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Council of the County Palatine of Durham.

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

**T. EUSTACE HILL, 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

**1908.**

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NEWCASTLE-UPON-TYNE:

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## THE COUNCIL OF THE COUNTY PALATINE OF DURHAM.

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TO THE CHAIRMAN AND MEMBERS OF THE HEALTH  
COMMITTEE.

GENTLEMEN,

Although I have been able to complete my Eighteenth Annual Report several months earlier than its predecessor, I fully recognise that too long a period has elapsed since the end of the year to which it relates, but the pressure of work has been so great that its earlier publication was not possible.

In the actual work of summarizing the district annual reports, I have had the assistance of Dr. Smedley, who commenced his duties as Assistant and Deputy County Medical Officer in September, 1908, and whose help in this and many other matters has been of great value to me.

As in previous years, each district report is separately summarized, though information as to vital statistics and infectious diseases is now arranged in a more tabular form, and with the object of avoiding unnecessary repetition matters of interest relating to these subjects are, for the most part, dealt with in the general portion of the report.

The slight increase in the chief mortality rates compared with 1907 is entirely attributable to the high infant mortality during the summer months, as a result of the climatic conditions experienced. It must also be remembered that the population, on which the mortality statistics are based, is very much under-

estimated, and there is every reason to believe that the total death-rate for the county was at least 1.0 per 1,000 less than that recorded.

As usual, I have received every assistance from the district sanitary officials in the discharge of my duties, and I greatly appreciate their help and co-operation.

I am,

Mr. Chairman and Gentlemen,

Your obedient Servant,

T. EUSTACE HILL.

*November, 1909.*

## THE ADMINISTRATIVE COUNTY.

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<p>No change in the area of the county occurred during 1908, nor was there any change in the area of the individual sanitary districts. During the year an order was made by the County Council constituting the township of Chester-le-Street an urban district. This order, with slight modifications was subsequently confirmed by the Local Government Board, and it will have the effect of increasing by one the number of urban districts in the county and of reducing the area and population of the Chester-le-Street Rural District by approximately 2,511 acres and 14,000 persons respectively.</p>	<p>Area,  Order for new urban district.</p>
<p>The Administrative County includes in its area 5 boroughs, 24 urban districts, 14 rural districts, and 2 port sanitary districts.</p>	<p>Number of sanitary districts.</p>
<p>The Medical Officer of Health for the Chester-le-Street R.D. is now a whole time officer.</p>	<p>Whole time appointment.</p>
<p>The only changes in the district sanitary officials during 1908 were the appointment of new sanitary inspectors for Crook and Stanley.</p>	<p>Changes in sanitary staff.</p>
<p>The annual health report for Leadgate is again type-written, but all the other reports are printed.</p>	<p>Printing of annual reports.</p>

### Population.

<p>The estimated population of the Administrative County, based on the rate of increase during the last intercensal period, was 843,770, an increase of 10,870 as compared with the previous year. Of this estimated population 486,717 are apportioned to the urban districts, the estimated population of the rural districts being 357,053. As was stated in my last annual report, the official estimate of the county population is undoubtedly too low.</p>	<p>Increase of population.</p>
<p>If the excess of births over deaths since 1901 alone be taken into</p>	<p>Estimate too low.</p>



Population. account, the population of the county at mid-year 1908 would have been 875,169, or 31,399 in excess of the official estimate, but in many districts there has been an increase in population far in excess of the natural increase, and, according to the estimates of the district medical officers of health, the population of the county in 1908 approximated 896,000. The fact that 4,429 new dwelling-houses were occupied during 1907 and 3,832 during last year, without in any way reducing the serious overcrowding which exists in most of our populous areas, is strong evidence as to the abnormal increase in the county population.

Abnormal increase.

### Births.

Exceptionally high rate.

District birth-rates.

Comparison with England and Wales.

