the Littleburn works, and the use of the works at the former place has been discontinued. 170 yards of sewers were laid at Brandon Colliery (Cobden Terrace and Albert Street) to replace open channels draining 53 houses. Similar improvements have been made in Back Church Street and Eshwood Street, New Brancepeth Colliery.

Scavenging was carried out by 11 contractors and, except in one instance, the work was well done. The refuse was deposited on the Council's tips or was disposed of as manure.

Housing.—(a) New Houses: 20 were erected and 12 occupied. (b) Insanitary Property: The report contains details of a special house inspection relating to 100 houses at Littleburn, in Railway Street (30), Princess Street (30), and Office Street (40). As regards many of these houses it is recommended that (1) general repairs should be made to the roofs and spouting, (2) ground floors and yards should be cemented, (3) coalhouses should be provided, and (4) the back streets properly made up. There is also a report of a special house inspection relating to 106 houses at New Brancepeth, in Eshwood Street (53), Church Street (25), Sleetburn Street (16), and Unthank Terrace (12). With regard to these houses it is recommended that (1) the T-fall bedrooms in Nos. 34-53, Eshwood

Street should be provided with proper lighting and ventilation, (2) ashpit-privies should be abolished in Nos. 1-24, Eshwood Street and in Unthank Terrace, (3) a cement pavement should be laid at the rear of all the houses, (4) open channels should be abolished and a gully provided for each house, (5) the back streets should be made up. During the year 165 yard premises were paved with cement and 170 new coalhouses were provided. Enclosed yards were made in Albert Street and Cobden Terrace, Brandon Colliery. The district now contains only 250 ashpit-privies. During the year 306 ash-closets were erected, making a total of 1,929 for the past 7 years.

Nuisances.—903 were abated; 479 notices were served. 19 notices were served with respect to overcrowding, which was abated in only 9 instances.

Streets.—Back Brandon Lane was made up.

Dairies and Cowsheds (34) were all inspected. Nuisances due to uncleanness (5), defective paving (3), and defective drainage (3) were detected, and notices were served regarding them. It is stated that practically all the premises have a good water supply.

Slaughter-houses were generally speaking well maintained. Reference is again made to the fact that several slaughter-houses are undesirably close to dwelling-houses. One seizure of unsound beef was made.

Factories (7), *Bakchouse* (1), *Workshops* (19) received 27 inspections and 5 nuisances were remedied.

SANITARY REQUIREMENTS.

1.—Improvements to the housing accommodation at Littleburn and Sleetburn.

2.—Street works.

CHESTER-LE-STREET.

D. DUNCAN, M.B., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population.. ..	15,132	14,787	Total notifications	66	35
Birth-rate	31'06	33'06	Smallpox	nil.	nil.
Death-rate	13'01	16'90	Scarlet fever	19	12
Zymotic death-rate.. .. .	1'32	4'66	Diphtheria.. .. .	3	9
Phthisis death-rate	1'12	0'74	Fevers (Enteric, &c.)	5	5
Total Tuberculosis death-rate	1'78	1'35	Puerperal fever	nil.	1
Respiratory diseases death-rate	2'11	1'82	Cases treated at Hospital ..	13	6
Infant mortality-rate per			Measles	(6)	(21)
1,000 births	112	185	Whooping Cough	(3)	(9)
			Diarrhoea and Enteritis (under		
			2 years)	(8)	(35)

GENERAL SANITATION.

Water was supplied by the Weardale and Consett Water Co.

Sewerage.—There are works at Chester-le-Street giving a fairly satisfactory effluent, and at Chester Moor giving a good effluent. The scheme for Pelton Fell Ward is in course of preparation.

Scavenging in Chester-le-Street is done by the Council's own workmen. In the Pelton Fell Ward the scavenging has been unsatisfactorily done by contractors, and the Council are considering the advisability of employing their own men to do the work. Satisfactory arrangements for the disposal of the refuse of this ward have not yet been made, and the same tip is at present being used. At Chester-le-Street tipping is now being localised to a site (close to the sewage beds) which has been enclosed with a fence.

Housing.—(a) New Houses: 34 were built and occupied. "The Committee have fixed on a site for building workmen's dwellings on. 17 acres of land in a good situation have been offered to the Council on advantageous terms, and if the Council, with the consent of the Local Government Board complete the purchase, they will be in a favourable position not only to build houses, but also to sell land to workmen to build houses under the Small Dwellings Acquisition Act, 1899. One absolute necessity is that the rents of the houses must not be too high, and the Local Government Board's regulations should be relaxed to allow of houses being built so as to let about 5s. per week. The bedrooms and the kitchen are the most important parts of the house." (b) Insanitary

Property: During the year closing orders were made with respect to 6 houses, and the same number of houses were demolished. 24 notices under Section 15 of the Housing, Town Planning, Etc., Act, referring to 90 houses, were served.

At Chester Moor the replacement of the old quarl floors with cement or wood floors was continued, 59 floors being laid. The back bedrooms in 45 4-roomed houses are to be ceiled and to be provided with dormer windows. In the Pelton Fell Ward 6 houses were demolished in Low Howlett, and 6 houses in High Howlett (south side) were provided with self-contained yards and with a new approach. In Chester-le-Street, W.C's. were substituted for privies (17) and ash-closet (7); and in Pelton Fell privies were replaced by water-closets in Whitehill Terrace (17), and by ash-closets in Lonsdale Street (11), Thornton Street (9), South View (11), Mission Row (17), and Railway Terrace (16).

The report directs attention to the inadequate bedroom accommodation in Pelton Fell, and it is stated that negotiations are proceeding with the colliery owners on this matter. It is recommended that the attics in the wood houses (183) should be permanently closed, and in the brick houses (138) should be raised. In any event it is necessary to provide additional houses for the locality.

Streets.—A contract was let for the making of 8 front streets and 10 back streets at Relton Terrace, etc., at a cost of £2,661. The front streets are to be made with tar macadam and the back streets with cement.

Common Lodging Houses (2) contain accommodation for 481 lodgers. Improvements to floors, fireplaces and windows, and the provision of a washhouse are needed in one of the premises.

Dairies (7), *Milkshops* (5).—An unsatisfactory cowshed at Red Rose Farm is still in use.

Slaughter-houses (9).—The Pelton Fell Co-operative Society have provided a new up-to-date slaughter-house. Notice has been served to discontinue the use of Hall's slaughter-house on account of its dilapidated condition.

Factories (12), *Workplaces* (31) and *Workshops* (38), received 405 inspections, and 5 nuisances were found of which 3 were remedied.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation in the Pelton Fell Ward.

CONSETT.

A. D. M. MACINTYRE, M.B., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population	11,414	11,247
Birth-rate	31·80	28·00
Death-rate	13·05	17·07
Zymotic death-rate	1·66	1·68
Phthisis death-rate	0·87	1·33
Total Tuberculo-sis death-rate	1·40	1·68
Respiratory diseases death-rate	1·84	3·64
Infant Mortality-rate per 1,000 births	63	149

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	70	23
Smallpox	nil	nil
Scarlet fever	42	8
Diphtheria	13	7
Fevers (Enteric. &c.)	1	nil
Puerperal fever	1	nil
Cases treated at hospital ..	41	3
Measles	(10)	(1)
Whooping cough	(6)	(nil)
Diarrhœa and Enteritis (under 2 years)	(1)	(16)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The sewage was satisfactorily treated at Stannifordham and Crookhall. The new outfall sewers to the Stannifordham Works have been completed and now no sewage is drained into the contiguous urban district.

Scavenging was satisfactorily done by the Council's workmen.

Housing.—(a) New Houses: 38 were built and occupied and 25 other houses are nearing completion. Water-closets are provided in all new houses. (b) Insanitary Property: of 39 houses inspected, 14 were found to be unfit for habitation and closing orders were recommended and made in all instances. 20 houses were rendered fit for habitation without the making of closing orders. "The reconstruction of the Consett Iron Company's Cottages in Company Rows is represented by 20 houses in Princess Street,

" which have been practically rebuilt and occupied during the year." A block of 13 houses situated in Medomsley Road, Green Street, and Bath Lane, considered by Dr. Macintyre to be " the most insanitary " block of property in the town," which was closed during the year is now undergoing reconstruction. The district still contains 589 privies and it is unsatisfactory to note that there was no reduction in the number of conveniences of this type made during the year.

Nuisances.—89 were abated; 11 formal and 78 informal notices were served.

Streets.—9 streets were made with tar macadam.

Common Lodging Houses (4), which have accommodation for 140 persons, were maintained satisfactorily.

Dairies, Cowsheds and Slaughter-Houses were regularly inspected and were kept clean.

Factories and Workshops received 72 inspections and were found free from nuisance.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation.

CROOK.

A. MACKAY, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	12,350	12,310	Total notifications.. .. .	211	58
Birth-rate	28·26	31·35	Smallpox	nil	nil
Death-rate	14·17	17·70	Scarlet fever	148	32
Zymotic death-rate	1·13	3·08	Diphtheria	51	4
Phthisis death-rate	0·81	1·13	Fevers (Enteric, &c.)	5	15
Total Tuberculosis death-rate	1·45	2·11	Puerperal fever	2	nil
Respiratory diseases death-rate..	2·27	2·92	Cases treated at hospital ..	114	32
Infant mortality-rate per			Measles	(3)	(7)
1,000 births	103	152	Whooping cough	(nil)	(8)
			Diarrhoea and Enteritis (under		
			2 years)	(5)	(16)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company. Notices were served requiring water to be laid into 23 houses in Welsh Row and on to the Brickyard Cottages (3).

Sewerage.—Sewers were relaid in Percy Street, Back High Hope Street and West Road.

Scavenging for the most part was done by contractors and as in previous years the work was the subject of several complaints. The Council's own workmen are responsible for the work, where, owing to the absence of back streets, access to the premises is difficult. Notices have been served requiring all such properties to be provided with water-closets and the Council is now erecting 18 water-closets in various places where the owners have failed to comply with the requirements of the notices.

Housing.—(a) New Houses: 12 were erected and occupied. (b) Insanitary Property: 522 houses were systematically inspected in Crook and Sunnyside and notices were served for the remedying of the defects found. Nos. 1-3 Humble's Yard are to be closed. Whitfield's Tenements are to be converted into 2 through houses and the basements are to be closed. Nos. 1-6 Queen Street were provided with self-contained yards, back doors and an additional block containing scullery and extra bedroom. Nos. 1-4 Woodfield Rows were raised and provided with back doors, and back doors were provided in Nos. 5-10. The Woodhouses (23), Grahamsley, were reconstructed, the walls of brick and weather boarding being replaced by cavity brick walls, whilst doors and windows were renewed and the floors were cemented. During the year water-closets were substituted for midden-privies (6), ash-closets (18); whilst 172 ash-closets replaced 132 midden-privies.

Nuisances.—222 were abated; 96 formal and 224 informal notices were served.

Streets.—9 streets were made at Crook (7) and Sunnyside (2) and plans and estimates have been prepared for the making of 10 other streets at Crook (7) Mount Pleasant (3) and Sunnyside (1).

Dairies and Cowsheds were all measured and carefully inspected. 1 byre was condemned and was rebuilt, whilst 2 others were remodelled.

Slaughter-houses (13) were found in fairly good order except in one or two instances where the floors were defective.

Factories (25) and Workshops (32) received 79 inspections, and 4 nuisances were found of which 3 were remedied.

SANITARY REQUIREMENTS.

1.—Making of the remainder of the back streets and repairing of roads in the colliery villages.

2.—To proceed as rapidly as possible with improvements recommended under the Housing Act.

FELLING.

WM. E. PEACOCK, M.D., B.Hy., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	25,359	25,100
Birth-rate	29.53	33.10
Death-rate	15.89	15.57
Zymotic death-rate ..	1.69	2.90
Phthisis death-rate ..	1.41	1.31
Total tuberculosis death-rate	2.40	1.87
Respiratory diseases death-rate	2.32	1.99
Infant mortality-rate per 1,000 births	119	127

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	146	82
Smallpox	nil.	nil.
Scarlet fever	40	41
Diphtheria	17	24
Fevers (Enteric, &c.)	3	6
Puerperal fever	nil.	1
Cases treated at Hospital ..	24	15
Measles	(26)	(13)
Whooping cough	(4)	(24)
Diarrhœa and Enteritis (under 2 years)	(6)	(33)

GENERAL SANITATION.

Water was satisfactorily supplied by the Newcastle and Gateshead Water Company.

Sewerage.—The sewage is discharged directly into the Tyne. The replacement of the main sewer in High Street by a sewer of modern construction is receiving consideration.

Scavenging was well done by the Council's workmen. About one-quarter of the refuse (4,430 loads) was dealt with by the destructor, the remainder was ploughed into farm lands or was deposited into disused quarries.

Housing.—(a) New Houses: 29 self-contained and 1 tenemented (flats) houses were built. Water-closets are provided in all new houses. (b) Insanitary Property: Of 147 houses inspected, 59 were considered unfit for habitation and were closed in the following

situations :—Oatmeal Mill (6), Palmer's Row (1), Paradise Place (3), and Dixon's Buildings (3), Windy Nook; Splitcrow Lane (4), Hunter's Place (7), Davidson Street (4), Summer Street (4), Brougham Place (1), and Greyhound Yard (1), Felling; Brewery Lane (12), Tyne Street (6), Nest Road (2), and Chapel House (1), Felling Shore; and at Noah's Ark (4), Pelaw Main. Improvements were effected to the following houses:—Nos. 12 and 14 Albion Street, Windy Nook (3 back-to-back tenements converted into 2 through tenements and new pantries, floors, windows, etc., provided); at Felling, Nos. 25 and 27 Caldwell Street (4 back-to-back tenements converted into 2 through tenements, pantries provided, and general repairs), 20 Gosforth Street (general repairs); at Felling Shore, in Tyne Street (2) (pantries provided, new floors and general repairs), No. 11 Brewery Lane (general repairs and provision of paving), Nos. 1-3 Ballast Road (general repairs), and in Back Tyne Street (4) (general repairs); at Heworth Colliery, Nos. 2-7 Chapel Square (block remodelled, cement floors laid, staircases and additional lighting provided where necessary), Nos. 9 and 10 Whitehill Lane and No. 40 Office Row (floors cemented and general repairs). 8 water-closets and 5 ash-closets were substituted for 13 ashpit-privies and 2 ash-closets were replaced by water-closets.

Nuisances.—207 informal and 8 formal notices were served and were complied with except in 2 instances.

Milk Supply.—There are 18 cowkeepers and 38 milk sellers. The cowsheds were maintained clean and are all well-lighted and ventilated.

Slaughter-houses (19) were maintained satisfactorily. The offal was removed promptly to the destructor.

Factories (9) and *Workshops* (50) received 59 inspections and 2 nuisances were found and remedied.

Attached to this report is the report of the Inspector of Nuisances, from which some of the facts mentioned above are taken.

SANITARY REQUIREMENTS.

None mentioned.

HEBBURN.

E. E. NORMAN, M.B., B.S., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population	22,561	21,766
Birth-rate	33.73	34.31
Death-rate	17.68	15.82
Zymotic death-rate	3.14	2.75
Pnthisis death-rate	0.84	1.19
Total Tuberculosis death-rate	1.64	1.60
Respiratory diseases death-rate	3.19	2.15
Infant mortality-rate per 1,000 births	157	125

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	175	136
Smallpox	nil	nil
Scarlet Fever	59	41
Diphtheria	29	49
Fevers (Enteric, &c.)	9	26
Puerperal fever	nil	1
Cases treated at hospital	95	101
Measles	(29)	(14)
Whooping cough	(23)	(3)
Diarrhoea and Enteritis (under 2 years)	(13)	(34)

GENERAL SANITATION.

Water was satisfactorily supplied by the Sunderland and South Shields Water Company.

Sewerage.—During the last 2 years 48 ventilating shafts have been erected and this work “has already resulted in the removal of “the unpleasant smells which used to be persistently noticeable in “certain areas.”

Scavenging of the ash-closets is carried out at night-time and the work, on the whole, is satisfactorily done. It has been decided to build a quay and purchase a hopper, but, for the present, arrangements have been made with the United Alkali Company to send all the refuse to sea.

Housing.—New Houses: 2 self-contained houses and 1 tenemented house (flats) were built. Dr. Norman says: “This number “is remarkably small seeing that there exists a very great demand “for housing accommodation. For many months past there have “been almost no empty houses and newcomers to the district, of “whom there have been many, have experienced the greatest “difficulty in securing accommodation. The Colliery is now employing more men than for some years past and continues to add “to their number, while the ship-building industry shows no sign “as yet of diminishing prosperity. If, under these circumstances, “building operations remain at a stand-still, it appears to me not “unlikely that the Council may find itself with no alternative but “to erect workmen’s dwellings in sufficient numbers to meet the “requirements of the district.” It is recommended that all new

houses should be provided with water-closets. (b) *Insanitary Property*: Of 95 houses inspected, 20 houses were closed; and 37 houses in Station Lane (30) and Charles Street (7) were remodelled and greatly improved without the making of closing orders. "Under the agreement come to between the Council and the Coal Company, a second batch of twenty houses in High Lane Row have been closed. The houses closed in 1911 are ripe for demolition for which an order has been given."

Nuisances.—255 were abated; 19 formal and 261 informal notices were served.

Common Lodging House (1) is in need of repair.

Slaughter-Houses (9) and *Cowsheds* (6) were kept fairly satisfactory. Most of the milk is imported from outside the district and is sold at most of the grocers', confectioners', and general dealers' shops. Dr. Norman again refers to the unsatisfactory arrangements (uncovered pails) for the storage of milk in these places.

Unsound Food.—Some pickled chilled beef was responsible for a rather severe outbreak of food poisoning in the South Ward, 26 persons being affected. 1 carcase infected with tuberculosis was surrendered for destruction.

Factories and Workshops (13) received 21 inspections and one nuisance (want of cleanliness) was found and remedied. There are 3 outworkers in the district.

SANITARY REQUIREMENTS.

Provision of water-closets in all new houses.

HETTON-LE-HOLE.

J. ADAMSON, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.	1912.	1911.	
Estimated Population ..	15,900	15,678	Total notifications ..	149	407
Birth-rate	34·71	37·05	Smallpox	nil	nil
Death-rate	18·45	21·62	Scarlet fever	90	122
Zymotic death-rate ..	0·50	6·25	Diphtheria	20	117
Phthisis death-rate ..	1·07	0·76	Fevers (Enteric, &c.) ..	10	50
Total Tuberculosis death-rate	1·62	1·77	Puerperal fever	nil	1
Respiratory diseases death-rate	1·13	2·17	Cases treated at hospital ..	29	95
Infant mortality-rate per 1,000 births	121	208	Measles	(nil)	(12)
			Whooping cough	(6)	(16)
			Diarrhoea and Enteritis (under 2 years)	(nil)	(60)

GENERAL SANITATION.

Water.—Not mentioned.

Scavenging was satisfactorily done by contractors.

Housing.—(a) New Houses: 48 were built and occupied. “Building is progressing generally, but again the desire to build “small two-roomed houses is to be regretted, but your Council is “powerless to prevent such being built and can do nothing except “remonstrate with the builder.” (b) Insanitary Property: No detailed information was given in the report but “much work was done during the year.”

Nuisances.—236 were abated; 284 formal and 141 informal notices were served.

Streets.—It is recommended that the unmade streets should be dealt with at an early date.

Common Lodging Houses (2) are unsatisfactory and notices have been served for their improvement.

Factories and Workshops were inspected at intervals.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation.
- 2.—The abolition of insanitary midden-privies.
- 3.—Improvements to common lodging houses.
- 4.—Making of back streets.
- 5.—Appointment of a whole time inspector of nuisances.

HOUGHTON-LE-SPRING.

D. S. PARK, F.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>			
	1912.	1911.	1912.		1911.	
Estimated Population	9,910	9,753	Total notifications	135	64	
Birth-rate	34·60	33·63	Smallpox	nil	nil	
Death-rate	14·73	18·04	Scarlet fever	95	21	
Zymotic death-rate	1·21	2·56	Diphtheria	10	7	
Phthisis death-rate	0·50	1·02	Fevers (Enteric, &c.)	4	14	
Total Tuberculosis death-rate	0·60	1·23	Puerperal fever	nil	nil	
Respiratory diseases death-			Cases treated at hospital ..	36	17	
rate	2·02	2·35	Measles	(1)	(4)	
Infant mortality-rate per			Whooping cough	(3)	(nil)	
1,000 births	131	149	Diarrhoea and Enteritis (under			
			2 years)	(1)	(16)	

GENERAL SANITATION.

Water was satisfactorily supplied by the Houghton Colliery Company and the Sunderland and South Shields Water Company. The supply by the latter Company is of a supplementary nature.

Sewerage.—“The effect of the colliery workings is still evident “in the subsidence of the land, with the result that the utmost “difficulty is experienced in obtaining anything like a possible or “satisfactory effluent. The under drainage is seriously affected, “the tanks are so ruptured as to be practically useless during the “greater part of the year, and only by close and constant attention “can the filters be made to perform anything like reasonable duty. “No improvement of a substantial character in the condition of “the farm can be expected until the land has ceased to subside.”

Scavenging.—Two portions of the district are now being scavenged by the Council by direct labour, and contractors are responsible for the rest of the district. The contract work is now being better done and the requirements of the Council will be more readily enforced in the future as the terms of the new contracts reduce the notice required by the contractor from 24 to 6 hours, before neglected work can be done by the Council.