There was a very large increase in the number of births registered, viz. :—31,297, as compared with 28,993 in the previous year. The birth-rate per 1,000 population was 37·0, or 2·2 in excess of the rate for 1907. The birth-rate for the past year is the highest since 1891, before which date I have no record; and though it is probable that the high rate is to some extent the result of the population being under estimated, the fact cannot be overlooked that there has been an extraordinary increase in the actual number of births over any previous year. If the birth-rate is calculated on the county population as estimated by the district medical officers of health, it would be 34·9 per 1,000. In the non-county boroughs the birth-rate was only 31·2, but it rose to 37·5 in the other urban districts, and to 39·6 in the rural areas. The birth-rate exceeded 40 per 1,000 in Spennymoor (42·2), Blaydon (41·3), and in the northern division of the Houghton-le-Spring Rural District (41·4); but it was as low as 26·1 in Durham City, 22·4 in Stanhope, and 23·2 in Barnard Castle. In the purely agricultural parts of the county, the birth-rate was, as in the previous year, below 30 per 1,000. The county birth-rate exceeded that for England and Wales by no less than 10·5 per 1,000 population.

### Deaths.

The total deaths registered, which were 14,205 in 1907, rose to 14,811—a number equal to a death-rate, calculated on the

official estimate of the population, of 17·5 per 1,000, which is an increase of 0·5 as compared with 1907. If, however, the rate were calculated on the estimated population of the district medical officers of health, it was only 16·5. This latter figure, however, is considerably in excess of the total death-rate for England and Wales, which was only 14·7 per 1,000 population. The increase in the death-rate is more than accounted for by the larger number of deaths from diarrrhœal diseases, which caused a very large mortality among infants during the third and fourth quarters of the year.

Deaths

Comparison with England and Wales.

Cause of increased death-rate.

The following table compares the death-rates for the county and for its urban and rural districts during the past five years with those for England and Wales:—

Death-rates, 1904-8.

	1904.	1905.	1906.	1907.	1908.
England and Wales ... ..	16·2	15·2	15·4	15·0	14·7
Administrative County .. ..	18·3	17·4	17·5	17·0	17·5
Urban Districts ... ..	18·5	17·2	17·3	16·7	16·9
Rural Districts ... ..	18·1	17·7	17·9	17·4	18·3

During the first quarter of the year the county death-rate was as high as 19·6 per 1,000, and was also high during the last quarter (18·8), but during the second and third quarters it fell to 15·4 and 16·3 respectively. In only one district (Willington) did the death-rate exceed 20 per 1,000.

Quarterly death-rates.

Comparatively high death-rates occurred in Houghton-le-Spring (19·6), Seaham Harbour (18·8), Benfieldside, and Spenny-moor (18·6), while among the rural districts the highest death-rate was in Durham (17·8) and Chester-le-Street (17·6). On the other hand, the total death-rate was as low as 11·9 in Stanhope, 12·3 in Tow Law, and 12·7 in Ryton; while among the rural districts the rate was only 11·0 in Hartlepool and 12·9 in Stockton.

District death-rates.

Uncertified  
deaths.

The proportion of uncertified deaths to total deaths was 3·1 per cent., which, though slightly lower than in the previous year, was more than twice as high as that for England and Wales (1·4). Of the 381 uncertified deaths, 77 were uncertified as a result of the attendance of unqualified medical practitioners, and of this number 55 were in the Spennymoor Urban District. For many years past the proportion of uncertified deaths to total deaths in that district has approximated 20 per cent., owing to an extensive medical practice by one or more persons holding no registerable medical qualification.

### Infant Mortality.

Increased  
mortality.

An unsatisfactory feature of the mortality statistics for 1908 was a large increase in the number of deaths of infants under one year of age, as many as 4,750 being recorded, which exceeds the number in 1907 by 796. The rate per 1,000 births registered was 151, which compares very unfavourably with the rate for 1907 (136), though it is nevertheless considerably below the average for previous years.

Cause of  
increase.