Housing.—(a) New Houses: 10 were built and 8 occupied. The District Council are preparing a scheme under Part III. of the Housing of the Working Classes Act, 1890. “It is intended to “build 50 for the present, 25 with four rooms and a scullery and 25 “with three rooms and a scullery. In view of the fact that there is “a growing demand for houses in the district and that our enter-

"prising builders are not disposed to speculate in this kind of pro-
 "perty, your Council is to be congratulated on the step it has taken.
 "There are no empty houses to be had in the district and it is no
 "uncommon thing for persons to spend days together in a fruitless
 "effort to find accommodation for themselves and families. Over-
 "crowding to a certain extent under existing conditions is difficult,
 "if not impossible, to avoid, more especially as so many of our
 "houses are undergoing repairs." (b) *Insanitary Property*: Of
 289 houses inspected 39 were considered unfit for habitation, and
 in 18 instances representations were made for their closure but
 only one closing order was made. 205 houses were repaired without
 the making of closing orders. The reconstruction of some of the old
 property belonging to the Colliery Company is proceeding in the
 Market Place and Anderson's Yard. "Representations with a view
 "to closing orders were made on the following premises, Nos. 1 and
 "2, Short Street, 17, Newtown, Lambton Street, Newtown, 18, High
 "Hill Side, 26, 37, 38, 39, 41 and 43, Market place, and 21, 22, 22a
 "and 22b, Kirklee Lane. The following have been closed without
 "closing orders: No. 2, Short Street, Newtown, 41, 42, 43, Market
 "Place, and 102, Sunderland Street (demolished). The tenants of
 "Nos. 26, 37, 38 and 39, Market Place, and No. 1, Short Street,
 "Newtown, have received notice to quit. Nos. 21, 22, 22a and 22b,
 "Kirklee Lane are now being reconstructed into three dwelling
 "houses. No. 17, Lambton Street, Newtown, has been thoroughly
 "overhauled and repaired, and is now fit for habitation. A scheme
 "has been submitted for 32 dwelling houses to be erected early this
 "year in the place of the existing block of insanitary houses at the
 "Folds Colliery Row. There are now 54 houses under notice for
 "repairs and improvements." During the year ashpit-privies were
 replaced by 77 water-closets and 298 ash-closets. There are still
 786 ashpit-privies in the district, but the Council is taking active
 measures to complete this most desirable and necessary improvement.

Nuisances.—729 were abated; 232 formal and 522 informal
 notices were served.

Streets.—3 private streets were made, and plans have been
 prepared for the making of 2 other streets.

Common Lodging Houses.—The houses (3) situated in Grey Horse
 Lane and High Hill Side have been structurally improved and now

possess proper accommodation for both sexes, but the buildings are not well adapted for this purpose. The yard of the Lambton lodging-house has been paved.

Dairies and Cowsheds received the required inspections. Action was taken in one instance for the abatement of overcrowding.

Slaughter-houses (12) are reported to be clean and well kept, but in some instances the shops are used as slaughter-houses. 4 beasts, found after slaughtering to be suffering from miliary tuberculosis, were surrendered by the owners to the Sanitary Inspector.

Factories and Workshops were inspected as usual, and 2 nuisances, due to overcrowding and defective sanitary accommodation, were remedied.

SANITARY REQUIREMENTS.

Abolition of ashpit-privies.

LEADGATE.

WM. ALLEN, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	5,000	4,990	Total notifications	31	15
Birth-rate	30'00	30'06	Smallpox	nil	nil
Death-rate	17'00	18'03	Scarlet fever	19	10
Zymotic death-rate	1'80	3'40	Diphtheria	9	3
Phthisis death-rate	1'40	1'00	Fevers (Enteric, &c.)	nil	nil
Total Tuberculosis death-rate	2'00	1'80	Puerperal fever	nil	nil
Respiratory diseases death-rate ..	3'40	3'00	Cases treated at hospital ..	16	11
Infant mortality-rate per 1,000 births	113	226	Measles	(1)	(nil)
			Whooping cough	(3)	(1)
			Diarrhoea and Enteritis (under 2 years)	(3)	(15)

GENERAL SANITATION.

Water is satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The district is reported to be well sewered, and most of the sewage is treated at the works.

Scavenging is nearly all done by contract.

Housing.—(a) New Houses: 19 were built and occupied; all with the exception of four houses at Iveston were provided with water-closets. There is a sufficiency of workmen's houses, and it is stated

that there is no overcrowding. (b) Insanitary Property: "Twenty houses were rebuilt, and, with the exception of one house at Ives-ton, these houses are the property of the Consett Iron Company, who have promised to rebuild another batch of houses at Plantation Street, Leadgate." It is stated that "The Consett Iron Company, being the largest owners of workmen's cottages, are gradually improving their property, and other owners are willing to remedy any defects pointed out by your Surveyor. Under Section 17 of the Act of 1909, therefore, there have been no orders for closure made, nor none applied for."

Milk Supply.—The district is supplied from 13 dairies. 4 cowsheds were rebuilt on model plans.

Slaughter-houses were well maintained.

Factories and Workshops (19) received 96 inspections and were found satisfactory.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation.

RYTON.

JAMES W. SMITH, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911		1912.	1911.
Estimated Population ..	13,450	13,060	Total notifications	88	86
Birth-rate	31·22	32·77	Smallpox	nil	nil
Death-rate	11·15	14·16	Scarlet fever	44	39
Zymotic death-rate	0·59	2·83	Diphtheria	16	10
Phthisis death-rate	0·37	0·45	Fevers (Enteric, &c.)	7	28
Total Tuberculosis death-rate	1·19	0·76	Puerperal fever	nil	1
Respiratory diseases death-rate..	1·85	1·83	Cases treated at hospital ..	22	25
Infant mortality-rate per 1,000 births	100	154	Measles	(nil)	(8)
			Whooping cough	(5)	(1)
			Diarrhoea and Enteritis (under 2 years)	(nil)	(25)

GENERAL SANITATION.

Water was satisfactorily supplied by the Newcastle and Gateshead Water Company.

Scavenging was done on the whole satisfactorily, but Dr. Smith again recommends that the work should be done in the early morning hours instead of during the day.

Housing.—(a) New Houses: 62 were erected and occupied, chiefly at Greenside, 33 being provided with water-closets and 29 with ash-closets. It is again recommended that water-closets should be provided in all new houses. (b) Insanitary Property: Of 111 houses inspected, 6 were considered unfit for habitation, and closing orders were made for the same, whilst the defects in 37 houses were remedied without the making of closing orders. In 33 houses yards were paved and ashpit-privies were replaced by water-closets (14) and ash-closets (36); the district still contains 866 ashpit-privies.

Streets.—It is stated that “many of the back streets have been dealt with during the year, and vast improvements effected, as at Greenside and Crawcrook, but there are still several referred to in former reports that require urgent attention, and none more so than the streets at Crookhill, which are impassable in bad weather. The street between South Beech Grove and South View is now being done, but the Clifford Terrace streets, the lane to Garden Terrace, Woodside, the road leading to Woodside Bank, still continue to be as bad as they have been for years, while the road from the East End of Ryton to Newburn Cottages continues to be the quagmire that it has been from time immemorial.”

Nuisances.—155 were abated; 156 formal and 184 informal notices were served.

Dairies and Cowsheds and Slaughter-houses were systematically inspected and found satisfactory.

Factories and Workshops.—There are no factories in the district, and the few workshops are satisfactory.

SANITARY REQUIREMENTS.

- 1.—Scavenging during the early morning hours.
 - 2.—Provision of water-closets in all new houses.
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SEAHAM HARBOUR.

LUKE G. DILLON, M.D., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	16,500	16,000
Birth-rate	36·91	34·75
Death-rate	14·96	18·81
Zymotic death-rate ..	1·63	3·75
Phthisis death-rate ..	0·85	0·93
Total Tuberculosis death rate	2·06	1·93
Respiratory diseases death-rate	4·00	3·18
Infant mortality-rate per 1,000 births	128	196

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	72	50
Smallpox	nil.	nil.
Scarlet fever	29	24
Diphtheria	4	1
Fevers (Enteric, &c.)	9	20
Puerperal fever	nil.	nil.
Cases treated at hospital ..	21	24
Measles	(8)	(4)
Whooping cough	(6)	(9)
Diarrhoea and Enteritis (under 2 years)	(13)	(43)

GENERAL SANITATION.

Water was satisfactorily supplied by the Sunderland and South Shields Water Company.

Sewerage.—Plans are being prepared with the object of taking all the sewage to the south of the town.

Scavenging was satisfactorily done by the Council's own workmen.

Housing.—(a) New Houses: 132 separate houses (138 tenements) were built and occupied. Dr. Dillon states: "It gives me much pleasure to state that the U.D.C. are now considering a scheme for building houses under Part III. of the Housing of the Working Classes Act. I beg to offer them my congratulations as I feel sure they are going to confer a boon and a blessing on the working classes in this district.

"Plans and estimates have been prepared by the Council's surveyor, Mr. F. E. Boaz, M.I.Mun.E., for 69 houses, and the calculations which have been made show that the houses will be no charge on the rates.

"The site is immediately to the south of the gasworks and the bottleworks, and contains 2·874 acres, and is offered by the Marquis of Londonderry at £550 per acre. The setting-out provides 24 houses to the acre. A new inclined road leading to Dawdon has been provided for, to be constructed by Lord Londonderry. Two new streets and two side streets are to be made, in addition to Gallery Row. The houses will be self-contained, and

“ are set out in blocks of five and six. There are no through back
 “ streets, but secondary access is provided by 13 ft. paved passages
 “ between each block, leading to 4 ft. paved footwalks.

“ Each house will be 16 ft. wide, centre to centre, by 39 ft.
 “ deep from front to backyard wall. The main building will be 26 ft.
 “ 3 in. deep. The backyard will contain, in addition to a coalhouse
 “ and w.c., a clear paved area of 150 square feet. On the ground
 “ floor, entrance to the house is by a small square vestibule, with a
 “ door leading immediately into the living room, which is situate
 “ at the front of the house, and is 15 ft. 3 in. by 14 ft. Room has
 “ been left in the scullery for the insertion of a bath. The first
 “ bedroom is 15 ft. 3 in. by 12 ft. 3 in., and the back bedroom is
 “ 11 ft. 9 in. by 12 ft.

“ Being in a commercial centre, no attempt has been made to
 “ introduce any architectural effects. Joint washhouses in joint
 “ blocks of twos and fours have been added, well away from the
 “ dwellings, at the end of the abutting garden. Each washhouse
 “ will serve two, and in some cases three, tenants.

“ The estimate for the 69 houses shows that a total loan will
 “ be required of £14,909 10s. 0d., the principal items being: land,
 “ etc., £1,776 10s. 0d.; buildings, £11,293; and streets, sewers,
 “ and fencing, £1,840. The annual charge for repayment and
 “ interest on the loan will be £646 16s. 5½d., and in addition there
 “ will be a further annual charge of £402 13s. 2½d. for rates, taxes,
 “ insurance, water, repairs, supervision, and collection of rents, and
 “ balance for contingencies, making a total annual charge of £1,049
 “ 9s. 8d. The rent of the 69 houses, at 6s. per week, will bring in
 “ £1,076 8s. 0d., and allowing 2½ per cent. for empties and losses,
 “ viz., £26 18s. 4d., just balances the account.”

“ (b) Insanitary Property: Dr. Dillon states: “ I have personally
 “ inspected 400 houses, which, with those inspected last year, con-
 “ stitute the worst class of property in the town. The principal
 “ defects found were dampness, absence of through ventilation, no
 “ provision for the storage of food, and overcrowding. Many houses
 “ are divided into three tenements, one downstairs and two up. It
 “ will be necessary in the near future to convert all these houses into

“single dwellings, or flats for two tenants.” Of 400 houses inspected, 42 were considered unfit for habitation, and representations were made with a view to making closing orders in 25 instances, but only one closing order was made, whilst defects in 65 houses were remedied without the making of closing orders. It is stated that “closing orders were recommended in regard to “exceptionally bad houses only, as if houses are closed at present the “occupiers are driven away from the town and thrown out of employment.” 12 ash-closets were replaced by water-closets.

Nuisances.—213 were abated; 47 formal and 167 informal notices were served.

Common Lodging Houses (4).—Structural alterations were carried out in 2 houses and one was closed, being unfit for habitation.

Dairies and Milkshops.—The 2 dairy farms and the various milkshops in the district were regularly inspected and were found in good order.

Slaughter-houses (14).—In some instances the slaughtering is done in the shop, which is objectionable. One shop was much improved by the substitution of a cement for a wooden floor.

Inspection of Ships.—109 foreign and 76 British ships were inspected. No case of infectious disease was detected during the year.

Factories (10), Workshops (24), and Bakehouses (27) received 167 inspections, and 6 nuisances (want of cleanliness) were found and remedied.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation, as mentioned in the report.

SHILDON.

S. FIELDEN, M.D., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	13,721	13,531
Birth-rate	28·56	28·45
Death-rate	15·08	13·08
Zymotic death-rate ..	3·35	1·18
Phthisis death-rate ..	1·45	0·88
Total Tuberculosis death-rate	1·89	1·62
Respiratory diseases death-rate	1·89	1·69
Infant mortality-rate per 1,000 births	86	101

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	396	133
Smallpox	nil.	nil.
Scarlet fever	354	64
Diphtheria	22	43
Fevers (Enteric, &c.)	10	13
Puerperal fever	nil.	1
Cases treated at hospital ..	124	49
Measles	(30)	(nil.)
Whooping cough	(1)	(2)
Diarrhoea and Enteritis (under 2 years)	(1)	(11)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The works acted efficiently. Sewers were laid in 6 streets.

Scavenging is done at night by the Council's own workmen. 8,279 loads of refuse were destroyed in the destructor, and 2,434 loads were put on farm land.

Housing.—(a) New Houses: 4 were built and occupied; 3 were supplied with water-closets, and the other (an outlying house) with an ash-closet. (b) Insanitary Property: 406 houses were inspected during the year, and for the most part were found in a satisfactory condition—any defects were promptly remedied. In Temperance Street 2 houses in the yard were demolished, and the owner is to be required to make further improvements. In Auckland Terrace 5 water-closets were erected and the yards asphalted. In Back Queen Street the houses were provided with proper drainage and water supply, and 4 water-closets were substituted for privies. 4 cottages in Fryer Street have been thoroughly repaired and provided with new cement floors and pantries. During the year 40 water-closets were substituted for privies.

Nuisances.—121 notices were served and complied with.

Streets.—6 front and 4 back streets were made. A recreation ground in a central position has been provided.

Cowsheds and Milkshops were periodically inspected and a few small defects were noted. 1 new byre was erected.

Slaughter-houses were well maintained.

Factories (13) and Workshops (39) received 104 inspections, and were found clean and satisfactory.

SANITARY REQUIREMENTS.

- 1.—To vigorously continue the abolition of privy-middens.
- 2.—To convert ash-closets to the water-carriage system.
- 3.—To continue the making of streets.
- 4.—The erection of new cowsheds and dairies.

SOUTHWICK-ON-WEAR.

JOHN J. CARRUTHERS, M.B., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	13,939	13,817
Birth-rate	33·93	35·99
Death-rate	13·27	19·99
Zymotic death-rate ..	0·93	3·61
Pbthisis death-rate ..	0·93	0·79
Total Tuberculosis death-rate	1·43	0·86
Respiratory diseases death-rate	2·29	3·76
Infant mortality-rate per per 1,000 births ..	67	153

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	97	60
Smallpox	nil.	nil.
Scarlet fever	61	32
Diphtheria	2	6
Fevers (Enteric, &c.)	7	22
Puerperal fever	nil.	nil.
Cases treated at hospital ..	54	44
Measles	(3)	(8)
Whooping cough	(4)	(6)
Diarrhoea and Enteritis (under 2 years)	(4)	(33)

GENERAL SANITATION.

Water was satisfactorily supplied by the Sunderland and South Shields Water Company. The public supply for Thistley Hill, referred to in previous reports, has not yet been obtained.

Sewerage system acted efficiently.

Scavenging was satisfactorily done by the Council's own workmen. The refuse is disposed of to farmers.

Housing.—(a) New Houses: 2 were erected and occupied. (b) Insanitary Property: Of 300 houses inspected, 5 houses were considered unfit for habitation and closing orders were made for the

same, whilst the defects in 18 houses were remedied without the making of closing orders. "In carrying out inspections, the work of the officials has been mainly directed to the property that is "oldest and most needful of attention." Water-closets were substituted for 56 midden-privies, of which the district still contains 666. 29 defectively paved yards were dealt with.

Nuisances.—406 were abated after the service of notices.

Dairies and Cowsheds were inspected frequently. According to a recent census there are 53 dairy cows, of which 31 were tested with tuberculin. One cow was found suffering from tuberculosis of the udder, and the owner agreed to stop using the milk.

Common Lodging Houses.—None.

Slaughter-houses (11).—The shops are used as slaughter-houses in 5 instances.

Factories (15), *Workshops* (40), and *Workplaces* (1) received 515 inspections. No nuisances were found.

SANITARY REQUIREMENTS.

- 1.—Abolish privy-middens and ash-closets.
- 2.—Substitute water-carriage system.
- 3.—A public slaughter-house.
- 4.—A public mortuary.

SPENNYMOOR.

W. MUSSELLWHITE, M.R.C.S., D.P.H.,
Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	18,033	17,914
Birth-rate	32.93	34.49
Death-rate	14.91	16.18
Zymotic death-rate ..	2.15	3.01
Phthisis death-rate ..	0.77	0.55
Total Tuberculosis death-rate	1.38	1.06
Respiratory diseases death-rate	3.27	2.00
Infant mortality-rate per 1,000 births	104	165

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	307	120
Smallpox	nil.	1
Scarlet fever	249	64
Diphtheria	6	6
Fevers (Enteric, &c.)	9	21
Puerperal fever	nil.	nil.
Cases treated at hospital ..	198	88
Measles	(9)	(1)
Whooping cough	(9)	(6)
Diarrhœa and Enteritis (under 2 years)	(12)	(43)

GENERAL SANITATION.

Water.—With the exception of a few outlying farms the whole district is satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—Tenders for the new sewerage scheme are to be advertised for immediately. Reference is again made to the pollution of Tudhoe Grange Beck with coal dust and tarry matter.

Scavenging.—“The work has been done very badly in some of the scavenging areas. Supervision of the scavenging occupies a large part of the Inspector of Nuisances’ time. The Council have had to take the work out of the hands of two or three of the contractors. I should recommend the Council not to accept tenders from any of the scavengers whose work has been unsatisfactory in the past.”

Housing.—(a) New Houses: 18 were built and occupied. It is stated that ash-closets were still being provided for new houses, but that waterclosets would be recommended as soon as the new sewerage system scheme comes into operation. (b) Insanitary Property: The systematic house-to-house inspection of the district was continued. One scavenging area in each of the three wards, Spennymoor, Ferryhill and Tudhoe, has been inspected, and a second area in Spennymoor Ward is now being inspected. Of 225 houses inspected, 6 were considered unfit for habitation and closing orders were made in one instance, whilst the defects in 5 others were remedied without the making of closing orders. In addition 99 preliminary notices were served as to defects which were complied with in 84 instances. 5 water-closets and 10 ash-closets were substituted for ashpit-privies of which there are still 683 in the district.

Nuisances.—48 were abated; 10 formal and 50 informal notices were served.

Streets.—Not mentioned.

Common Lodging Houses (4) were inspected regularly and found to be well conducted.

Dairies and Cowsheds.—All cowsheds and dairies were inspected twice during the year, and notices for whitewashing were complied

with. "There is, however, little improvement to report as to the condition in which the cows are kept, and few or no precautions are taken in milking."

Slaughter-houses were inspected twice a year and most were found clean and well kept, but in many instances they are situated too close to houses.

Offensive Trades.—The 2 knacker yards gave rise to no nuisances.

Factories (27), *Workshops* (72), and *Workplaces* (3) received 190 inspections; 6 nuisances due to uncleanness (1), defective sanitary accommodation (4), etc., were found and remedied.

SANITARY REQUIREMENTS.

Abolition of ashpit-prives and provision of water-closets as soon as the new sewerage scheme is completed.

STANHOPE.

JOHN GRAY, M.B., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	2,026	2,010
Birth-rate	16·28	18·40
Death-rate	15·30	16·91
Zymotic death-rate..	0·98	0·49
Phthisis death-rate..	1·48	0·99
Total Tuberculosis death-rate	1·97	1·49
Respiratory diseases death-rate	1·97	1·99
Infant mortality-rate per 1,000 births	60	53

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	52	5
Smallpox	nil.	nil.
Scarlet fever	37	1
Diphtheria	14	1
Fevers (Enteric, &c.)	nil.	1
Puerperal fever	nil.	nil.
Cases treated at hospital ..	34	no hospital.
Measles	(1)	(nil.)
Whooping cough	(nil.)	(1)
Diarrhoea and Enteritis (under 2 years)	(nil.)	(nil.)

GENERAL SANITATION.

Water Supply.—The supply is both plentiful and good. The three metal covers to replace the wooden one at the reservoir mentioned in the last annual report have now been provided. The water main in Paragon Street has been extended.

Sewerage.—The new sewage disposal plant did not work so satisfactorily during the wet season owing to the access of surface water.

Scavenging.—Scavenging is carried out satisfactorily.