The increased infant mortality rate was almost entirely the result of a high mortality from diarrhœal diseases during the third and fourth quarters of the year, for in 1907 these deaths among children under one year of age only numbered 399, while in the year under review they rose to 954. The chief reason for the increased diarrhœa mortality during 1908 was undoubtedly the higher temperature experienced, especially during the month of September, which was exceptionally favourable to the development of the organisms associated with that disease.

As in previous years, the infant mortality was much lower in the boroughs (136) than in the other parts of the county, viz., 154 in the rural districts and 156 in the remaining urban districts.

Quarterly  
mortality.

District  
infant  
mortality  
rates.

There was a considerable variation in the infant mortality rate during the different quarters of the year, for it was as low as 104 during the second quarter, rising to 166 in the third and 196 in the fourth quarter. The highest infant mortality rate occurred in Willington (241), while it exceeded 190 per 1,000 births in

Brandon, Houghton-le-Spring, and Stanley. Among the rural districts the highest rates were 190 in Houghton-le-Spring (Northern Division) and 176 in Chester-le-Street.

Infant mortality.

In many of the district health reports reference is made at more or less length to the subject of infant mortality; thus, in the report for Chester-le-Street Rural District, Dr. Taylor, commenting on the high infant mortality rate, says:—

Causes of high infant mortality.

“The very great increase, as I have already pointed out, has been caused by infantile diarrhoea, which is always prevalent during hot weather, but has been more than usually prevalent during this year. Other and more regular causes of this class of deaths I went fully into in my last report, and need not recapitulate this year. The aim of your Council should be in the future, as in the past, the abolition of ash-pit-privies, places which disseminate injurious organisms, the paving of dank, insanitary back yards, and the improvement of the houses of the people. The people themselves can do much, but progress in cleanliness is slow, very slow, amongst the people in general.

“Look at scores and scores of these back yards, the worst in structure adjoining the worst houses, see the filthy condition of the ground there, covered with fœcal matter of the children, the parents too lazy and too careless to see and enforce their children using the proper places and for which purpose the ground in the vicinity of the house is used. In addition to this pollution, the yard is too often the dwelling-place of poultry, rabbits or dogs, all polluting the soil and rendering it the very best breeding place of those very organisms which kill the young infants of the community.”

Dr. Stobo in alluding to the high infant mortality rate of 230 per 1,000 births in the parish of Tunstall, in the Sunderland rural district, strongly condemns the practice of mothers who insist on taking out young children in the night air, in all weathers, and frequently also insufficiently clothed; and dealing with the large number of deaths from debility and allied affections Dr. Stobo says:—“Generally speaking the

Infant  
mortality.

“ children who die from these causes may be divided into two  
 “ classes—(a) The congenitally weak children born with an in-  
 “ herent weakness which all care and attention will fail to overcome.  
 “ Their death should not honestly be deplored, either for their  
 “ own sakes or that of their friends ; (b) Those who have been  
 “ perfectly strong at birth, but from parental negligence or care-  
 “ lessness, or ignorance, generally pine away. It seems to  
 “ be the hardy annual in the reports of health officers to  
 “ protest against the continued ignorance of the mothers  
 “ in the feeding of their young. Yet the dawn of a  
 “ better day seems to be appearing. By some means the  
 “ knowledge of how to feed the child is being diffused, and, in  
 “ my opinion, the fatal results are now more due to negligence or  
 “ indifference than ignorance.” And he adds that he is persuaded  
 that the latter class (b) is in the majority. Dr. Hunton of the  
 Sedgefield Rural District thinks that “ it is now not from want of  
 “ knowledge if mothers err in the treatment of their children ; it  
 “ is from deliberate choice, and too frequently the easiest method,  
 “ not the most desirable one for the welfare of the child, is pre-  
 “ ferred ” ; and he thinks that our high infant mortality rate is not  
 one in which sanitation plays a prominent part. Dr. Hunton also  
 objects to the Notification of Births Act and lady health visitors  
 in the following words :—“ One of the many remedies proposing  
 “ to deal with this infantile mortality was the compiling of the  
 “ Compulsory Notification of Births Act, which I think your  
 “ Council acted wisely in your refusal to adopt, for whatever good  
 “ may come from its application in other districts, your popula-  
 “ tion, possessed of a praiseworthy independence, which we should  
 “ seek to support rather than undermine, would, I am certain,  
 “ resent the official inspection of their children which follows as a  
 “ natural corollary from the adoption of this Act. And in their  
 “ very just resentment they would have my sympathy. If aid is  
 “ to come to the people, in this, as in other matters, to be worth  
 “ anything, it must come from themselves ; and in the place of the  
 “ appointment of an official lady health inspector now proposed, I  
 “ should like to see in your different townships, appointed and

Notification  
of Births  
Act and  
Lady  
Health  
Visitors.

“paid for by themselves, aided, if need be, by contributions from your Council, district nurses for each, who, by their practical sympathy in doing, rather than saying something, would prove of immense service in this as in other matters affecting the health of your district.” Dr. Hunton’s views are, I am glad to say, not those usually held by the medical officers of health in this county or in the country generally, and his opinion that the people would resent a visit from an official lady health visitor has been disproved in every district in which such officials have been appointed. Dr. Hunton’s advocacy of the appointment of district nurses would seem to indicate that their duties and qualifications are quite different from those of the health visitor. As a general rule, there is no such difference, for a large proportion of the lady health visitors are also trained nurses, with the additional advantage of having been practically trained in domestic and general hygiene. The fact that ladies have been successfully employed in the dual capacity of health visitor and district nurse would seem to refute the views held by Dr. Hunton.

Infant  
mortality.

The question of the adoption of the Notification of Births Act in this county received the careful attention of the County Health Committee, as it was recognized that the proper administration of the Act would greatly assist sanitary authorities in reducing the high infant mortality. On its coming into force the district sanitary authorities were, therefore, asked if they were prepared to adopt the Act and appoint health visitors. No definite response being forthcoming and the County Health Committee recognizing the difficulties in the way of adopting the Act for the whole county, proposed to the councils of the urban districts of Brandon, Shildon, Southwick-on-Wear, and Stanley, where the infant mortality rate had for many years past been excessive, that if they would adopt the Notification of Births Act the County Council would be prepared to appoint health visitors to administer the Act in those districts. This proposal was agreed to, though in Brandon only after considerable delay, and the Local Government Board subsequently gave their approval to the adoption of the Act in those districts. The health visitors

Action of  
County  
Health  
Committee.

Infant  
mortality.

for Southwick and Stanley entered on their duties before the end of the year, while the Shildon health visitor commenced her duties on the 1st of January, 1909. One of the great advantages resulting from the adoption of the Notification of Births Act by the district authority is that the birth notifications are sent to the district medical officer of health, and can be easily obtained without delay by the health visitor working in that district. The county health visitors, though acting generally under my directions, are requested to carry out the instructions of the district medical officer of health who, I have every reason to believe, will give them every assistance in their work. It is satisfactory to note that in none of these districts has there been any opposition to the visits of the health visitors to the homes, but on the other hand they have been welcomed wherever they have gone, and an appreciation of their services, short as they have been, is noted in the annual reports for Shildon and Stanley.

Whickham  
U.D.C. and  
District  
Nurses.

The Whickham Urban District Council also decided to adopt the Notification of Births Act, and approved of a scheme drawn up by the Medical Officer of Health for utilizing the services of district nurses as health visitors, three nurses being appointed for different parts of the district—which is a very scattered one and difficult to be worked from any single centre—part of whose salaries will be paid by the District Council. It is satisfactory to note that the Local Government Board subsequently approved of the scheme, and the matter is sufficiently important to justify me in quoting the letter from the Local Government Board on the matter:—

LOCAL GOVERNMENT BOARD,

WHITEHALL, S.W.,

27TH NOVEMBER, 1908.