Housing.—(a) New Houses: Two new houses were erected and occupied during the year. (b) Insanitary Property: Under the Housing (Inspection of District) Regulations, 13 houses were inspected and their condition noted, but no mention is made as to whether any action was taken. To 6 cottages in Back Lane doors were provided, the yards cemented and separate water spouts and closet accommodation provided. To 3 cottages in the Square, water-closets were provided in place of a very defective ashpit-privy. Here the yards were cemented, and to one of the houses a back door provided. During the year 19 ashpit-privies were converted into water-closets and 6 into ash-closets. There are still 15 ashpit-privies and 188 ash-closets in this district.

Nuisances.—24 informal notices were served, namely, 10 with respect to ashpits and privies, 13 in connection with defects in house drainage, and one to cleanse a dwelling; all were complied with.

Dairies, Cowsheds and Milkshops.—The cowsheds were inspected. One of the worst in the district has been built and remodelled and is now satisfactory.

Slaughter-houses.—No mention is made.

Food and Drugs.—The milk supply is stated to be good.

Factories and Workshops.—No mention is made.

SANITARY REQUIREMENTS.

1.—The provision of additional lighting and through ventilation in the older type of cottages.

2.—The paving of yards, and improved access to certain back premises to facilitate public scavenging.

3.—The improvement generally of the sanitary condition of the cottages and more particularly with respect to damp walls.

STANLEY.

E. G. D. BENSON, L.R.C.P., D.P.H., Medical Officer
of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	25,000	23,600	Total notifications	190	124
Birth-rate	34.40	36.22	Smallpox	nil.	nil.
Death-rate	13.32	16.10	Scarlet fever	100	68
Zymotic death-rate ..	1.60	2.88	Diphtheria	44	30
Phthisis death-rate ..	0.78	0.59	Fevers (Enteric, &c.) ..	1	9
Total Tuberculosis death-rate	1.52	2.07	Puerperal fever	nil.	nil.
Respiratory diseases death-rate	2.28	2.88	Cases treated at hospital ..	140	98
Infant mortality-rate per 1,000 births	126	173	Measles	(19)	(20)
			Whooping cough	(3)	(11)
			Diarrhoea and Enteritis (under 2 years)	(7)	(32)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—Application is to be made for a loan for works at Hustle Donn, supplementary to those at South Moor.

Scavenging was done by contractors. “The provision of covered carts has proved a great boon, especially in summer, as by this innovation the dust is prevented from being disseminated in the atmosphere by the wind, and will doubtless aid in preventing epidemics of such diseases as typhoid fever and epidemic enteritis.”

Housing.—(a) New Houses: 212 self-contained houses were built. The majority of the houses contained 3 rooms (77) or 4 rooms (72); 46 houses contained 5 rooms, and in 28 instances they were provided with baths, and in 34 instances with water-closets. (b) Insanitary Property: 48 houses were inspected, all of which were considered unfit for habitation, but closing orders were only made in 32 instances, leaving 16 houses which are to be closed by the owner. Demolition orders were made for 6 houses in High Street, and similar action should be taken respecting the houses in Sand Street, which are now all empty.

At Havannah, closing orders for the whole of Scott Street and George Street (32 houses) were served, and plans have been passed for semi-detached houses in Scott Street, whilst new houses with self-contained yards are to be erected in George Street and Alfred Street. At South Moor satisfactory alterations are to be made to

High Row, Quaking Houses and Old South Moor. In Pine and Poplar Streets the houses have been provided with ash-closets and self-contained yards. At Shield Row and Kip Hill, the owners have been informed that the houses are unfit for habitation and that closing orders are to be made. 111 yards were paved, and in Joicey Terrace and Henry Street cement footpaths and dry yards formed. 127 ashpit-privies were converted into ash-closets and 1 water-closet was substituted for an ash-closet. The district still contains 1,241 ashpit-privies.

Nuisances.—300 were abated. 176 formal and 266 informal notices were served.

Milk Supply.—9 vendors and 10 cow-keepers retail milk in the district. There is still room for improvement in the condition of the byres.

Slaughter-houses (8) were satisfactorily maintained. The offal was promptly removed.

Factories (19) and *Workshops* (41) received 120 inspections; 2 nuisances (uncleanliness) were found and remedied.

SANITARY REQUIREMENTS.

None mentioned.

TANFIELD.

E. G. D. BENSON, L.R.C.P., D.P.H., Medical Officer of Health.

Vital Statistics,

	1912.	1911.
Estimated Population ..	10,500	10,700
Birth-rate	30·47	30·09
Death-rate	14·09	14·86
Zymotic death-rate ..	1·43	3·05
Phthisis death-rate ..	1·04	0·56
Total Tuberculosis death-rate	1·43	0·93
Respiratory diseases death-rate ..	2·09	1·49
Infant mortality-rate per 1,000 births	119	167

Infectious Diseases—Cases and (Deaths)

	1912.	1911.
Total notifications	123	72
Smallpox	nil	nil
Scarlet fever	35	28
Diphtheria	45	18
Fevers (Enteric, &c.)	3	10
Puerperal fever	nil	nil
Cases treated at hospital ..	79	52
Measles	(nil)	(8)
Whooping cough	(5)	(7)
Diarrhoea and Enteritis (under 2 years)	(5)	(14)

GENERAL SANITATION.

Water.—The district is satisfactorily supplied by the Weardale and Consett Water Company. Water has been laid on to Esther Pit and Upper Lintz Cottages and now practically almost all the houses are provided with inside water taps.

Sewerage.—The area of the works at Tantobie and White-le-Head have been increased so as to permit the land to be rested at intervals. Friarside has been provided with drainage.

Scavenging was satisfactorily done by contractors, and the disposal of the refuse caused no nuisance.

Housing.—(a) New Houses: 17 self-contained houses (4-roomed or larger) were built. (b) Insanitary Property: 27 houses were inspected and all were considered to be unfit for habitation; in 6 instances representation was made for closure and closing orders were made, whilst in 21 houses the defects were remedied without the making of closing orders, 10 houses being practically rebuilt and 11 others vastly improved. The replacement of stepladders by stair-cases and the substitution of ash-closets for ashpit privies has made considerable improvement to the houses at Tanfield Lea, Hobson, and Beamish, Red Row. It is again mentioned that similar improvements should be made at Lintz Colliery and Friarside. During the year 2 water-closets and 75 ash-closets were substituted for midden-privies of which there are still 796 in the district.

Streets.—One back street has been made at Lintz Colliery.

Nuisances.—131 formal and informal notices were served.

Slaughter-Houses, Dairies and Cowsheds were satisfactorily maintained.

Factories (14) and Workshops (21) received 70 inspections. 5 nuisances were detected and remedied.

SANITARY REQUIREMENTS.

The abolition of ashpit-privies at Lintz Colliery and Friarside.

TOW LAW.

J. H. NAISMITH, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	4,327	4,327	Total notifications	41	20
Birth-rate	28·88	26·57	Smallpox	nil	nil
Death-rate	10·16	14·9	Scarlet fever	20	6
Zymotic death-rate	nil	2·31	Diphtheria	3	5
Phthisis death-rate	1·15	1·15	Fevers (Enteric, &c.)	1	1
Total Tuberculosis death-rate	1·38	1·84	Puerperal fever	1	nil
Respiratory diseases death-rate	2·31	1·38	Cases treated at hospital ..	10	4
Infant mortality-rate per 1,000 births	72	78	Measles	(nil)	(2)
			Whooping cough	(nil)	(6)
			Diarrhœa and Enteritis (under 2 years)	(nil)	(1)

GENERAL SANITATION.

Water Supply.—The water supply of the district is obtained from the mains of the Weardale and Consett Water Company.

Sewerage.—The general drainage is said to be satisfactory. There are still many defective yard traps, and in some places the channels in the back streets require attention.

Scavenging.—In some parts of the district the scavenging is carried out in a highly satisfactory manner, but is not so in many other parts.

Housing.—(a) New Houses: No new houses were erected during the year. (b) Insanitary Property: Dr. J. H. Naismith reports that “very few new houses have of late years been built, and the consequence is that a great many are not up to the present day requirements. . . . We have started to tackle some of the problems lying to our hands, but in the future we must proceed at “a faster pace.” The chief structural defects enumerated in the report are, faulty slating, broken spouting and downcomers with the water soaking into the foundation of the building, and faulty paving in some of the back streets. In the report of the Inspector of Nuisances, which is appended, it is recorded that 38 houses were inspected under the Housing (Inspection of District) Regulations and that 11 were found to be defective. With respect to these, notices have been served, but as the defects have not been remedied proceedings are to be taken.

The summary also states that 36 defective yard surfaces were put in order, 45 houses provided with rain water down-pipes, 16 open privies converted into ash-closets (15) and into water-closets (1). There are still 267 ashpit-privies in the district.

Nuisances.—The number of nuisances abated was 24; not abated, 9.

Dairies and Cowsheds.—The question of the “cowsheds and dairy accommodation,” writes Dr. Naismith, “must be seriously tackled in the near future if we wish to keep up with the needs of the times.” The milk supply is good.

Slaughter-houses.—“These as a rule are kept clean and tidy and are duly registered.”

Food and Drugs.—No mention is made as to the quality of the meat and food supplies sold in the district.

Factories and Workshops.—There are three registered workshops. Of the factories 3 inspections were made, of the workshops 2. “The places are small and are well looked after.” There are no bake-houses.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing of the working classes.
 - 2.—The enforcement of the provisions of the Dairies, Cowsheds and Milkshops Order with respect to cowsheds.
 - 3.—More satisfactory methods of scavenging in certain parts of the district.
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WHICKHAM.

ANDREW SMITH, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	19,164	18,469	Total notifications	161	150
Birth-rate	30·26	30·10	Smallpox	nil	nil
Death-rate	12·62	13·75	Scarlet fever	61	92
Zymotic death-rate	2·14	2·16	Diphtheria	33	39
Phthisis death-rate	0·88	0·59	Fevers (Enteric, &c.)	11	5
Total Tuberculosis death-rate	1·56	1·29	Puerperal fever	2	nil
Respiratory diseases death-rate ..	1·93	1·84	Cases treated at hospital ..	68	85
Infant mortality-rate per 1,000 births	86	143	Measles	(16)	(16)
			Whooping cough	(9)	(3)
			Diarrhœa and Enteritis (under 2 years)	(5)	(21)

GENERAL SANITATION.

Water Supply.—The quality of the water is excellent, and the quantity sufficient. The district is supplied by the Newcastle and Gateshead Water Company, with the exception of Marley Hill, which is served by the Weardale and Consett Water Company.

Sewerage.—When the scheme for the drainage of Marley Hill, Byer Moor, and Crookgate, which is now approaching completion, is in full working order, the drainage throughout the district will be satisfactory. But it is just possible, owing to the great increase of the district that the main sewer will soon be inadequate. There are 2,999 ash-closets, 164 water-closets and 4 ashpit-privies in the district.

Scavenging.—The work is carried out by the District Council, and is done efficiently; the ash-closets are emptied weekly.

Housing.—(a) New Houses: Built 23; all were occupied. (b) Insanitary Property: The following is a summary of the work carried out during the year under the Housing, Town Planning, Etc., Act, 1909:—Houses closed 6; houses (new property) in connection with which minor defects were remedied 67; houses satisfactorily repaired under the supervision of the sanitary authority 43; work in progress 30; houses with respect to which owners have promised to remedy defects and in hand 80.

Whickham.—There are many old houses in Whickham without damp proof courses but steps are being taken to miti-

gate the tendency to dampness. One tenement property in Church Chare requires reconstruction or demolishing and is now being dealt with.

Swalwell.—Spicer's Bank has been satisfactorily paved so that, with a good front street, back street and paved yards, the houses throughout now are in as satisfactory a condition as it is possible to make them.

At Waterside, Poor House Yard and Whorlton Terrace the brick floors of the houses repeatedly referred to in previous reports are now being replaced by impervious cement, the pantries are being repaved and cement roofs are taking the place of dilapidated tiles.

In Long Row the yards are being reconstructed and improvements carried out to the sanitary conveniences.

"General progress is being made," writes Dr. Andrew Smith, "in the sanitation of this ward, though it must ever be borne in mind that we are here dealing with very old property of very bad original construction. . . . There is nothing like the overcrowding which existed only a few years ago."

Marley Hill.—The great improvement scheme mentioned in his last annual report Dr. Smith says "is being steadily proceeded with, but is not by any means complete. The greater part of the work is done, the sewers are laid, the machinery and works for the Shone System are being constructed, the large yards with conveniences at Byer Moor are finished, the roads there are partially constructed, a few of the back-to-back houses have been made through, but not to any great extent since last year."

Dunston.—"This ward continues to increase in size by continuous building. Dunston has been thoroughly overhauled during the year, but in addition to all the work scheduled in the last report to be done, something like 60 houses have already been dealt with, and others are either

“being attended to or are under negotiation with the owners,
 “while preliminary notices have been taken of others to be
 “similarly dealt with in detail.”

Common Lodging Houses.—Not mentioned.

Nuisances.—To abate nuisances 311 formal notices were served and 291 were complied with. These included notices to cleanse (23), with respect to structural defects in dwelling houses (47), with respect to defective house drainage (49) and yard paving (9), with respect to defective ash-closets (51), defective ashpits and privies (6). One ashpit privy was converted into a water-closet. No ash-closets were converted into water-closets.

Dairies, Cowsheds and Milkshops.—All the dairies and cowsheds were inspected and reported on in detail, and from 70 to 80 visits were paid to them. 16 notices were served to abate nuisances, and in addition 30 cowkeepers were notified with respect to the half-yearly limewashing. Dr. Smith can “confidently assert that a pure, “sweet and clean milk supply is guaranteed throughout the district “in every way except that of tubercle free.”

There are a good many small shops in the district, such as confectioners and general shops, where milk is retailed. These are regularly inspected, and during the year 5 notices were served.

Slaughter-houses.—There are 10 slaughter-houses, namely, 3 at Whickham, 3 at Swalwell, 1 at Crookgate and 3 at Dunston. In addition to these a license was granted for permission to use certain premises at Whickham, but the slaughter-house has not been occupied.

2 slaughter-houses at Dunston were condemned; 1 at Whickham was granted a temporary license; 3 at Swalwell were required to put their places in order; 1 at Whickham, 1 at Crookgate and 1 at Dunston required to carry out one or two minor improvements; 2 new slaughter-houses (1 at Whickham and 1 at Dunston) were erected, and 1 old premises was converted into a slaughter-house. Dr. Andrew Smith considers the slaughter-houses in the district to be very satisfactory. They are all apparently licensed slaughter-houses.

Offensive Trades.—Power to include in the list of offensive trades “fish fryer” was sanctioned by Order of the Local Government Board under Section 51 of the Public Health Acts Amendment Act, 1907. Besides fish fryers there is a soap factory and also a marine store at Dunston. This place has also been entered on the list of offensive trades.

Food and Drugs.—No mention is made in the report as to whether the provision shops are inspected or as to whether the character of the food exposed for sale is satisfactory.

Factories and Workshops.—The total number of workshops on the register is 18. Seventeen inspections were made, namely, 3 to factories, 10 to workshops and 4 to workplaces. 8 written notices were served. Additional sanitary accommodation provided in one case and new sanitary conveniences in 3. No list of out-workers was received. The bakehouses are well kept and are visited periodically.

SANITARY REQUIREMENTS.

1.—Further improvements to the houses of the working classes in the district.

2.—Street improvements.

WILLINGTON.

R. E. BROWN, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	8,839	8,755
Birth-rate	29·30	31·41
Death rate	11·87	18·50
Zymotic death-rate	0·79	3·31
Phthisis death-rate	0·35	0·34
Total Tuberculosis death-rate	0·56	0·38
Respiratory diseases death-rate	1·79	5·25
Infant mortality-rate per 1,000 births	100	163

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	267	71
Smallpox	nil	nil
Scarlet fever	210	20
Diphtheria	45	32
Fever* (Enteric, &c.)	nil	15
Puerperal fever	1	nil
Cases treated at hospital ..	203	65
Measles	(8)	(7)
Whooping cough	(nil)	(6)
Diarrhoea and Enteritis (under 2 years)	(nil)	(8)

GENERAL SANITATION.

Water Supply.—The supply is from the Consett and Weardale Water Co. The water, which is derived from the uplands, is soft and pure. It is ample for the needs of the district. The outlying farms are supplied from local springs.

Sewerage.—At Page Bank sewers have been laid and the sewage is treated on two acres of land. The results of the treatment are considered to be unsatisfactory at times. The town of Willington has a main drainage scheme.

Scavenging.—The scavenging is carried out by the Council's workmen.

Housing.—(a) New Houses: 55; all were occupied. (b) Insanitary Property: At Oakenshaw improvements were carried out to 37 houses. Here a staircase has been provided to each house in place of a ladder, and to 9 of the 37 houses sculleries and pantries have been added. To 64 houses in New Row, Oakenshaw, a self-contained yard to each house has been made, the open midden-privies replaced by properly constructed ash-closets, the open channels abolished, and a gully connected to a more efficient means of drainage provided.

At Brancepeth Colliery 11 houses have been demolished, and substantial buildings erected in their place. The conversion of 22 midden-privies into ash-closets is required in Cross Row, Oakenshaw. At Brancepeth Colliery there are still many midden-privies. Besides the conversion of the privies the houses here require self-contained yards and a better system of drainage. Structural alterations are required to 12 houses in High Street, Willington. Dr. Brown says that there is still a considerable amount of overcrowding. "A great number of persons who pay their rent declare that they are unable to pay rent for large houses. . . Houses are being built in the district, but if this be not sufficient to cope with this condition the Council must take into consideration the advisability of building more."

Some paving and channelling is being carried out, but the back of High Street and the other back streets in the town and the colliery streets require making up. Under the Housing (Inspection of District) Regulations 53 houses in Willington were inspected, but all with the exception of 15 were visited on the last day of the year. The houses scheduled are: High Street (No. 62), Nelson Street (1-2), near the Parish Hall (4 houses), Hutton Terrace (19-23), Bowden

Yard (1-6), Cooper's Yard (3), South Street (5-7 and 2 other houses), Railway Cottages (2-5), and Chapel Street (1-17). No. 62, High Street has since been made fit for habitation; 3 of the 4 houses near the Parish Hall have been closed but the fourth house, with respect to which a notice has been served, is still occupied. This house is damp and the roof, the floor and the windows are defective.

Notices have been served with respect to Nos. 1-2, Nelson Street but the houses are still occupied, and apparently the defects which include dampness, defective floors, roofs, ceilings, and lack of through ventilation remain unabated.

Nos. 1 and 6, Bowden Yard are now empty. There is no mention in the report as to what action has been taken with respect to the remaining houses scheduled as being defective.

Nuisances.—To abate nuisances 476 informal and 2 formal notices were served; 44 nuisances were abated. The number of ashpit-privies converted into ash-closets was 110, and into water-closet 1. There are still 321 ashpit-privies in this district.

With reference to dwelling-houses and schools, 13 notices were served for "foul conditions," 108 for structural defects, and 5 for overcrowding.

Common Lodging Houses.—There are none in the district.

Dairies, Cowsheds and Milkshops.—All the milk dealers are registered. The dairies and the milk utensils are kept clean. There are some cowkeepers and one milk-seller in the district, but the bulk of the milk is supplied direct from the farms. The cowsheds are kept clean as a rule; 2 or 3 require attention in the way of lighting and ventilation.

Slaughter-houses.—The slaughter-houses (5) are regularly inspected, and are in good sanitary condition. The yard of one is undergoing repair.

Offensive Trades.—There are no scheduled offensive trades in the district.

Food and Drugs.—No seizure of unwholesome food was made during the year. The meat is found to be fresh and wholesome.

Factories and Workshops.—There are 20 registered workshops in the district. To these places 58 visits of inspection were paid. The chief workshop industries are dress-making, saddlery, boot-making, cabinet-making, brick-making, joinery and printing. Notice was served in one case to provide proper sanitary accommodation.

SANITARY REQUIREMENTS.

1.—The abolition of all the open privy-middens throughout the district.

2.—The remainder of the footpath on the north side of the main street to be completed.

3.—The making, paving, and channelling of the private streets, both town and collieries, to be continued with.

4.—The remaining cow-sheds which have not as yet been remedied to be attended to.

5.—Continued improvements in the housing accommodation.

6.—The erection of houses by the Council, if need be, to obviate the condition of overcrowding and where houses are found to be in an unfit state for habitation.

RURAL DISTRICTS.

AUCKLAND RURAL DISTRICT.

J. F. MACDONALD, M.D., D.P.H., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	59,254	58,547
Birth-rate	32·25	32·33
Death-rate	13·09	16·17
Zymotic death-rate ..	1·55	2·61
Phthisis death-rate ..	0·76	0·66
Total Tuberculosis death-rate	1·28	1·24
Respiratory diseases death-rate	1·97	2·56
Infant mortality-rate per 1,000 births	106	156

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	1,409	450
Smallpox	nil.	nil.
Scarlet fever	1,122	298
Diphtheria	106	51
Fevers (Enteric, &c.)	19	65
Puerperal fever	3	2
Cases treated at hospital ..	551	203
Measles	(33)	(16)
Whooping cough	(7)	(28)
Diarrhoea and Enteritis (under 2 years)	(17)	(85)

GENERAL SANITATION.