SIR,

I am directed by the Local Government Board to advert to your letters of the 22nd ultimo and 17th instant relative to the application of the Whickham Urban District Council for the Board's consent to the adoption of the Notification of

Births Act, 1907, within the District, and with reference to the proposal to obtain, by arrangement with a Nursing Association, the part-time services of three nurses, I am to state that the Board would regard the employment of such nurses under the supervision of the Medical Officer of Health as a satisfactory means of administering the Act in Whickham, but I am to point out that there is no statutory authority which would enable the District Council to subscribe to the funds of the Association in respect of such services.

Infant  
mortality.

If, however, the District Council made an arrangement with the Nursing Association whereby the nurses would be available for a specified portion of their time for employment by the District Council, it would be competent to the latter, as indicated in the Board's letter of the 21st March last, to appoint and pay the nurses as Assistant Inspectors of Nuisances with the duty of acting, during the proportion of their time agreed upon with the Association, as Health Visitors under the direction of the Medical Officer of Health. The Board's approval of these appointments would not be required, but on being informed that they have been made the Board will be prepared to consent to the adoption of the Act within the District and when the resolution has been advertised to fix a date for its coming into operation.

I am, Sir,

Your obedient Servant,

JOHN LITHIBY,

ASSISTANT SECRETARY.

Clerk to Whickham Urban District Council.

The Notification of Births Act was also adopted in the Borough of Stockton, where a health visitor has been doing excellent work for some years past.



Infant  
mortality.

A health visitor was also appointed by a voluntary organisation for the City of Durham, and the Medical Officer of Health says:—"She has met with much acceptance in every respect, "and from the work she has already accomplished I think we have "reason to believe and hope that the present year will show a "distinct improvement in the amount of Infantile Mortality in the "City."

### Zymotic Diseases.

Comparison  
with  
England  
and Wales.

Under this heading are included the diseases known as small-pox, scarlet fever, diphtheria, and membranous croup, fevers (enteric, continued, typhus, &c.), measles, whooping cough, and diarrhœa, and the number of deaths registered from them during 1908 was 2,278, which is equal to a death-rate of 2·69 per 1,000 population. In 1907 the deaths only numbered 1,657, equal to a death-rate of 1·98 per 1,000 population. The rate for England and Wales (1·29) was less than one-half of that for the county.

Increased  
zymotic  
death-rates.

Compared with 1907, there was an increase in the county death-rates from diarrhœa, whooping cough, enteric fever, and scarlet fever, and a fall in the rates from measles and diphtheria. The mortality rate was much higher in the rural districts of the county (2·94) than in the urban districts (2·5). There was a marked variation in the zymotic death-rate during the different quarters of the year, for while it was as low as 1·52 in the second quarter, it rose to 3·88 in the third quarter of the year, the death-rate from diarrhœal diseases alone during the latter quarter being equal to 3·05 per 1,000 population.

District  
death-rates.

The highest zymotic death-rates occurred in Leadgate and Stanley (3·5), while the same rate occurred in the Chester-le-Street Rural District. On the other hand, the rate was nil in Stanhope and only 0·45 in Tow Law, and 0·30 and 0·60 in the Darlington and Weardale Rural Districts respectively.

Chief vital  
statistics.

In the following table the chief vital statistics of the administrative county during 1908, and of its urban and rural districts are compared with those of England and Wales:—

1908.	Total Urban Districts.	Rural Districts.	Administrative County.	England and Wales.	Zymotic diseases. Chief vital statistics.
Birth-rate ... ..	35·2	39·6	37·0	26·5	
Death-rate ... ..	16·9	18·3	17·5	14·7	
Zymotic death-rate ... ..	2·5	2·94	2·69	1·29	
Infant Mortality-rate ... ..	149	154	151	121	
Small-pox ... ..	Nil.	Nil.	Nil.	0·00	
Scarlet Fever ... ..	0·06	0·08	0·07	0·08	
Diphtheria and Membranous Croup ... ..	0·16	0·20	0·18	0·15	
“Fever” (Enteric and Continued) ... ..	0·13	0·26	0·18	0·07	
Measles ... ..	0·29	0·25	0·27	0·22	
Whooping Cough ... ..	0·56	0·49	0·53	0·27	
Diarrhœa ... ..	1·29	1·63	1·44	0·50	

### Small-Pox.

Only one case was notified in the county during 1908, and it occurred in July at Shotton in the Easington Rural District. A case was, however, also notified from a ship arriving in the Tyne Port in February, and was isolated in the Port Hospital.

There was no serious outbreak of small-pox in England and Wales during 1908, and there was a disposition on the part of some sanitary authorities in this county to utilise their small-pox hospitals for the treatment of consumptive patients. While in non-epidemic periods such hospitals, if suitably situated and of convenient construction, may be usefully employed for such a purpose, it is necessary here to warn sanitary authorities that

Small-pox hospitals as consumptive sanatoria.

**Small-pox.** they must be more than ever prepared to deal promptly with any cases of small-pox that may occur in their district.

**Vaccination.** Vaccination and re-vaccination, which, in the opinion of the medical profession, are the only protection against small-pox, are each year being more and more neglected and also more ineffectively performed, and there is in consequence a rapidly increasing number of individuals throughout the country who are susceptible to small-pox. The rising generation, who have had little experience of this loathsome disease, will no doubt pay little attention to any warnings in the matter so long as the present immunity from the disease continues, especially as certificates exempting from vaccination can now be obtained practically without trouble, and no opportunity is lost by anti-vaccinators of urging their objections (most of them unsound) to vaccination. I have, however, not the slightest doubt that at no distant date there will be a rude awakening of the people of this country, and though, when the wolf is at the door, the people will generally rush to the protection afforded by vaccination, there will be, without doubt, many innocent sufferers, for whose treatment in our isolation hospitals the existing accommodation will be found to be utterly inadequate.

The Medical Officer of Health for Durham, in his annual report, urges on his Council the great necessity for making suitable provision for the isolation of small-pox patients, and he also deplures the growing tendency to neglect vaccination in infancy.

### Scarlet Fever.

**Increased prevalence.**

There was a slight increase in the prevalence of scarlet fever. The number of cases, which had fallen from 2,621 in 1906 to 2,234 in 1907, increased to 2,567 in the year under review, while the deaths increased from 55 to 62. Generally speaking, however, the disease was of a very mild type, and the death-rate for the whole county was 0·07 per 1,000 population, which is below the rate for England and Wales. The mortality was slightly higher in the rural than in the urban districts. The usual autumnal rise in the prevalence of the disease was again noticeable.

In the individual districts, the greatest incidence occurred in Brandon, Felling, Houghton-le-Spring, Ryton, and in portions of the rural districts of Auckland, Chester-le-Street, Easington, Houghton-le-Spring, and Sedgefield. In no district, however, was there any serious epidemic, and only in very few instances did the spread of the disease appear to have been influenced by school attendance. In fact, in only two districts, viz., Spennymoor and Durham Rural District (Pittington), was it necessary to temporarily close schools with the object of preventing the spread of the disease.

Scarlet  
Fever.  
District  
incidence.

School  
closure.

In many of the annual reports reference is made to the usual way scarlet fever is spread, viz., by mild unrecognised cases and by indiscriminate visiting by parents at infected houses. The Medical Officer of Health for Whickham refers at some length to the difficulty at times, despite careful precautionary measures, of preventing return cases of the disease, and he also urges the desirability of isolation of scarlet fever cases in hospital where complete home isolation is not possible.

Causes of  
spread.

### Diphtheria and Membranous Croup.

Although there was a slight increase in the number of notified cases of these diseases it is satisfactory to note that there was a gratifying decline in the number of deaths, as is shown in the following table:—

Increased  
prevalence.