Water Supply.—The greater part of the district is supplied with water from the reservoirs of the Weardale and Consett Water Company situated at Waskerley and at Tunstall. Part of the Parish of Lynesack and Softley is served by the mains of the Barnard Castle Rural District Council, and a few houses at St. Andrew's, Auckland, by those of the Bishop Auckland Urban District. The Civil Parishes of South Bedburn, Hamsterley, Windlestone, Bolam and certain outlying scattered dwellings in the rural district depend upon springs and wells for their supplies. To counteract any plumbo-solvent action the water from the Waskerley reservoir is treated with lime. "The supply is constant and is a good upland surface water."

Sewerage.—The whole of the rural district is sewered with the exception of certain scattered hamlets and dwellings and also the following parishes:—South Bedburn, Binchester, Bolam, Lynesack, Softley, Middridge, Middridge Grange, and Whitworth Without. Sewage disposal works are in construction or are about to be commenced at St. Helens Auckland, West Auckland, Evenwood and Barony, Escomb, Hunwick and Helmington. The total number of water-closets in the rural district is 461; there are 8,556 ash-closets, 1,793 ashpit-privies and 6 pail-closets.

Scavenging.—15 townships are scavenged under contract with the District Council; in the remaining townships the scavenging is done either by the owners or the occupiers. Privies and ashpits are emptied once a fortnight; earth-closets and ash-closets once a week. The work is fairly well done in some districts, in others only moderately so and not in accordance with the terms of the contract. Dr. Macdonald mentions that the contents of a number of ash-closets have to be deposited on the public streets, and that it is common to see soiled paper blowing about and thus creating a nuisance. He trusts that the Council will take advantage of their powers under Section 39 of the Public Health Acts Amendment Act, 1907, to enforce the water-carriage system.

Housing.—(a) New Houses: 120 new houses were erected and occupied. (b) Insanitary Property: During the year 851 houses were inspected, and of these 136 were considered unfit for human habitation. In 27 cases closing orders were made, 10 were closed voluntarily, 16 were made fit for human habitation, 1 was unoccupied, and with respect to 28 the owners were either considering what they would do to the property or had promised to carry out the requirements of the sanitary authority. Three houses were demolished and 2 built in their places. At Helmington Row 57 houses were pronounced unfit for habitation and 6 were closed, but what action was taken with respect to the remaining 51 the report does not clearly state. As the result of friendly persuasion by the Inspector of Nuisances two 2-roomed houses were made into 4-roomed houses; in the case of nine 2-roomed houses the roof was raised and each house provided with 4 rooms and self-contained yard; six back-to-back houses were converted into "through" houses. To a large number of houses bigger windows were provided, others made to open, floors and yards cemented and minor structural improvements carried out. During the year 235 ashpit-privies were abolished and 323 ash-closets and 21 water-closets substituted; 1 W.C. was substituted in place of an ash-closet. There is a scarcity of houses in the townships of Byers Green, Coundon, Coundon Grange, Hunwick, Helmington and Helmington Row. At the last three named places building operations were fairly active during the year. At Helmington Row 51 new houses were occupied in 1912, and plans passed for 92.

Nuisances.—839 nuisances were abated during the year. Of these 344 were with respect to structural defects to houses, 170 with respect to yard paving, 113 in connection with defective house drainage and 220 respecting ashpits and privies. There are still 1,793 ashpit-privies in the district.

Common Lodging Houses.—There is one registered common lodging-house; one which was not considered fit for human habitation was closed during the year. Action was taken with respect to an unregistered common lodging-house.

Dairies, Cowsheds and Milkshops.—There are 188 dairies and cowsheds in the district. A number require improvements; 263 visits of inspection were made and only one informal notice appears to have been served. No mention is made as to whether the provisions of Dairies, Cowsheds and Milkshops Orders are enforced.

Slaughter-houses.—There are 60 slaughter-houses in the district. Some are in need of structural improvements.

Offensive Trades.—Not mentioned.

Food and Drugs.—During the year one consignment of fish was condemned. The number of visits of inspection made to the butchers' shops and slaughter-houses was 96, "but with so many "slaughter-houses," writes Dr. Macdonald, "in so large a district, "inspection of slaughtered animals by the officers of the Council "is impossible."

Factories and Workshops.—There are 15 factories and 83 workshops and one registered workplace in the district. To these 167 official visits were paid; 3 defects were found. One of these, to provide separate closet accommodation, has been attended to.

SANITARY REQUIREMENTS.

- 1.—Improvements in the housing of the working classes.
 - 2.—Attention to slaughter-houses, dairies and cowsheds.
 - 3.—Provision of water-closets in place of the conservancy system in certain districts.
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BARNARD CASTLE RURAL DISTRICT.

JAMES C. NELIGAN, L.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	11,793	11,631	Total notifications	91	46
Birth-rate	23·48	26·83	Smallpox	nil	nil
Death-rate	13·99	12·41	Scarlet fever	48	34
Zymotic death-rate	0·76	0·77	Diphtheria	25	4
Phthisis death-rate	0·59	0·34	Fevers (Enteric, &c.)	nil	1
Total Tuberculosis death-rate	1·44	0·42	Puerperal fever	1	nil
Respiratory diseases death-rate	0·94	0·94	Cases treated at hospital	29	19
Infant mortality-rate per 1,000 births	112	79	Measles	(4)	(5)
			Whooping cough	(3)	(nil)
			Diarrhoea and Enteritis (under 2 years)	(nil)	(3)

GENERAL SANITATION.

Water Supply.—There are public supplies at Woodland, Cockfield and Middleton.

The Woodland supply has been satisfactory, but attention is again drawn to the urgent necessity of augmenting the supply at Middleton and of carrying out certain works at Cockfield. At the last named place there is an abundant overflow from the springs, but owing to the large consumption of water at the Collieries and the fact that a section of the pipes between the springs and the reservoir is too small, there is a shortage at times in the supply to the upper part of the village.

At Middleton the circumstances are more serious. Dr. James Neligan reports that there are houses in the district where, owing to the shortage of water, the closets as well as the baths are practically useless. The dangers of an epidemic of infectious disease during a dry season is pointed out by Dr. Neligan, who urges the responsible authorities to take immediate steps to provide a more adequate supply for Middleton.

At Forest and Frith galvanized pipes have been laid to supply by gravitation 18 houses on Lord Barnard's estate.

Sewerage.—The sewage works in different parts of the district are working efficiently, but at Middleton the distributing trays require renewal and will shortly receive attention.

Scavenging.—At Cockfield the scavenging is done fairly satisfactorily. At Middleton, Gainford and Staindrop there has been a

slight improvement in the condition of the privies. Informal notices were served to abate nuisances caused by the accumulation of refuse and filth in 46 instances.

Housing.—(a) New Houses: 17 were erected and 16 occupied. There is a sufficiency of good and habitable houses, suitable for working men in all parts of the district with the exception of Staindrop, where, owing to the opening up of a colliery close to Winston Station, there has been a considerable influx of men with their families. (b) Insanitary Property: Under the Housing (Inspection of District) Regulations 37 houses were inspected; 13 were closed and in 10 cases the defects were remedied without a closing order. After the closing order was made one house was repaired and made habitable.

The number of defects found was 116; of these 14 have been remedied and the others are receiving attention. One demolition order was made.

At 54 houses the midden-privies have been converted into ash-closets and at 29 houses into W.C.'s. There are still 1,364 ashpit-privies in the district.

Nuisances.—To premises, 1,397 visits of inspection were paid, and with respect to these 186 informal and 39 formal notices were served. The number of nuisances abated was 180; of these 8 were with respect to structural defects.

Common Lodging Houses.—There are 2 common lodging-houses, namely, one at Middleton and one at Staindrop. The former changed hands during the year and the opportunity was taken to carry out certain improvements.

Dairies, Cowsheds and Milkshops.—There are 31 milk sellers in the district. To the cowsheds and stables 22 visits were paid; 2 informal notices were served.

The report does not say whether the premises are in a satisfactory condition.

Slaughter-houses.—There are 3 registered and 14 licensed slaughter-houses. To these 38 visits of inspection were paid; 1

informal notice to remedy a defect was served. The report does not say if there are bye-laws and if so whether they are complied with.

Offensive Trades.—Not mentioned.

Food and Drugs.—As to the character of the food sold in the district no mention is made in the report, but in the Sanitary Inspector's summary, which is appended, it is stated that one seizure of unwholesome food was made.

Factories and Workshops.—There are 15 factories, 39 workshops and 3 workplaces. To these places 57 inspections were made. No defects apparently were found.

SANITARY REQUIREMENTS.

- 1.—An additional water supply for Middleton.
- 2.—An improved water supply for Cockfield.
- 3.—Increased attention to the scavenging of the district.

CHESTER-LE-STREET RURAL DISTRICT.

JOHN TAYLOR, M.D., D.P.H., Medical Officer
of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	65,879	63,882	Total notifications	428	377
Birth-rate	33·71	34·20	Smallpox	nil.	4
Death-rate	13·43	16·34	Scarlet fever	234	148
Zymotic death-rate	1·26	3·24	Diphtheria	39	92
Phthisis death-rate	0·55	0·75	Fevers (Enteric, &c.)	12	57
Total Tuberculosis death-rate ..	1·17	1·58	Puerperal fever	nil.	2
Respiratory diseases death-rate ..	2·35	2·75	Cases treated at hospital ..	118	104
Infant mortality-rate per 1,000 births	120	188	Measles	(26)	(35)
			Whooping cough	(29)	(34)
			Diarrhœa and Enteritis (under 2 years)	(17)	(117)

GENERAL SANITATION.

Water Supply.—“Speaking generally, the district is very well supplied with water.” The Weardale and Consett Water Company supply 50 per cent. of the population; the Newcastle and Gateshead Water Company 29 per cent.; the Sunderland and South Shields Water Company 12·5 per cent.; the Lambton and Hetton Collieries Company 6·7 per cent.

All the Companies have a constant supply, but better and longer storage is required for the water supplied by the last two Companies.

The houses at Barnsby Lane, Fulgar Bar, and at Pennyfine, in the parish of Lamesley, referred to in previous reports, are still in need of a better supply.

With respect to Lumley Little and Lumley Great, a scheme for the better supply of these parishes was, after much consideration, submitted to the Local Government Board, and on October 15th a local inquiry was held, but up to May in the following year nothing had been done to supply these townships.

Sewerage.—The sewage system of Lumley Village, which requires early attention, has not been improved; the scheme for the drainage of the houses at Pelton Fell, which is in progress, will, it is expected, be complete at an early date.

Scavenging.—With few exceptions, Waldrige (283 houses), Ouston Parish (165 houses), Beamish Parish (102 houses), and Burnmoor (258 houses), the scavenging of the district is carried out by contractors. Dr. Taylor condemns the present arrangements, and considers the time has arrived when a considerably better system of scavenging should be introduced into the thickly populated villages, and advises the Council to provide horses and carts and employ their own staff to carry out this work.

Housing.—(a) New Houses: 238 houses were built and occupied during the year in the townships of Washington (55), Lumley Little (35), Lamesley (33), Birtley (29), Pelton (20), Urpeth (14), Harra-ton (13), Usworth (12), Witton Gilbert (12), Biddick South (9), and Edmondsley (6).

Housing Schemes.—At Pelton there is a great scarcity of houses, and the District Council have under consideration two schemes for building houses. One is to provide 113 houses in the village of Pelton, and the other to provide about 100 houses near the Newfield Inn. As the Colliery Companies are not prepared to build houses, and private enterprise cannot be relied upon to meet the demand, 42 houses have been built in the parish of *Washington* and a further

number of houses in this township are being erected; for similar reasons the District Council have under consideration a scheme for the building of 57 houses in the township of *Usworth*.

(b) *Insanitary Property*: The number of houses closed during the year was 117 (88 voluntarily on representation to the owners). The houses were distributed throughout the district as follows:—*Pelton* (33), *Harraton* (29), *Washington* (15), *Lamesley* (11), *Usworth* (10), *Birtley* (8), *Burnmoor* (5), *Edmondsley* (2), and one each at *Barmston*, *Lumley Great*, *Lumley Little*, and *Witton Gilbert*.

Many improvements to house property and their surroundings have been carried out during the year. Details of the improvements effected in the several townships are given in the report. In this connection, *Birtley*, *Ouston*, and *Pelton* are specially mentioned.

At *Portobello*, in the township of *Harraton*, 6 houses have been built to replace old ones pulled down; the rebuilding of the old houses at *Kibblesworth* (*Lamesley*) was continued during the year, and 6 more houses in the Square were rebuilt, which "almost completes the rebuilding of this village," writes Dr. Taylor. In the township of *Lamesley* 4 houses at *Sunniside*, 2 at *Vale Mount Cottages*, and 3 at *The Blacking* were raised; at *Blue Row*, *Lumley*, 13 old houses were demolished, and a similar number erected in their place; at *Nettlesworth* (*Plawsworth*) 6 houses were rebuilt; at *Washington* village 10 two-roomed tenements were converted into 5 self-contained tenements of 4 rooms, and at *Washington Station*, *Washington*, 6 back-to-back houses were converted into through houses.

Reporting on the sanitary circumstances of the township of *Burnmoor*, Dr. Taylor remarks that "the number of poor houses in this parish is considerable, and rebuilding them in the near future should be the policy continued by the owners of the houses in this township." Referring to *Harraton*, Dr. Taylor says "this is a township of old houses, many of which are past repair, and should be closed. Of the 29 houses closed at *Harraton* mentioned above, 6 were at *Low Flatts*; the remaining houses here," Dr. Taylor considers, "should be immediately closed," and at such places as *The Square*, *Fatfield*, *Long Row*, *Short Row*, and *Novo Scotia*, improvements to the houses are also needed. *Lumley Great* is

another township of old houses, many of which are quite unfit for human habitation, but the owners "are steadily pulling down the "old houses and replacing them by a really good class of house."

At *Pelton* the West Pelton Collieries Company, who are the owners of a number of back-to-back houses in George Street, William Street, and West Terrace, have agreed to the carrying out of other important improvements, to raise the houses and convert them into through houses. There are many other back-to-back houses in this township.

The condition of the township of *Urpeth* "is much the same as "it was last year. Many of the houses are old, very low, and are "far from being healthy dwellings." The houses in this area mentioned in his last annual report, Dr. Taylor considers, should be either closed or heightened. Other houses to which attention is again specially called are Brown's Buildings. *Birtley*.—Houses here require similar treatment.

In his report on the townships of *Usworth*, Dr. Taylor remarks "Though houses are very much required in this parish, especially "at Usworth Colliery, nothing has been done by the owners either "to provide houses or to improve the wrecks which in many instances "are inhabited by their workmen to-day. Unless where closed, the "Middle High Row, Taylor's Row, and west side of the Square "remain monuments of the old insanitary colliery house."

During the past eight years spasmodic attempts have been made to effect improvements to the Company's houses, but in vain. Dr. Taylor considers the time has arrived when the Council should exercise their powers under the Housing Acts and not be put off with plausible talk, of a semi-promissory character, if the occupants of these colliery houses are to enjoy the ordinary amenities of life.

In the township of *Washington*, although much has been accomplished and many houses closed, there are still many houses, writes Dr. Taylor, of a poor type, which should be closed at an early date.

The sanitary improvements accomplished during the year are summarised as follows:—A very large number of houses have been put into a proper state of repair, 227 ash-closets have been built,

91 W.C.'s provided, 275 ashpit-privies abolished, 110 back yards cemented, 153 floors similarly treated.

Streets.—Under the provisions of the Private Street Works Act, 4,909 lineal yards of streets have been provided, at Fatfield, Harraton (1,409 yards), at Pelton (997), at Urpeth (1,701), and at Washington (802). In addition to these a new road has been made at Ouston Square, Ouston.

At Birtley there are still several streets which require attention; “the streets in the village of Edmondsley remain in the same unmade condition as formerly”; some of the streets in Lumley Great also require making up. Reporting upon the streets in the village of Sacriston, Dr. Taylor says that although resolutions respecting the improvements of the streets have been arrived at by the Local Committee, most of the streets, some of which are unusable in wet weather, remain in the same condition as formerly.

Slaughter-houses.—The reports of the Sanitary Inspectors from which the following particulars are extracted show that in the Birtley division there are 8 slaughter-houses; in the Witton Gilbert division 21; the number in the Washington division is not given. The slaughter-houses reported on are said to be kept in fairly good order.

No systematic inspection of the meat supply is carried out. One tuberculous carcass was notified to the Medical Officer of Health and ordered to be destroyed.

Nuisances.—To abate nuisances 80 formal and 1,697 informal notices were served. The total number of nuisances abated was 1,601.

Common Lodging Houses.—There is only one common lodging-house. It has been inspected during the day and at night and found in good order.

Dairies, Cowsheds and Milkshops.—There are 86 cowsheds in the district; many improvements have been carried out during the year, but many of the cowsheds are old and require attention.

Dr. Taylor remarks that “the need of cleanliness amongst the dairy workers and milkers does not appear to be fully recognised by many dairymen,” and that the minds of the dairymen vary much on the question of cleanliness of the cows.

Factory and Workshops.—All the factories, workshops and work-places were regularly visited. Eight notices were served to abate overcrowding (1) and to provide water-closet accommodation (4); all were complied with.

SANITARY REQUIREMENTS.

- 1.—Improvements to the sewerage system at Lumley village.
- 2.—Improved methods of scavenging.
- 3.—Provision of houses at Pelton Fell and in the Usworth district.
- 4.—Improvements in the housing accommodation throughout the district, and more especially at Burnmoor, Harraton, Lumley Great, Urpeth, Birtley, Usworth, and Washington.
- 5.—The making up of the streets at Birtley, in the village of Edmondsley, at Lumley Great and at Sacriston.

DARLINGTON RURAL DISTRICT.

ROBERT H MEIKLE, M B., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	10,914	10,914	Total notifications	141	100
Birth-rate	24·37	23·55	Smallpox	nil.	nil.
Death-rate	11·63	16·30	Scarlet fever	93	85
Zymotic death-rate	0·91	1·09	Diphtheria	11	6
Phthisis death-rate	0·73	1·00	Fevers (Enteric, &c.)	3	2
Total Tuberculosis death-rate	0·91	1·92	Puerperal fever	1	nil.
Respiratory diseases death-rate	1·37	1·19	Cases treated at hospital ..	20	19
Infant mortality-rate per			Measles	(5)	(2)
1,000 births	109	136	Whooping cough	(nil.)	(4)
			Diarrhoea and Enteritis		
			(under 2 years)	(1)	(4)

GENERAL SANITATION.

Water Supply.—Supplies of water from the public wells have been analysed and, with the exception of one at Neasham, the results were satisfactory. An agreement has been entered into with the Tees Valley Water Board to extend their main into this village. Arrangements have also been made with the same Board to supply Great Burdon village.

Sewerage.—Complaints were received with respect to nuisances arising in connection with the sewage disposal works at Karrajat, Brusselton Houses, and Sadberge. The other disposal works gave satisfaction. At Blackwell trapped road gullies have been provided. At Great Burdon plans are being prepared for a new sewerage scheme for the village. At Heighington a new purification plant will be necessary before any further sewerage of the district can be undertaken. At Middleton-St.-George drainage works are now in progress near the Old and New Rows. During the year the village of Harrowgate has been entirely re-sewered.

Scavenging.—Where public scavenging is undertaken the work is carried out most efficiently.

Housing.—(a) New Houses: 10 were erected, and of these 9 were occupied. (b) Insanitary Property: Ten houses were found on inspection to be unfit for human habitation; 10 closing orders were made; one house was made fit for habitation. Notices with respect to 17 houses were served under the Public Health Acts, and 9 were remedied without a closing order.

Hurworth.—3 closing orders were made during the year, and of the 4 houses closed in 1911, one house has been demolished, 1 converted in two, 1 made habitable and 1 is at present being reconstructed.

Middleton-St.-George.—Closing orders were made with respect to two houses. Two other houses were dealt with under the Public Health Acts, and structural alterations carried out.

Morton Palms.—Here one house was closed voluntarily and another made fit for human habitation after notice under the Public Health Acts.

Neasham.—At Neasham 9 houses were put into habitable repair after the service of notices under the Public Health Acts.

Redworth.—Here one house was closed and a demolition order made; another house, after notice under the Public Health Acts, was put into a proper state of repair.

Summerhouse.—The owner of a house in this district has given an undertaking to make the house habitable.

Archdeacon Newton.—Here four houses have been redrained, the ashpits converted into ash-closets and the yards cemented.

Aycliffe, Great.—In this village a closing order was made on one of the houses; the question of proceeding with a demolition order is under consideration.

Brafferton.—A house in this village was made fit for habitation and the closing order determined. Under notice structural improvements have been carried out to houses adjoining this property.

Cockerton.—At Cockerton many ashpit-privies have been converted into ash-closets.

Haughton-le-Skerne.—“The majority of the streets,” writes Dr. Robert Meikle, “on the Harrowgate Hill estate are still unmade and “are in a boggy and insanitary condition, and it is urgent that some-“thing should be done to remedy this state of affairs.” One house at Harrowgate Hill was closed during the year.

Heighington.—With respect to 7 houses in this village, notices were served to carry out certain structural alterations and repairs, and a new house has been erected on the site of one which was closed in 1911 and subsequently demolished. At *Houghton Bank* 2 houses have also been put into proper habitable condition.

24 ashpit-privies were converted into ash-closets.

There are still 1,494 insanitary ashpit-privies in the district.

Nuisances.—162 were abated; 83 by informal and 115 by formal notices.

Common Lodging Houses.—None.

Dairies, Cowsheds and Milkshops.—Particular attention has been given to the dairies and cowsheds in the district. At Archdeacon Newton one farmhouse with buildings has been redrained, and at another farm in this district the house has been remodelled and the tank in close proximity to the cowshed and milk store removed 90 yards away. At Aycliffe, Great, the water supply to a farm was found to be polluted and the cowshed defective. These are being attended to.

At Barmpton improvements are being made to the drainage of various farms in the parish.

At Heighington improvements under notice are being carried out to certain farm buildings.

Dr. Meikle draws attention to the large accumulation of dung in the neighbourhood of the cowsheds.

Slaughter-houses.—No mention of the slaughter-houses is made either in the Medical Officer's report or the Sanitary Inspector's return.

Food and Drugs.—No mention is made as to whether the meat and other food supplies sold in the district are pure.

Factories and Workshops.—There are 44 workshops in the district. To these 35 inspections were made. Seven nuisances under the Public Health Acts were dealt with.

SANITARY REQUIREMENTS.

1.—Attention to nuisances at certain of the sewage disposal works.

2.—The provision of a purification plant at Heighington.

3.—Street works in the Harrowgate Hill estate mentioned in this as well as the last annual report.

DURHAM RURAL DISTRICT.

A. T. HARRISON, L.S.A., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	31,309	30,892
Birth-rate	32'32	33'63
Death-rate	13'89	17'60
Zymotic death-rate ..	1'05	3'23
Phthisis death-rate ..	0'86	0'93
Total Tuberculosis death-rate	1'15	1'55
Respiratory diseases death-rate	1'72	2'16
Infant mortality-rate per 1,000 births	116	162

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	182	186
Smallpox	nil.	ni.
Scarlet fever	36	46
Diphtheria	49	61
Fevers (Enteric, &c.)	19	54
Puerperal fever	nil.	?
Cases treated at hospital ..	53	59
Measles	(7)	(15)
Whooping cough	(3)	(7)
Diarrhoea and Enteritis (under 2 years).. .. .	(9)	(55)

GENERAL SANITATION.

Water Supply.—The greater part of the district is supplied by the Weardale and Consett Water Company.

Dr. A. T. Harrison draws attention to the insufficient and unwholesome supply at Old Cassop, Quarrington Hill, Cassop Colliery and Kelloe. At present the water is derived from the works of Messrs. Walter Scott and Co.

At Quarrington a number of new houses are privately supplied by the Steetley Lime Coy. This water is conducted from surface springs at Coxhoe to a storage tank in the village.

Dr. Harrison also draws attention to the fact that certain localities are without a proper water supply, namely: "The village of Old Quarrington, Whitwell Moor, Cassop Grange and High But-terby Farms, Brasside, Cassop Smithy and Strawberry Hill Farms, and Broomside Pit Cottages are still without a proper water supply."

Sewerage.—In the report of the Surveyor, which is appended, is a summary of the drainage and street works carried out in his department during the year, and from this report the following particulars are abstracted:—

Sunderland Bridge.—New sewage disposal works for the village of Sunderland Bridge were constructed during the year.

Pity Me.—The outfall sewer has been extended and 3 acres of land provided for irrigation.

Village of Ludworth.—Plans and estimates of an amended scheme of sewerage and sewage disposal works have been prepared for submission to the Local Government Board.

East Hetton.—An amended scheme of sewerage and sewage disposal has been forwarded to the Local Government Board, and arrangements have been made for acquiring a site for the outfall works.

Quarrington Hill.—70 houses here have been drained at the expense of the owners, the covered drains will replace open channels.

New sewers have been laid by the owners of 6 new private streets at Ushaw Moor, Neville's Cross, Sherburn and Quarrington Hill.

Scavenging.—Earth-closets are cleansed weekly, other closets fortnightly. Throughout the district the work is carried out by public scavengers, with the exception of the following places where it is done privately by the occupiers:—St. Oswald's, Sherburn Hospital, Whitwell, Brancepeth.

Housing.—(a) New Houses: 124 new houses were completed and occupied during the year. (b) Insanitary Property: For the purpose of Section 17 of the Housing, Town Planning, Etc., Act, 1908, 126 dwelling-houses were inspected, 110 were considered unfit for human habitation and nine representations made to the local authority. With respect to the 110 houses, closing orders were made in 58 cases; up to the end of the year only 8 had been closed, 12 were put into a proper habitable condition after the order was made, and 15 were remedied without making an order for closing.

The Inspector of Nuisances, in his report which is appended, reviews the work which is carried out in the several parishes. Belmont has been carefully inspected, 3 cottages have been made habitable, but there are many houses in the parish which are in an insanitary condition and the owners are poor and the tenants are of the worst class; at Bearpark, improvements have been carried out, but the streets in Bearpark Colliery Rows and Aldin Grange Terrace are in a most insanitary state; at Broom, the Inspector again draws attention to the insanitary condition of the streets; at Cassop-cum-Quarrington, repairs to the miners' cottages are being carried out, but *nothing has been done to remedy the defective closets at Back Double Row, Quarrington Hill*; at Long Row, Coxhoe, 20 houses have been rebuilt or are in hand, and 25 ash-closets at California erected; *the Inspector again calls attention to the insanitary condition of houses and conveniences at East Hetton Village*, and recommends that they should be inspected and notices served to make them habitable; at Framwellgate Moor some repairs to roofs, spouts and yard surfaces have been carried out, but *the Inspector has again to draw attention to the insanitary state of 16 old cottages mentioned in his last annual report*, and recommends that they should either be closed or rebuilt; 14 ash-pit-privies in the village of Ludworth have been converted into ash-closets, and sanitary improvements carried out to houses in Victoria Street; in addition 94 houses

in the village, owned by the Weardale Steel, Coal and Coke Company, are to be rebuilt, and the Company have agreed to complete 20 each year; at Sherburn Hill, in the Parish of Sherburn, 50 privy middens have been converted into ash-closets, but there are many such privies in Durham Row West which should receive attention; at Croxdale Colliery, in the Parish of Sunderland Bridge, impervious pavement has been put down at the back of 80 houses, and the floors of the houses relaid; at Kimblesworth 20 privy-middens have been abolished and 40 earth-closets provided.

With respect to dwelling-houses 14 formal and 40 informal notices were served under the Public Health Acts, 27 were complied with, 206 houses were made habitable and the work is pending in 204.

Nuisances.—752 notices to abate nuisances were served, and all were complied with.

Streets.—Three private streets at Neville's Cross are to be made up under the Public Street Works Act, 1892. The road to Ludworth Village and the front street in that village have been made up. The footpath has been tar-paved and tanks and channels provided at Hett, Pity Me, Framwellgate Moor, Neville's Cross, Shadforth and Sherburn Hill.

Common Lodging Houses.—Not mentioned.

Slaughter-houses (18).—The larger slaughter-houses are satisfactory, but the smaller places require much attention. The slaughter-houses are frequently visited, but no diseased carcasses have been detected. With one or two exceptions the slaughter-houses are structurally in good order.

The Inspector urges the Council to consider the question of passing a bye-law or recommending the use of the patent killer in slaughter-houses, so as to minimise the cruelty which at present exists in the method of slaughtering.

Dairies, Cowsheds and Milkshops.—The dairies, cowsheds and milkshops were carefully inspected during the year, and in a number of these considerable structural improvements were found. There

are 64 registered cowkeepers and purveyors of milk. The number of cows is 582. A great deal of milk is sent out of the district.

There are 4 dairies without good water supplies.

Offensive Trades.—Not mentioned.

Food and Drugs.—The milk produced in the district is said to be on the whole good and wholesome. The meat has always been found to be of good quality. Fish hawked in the streets have been found in a few instances to be unfit for consumption and destroyed.

Factories and Workshops.—In the form supplied the number of visits of inspection was 80, namely 27 to factories, 38 to workshops, and 16 to workplaces. Fourteen written notices were served, and 15 nuisances under the Public Health Acts remedied. The list of registered workshops is not given.

SANITARY REQUIREMENTS.

- 1.—Public water supply in certain villages.
- 2.—Improvements to the housing of the working classes.

EASINGTON RURAL DISTRICT.

JAMES ARTHUR, L.R.C.P., D.P.H., Medical Officer
of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	63,050	61,140	Total notifications	778	484
Birth-rate	35.40	36.93	Smallpox	nil.	nil.
Death-rate	14.22	17.64	Scarlet fever	513	232
Zymotic death-rate	1.69	4.02	Diphtheria	79	116
Phthisis death-rate	0.65	0.65	Fevers (Enteric, &c.)	20	87
Total Tuberculosis death-rate	1.17	1.39	Puerperal fever	6	3
Respiratory diseases death-rate	2.23	2.09	Cases treated at hospital	60	59
Infant mortality-rate per 1,000 births	118	178	Measles	(19)	(30)
			Whooping cough	(33)	(27)
			Diarrhoea and Enteritis (under 2 years)	(17)	(153)

GENERAL SANITATION.

Water Supply.—Wingate: A new 4 in. main has been laid and there is now an ample supply of water to this village; at Stationtown the mains in the back streets have been extended; at Trimdon additional distribution standpipes in the streets are required; at Blackhall the new village obtains its supply at present from surface

wells; at Wheatley Hill there has been a scarcity, but steps are being taken to provide a sufficient supply.

Sewerage.—A comprehensive scheme for the drainage of Haswell, South Hetton, Murton, Cold Hesleden, Dalton-le-Dale, and part of New Seaham has been prepared and will shortly be submitted to the Local Government Board.

The plans for the Wingate sewerage scheme for the drainage of Deaf Hill, Wingate, Station Town, Hutton Henry, Castle Eden, Castle Eden Colliery, High Hesleden, Low Hesleden, and Blackhalls have been completed and application for sanction to raise a loan to carry out the works has been made to the Local Government Board. New sewers have been laid at Easington Colliery, Haswell, Shotton, Castle Eden, Cold Hesleden, Murton, Wingate, Trimdon, Thornley, Hutton Henry, and Seaham.

Scavenging.—The scavenging is carried out by contractors. The work, Dr. Arthur says, is fairly well carried out. The refuse is disposed of on land in most cases. When emptying the closets the contents are apt to be spilt on the ground. Dr. Arthur suggests as an experiment the provision of good fitting square bins.

Housing.—(a) New Houses: 503 new houses were erected and occupied during the year. (b) Insanitary Property: For the purpose of Section 17 of the Housing, Town Planning Act, 853 houses were inspected, 120 found unfit for human habitation; 84 were reported to the Council; 31 were formally closed. After the making of the closing order 39 houses were put into repair; of these 17 were with respect to houses at Easington (3), Haswell (1), and South Hetton (13), which had been closed during the two previous years, and 22 situated at Hutton Henry (21) and Thornley (1) and closed in 1912.

In addition to the foregoing, extensive alterations and improvements were accomplished without resorting to closing orders, the most important being at Easington, where 3 houses were rebuilt, 23 houses demolished and new houses of brick built instead, 24 houses put into proper habitable condition and one demolished; at Haswell where 1 house (closed in 1910) was rebuilt, 2 houses demolished, 1 rebuilt and 63 houses dealt with as follows:—47 put into proper

habitable condition, 2 back-to-back converted into 1, 2 provided with through ventilation, and with respect to 12 improvements have been promised; at South Hetton 4 have had the walls raised and other defects remedied, 9 provided with proper sanitary conveniences, sinks to each house provided and the yards paved, 6 houses were formally closed, 2 in Gate Street were re-roofed and the privy accommodation improved, to 6 important repairs and general improvements carried out, and with respect to 10 premises the owners have promised to remedy the defects; in Richmond Place 5 houses were made habitable, and in Front Street the privies and yards to 10 houses were improved and general repairs carried out; at Shotton 4 houses were rebuilt, 10 put into a proper state of repair, and promises to carry out similar improvements have been given with respect to 11; at Burdon 2 houses have been dealt with; at Cold Hesleden 24 houses were provided with better means of ventilation; at Dalton-le-Dale notices to provide proper means of ventilation with respect to 26 houses have been served; at Castle Eden 4 houses have been rebuilt, 34 put into a proper state of repair, and 2 are under notice; at Murton structural alterations and repairs were carried out to 141 houses. "Improvements to other streets of houses in this village," says Dr. Arthur, "are urgently needed," and the matter is under the consideration of the Council. At Thornley 34 houses were rebuilt, 8 converted into through houses, 1 demolished, 1 rebuilt, 2 closed and 16 are receiving attention; at Kelloe 2 houses have been put into a proper habitable condition; at Wingate 6; at Wheatley Hill structural alterations and repairs have been carried out to 44 and 1 closed; at Hutton Henry 21 houses have been repaired and generally improved; at Seaham yards have been repaved and drainage and sinks provided for 22, and similar work is in progress in 65 other houses; at Seaton 2 houses have been demolished.

The foregoing improvements included the conversion of 331 ashpit privies into ash-closets and 12 into water-closets, also the paving of the yards of 374 houses.

There are still over 3,000 ashpit-privies in the district, but the proportion to ash-closets has been considerably decreased during the past three years.

The District Council have decided to erect 101 houses at Murton, under Part III. of the Housing of the Working Classes Act, 1890; the scheme has been provisionally sanctioned, but as the Board insist on the provision of a water-carriage system of sewage disposal, the scheme has not been proceeded with.

Nuisances.—620 informal and 44 formal notices were served and 627 nuisances abated.

Common Lodging Houses.—There are 2 common lodging-houses. One containing 47 beds is well managed, but the other is unsuitable for the purpose and requires reconstruction. Both are regularly inspected.

Dairies, Cowsheds and Milkshops.—There are 63 dairies, cowsheds and milkshops on the register. "More than half," Dr. Arthur writes, "are in a fairly good condition, but much improvement is required in the smaller ones as to floors, lighting, and ventilation." Little fresh milk is used; only one cow is kept for more than each hundred of the population, and much of the milk is exported; practically milk is not used as a food for children as it ought to be. "It is not obtainable when required in illness." The number of cows in the district is 596.

Slaughter-houses.—The number of slaughter-houses is 37. "Most are attached to dwelling-houses. In the smaller businesses the slaughtering is performed in the selling-shop, and the premises are far from satisfactory."

To remedy defects and abate nuisances 28 informal notices were served.

The district has now bye-laws relating to slaughter-houses.

Offensive Trades.—Not mentioned.

Food and Drugs.—No seizures of unwholesome food were made during the year.

Factories and Workshops.—There are on the register 16 factories, 81 workshops and 20 workplaces and 10 bakehouses. To these places 166 inspections were made and 2 written notices served. The bakehouses are well kept.

SANITARY REQUIREMENTS.

- 1.—Improved methods of scavenging.
- 2.—Enforcement of the Dairies, Cowsheds and Milkshops Order and improvements to slaughter-houses.
- 3.—Continued action under the Housing and Public Health Acts with a view to improving the housing accommodation of the working classes.

HARTLEPOOL RURAL DISTRICT.

T. G. AINSLEY, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population ..	2,440	2,440	Total notifications ..	10	4
Birth-rate	27·45	22·95	Smallpox	nil.	nil.
Death-rate	12·70	11·47	Scarlet fever	6	4
Zymotic death-rate..	0·82	0·81	Diphtheria	2	nil.
Phthisis death-rate..	0·82	nil.	Fevers (Enteric, &c.) ..	nil.	nil.
Total Tuberculosis death-rate	1·23	0·81	Puerperal fever	nil.	nil.
Respiratory diseases death-rate	1·23	0·81	Cases treated at hospital ..	nil.	nil.
Infant mortality-rate per 1,000 births	149	160	Measles	(nil.)	(nil.)
			Whooping cough	(1)	(1)
			Diarrhoea and Enteritis (under 2 years)	(1)	(1)

GENERAL SANITATION.

Water Supply.—No particulars relating to the water supply of the district are given. A well at Greatham was found on analysis to be contaminated, and the Hartlepool Water Company supply has been laid on.

Sewerage.—The drainage of the district is not described, but it is said to be satisfactory on the whole. Reference is made to a sewer at Greatham.

Scavenging.—Scavenging is carried out at Greatham and Hart. At the back of Saltaire Terrace the scavenging has been carried out more efficiently.

Housing.—(a) New Houses: Plans for 7 new buildings were approved. (b) Insanitary Property: The number of houses inspected was 45. No details of defects found are given, but “seven houses “in West Row, Hart, which are old and insanitary, are receiving “attention.” At Greatham alterations and improvements have

been carried out to a block of 8 cottages. Here the ashpit-privies have been converted into ash-closets and separate yards to each house provided.

Nuisances.—34 informal and 5 statutory notices were served. The nuisances were abated.

Common Lodging Houses.—None.

Dairies, Cowsheds and Milkshops.—The dairies have been systematically inspected. Some require a good deal of supervision by the Inspector. To remedy defects or abate nuisances 6 notices were served. Structural improvements were carried out to three. The number of dairies, cowsheds and milkshops in the district is not given.

Slaughter-houses.—“ These have been inspected and found in good order.” The number is not given. One notice was served requiring limewashing.

Offensive Trades.—None.

Food and Drugs.—It is not stated as to whether the meat and other foodstuffs sold in the district or exposed for sale are satisfactory. Apparently no seizures of unwholesome food were made.

Factory and Workshops.—“ These have been inspected from time to time and found in good order.” No further information is given.

SANITARY REQUIREMENTS.

None mentioned.

HOUGHTON RURAL DISTRICT.

D. S. PARK, F.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.		1912.	1911.
Estimated Population	26,200	25,518	Total notifications	133	287
Birth-rate	35.19	36.83	Smallpox	nil	14
Death-rate	13.92	16.22	Scarlet fever	58	83
Zymotic death-rate	1.75	2.39	Diphtheria	21	44
Phthisis death-rate	0.57	0.70	Fevers (Enteric, &c.)	22	52
Total tuberculosis death-rate	0.99	1.37	Puerperal fever	nil	nil
Respiratory diseases death-rate	2.57	3.29	Cases treated at hospital	29	74
Infant mortality-rate per 1,000 births	120	156	Measles	(12)	(4)
			Whooping cough	(17)	(3)
			Diarrhoea and Enteritis (under 2 years)	(8)	(40)

GENERAL SANITATION.

Water Supply.—Sunniside: Water has been laid on to each house. Low Lambton: For this place the Lambton and Hetton Collieries, Ltd., have obtained a supply from the Sunderland and South Shields Water Co. Quarry House and Pity Me: A supply has been laid on to these houses. The water supply of the district is insufficient for the general adaptation of the water-carriage system.

Sewerage.—New sewers have been laid in St. Aden's Terrace, the New Herrington Burn Building Estate, Station Crescent, N. Stanley Terrace, Sunniside, Grasswell, and at West Rainton, also house drains to Middle Row, Sunniside, Johnson's Buildings, Blacksmith's Yard, and the Old Hall Buildings, West Rainton. The Sedgeleth and the South Biddick Sewage Farms are carefully attended to, and the effluent from the William Henry Pit disposal works, where the sewage is filtered before it enters a stream, is believed to be satisfactory.

Scavenging.—Since the appointment of an additional Inspector of Nuisances, the scavenging under his supervision has been carried out more satisfactorily. There are 24 scavenging sub-districts; the work is let by tender, and the annual cost of scavenging the 5,260 houses is about £2,218 or 8/5 per house.

Housing.—(a) New Houses: 183. The majority are already occupied, and the remainder are rapidly approaching completion. (b) Insanitary Property: At Sunniside 54 houses in Middle Row have been provided with ash-closets, and similar work is being carried out at South Row; at Freehold (155 houses) most of the open privy-ashpits have been done away with, and general repairs have been carried out to the houses; at Johnson's Buildings the floors of the houses have been cemented, cement footpaths laid and new ash-closets built; at Post Office Yard, Blacksmith Yard, Old Hall, Church Street, and Winter's Terrace, ash-closets have been provided to replace the insanitary privies; Old Hall is being rebuilt, 2 houses at Middle Rainton have been repaired, the houses in Winter's Terrace are being put into proper habitable condition; and the owners of the Lambton and Hetton Collieries have rebuilt the houses at Barrack Row and Whitefield Pit; at Moorsley, the North Hetton Coal Company have given an undertaking to repair the streets and

footpaths and to put the houses belonging to them in proper habitable condition; the drainage of Granger Terrace is still unsatisfactory; one house at Newbottle is closed; nothing has been done to improve the sanitary condition of Morton Engine Cottages; Rotten Row cottages are still occupied.

No particulars are given as to the number of houses inspected; the number considered unfit for human habitation; the number of representations made to the sanitary authority; the number closed, etc.

New Streets.—Application has been made to the Local Government Board for powers under the Private Streets Works Act, 1892, with respect to private streets at Peshaw. The Medical Officer of Health mentions a number of streets requiring urgent attention, but nothing has been done; in wet weather they are almost impassable.

Nuisances.—Complaints have been received with respect to the disposal of house refuse, etc., in proximity to dwelling-houses; nuisances arise from the keeping of animals in close proximity to houses; three cases of overcrowding were reported. These are the only nuisances mentioned in the report.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—There are 4 registered milkshops. "The shops and utensils are usually clean and well kept." The number of cowkeepers is 55, and the number of cows in the district 860.

The dairies and cowsheds are periodically inspected and "due attention is paid to the lighting, ventilation, air space, drainage and cleanliness."

The report does not give any information as to the structural condition of these places; as to whether any improvements were carried out during the year.

Slaughter-houses.—There are 18 registered slaughter-houses. They are periodically inspected. With one or two exceptions the premises are said to be well kept.

Offensive Trades.—The meat and milk supplies are said to be generally of good quality. No proceedings were taken for selling adulterated milk.

Factories and Workshops.—The factories and workshops are inspected. The closets at the Penshaw Brick Works and at the Herrington Brick Works do not receive sufficient attention.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation.
- 2.—Making up of private streets.

LANCHESTER RURAL DISTRICT.

J. WILSON, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths.)</i>		
	1912.	1911.		1912.	1911.
Estimated Population	32,502	32,237	Total notifications	225	142
Birth-rate	31.84	32.23	Smallpox	nil	nil
Death-rate	12.37	14.64	Scarlet fever	169	32
Zymotic death-rate	1.53	2.79	Diphtheria	25	29
Phtisis death-rate	0.58	0.68	Fevers (Enteric, &c.)	9	63
Total Tuberculosis death-rate	0.89	1.11	Puerperal fever	1	nil
Respiratory diseases death-rate	2.19	2.63	Cases treated at hospital	191	103
Infant mortality-rate per 1,000 births	90	154	Measles	(24)	(7)
			Whooping cough	(2)	(13)
			Diarrhoea and Enteritis (under 2 years)	(14)	(54)

GENERAL SANITATION.

Water Supply.—The district is supplied by the Weardale and Consett Water Company. The water, which is upland surface, is of good quality and ample.

Sewerage.—The district as a whole is sewered and the houses are drained into them. A few houses drain separately into cesspools or directly on to the land. There are sewage works at Croniwell, Hedleyhope, Maiden Law, Derwent Cottages, Langley Park, Ushaw, Pear Tree Cottages, Malton Colliery, Waterhouses Railway Station, Esh Winning and Cornsay Colliery. Land irrigation is in use at Medomsley, Medomsley Edge, Bradley Cottages, Villa Reil, Castle-side, Templetown, Delves Terrace, and Cornsay.

Scavenging.—In the parishes of Esh, Lanchester, and Craghead, the house refuse is removed to tips provided by the Council.

Housing.—(a) New Houses : 57 were erected and occupied during the year. (b) Insanitary Property. 730 houses were inspected, and of these 174 were found defective; 7 were reported to the District Council as unfit for human habitation; in 3 cases closing orders were made; 1 was made habitable and 3 were closed voluntarily. The number of ashpit-privies converted into ash-closets was 169 and into water-closets 5. The yards in connection with 141 houses were cemented.

During the year Dr. Wilson made an inspection of the district and submitted a report together with recommendations for remedying the sanitary defects. The report deals mainly with individual property. Amongst others he draws attention to are Wagtail Cottages (28 houses) and East Field Cottages, near Craghead (8 houses).

The defects mentioned include damp walls, defective roofing and floors, the absence of proper staircases, defective and unpaved yards, defective rain water spouting, insanitary ashpit privies.

At Hill Top, near Esh, Dr. Wilson recommends main drainage for this area; attention is again drawn to the dilapidated channels and ashpits at Hedley Hill Cottages; at Cornsay Village "nothing has been done by the Cornsay Colliery Company to place these houses in a sanitary condition," and he recommends that the houses (2) owned by the Ushaw College Authorities should be closed until they are made fit for occupation. Referring to his report for 1911, the Medical Officer of Health draws attention to the fact that the insanitary conditions affecting certain properties mentioned in that report have not yet been remedied, namely at West View (2 houses), Church Street (95 houses), Front Street (1 house), Muse's Row (7 houses), Derwentside Cottages, High and Low Westwood, Vicarage View, Medomsley (4 houses), the Royal Oak Yard, Jefferson's House (Medomsley Edge), Tempest Terrace and West View, Bradley Cottages (20 houses), Blue Bell Cottages (Lanchester), and Church Street (2 houses), the latter he recommends should be closed.

Nuisances.—The number of informal and formal notices served were 1,581 and 15 respectively, and 1,415 nuisances were abated. Nine cases of overcrowding were dealt with.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—There are 181 registered cowkeepers, 254 cowsheds, and 1,384 dairy cattle. 7 new cowsheds were built during the year. 66 informal notices were served.

Slaughter-houses.—Not reported on, but 13 informal notices were served to abate nuisances on these premises.

Offensive Trades.—Not mentioned.

Food and Drugs.—No particulars are given as to the quality of the meat and other food supplies sold in the district.

Factory and Workshops.—There are 16 registered workshops; 29 inspections were made. No nuisances under the Public Health Acts appear to have been found.

SANITARY REQUIREMENTS.

1.—The remedying of the insanitary conditions affecting the property referred to in the report of the Medical Officer of Health, and the improvement generally of the housing accommodation of the district.

2.—The paving or cementing of yards.

3.—The abolition of ashpit-privies.

4.—The sewerage of Hill Top.

SEDFIELD RURAL DISTRICT.

FREDERICK HUNTON, M.D., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	34,123	32,818
Birth-rate	31·53	30·01
Death-rate	11·89	15·96
Zymotic death-rate ..	1·32	3·80
Phthisis death-rate ..	0·69	0·54
Total tuberculosis death-rate	1·02	1·24
Respiratory diseases death-rate	1·75	2·22
Infant mortality-rate per 1,000 births	103	175

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	258	328
Smallpox	nil.	nil.
Scarlet fever	1·8	223
Diphtheria	24	40
Fevers (Enteric, &c.)	7	44
Puerperal fever	2	1
Cases treated at hospital ..	126	134
Masles	(9)	(26)
Whooping cough	(3)	(14)
Diarrhoea and Enteritis (under 2 years)	(7)	(62)

GENERAL SANITATION.

Water Supply.—At Fishburn and Sedgfield complaints have been received respecting the insufficiency of the water supply; steps are being taken to deal with this matter.

A few samples of water were taken from various wells in the district for analysis. With respect to the quality and sufficiency of the water supply generally throughout the district, the report gives no information.

Sewerage.—“It is proposed during the present year to construct a joint disposal scheme at Coxhoe Bridge, and to enlarge the works at Trimdon Colliery, Windlestone Row, and Sedgfield.”

The existing works are giving satisfaction.

Scavenging.—At Bishop Middleham and Fishburn the scavenging is done by public contract with satisfactory results.

Reporting on the scavenging of the district, Dr. Frederick Hunton writes “the scavenging has been much better done, although in some districts there have been causes for complaint, and I can only repeat what I have said in previous annual reports, that there is no probability of the work being really effectively performed until your Council undertake it.”

Housing.—(a) New Houses: 212 new houses were erected. (b) Insanitary Property: For the purpose of Section 17 of the Housing, Town Planning Act, 1909, 383 houses were inspected; 53 were considered unfit for human habitation; 53 closing orders were made; 60 houses were put into a proper state of repair without resorting to a closing order; none of the houses closed were put into a fit state for human habitation.

The chief defects were:—defective paving and roofs, general dampness, bad ventilation, and insanitary ash-pit-privies.

There is no information given as to the character of the housing generally throughout the district.

It is proposed to erect, under Part III. of the Housing Acts, 20 houses at South View, Trimdon.

Streets.—“One of the most urgent needs of your district,” writes Dr. Hunton, “is the making up of streets, and for years I have reported very strongly upon the matter with very little practical result.”

Nuisances.—Two statutory and 770 informal notices were served to abate nuisances; as a result 591 nuisances were abated. Amongst these are included the conversion of 204 ashpit-privies into ash-closets. There are still 1,723 privies in this district.

Common Lodging Houses.—None.

Dairies, Cowsheds and Milkshops.—132 notices were served to whitewash and cleanse and to carry out structural alterations. The number of persons registered, the character of the buildings, etc., are not stated.

Slaughter-houses.—No mention is made under this heading.

Food and Drugs.—The supply of milk is said to be satisfactory. "One barrel of fish and 1 meat roll" were condemned. Proceedings were taken in one case for exposing for sale unwholesome food.

Factories and Workshops.—There are 24 registered workshops; 86 inspections were made and 3 written notices were served.

SANITARY REQUIREMENTS.

- 1.—The making up of streets.
- 2.—Improvements to the houses of the working classes.
- 3.—More efficient scavenging.

SOUTH SHIELDS RURAL DISTRICT.

W. ARMSTRONG, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	15,968	15,033
Birth-rate	24.20	25.80
Death-rate	11.71	12.63
Zymotic death-rate	1.17	1.66
Phthisis death-rate	0.32	0.66
Total Tuberculosis death-rate	0.91	1.46
Respiratory diseases death-rate ..	2.41	2.19
Infant mortality-rate per 1,000 births	97	154

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	123	78
Smallpox	nil	nil
Scarlet fever	63	27
Diphtheria	11	19
Fevers (Enteric, &c.)	6	19
Puerperal fever	1	1
Cases treated at hospital	64	38
Measles	(8)	(1)
Whooping cough	(7)	(nil)
Diarrhoea and Enteritis (under 2 years)	(2)	(3)

GENERAL SANITATION.

Water Supply.—The district is supplied by the Sunderland and South Shields Water Company.

Many of the farms are in need of a better water supply.

Sewerage.—A new scheme for the drainage of Boldon is still under consideration. The Marsden sewer has been extended and now discharges on to the beach.

Scavenging.—The removal of house refuse throughout the district is carried out by contract. It is fairly well done, but there have been complaints from East and West Boldon, Cleadon, Boldon Colliery, and Harton Village.

Housing.—New Houses: 50 were built, occupied 24. Under the Housing (Inspection of District) Regulations 217 houses were inspected; 16 were considered unfit, 16 were closed, one was put into a fit state for human habitation, after closure, and in 147 the defects were remedied without making an order. 1 house has been demolished and 5 demolition orders have been made but are not yet operative.

Nuisances.—16 ashpit-privies were converted into earth-closets and 27 into water-closets. 439 nuisances were abated; of these 57 were with respect to structural defects to houses, 45 with respect to yard paving and 47 with respect to drainage defects.

Streets.—Dr. Armstrong draws attention to a number of streets which require making up.

Common Lodging Houses.—There are none in the district.

Dairies, Cowsheds and Milkshops.—The dairies and cowsheds are regularly inspected. 13 informal and 10 statutory notices were served to abate nuisances. Four farms were thoroughly repaired and 5 others which have been reported upon require attention.

Slaughter-houses.—Slaughter-houses (10), meat shops (4). Seven informal notices were served.

Offensive Trades.—There are none in the district.

Food and Drugs.—No seizures of unwholesome meat were made during the year.

Factory and Workshops.—146 inspections were made and 10 notices were served.

SANITARY REQUIREMENTS.

- 1.—A better water supply to many of the farms.
- 2.—Street improvements.

STOCKTON RURAL DISTRICT.

J. W. BLANDFORD, L.R.C.P., Medical Officer of Health.

<i>Vital Statistics.</i>		<i>Infectious Diseases—Cases and (Deaths).</i>			
	1912.	1911.	1912.	1911.	
Estimated Population ..	17,475	17,475	Total notifications ..	144	120
Birth-rate	26·15	27·41	Smallpox	nil	nil
Death-rate	11·61	15·27	Scarlet fever	89	53
Zymotic death-rate	0·57	2·34	Diphtheria	32	40
Pneumonia death-rate	0·63	1·08	Fevers (Enteric, &c.)	9	15
Total Tuberculosis death-rate	1·37	1·37	Puerperal fever	1	nil
Respiratory diseases death-rate	0·74	2·63	Cases treated at hospital	61	52
Infant mortality-rate per 1,000			Measles	(4)	(7)
births	74	146	Whooping cough	(1)	(7)
			Diarrhoea and Enteritis		
			(under 2 years)	(3)	(16)

GENERAL SANITATION.

Water Supply.—“The district is supplied by the Tees Valley Water Company and partly from private wells. The water supply has been good and plentiful. Two samples from private wells were analysed and one was condemned.”

Sewerage.—At Norton a sewer from the tram terminus to the river has been completed, and a pumping station erected at the bottom of Tanners Bank. When the new sewer in Durham Road is laid the whole of the populous part of Norton will be sewered; at Billingham some form of purification scheme at the outfall is recommended, and at Haverton Hill the sewer going through the reclaimed land should be covered in and extended direct to the Tees; at Wolviston it is anticipated that in the event of very dry weather the beck into which the sewage of the village discharges usually will become very foul, and a scheme for dealing with this matter should be provided at an early date; at Whitton to effectually deal with the sewage some better means of treating it will have to be adopted; to treat the sewage from the village of Carlton filtration works are to be provided.

Scavenging.—Scavenging is done under contract at Norton, Billingham, Haverton Hill, Port Clarence, Whitton, Eaglescliffe, Hartburn and Preston. The work has been done satisfactorily, though from Haverton Hill there have been some complaints; the streets at Haverton Hill “are not so carefully cleansed as they might be.”

Housing.—(a) New Houses: 7 were occupied. (b) Insanitary Property: As stated in the report, little work has been done in this district under the Housing and Town Planning, Etc., Act. Only 32 houses situated in the Norton district were inspected under the Housing (Inspection of District) Regulations, and with respect to these 8 notices were served to abate nuisances. Several houses at Haverton Hill became dangerous owing to the subsidence caused by brine pumping, and were closed voluntarily.

Dr. Blandford, reporting on the back-to-back houses at Port Clarence, states that the fumes from the works adjoining these buildings are very offensive. These houses were specially referred to at the Borough of Middlesbrough Extension Inquiry.

Streets.—At Whitton the streets at the front and back of the houses require making up.

Nuisances.—418 informal and 21 statutory notices were served; the number of nuisances abated was 436. With respect to ashpits and privies, 122 notices were served. The number of ashpit-privies converted into ash-closets was only 4, into water-closets 2. There are still 132 ashpit-privies in the district. To abate nuisances with respect to structural defects to houses, 69 notices were served and 68 nuisances abated; the number of nuisances abated with respect to defective drainage was 108.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—There are 59 dairies and cowsheds in the district. They are regularly inspected, and to abate nuisances 18 notices were served. The water supply to the farms is satisfactory; repairs have been carried out when necessary. The “places and milk vessels are kept fairly clean.”

Slaughter-houses.—There are 12 slaughter-houses; they are kept satisfactorily. The knackers' yard has been kept under close observation.

Offensive Trades.—None.

Food and Drugs.—The quality of the meat and other food supplies sold in the district is not mentioned. No seizures of unwholesome food were made.

Factories and Workshops.—There are 26 workshops and work-places; 54 visits of inspection were paid and 4 notices were served to abate nuisances. There are no out-workers.

Some of the foregoing particulars are abstracted from the report of the Inspector of Nuisances.

SANITARY REQUIREMENTS.

1.—*Sewage Works.*—At Billingham the provision of sewage purification works; at Haverton Hill the provision of a satisfactory outfall; at Wolviston the provision of purification works; at Whitton the provision of purification works or a satisfactory outfall; the provision of purification works for the sewage of Carlton village.

2.—*New Streets.*—Street improvements at Whitton.

3.—*Housing.*—Improvement of the housing accommodation.

SUNDERLAND RURAL DISTRICT.

ROBERT STOBO, M.B., B.Hy., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	29,898	29,161
Birth-rate	29.73	32.44
Death-rate	13.17	17.66
Zymotic death-rate ..	0.70	3.73
Pertussis death-rate ..	1.17	0.99
Total Tuberculosis death-rate	1.70	1.33
Respiratory diseases death-rate	2.44	2.91
Infant mortality-rate per 1,000 births	100	201

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	351	159
Smallpox	nil	nil
Scarlet fever	137	40
Diphtheria	100	71
Fevers (Enteric, &c.)	20	30
Puerperal fever	1	1
Cases treated at hospital ..	81	66
Measles	(2)	(18)
Whooping Cough	(5)	(11)
Diarrhoea and Enteritis (under 2 years)	(6)	(70)

GENERAL SANITATION.

Water Supply.—All the parishes in the district derive their supply from the Sunderland and South Shields Water Company, and each house, with the exception of those belonging to the Ryhope Colliery Company, have the water laid on to them.

All the farms in the district have the public water supply.

Sewerage.—Ryhope Colliery, Ryhope, New Silksworth and Tunstall are in need of an efficient sewerage scheme. The sewers in certain streets in Ryhope are in such an unsatisfactory condition that the serving of notices to convert the insanitary ashpit-privies into water-closets had to be deferred.

In the present system there is no means of flushing, ventilation, or inspection, and the street gullies, which are in close proximity to the houses, are a serious nuisance.

Scavenging.—For scavenging purposes the district is divided into 12 areas. The ashpits are emptied once a week and the portable bins twice a week. The scavenging is done by contract and has been most satisfactorily carried out.

There are 701 ashpit-privies and 3,889 ash-closets in the district.

Housing.—(a) New Houses: erected 9, occupied 8. (b) Insanitary Property: Under the Housing Regulations 1,157 houses were inspected; in the parish of Ford 168, Hylton 478, Ryhope 245, and Tunstall 266.

Notices, with respect to houses in the parishes of Ford and Hylton and in the village of Ryhope, were served under the Public Health Acts as follows:—To pave and repair yards 35, to provide better means of ventilation in bedrooms 252 (at Hylton 201), to remedy defective spouting 41, and to remedy dampness in rooms 41. In addition a number of other notices were served to remedy numerous defects.

In the parish of Ford 101 notices were served to convert privies into water-closets, but with respect to 57 insanitary ash-pit privies in the village of Ryhope it was impossible to deal with them in a

similar manner owing to the unsatisfactory condition of the sewerage system in this district.

The houses at Tunstall, Dr. Stobo reports, are of modern construction and are provided with separate ash-closets, paved yards and gullies discharging into a drain and connected to the public sewer.

Here, however, 72 houses were found to be damp owing to the want of proper provision to drain off surface water.

At Hylton, 17 cases of overcrowding were found.

Dr. Stobo's report on the general sanitation of the Ryhope Colliery property shows that out of 922 houses in this area 626 have ash-closets and 296 ashpit-privies. Only one back street in the whole of the colliery property is completely paved, and none of the carriageways are paved. Surface water drainage is also greatly needed. Referring to Queen Street, which was the subject of a special report Dr. Stobo says "it is impossible to consider the merits of this street alone as many of the Ryhope Coal Company's old houses are in a similar condition. . . . Dampness," he says, "is manifest in the great majority of the houses, both on the ground floor and the first storey; defective ventilation is most marked in the bedrooms" which are "without provision for efficient through ventilation. . . . The want of proper paving both back and front is the main cause, not only of dampness to the dwellings but the general insanitary condition outside, which I believe to be productive of much illness."

With respect to these houses he recommends

- (a) The provision of a footpath, both back and front, of some impervious material.
- (b) The levelling and cindering of the front street and closing it up for the usual vehicular traffic.
- (c) Cementing the spaces between the pantries.
- (d) Making a proper street at the back for vehicular traffic, either by tar-grouting or, if possible, tar-macadam.
- (e) The provision of a gully in some convenient place.

- (f) Providing a separate water supply to each house.
- (g) Removing the partition in the first storey and converting the two bedrooms into one.
- (h) Providing a fireplace in the upstairs bedroom.
- (i) Removal of present staircase and erecting a wider staircase at the other end of the living room.
- (k) Removal of the present bedroom windows and providing large dormer windows in their place.
- (l) Overhauling of the sewer by the District Council and providing means of inspection, flushing and ventilation.

With the exception of (d) the recommendations were accepted by the Coal Company's representative, who did not consider the houses worth the construction of a modern street.

Up to the end of the year, however, nothing had been done to comply with the Medical Officer of Health's recommendations, but the houses in Middle Railway Street and Bull Row are being reconstructed by the Company.

Housing and Town Planning Act.—Four notices were served under this Act to carry out extensive alterations to houses in the parish of Ford.

Nuisances.—482 informal and 312 statutory notices were served to abate nuisances; the number abated was 668. With respect to structural defects to houses, 287 nuisances were abated, and 20 cases of overcrowding were dealt with.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—There are 34 dairy farms and 18 milkshops in the district. The dairy farms are in a satisfactory state and suitable for the purpose. Minor alterations were carried out to three. The 534 cows in the district were inspected by a Veterinary Surgeon appointed by the Council, and all but four were found healthy.

In most cases the 18 milkshops deal in small quantities of milk. The conditions under which the milk is stored and retailed are not satisfactory.

Slaughter-houses.—Not mentioned in the report.

Offensive Trades.—Not mentioned.

Food and Drugs.—Character of meat and other food supplies sold in the district are not mentioned; in the Sanitary Inspector's report it would appear that carcasses of three tuberculous cows were seized.

Factories and Workshops.—There are 25 workshops and 28 retail bakehouses, one of which is underground. To the workshops 50 visits of inspection were paid, to the factories 6. The number of defects dealt with under the Public Health Acts were 6.

No list of outworkers was received.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation, more particularly those belonging to the Ryhope Colliery.
- 2.—The provision of surface water drainage at Ryhope Colliery.
- 3.—A better system of drainage for Ryhope village.
- 4.—The making up of streets in Ryhope village and at Ryhope Colliery.

WEARDALE RURAL DISTRICT. (Derwent Division).

ANDREW VEITCH, M.D., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population	490	480
Birth-rate	18·36	12·50
Death-rate	10·20	10·41
Zymotic death-rate	nil	nil
Phthisis death-rate	2·04	nil
Total Tuberculosis death-rate	2·04	nil
Respiratory diseases death-rate	2·04	nil
Infant mortality-rate per 1,000 births	111	166

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	3	nil
Smallpox	nil	nil
Scarlet fever	nil	nil
Diphtheria	1	nil
Fevers (Enteric, &c.)	nil	nil
Puerperal fever	nil	nil
Cases treated at hospital	nil	No hos.
Measles	(nil)	(nil)
Whooping cough	(nil)	(nil)
Diarrhoea and Enteritis (under 2 years)	(nil)	(nil)

GENERAL SANITATION.

Water Supply.—The villages of Edmondbyers and Ruffside have public supplies. The rest of the district is supplied from springs, which are numerous and yield a pure and wholesome supply.

Sewerage.—"The villages are sufficiently drained" and well flushed by the heavy rains.

Scavenging.—The privy system is in use throughout the district. The contents are emptied periodically.

Housing.—At Edmondbyers a house was on inspection considered to be unfit for human habitation. A new house is to be built in its place. To abate overcrowding additional rooms are to be added to Hunter House Cottage; at "the Park" drainage and byre improvements are to be carried out.

The district has been inspected several times by the Inspector and Medical Officer of Health. There are many unoccupied houses.

Nuisances.—No nuisances were complained of.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—There are no registered dairymen in the district. Those who have cows dispose of the milk in small quantities to neighbours.

Slaughter-houses.—None.

Offensive Trades.—None.

Food and Drugs.—No food was seized as being unfit for human consumption.

Factories and Workshops.—There are no bakehouses.

SANITARY REQUIREMENTS.

None mentioned.

The summary of the work carried out by the Inspector of Nuisances for the whole of the Weardale Rural District shows that 166 informal notices were served and that 130 nuisances were abated. One was a case of overcrowding, 5 were with respect to defects in dwelling-houses and schools, and 10 with respect to house drainage. The number of ashpit-privies converted into ash-closets was 2, new ash-closets and new water-closets provided 2 and 12 respectively.

Twelve notices were served to abate nuisances connected with cowsheds.

WEARDALE RURAL DISTRICT.

(Stanhope Division.)

JAMES BANNERMAN, M.B., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1912.	1911.	1912.	1911.	
Estimated Population	2,727	2,727	Total notifications	55	12
Birth-rate	22·38	18·33	Smallpox	nil.	nil.
Death-rate	14·30	13·20	Scarlet fever	16	3
Zymotic death-rate	0·36	2·20	Diphtheria	36	6
Phthisis death-rate	1·10	1·10	Fevers (Enteric, &c.)	nil.	1
Total Tuberculosis death-rate	1·10	1·10	Puerperal fever	nil.	nil.
Respiratory diseases death-rate	1·10	1·83	Cases treated at hospital ..	11	No hos.
Infant mortality-rate per			Measles	(nil.)	(nil.)
1,000 births	66	60	Whooping cough	(nil.)	(1)
			Diarrhoea and Enteritis		
			(under 2 years)	(nil.)	(1)

GENERAL SANITATION.

Water Supply.—The water supply at Frosterly Hill End, Rookhope, and Crawleyside are under the control of the District Council. The Frosterly supply has been supplemented by springs on Thornhope Moor, from whence 364 yards of piping have been laid to the Council's chambers.

Sewerage.—Frosterly, Hill End, Crawleyside and Rookhope are sewered, and sewage disposal fields are provided.

Housing.—(a) New Houses: 2. (b) Insanitary Property: One house was condemned during the year. Three cottages at Rookhope were inspected, one has been closed and one improved. The owners of this property are preparing plans for buildings to accommodate 100 miners.

Scavenging.—Not mentioned.

Nuisances.—Nuisances in connection with privies occurred and were all abated.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—The number of dairy farms in the district is not given. One byre has been improved and another is under notice. The byres have been greatly improved during the past few years. There are no milkshops, and the milk is retailed by small farmers.

Slaughter-houses.—Not mentioned.

Food and Drugs.—The quality of the meat and other food stuffs sold in the district is not mentioned. There were no seizures of unwholesome food.

Factories and Workshops.—“There are no public bakehouses.”

SANITARY REQUIREMENTS.

Not mentioned.

WEARDALE RURAL DISTRICT.

(St. John's Division.)

ALEXANDER WOOD, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population ..	3,042	3,042
Birth-rate	22·68	22·02
Death-rate	15·44	15·45
Zymotic death-rate ..	0·32	nil
Pnthisis death-rate ..	0·32	0·65
Total Tuberculosis death-rate	0·98	1·64
Respiratory diseases death-rate	0·65	0·98
Infant mortality-rate per 1,000 births	43	89

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	10	6
Smallpox	nil.	nil.
Scarlet fever	2	nil.
Diphtheria	2	1
Fevers (Enteric, &c.)	3	5
Puerperal fever	nil.	nil.
Cases treated at hospital ..	1	No hos.
Measles	(nil.)	(nil.)
Whooping cough	(nil.)	(nil.)
Diarrhœa and Enteritis (under 2 years)	(nil.)	(nil.)

GENERAL SANITATION.

Water Supply.—The villages of Lanehead, Cowshill, Wearhead, West Black Dene, Ireshopeburn, St. John's Chapel with Burnfoot, Daddry Shields and Westgate have good supplies of water. Schemes to supply various farms in the district have been submitted by the District Council to the owners for their consideration.

Sewerage.—There are public sewers at Cowshill, Wearhead, Ireshopeburn, Black Dene, St. John's Chapel, and Westgate. They are regularly flushed. The sewage is treated by broad irrigation. Drainage as well as a water supply is required at the village of Brotherlee.

Scavenging.—Not mentioned.

Housing.—(a) New Houses: Not mentioned. (b) Insanitary Property: A house was closed at Westgate. Five miners' lodging shops at Rookhope were inspected. One has since been closed.

Nuisances.—Minor nuisances were dealt with. Privies were converted into either ash-closets or water-closets.

Dairies, Cowsheds and Milkshops.—One cowshed was closed and various improvements carried out.

Slaughter-houses.—Not mentioned.

Offensive Trades.—Not mentioned.

Food and Drugs.—Not mentioned.

Factories and Workshops.—Not mentioned.

SANITARY REQUIREMENTS.

1.—Drainage and water supply at Brotherlee village.

2.—Water supply to 10 farms at Burnhope, and to farms at Scutter Hill.

WEARDALE RURAL DISTRICT. (Wolsingham Division).

R. H. O. GARBUTT, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1912.	1911.
Estimated Population	3,413	3,414
Birth-rate	22.26	24.89
Death-rate	18.47	12.00
Zymotic death-rate	0.29	0.29
Phthisis death-rate	0.29	0.58
Total Tuberculosis death-rate	0.58	1.17
Respiratory diseases death-rate	1.75	1.17
Infant mortality-rate per 1,000 births	52	70

Infectious Diseases—Cases and (Deaths).

	1912.	1911.
Total notifications	5	10
Smallpox	nil.	nil.
Scarlet fever	nil.	4
Diphtheria	nil.	3
Fevers (Enteric, &c.)	1	1
Puerperal fever	nil.	1
Cases treated at hospital	1	No hos.
Measles	(nil.)	(nil.)
Whooping cough	(nil.)	(nil.)
Diarrhoea and Enteritis (under 2 years)	(nil.)	(nil.)

GENERAL SANITATION.

Water Supply.—In the "Sanitary Drainage District" 518 houses derive their supply from the Weardale and Consett Water Company. White Kirby and Thornley villages have also a good supply from the District Council's public standpipes.

Sewerage.—The “district” sewers are regularly flushed; the sewage disposal irrigation fields work satisfactorily.

Scavenging.—Scavenging is carried out satisfactorily. Dr. Garbutt again draws attention to the objectionable practice in vogue of depositing the contents of the ashpits on the roadway at all hours of the day, until the cart is ready to collect it.

Housing.—(a) New Houses: 3, all are occupied. (b) Insanitary Property: “Some of the houses,” says Dr. Garbutt, “are structurally dilapidated and insanitary and, although comparatively speaking, a fairly high rental is obtained, and they are seldom unoccupied, the minimum amount is expended on maintaining them reasonably fit for human habitation.”

Although many houses are inspected by the Medical Officer of Health and the Inspector, systematic inspection, as required by the Housing (Inspection of District) Regulations, is not yet carried out in this district. Closing orders were made with respect to two houses; the houses are now unoccupied.

Nuisances.—Minor nuisances were reported and were immediately abated.

Common Lodging Houses.—Not mentioned.

Dairies, Cowsheds and Milkshops.—Many of the cowsheds “are in a most unsatisfactory condition” and unsuited for dairy purposes.

Slaughter-houses.—Not mentioned.

Offensive Trades.—Not mentioned.

Food and Drugs.—Not mentioned.

Factories and Workshops.—Two visits of inspection were made to factories.

SANITARY REQUIREMENTS.

- 1.—Scavenging at proper hours.
 - 2.—Improvements to the cowsheds.
 - 3.—Improvements and repairs to insanitary dwellings.
 - 4.—The carrying out of the Housing (Inspection of District) Regulations.
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PORT SANITARY DISTRICTS.

HARTLEPOOL PORT.

S. BIGGART, M.D., Medical Officer of Health.

Hospital.—The number of patients admitted to the Hospital was 90; these included two persons removed from vessels in port; one proved to be a case of typhoid fever and the other a case of dysentery. The remaining 88 cases came from West Hartlepool (75), Hartlepool (10), Seaton Carew (1), Cameron Hospital (1), and Hartlepool (1). The accommodation is stated to be sufficient to meet the present requirements, and the hospital is in good working order and repair.

Inspection of Ships.—The number of vessels inspected by the Medical Officer of Health was 34 and by the Sanitary Inspector 1,537. The vessels were visited by the Medical Officer of Health on account of sickness (2), for the examination of the crew from infected ports or suspected ports (2), for the examination of unsound food as cargo (2), and on account of sanitary defects (2); 7 re-visits were made and one visit paid to examine a stowaway. Of the 1,537 vessels inspected, sanitary defects were found on 136, and the total number of sanitary defects was 315. All the requirements of the Inspector were complied with.

Inspection of Food.—Dr. Biggart reports that the tinned food imported was good in quality and well packed; that fresh fruit imported from Hamburg was of uniformly good quality; that 17 barrels of unsound plums were surrendered and sent to the refuse destructor at West Hartlepool.

RIVER TYNE PORT.

W. EDMUND HARKER, M.D., D Hy., Medical Officer
of Health.

Hospital.—The number of patients treated at the floating hospital was 8, viz., diphtheria (1), enteric fever (2), suspected case of enteric fever (1), measles (1), plague (1), beri beri (1), and dysentery (1). There were two deaths, one from plague, the other from enteric fever.

Sickness on Shipboard.—The diseases reported (a) as having occurred "on the voyage" and (b) or after arrival were as follows:—Malaria (a) 44 and (b) 6, smallpox or suspected smallpox (a) 1, plague (a) 2 and (b) 1, enteric fever (a) 26 and (b) 3, diphtheria (b) 1, beri beri (a) 6 and (b) 3, measles (a) 1 and (b) 1, chickenpox (a) 1, dysentery (a) 2 and (b) 1, choleraic diarrhoea, etc., (a) 3 and (b) 8, influenza (a) and (b) 16.

Vessels inspected by the Medical Officer of Health on account of Sickness.—The number of vessels boarded by the Medical Officer of Health on account of reported or suspected sickness was 50. The nature of the illness and the reason for visiting is recorded as "non-infectious" 16, bronchitis 3, pneumonia 1, pleurisy 1, dropsy 1, appendicitis 1, rheumatism 3, alcoholism 1, cold 2, influenza 3, meningitis 1, arriving from infected ports 2, arrival of emigrants 3, accidents 3, infectious diseases or suspected 9.

Vessels from Infected Ports.—The number of vessels boarded by the officers of the Port Sanitary Authority on account of coming from ports infected, or suspected to be infected with cholera, yellow fever, plague, smallpox, was 625. The vessels from infected ports came direct to the Tyne from 37 ports, and indirectly from 480.

Sanitary Inspection.—The number of vessels arriving in the port was 12,389, namely 1,637 foreign, 4,059 home and 6,693 coastwise. The number inspected by the Chief Inspector and his assistants was 9,335; of these 1,613 were foreign, 3,972 home, and 3,748 coastwise.

Of the 9,335 vessels inspected structural defects were found in 367, and 217 were in a dirty condition. The tabulated list of defects

includes defective side scuttles (144), leaky fore-castle decks (79), defective stores (35), defective drainage (14), and ventilation (16), etc.

Water Supply.—The water boats, 18 in number, were inspected and the tanks found in good condition. In 25 cases the drinking water of ships from ports infected or suspected to be infected with cholera, was changed and the tanks purified.

Disinfection.—16 vessels and several lots of clothing were disinfected. On account of infection, 259 old beds were burnt and 2 lots of filthy clothing destroyed. In addition, 20 fishing boats, in a foul condition, were cleansed and deodorized under notice.

Emigrants.—4,187 emigrants passed through the port during 1912, en route to America. All were well before leaving. All emigrant vessels were visited by the Medical Officer of Health and his Inspectors, and were kept under supervision when in port. Information with respect to emigrants proceeding from the Tyne to other British ports was, as hitherto, forwarded to the Medical Officer of Health of the several ports.

Inspection of Food.—94,961 tons of wheat arriving in the Tyne were inspected, also 8,686 cases of condensed milk, 594 cases of margarine, 1,309 kegs of butter, 980 baskets of fish, 9 cargoes of potatoes and 4 of onions.

The consignments condemned were as follows.—2,580 bags of damaged wheat at the Tyne Dock, 819 tons of damaged wheat at the Albert Edward Dock and the wharf of the Dunston Flour Mill, 14 tons of potatoes and 3½ tons of onions.

The number of special cargoes examined was 856; of these 646 were fish, 116 wheat, 64 fruit, 9 onions and 21 potatoes.

No unsound fish was landed during the year.

Report on Outbreak of Plague.—The report contains a special report of an outbreak of plague on board the S.S. Bellailsa.

1871
1872

1873
1874

1875
1876

1877
1878

1879
1880

1881
1882

1883
1884

1885
1886

TABLE A.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE URBAN DISTRICTS OF THE ADMINISTRATIVE COUNTY OF DURHAM.

URBAN DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population 1912 (Estimate).	Births.	Deaths.	Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality rate per 1,000 Births.	Phthisis death-rate.	Total Tuberculosis death-rate.	Lung Diseases death-rate.	Number of Cases Notified.	Hospital accommodation?	Number of cases removed to Hospital.	Percentage of Notified cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.	
BOROUGHES.																			
Darlington	S. G. Mostyn, M.B., D.P.H.	3956	57104	1456	713	25.50	12.48	0.98	84	0.94	1.40	1.55	748	Yes.	539	72.0	18	18	
Durham	A. M. Vann, M.R.C.S.	1066	17550	435	245	24.78	13.96	0.85	101	1.02	1.25	1.99	88	Yes.	28	31.8	92	17	
Hartlepool	J. Dickinson Leigh, M.D., F.R.C.S., D.P.H.	735	21050	647	359	30.73	17.05	0.71	106	0.61	1.94	2.47	83	Yes.	10	12.0	36	7	
Jarrow	J. M. Nicoll, M.B.	783	34400	1103	575	32.06	16.71	1.39	116	1.16	1.80	3.66	219	Yes.	75	34.2	6	91	
Stockton	Thomas Horne, M.D.	2935	52244	1602	815	30.66	15.59	1.24	91	1.22	1.99	2.47	476	Yes.	227	47.7	29	35	
URBAN DISTRICTS.																			
Annfield Plain	W. M. Morison, L.R.C.P.	3489	17000	625	179	36.76	10.53	1.06	74	0.76	1.29	1.88	116	Yes.	64	55.2	1	17	
Barnard Castle	H. Weighton, M.D.	560	4801	110	75	22.91	15.62	0.42	45	2.08	2.70	1.87	101	Yes.	18	17.8	...	2	
Benfieldside	Wm. Allen, M.D.	1525	8500	245	104	28.82	12.24	0.70	65	0.70	0.94	2.23	90	Yes.	60	66.6	9	12	
Bishop Auckland	T. A. McCullagh, M.R.C.S.	691	14092	362	209	25.68	17.59	1.20	104	0.78	1.49	1.42	136	Yes.	24	17.6	51	15	
Blaydon	H. Morrison, M.B., B.S., B.Hy.	9314	32500	1096	455	33.72	14.00	2.49	129	0.68	1.01	2.77	219	Yes.	113	51.6	5	40	
Brandon and Byshottles	Henry Smith, M.D.	6669	17970	580	208	32.23	11.58	1.00	91	0.39	0.55	2.56	135	Yes.	44	32.6	2	17	
Chester-le-Street	D. Duncan, M.B.	2511	15132	470	197	31.06	13.01	1.32	112	1.12	1.78	2.11	66	Yes. †	18	27.3	25	8	
Consett	A. D. M. Macintyre, M.B.	1005	11414	363	149	31.80	13.05	1.66	63	0.87	1.40	1.84	70	Yes.	41	58.6	2	18	
Crook	A. Mackay, M.D.	4056	12350	349	175	28.26	14.17	1.13	103	0.81	1.45	2.27	211	Yes.	114	54.0	...	15	
Felling	Wm. E. Peacock, M.D., B.Hy.	2684	25359	749	403	29.53	15.89	1.69	119	1.41	2.40	2.32	146	Yes.	24	16.4	...	48	
Hebburn	E. E. Norman, M.B., B.S.	1241	22561	761	399	33.73	17.68	3.14	157	0.84	1.64	3.10	175	Yes.	95	54.3	3	36	
Hetton-le-Hole	J. Adamson, M.D.	1617	15900	552	214	34.71	13.45	0.50	121	1.07	1.63	1.13	149	Yes.	29	19.4	...	16	
Houghton-le-Spring	D. S. Park, F.R.C.S.	1551	9910	343	146	34.60	14.73	1.21	131	0.50	0.60	2.02	138	Yes.	36	26.1	8	5	
Leadgate	Wm. Allen, M.D.	1836	5000	150	85	30.00	17.00	1.80	113	1.40	2.09	3.40	31	Yes.	16	51.6	...	6	
Ryton	James W. Smith, M.D.	5169	13450	420	150	31.22	11.15	0.59	100	0.37	1.19	1.85	88	Yes.	22	25.0	5	12	
Seaham Harbour	Luke G. Dillon, M.D.	1101	16500	609	247	36.91	14.96	1.63	128	0.85	2.06	4.00	72	Yes.	21	29.1	2	26	
Shildon	S. Fielden, M.D.	1066	13721	392	207	28.56	15.08	3.35	86	1.45	1.89	1.89	396	Yes.	124	31.3	...	16	
Southwick-on-Wear	John J. Carruthers, M.B.	856	13939	473	184	33.93	13.27	0.93	67	0.93	1.43	2.29	97	Yes.	54	55.6	...	31	
Spennymoor	W. Mussellwhite, M.R.C.S., D.P.H.	3388	18033	594	269	32.93	14.91	2.15	104	0.77	1.38	3.27	307	Yes.	198	64.5	3	20	
Stanhope	John Gray, M.B.	216	2026	33	31	16.28	15.30	0.98	60	1.48	1.97	1.97	52	Yes.	34	65.4	10	2	
Stanley	E. G. D. Benson, L.R.C.P.	3593	25000	860	333	34.40	13.32	1.60	126	0.76	1.52	2.28	190	Yes.	140	73.7	2	36	
Tanfield	E. G. D. Benson, L.R.C.P.	4779	10500	320	148	30.47	14.09	1.43	119	1.04	1.43	2.09	123	Yes.	79	64.2	7	9	
Tow Law	J. H. Naismith, M.D.	477	4327	125	44	28.88	10.16	Nil.	72	1.15	1.38	2.31	41	Yes.	10	24.4	...	3	
Whickham	Andrew Smith, M.D.	5914	19164	580	242	30.26	12.62	2.14	86	0.88	1.56	1.93	161	Yes.	68	42.2	3	29	
Willington	R. E. Brown, L.R.C.P.	3793	8839	259	105	29.30	11.87	0.79	100	0.35	0.56	1.79	267	Yes.	203	76.3	...	9	

† In this district arrangements have been made by which fever patients may be removed to the hospital in the adjoining rural district.

TABLE DIVING FORMATION

No.	Name	Rank	Branch	Service No.
1	John G. Jones	Ensign	U.S. Navy	1001
2	James H. Smith	Ensign	U.S. Navy	1002
3	Robert L. Brown	Ensign	U.S. Navy	1003
4	William D. White	Ensign	U.S. Navy	1004
5	Richard E. Black	Ensign	U.S. Navy	1005
6	Thomas M. Green	Ensign	U.S. Navy	1006
7	Charles F. Gray	Ensign	U.S. Navy	1007
8	Henry J. King	Ensign	U.S. Navy	1008
9	George W. Lee	Ensign	U.S. Navy	1009
10	Franklin P. Hall	Ensign	U.S. Navy	1010
11	Edward R. Young	Ensign	U.S. Navy	1011
12	Joseph B. Butler	Ensign	U.S. Navy	1012
13	Samuel H. Reed	Ensign	U.S. Navy	1013
14	Benjamin F. Baker	Ensign	U.S. Navy	1014
15	John C. Wall	Ensign	U.S. Navy	1015
16	George W. Wood	Ensign	U.S. Navy	1016
17	Richard M. Bell	Ensign	U.S. Navy	1017
18	Thomas A. Hill	Ensign	U.S. Navy	1018
19	James K. Adams	Ensign	U.S. Navy	1019
20	Robert L. Nelson	Ensign	U.S. Navy	1020

TABLE A1

TABLE GIVING THE DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES WITHIN THE URBAN DISTRICTS OF THE ADMINISTRATIVE COUNTY OF DURHAM.

URBAN DISTRICTS	DEATHS AT SUBJOINED AGES.										DEATHS FROM SUBJOINED CAUSES.																															
	At all ages	Under 1 Year.	1 and under 2.	2 and under 3.	3 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards	Fevers	Diphtheria	Scarlet Fever	Smallpox	Measles	Whooping Cough	Diphtheria and Croup	Erysipelas	Pneumonia	Pneumonia	Pneumonia	Tuberculosis	Meningitis	Other Infections	Typhoid	Typhus	Cholera	Malicious Disease	Meningitis	Organic Heart Disease	Breast	Pneumonia	Other Diseases of the Respiratory System	Diarrhoea and Enteritis	Appendicitis and Typhoid	Alcoholism	Cirrhosis of Liver	Phthisis and other Diseases of the Lungs	Paratyphoid	Other Diseases of the Intestines	Accidental Deaths	Violent Deaths	Other Unnatural Deaths
Darlington	713	123	20	33	23	28	86	176	214	2	14	12	15	5	16	54	12	14	2	55	10	54	59	30	10	9	3	3	4	21	1	3	56	17	8	205	19					
Durham	245	44	12	6	5	10	32	57	79	1	4	4	4	1	18	4	23	1	26	16	19	3	2	1	1	3	10	3	11	5	1	75	9									
Hartlepool	359	69	20	21	12	23	37	91	86	1	10	13	1	18	5	7	2	40	7	15	3	28	11	44	55	71	9	12	1	2	1	15	42	30	3	123	16					
Jarrow	573	128	43	30	30	33	72	100	130	1	13	1	18	5	7	2	40	7	15	3	28	11	44	55	71	9	12	1	2	1	15	42	30	3	123	16						
Stockton	815	147	48	52	39	43	112	187	187	2	33	8	10	5	64	16	24	6	47	11	79	59	69	5	18	1	1	21	2	5	76	45	7	191	9							
Annfield Plain	171	46	15	11	4	7	24	30	34	3	4	4	2	3	13	3	6	13	3	6	13	19	17	15	3	7	1	1	21	2	26	7	16	3								
Barnard Castle	73	5	3	2	2	2	9	15	37	1	1	1	1	10	1	2	4	10	3	6	1	9	1	1	2	26	7	1	19	2												
Benfieldside	104	16	5	8	5	3	17	25	24	2	2	1	1	6	1	1	10	1	1	10	13	3	16	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Bishop Auckland	209	38	12	13	10	2	31	40	63	1	10	1	2	1	11	2	9	2	20	1	21	24	67	5	13	4	2	2	1	16	7	29	20	4	8	37						
Blaydon	451	142	11	86	15	20	37	67	73	1	53	5	6	1	22	2	9	2	20	1	21	24	67	5	13	4	2	2	1	16	7	29	20	4	8	37						
Brandon & Blythoties	208	53	20	13	9	10	30	29	44	2	3	4	3	1	7	3	7	8	2	15	14	18	1	10	3	3	5	21	11	38	9											
Chester-le-Street	197	53	16	15	2	8	25	39	39	1	6	1	3	1	17	3	7	8	2	15	14	18	1	10	3	3	5	21	11	38	9											
Consett	149	23	12	8	6	14	19	35	32	1	10	1	6	1	10	2	4	10	2	11	8	13	4	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Crook	175	35	10	15	7	9	16	38	44	1	3	3	2	2	10	5	3	1	12	5	21	12	16	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Felling	463	89	40	29	19	23	46	78	179	1	25	4	6	1	36	5	20	1	17	6	37	19	40	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Hebburn	369	120	47	35	16	16	29	61	45	4	29	23	2	1	19	12	6	1	17	6	1	17	10	5	16	13	13	6	1	1	1	1	1	1	1	1	1	1	1	1		
Hetton-le-Hole	214	67	9	5	5	9	33	40	46	1	1	5	1	1	17	5	4	10	5	16	13	13	7	15	2	1	2	4	2	2	44	16	3	53	9							
Houghton-le-Spring	146	45	10	8	6	5	12	15	45	1	1	1	3	5	1	1	5	1	10	19	4	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Leadgate	85	17	5	7	5	3	8	16	24	1	3	3	7	7	7	3	3	3	7	8	9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Ryton	150	42	5	13	5	5	11	33	36	1	5	3	3	3	5	5	6	5	10	1	13	4	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Seaham Harbour	249	78	22	21	13	12	25	25	53	1	8	6	1	1	14	3	17	11	11	20	46	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Shildon	207	34	18	29	10	16	31	36	33	4	33	9	1	1	3	20	2	4	7	2	16	17	9	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Southwick-on-Wear	184	32	16	8	13	9	26	43	37	3	2	4	1	1	13	1	6	7	27	18	14	2	5	4	2	2	13	4	1	1	1	1	1	1	1	1	1	1	1	1		
Spennymoor	269	62	30	20	15	10	27	51	54	9	8	9	1	2	14	5	6	3	16	5	20	21	38	1	18	1	2	9	1	1	1	1	1	1	1	1	1	1	1	1	1	
Stanhope	29	3	1	1	1	5	4	5	9	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Stanley	333	109	28	17	17	18	46	52	46	19	3	3	8	6	19	5	14	2	11	2	18	39	18	2	8	1	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tanfield	148	38	1	5	6	10	21	39	37	2	5	3	1	1	11	1	3	1	17	3	14	13	9	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Tow Law	41	9	4	1	2	8	9	8	8	4	16	1	9	6	1	17	8	5	14	11	11	20	6	5	1	1	7	3	26	13	2	40	15									
Whickham	242	60	21	23	16	10	33	44	45	3	2	2	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Willington	105	27	7	8	4	5	14	16	24	3	2	2	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
TOTAL	7620	1745	521	542	321	370	921	1493	1707	33	1	310	52	130	81	55	5	503	114	219	29	425	79	649	539	710	69	175	22	15	29	187	11	65	737	318	44	1626	318			

The difference between the total deaths in some districts in this Table and the figures given in Table A. is due to the incompleteness of the statistics in the Annual Reports of the district Medical Officers of Health. In a number of instances the deaths and ages of residents who died outside the District were not included as they should be in L.G.B. Table III.

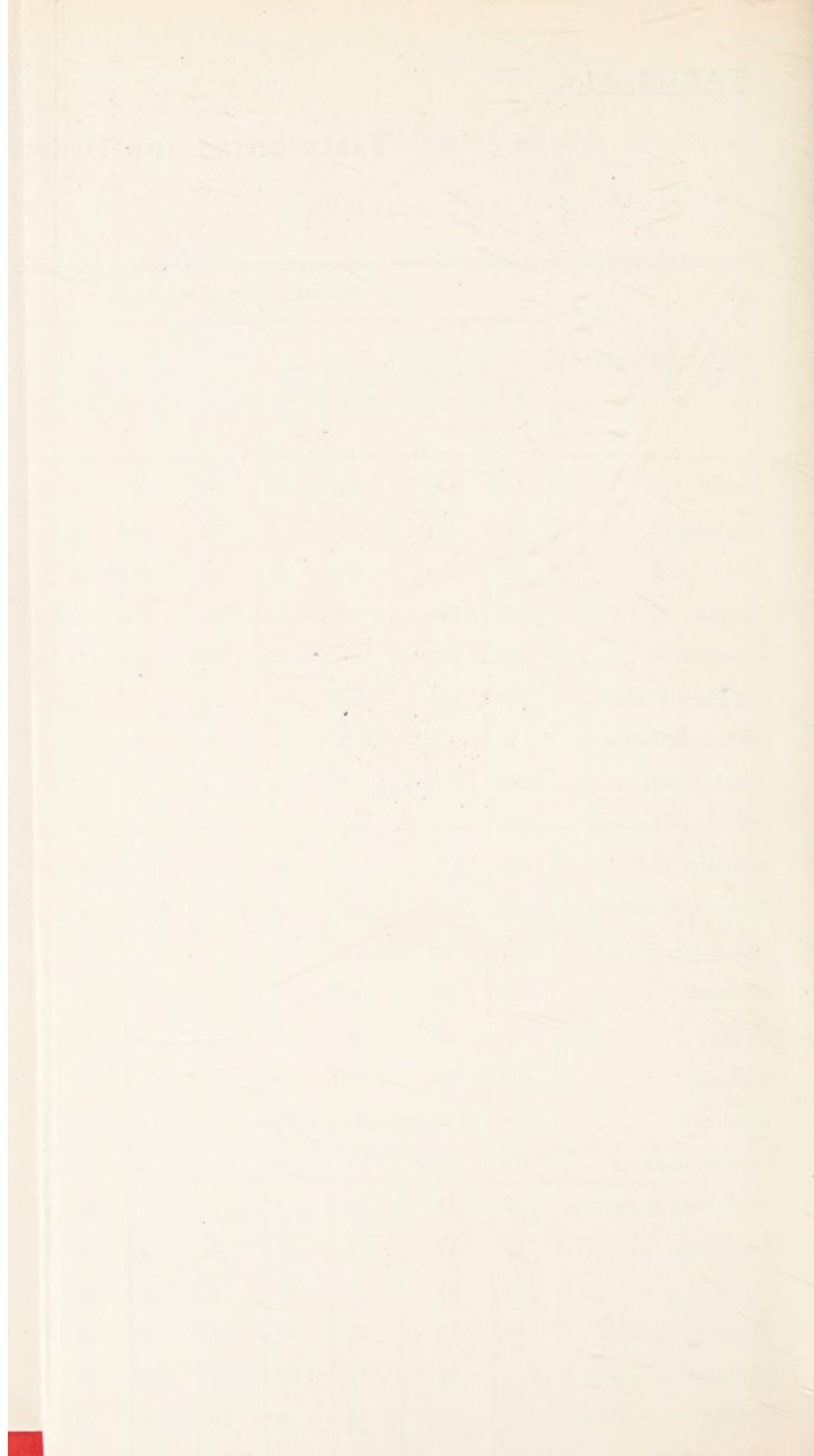


TABLE B.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE RURAL DISTRICTS OF THE ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population 1912 (Estimated).	Births.	Deaths.	Birth-rate.	Death-rate.	Zymotic death-rate.	Infant Mortality rate per 1000 Births.	Phtthisis death-rate.	Total Tuberculosis death-rate.	Lung Diseases death-rate.	Number of Cases Notified.	Hospital accommodation?	Number of cases removed to Hospital.	Percentage of Notified Cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.
Auckland	J. F. Macdonald, M.D., D.P.H.	57334	59254	1911	776	32.25	13.09	1.55	106	0.76	1.28	1.97	1409	Yes.	551	39.1	21	46
Barnard Castle	James C. Neligan, L.R.C.S.	70961	11793	277	165	23.48	13.99	0.76	112	0.59	1.44	0.94	91	Yes.	29	31.8	...	9
Chester-le-Street	J. Taylor, M.D., D.P.H.	32169	65879	2221	885	33.71	13.43	1.26	120	0.55	1.17	2.35	428	Yes.	118	27.5	6	69
Darlington	Robert H. Meikle, M.B.	42019	10914	266	127	24.37	11.63	0.91	109	0.73	0.91	1.37	141	Yes.†	20	14.2	...	9
Durham	A. T. Harrison, L.S.A.	30871	31309	1012	435	32.32	13.89	1.05	116	0.86	1.15	1.72	182	Yes.	53	29.1	9	28
Easington	J. Arthur, L.R.C.P., D.P.H.	37018	63050	2232	897	35.40	14.22	1.69	118	0.65	1.17	2.23	778	Yes.	60	7.7	23	48
Hartlepool	T. G. Ainsley, M.D.	19090	2440	67	31	27.45	12.70	0.82	149	0.82	1.23	1.23	10	Yes.†	Nil.	0.0	166	1
Houghton	D. S. Park, F.R.C.S.	13192	26200	922	365	35.19	13.92	1.75	120	0.57	0.99	2.57	133	Yes.	29	21.8	...	22
Lanchester	J. Wilson, M.D.	51151	32502	1035	402	31.84	12.37	1.53	90	0.58	0.89	2.49	225	Yes.	191	84.8	63	19
Sedgefield	Frederick Hunton, M.D.	45006	34123	1076	406	31.53	11.89	1.32	103	0.69	1.02	1.75	258	Yes.	126	48.9	126	19
South Shields	W. Armstrong, L.R.C.P.	12073	15368	372	180	24.20	11.71	1.17	97	0.32	0.91	2.41	123	Yes.	64	52.0	294	15
Stockton	J. W. Blandford, L.R.C.P.	34539	17475	457	203	26.15	11.61	0.57	74	0.68	1.37	0.74	144	Yes.†	61	42.3	5	14
Sunderland	Robert Stobo, M.B., B.Hy.	6980	29898	889	394	29.73	13.17	0.70	100	1.17	1.70	2.44	351	Yes.	81	23.1	...	45
Weardale (Derwent Division)	Andrew Veitch, M.D.	13144	490	9	5	18.36	10.20	Nil.	111	2.04	2.04	2.04	3	Yes.	Nil.	...	...	...
Weardale (Stanhope Div.)	James Bannerman, M.B.	24864	2727	61	39	22.38	14.30	0.36	66	1.10	1.10	1.10	55	Yes.	11	20.0	...	3
Weardale (St. John's Div.)	Alexander Wood, L.R.C.P.	36096	3042	69	47	22.68	15.44	0.32	43	0.32	0.98	0.65	10	Yes.	1	10.0	...	3
Weardale (Wolsingham Div.)	R. H. O. Garbutt, L.R.C.P.	21552	3413	76	46	22.26	13.47	0.29	52	0.29	0.58	1.75	5	Yes.	1	20.0	1	8

† In these districts arrangements have been made by which fever patients may be removed to the hospital in the adjoining urban district.

Year	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Population	100	150	200	250	300	350	400	450	500	550
Area	100	100	100	100	100	100	100	100	100	100
Population Density	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
Urban Population	50	70	90	110	130	150	170	190	210	230
Rural Population	50	80	110	140	170	200	230	260	290	320
Urban Density	0.5	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3
Rural Density	0.5	0.8	1.1	1.4	1.7	2.0	2.3	2.6	2.9	3.2
Urban Area	20	30	40	50	60	70	80	90	100	110
Rural Area	80	70	60	50	40	30	20	10	0	0
Urban Density (per sq. unit)	2.5	2.3	2.25	2.2	2.15	2.1	2.05	2.0	1.95	1.9
Rural Density (per sq. unit)	0.5	1.1	1.75	2.4	3.05	3.7	4.35	5.0	5.65	6.3

TABLE BI.

TABLE GIVING THE DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES WITHIN THE RURAL DISTRICTS OF THE ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS	DEATHS AT SUBJOINED AGES								DEATHS FROM SUBJOINED CAUSES																													
	At all ages	Under 1 Year	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Fevers														Other causes															
									Typhus	Enteric	Continued	Smallpox	Malaria	Scarlet Fever	Whooping Cough	Diphtheria (crep.)	Influenza	Mumps (Pneumonia)	Tuberculosis	Subcutaneous Strangles	Other Tuberculosis	Rheumatic Diseases	Rheumatic Fever	Cancer, Malignant Disease	Measles	Organic Heart Disease	Bronchitis	Pneumonia (all forms)	Other Diseases of Infancy	Diarrhoea and Enteritis	Syphilis and Gynaecitis	Alcoholism	Corbacia of Liver	Nephritis and Bright's Disease	Puerperal	Other accidents and diseases of Infancy	Congenital Malformations including Pre-natal Death	Violent Deaths, Suicide & Homicide
Auckland	776	204	60	53	46	40	93	183	3	33	18	7	14	11	45	12	19	5	23	8	55	70	47	16	28	3	2	6	16	2	10	87	29	5	179	23		
Barnard Castle	185	31	5	4	12	8	18	32	55	4	26	2	29	5	1	7	5	5	1	6	14	7	4	5	3	3	1	16	7	1	23	47						
Chester-le-Street	891	268	67	47	26	37	89	168	189	4	5	2	3	8	1	1	7	7	37	8	62	64	91	7	27	2	2	38	5	134	36	3	182	49				
Darlington	118	29	4	3	6	2	16	25	33	2	5	7	1	3	9	2	27	3	6	1	7	9	10	5	1	1	1	1	1	11	4	3	39	4				
Durham	435	118	23	21	21	28	51	61	112	4	7	1	3	9	2	27	3	6	1	26	4	37	30	24	4	9	5	11	5	70	21	3	123	...				
Easington	897	266	61	67	40	58	94	129	173	5	19	18	33	15	14	41	8	25	5	37	15	37	53	88	9	22	3	30	5	7	196	53	4	98	117			
Hartlepool	31	10	1	1	1	5	7	6	6	3	12	1	17	5	1	15	3	8	19	33	25	42	1	12	1	1	3	3	56	26	1	77	2					
Houghton	365	111	34	30	10	22	29	56	73	3	24	3	2	4	1	19	3	7	3	10	4	25	41	40	1	17	1	3	5	1	4	29	19	2	1	111		
Lanchester	383	94	24	29	19	20	40	67	90	3	8	7	7	5	1	8	13	17	17	20	1	5	1	1	3	2	12	6	2	49	...							
Sedgefield	406	111	30	19	30	24	52	60	80	1	4	1	1	12	4	8	14	13	11	2	23	4	2	1	3	2	12	6	2	49	...							
South Shields	180	56	16	6	8	7	17	33	57	1	2	5	7	2	35	2	14	19	7	28	48	25	7	6	3	1	5	6	6	48	13	3	101	...				
Stockton	203	34	6	12	13	12	33	42	51	1	5	7	2	35	2	14	19	7	28	48	25	7	6	3	1	5	6	6	48	13	3	101	...					
Sunderland	334	80	24	18	13	24	53	65	108	1	1	1	1	12	4	8	14	13	11	2	23	4	2	1	3	2	12	6	2	49	...							
Weardale (Derwent Division)	5	1	...	...	...	2	2	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Weardale (Stanhope Div.)	39	4	2	1	1	5	8	18	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Weardale (St. John's Div.)	47	3	1	2	1	5	12	23	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Weardale (Wolsingham Div.)	46	4	2	1	3	1	15	20	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	5331	1413	337	312	258	288	603	677	1273	28	1	173	46	111	70	40	282	62	137	15	224	47	373	408	431	77	139	17	4	35	136	11	54	674	243	33	1130	370

The difference between the total deaths in some districts in this Table and the figures given in Table B. is due to the incompleteness of the statistics in the Annual Reports of the district Medical Officers of Health. In three instances the deaths of residents who died outside the District were not included in the L.G.B. Table III.

TABLE 1

No.	Description	Value
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1870

Date	Particulars	Amount
Jan 1	Balance	100.00
Jan 15	To Cash	50.00
Jan 20	By Cash	25.00
Jan 25	To Cash	75.00
Jan 30	By Cash	30.00
Feb 5	To Cash	100.00
Feb 10	By Cash	40.00
Feb 15	To Cash	60.00
Feb 20	By Cash	20.00
Feb 25	To Cash	80.00
Feb 30	By Cash	15.00
Mar 5	To Cash	90.00
Mar 10	By Cash	35.00
Mar 15	To Cash	55.00
Mar 20	By Cash	10.00
Mar 25	To Cash	70.00
Mar 30	By Cash	25.00
Apr 5	To Cash	110.00
Apr 10	By Cash	45.00
Apr 15	To Cash	65.00
Apr 20	By Cash	15.00
Apr 25	To Cash	85.00
Apr 30	By Cash	30.00
May 5	To Cash	120.00
May 10	By Cash	50.00
May 15	To Cash	70.00
May 20	By Cash	20.00
May 25	To Cash	90.00
May 30	By Cash	35.00
Jun 5	To Cash	130.00
Jun 10	By Cash	55.00
Jun 15	To Cash	80.00
Jun 20	By Cash	25.00
Jun 25	To Cash	100.00
Jun 30	By Cash	40.00
Jul 5	To Cash	140.00
Jul 10	By Cash	60.00
Jul 15	To Cash	90.00
Jul 20	By Cash	30.00
Jul 25	To Cash	110.00
Jul 30	By Cash	45.00
Aug 5	To Cash	150.00
Aug 10	By Cash	65.00
Aug 15	To Cash	100.00
Aug 20	By Cash	35.00
Aug 25	To Cash	120.00
Aug 30	By Cash	50.00
Sep 5	To Cash	160.00
Sep 10	By Cash	70.00
Sep 15	To Cash	110.00
Sep 20	By Cash	40.00
Sep 25	To Cash	130.00
Sep 30	By Cash	55.00
Oct 5	To Cash	170.00
Oct 10	By Cash	75.00
Oct 15	To Cash	120.00
Oct 20	By Cash	45.00
Oct 25	To Cash	140.00
Oct 30	By Cash	60.00
Nov 5	To Cash	180.00
Nov 10	By Cash	80.00
Nov 15	To Cash	130.00
Nov 20	By Cash	50.00
Nov 25	To Cash	150.00
Nov 30	By Cash	65.00
Dec 5	To Cash	190.00
Dec 10	By Cash	85.00
Dec 15	To Cash	140.00
Dec 20	By Cash	55.00
Dec 25	To Cash	160.00
Dec 30	By Cash	70.00
Total		2000.00

1870

1871