Diphtheria and Membranous Croup.	Administrative County.				
	1904.	1905.	1906.	1907.	1908.
Cases notified ... ..	1400	1547	1298	1108	1146
Deaths registered ... ..	237	210	168	169	152
Death-rate per 1,000 population	0·29	0·25	0·20	0·20	0·18

Diphtheria.  
Seasonal  
prevalence.

The county death-rate was slightly in excess of that for England and Wales (0·15), and the rate was somewhat higher in the rural than in the urban districts. The greatest prevalence of the disease occurred during the first and last quarters of the year, its incidence being smallest during August. In no sanitary district did the disease become seriously epidemic, but the number of cases was rather high in Darlington, Bishop Auckland, Ryton, Shildon, Whickham, and in portions of the rural districts of Auckland, Easington, and Lanchester.

Bacterio-  
logical  
examina-  
tions.

In several of the annual reports reference is made to the great value of bacteriological examinations in the diagnosis of cases of diphtheria, and in the report for Felling the opinion is expressed that medical practitioners do not sufficiently frequently have recourse to this method of confirming their diagnosis. In a number of districts diphtheria antitoxin serum is now provided by the sanitary authorities without charge, and the Medical Officer of Health of Shildon again urges that his Council should make similar provision. In some of the reports (Chester-le-Street and Sunderland rural districts) it is pointed out that it is an unusual thing for more than one case of diphtheria to occur in the same family, and Dr. Stobo is also of opinion that a healthy throat is not readily susceptible to the diphtheria bacillus, but it is liable to occur among children suffering from throat catarrh brought about by exposure to such conditions as damp unpaved streets. Dr. Stobo intends, as far as possible, to have swabs taken from the throats of all diphtheria convalescents, being guided by the results in his decision as to when a patient is free from infection, for he has "no doubt that the present prevalence of diphtheria is wholly "due to convalescents, apparently quite well, being permitted to "mix with others before the infection has left the throat." The medical officers of health for Ryton and Whickham hold similar views. The Medical Officer of Health for Chester-le-Street Rural District blames school attendance for the spread of diphtheria, and says: "The school, I still believe, continues to be the breed-  
"ing ground of diphtheria, and it appears to me that school-

Period of  
infectivity.

School  
attendance  
and  
diphtheria.

“masters continue to be too eager to have children quickly back to school, and in many instances more inquiries as to the cause of absent children should be made before admitting members of those households when a child is absent from school through illness.” Only a small proportion of the notified cases of diphtheria were isolated in hospital, but the Medical Officer of Health for Chester-le-Street Rural District points out the marked advantage resulting from such isolation, and he, as well as the Medical Officer of Health for South Shields Rural District, recommends that accommodation for diphtheria cases be provided in the isolation hospitals.

Diphtheria.

Hospital  
treatment.

### Typhus Fever

The only case of typhus fever was reported from the Ryton Urban District in June, and was promptly removed to hospital. No information is given in the Ryton report as to the origin of the case, and having regard to the entire absence of the disease from other districts in the county, it is possible an error was made in the diagnosis of the case.

### Enteric Fever.

In 1907 the cases of and deaths from this disease were the fewest ever recorded, but during last year there was a very marked increase both in its prevalence and mortality. The death-rate from the disease was 0·18 per 1,000 population, which is more than twice as high as that for England and Wales (0·07). The rate in the rural districts of the county (0·26) was exactly double that of the urban districts.

Increased  
prevalence  
and  
mortality.

The following table gives particulars of the incidence of, and mortality from, enteric fever during each month of the year:—

Enteric  
fever.

## ENTERIC FEVER IN THE ADMINISTRATIVE COUNTY OF DURHAM.

Monthly  
incidence  
of cases.

1908.	No. of Cases.	No. of Deaths.	Case Mortality per cent.	Death-rate per 1,000 Population per annum.
January ... ..	43	5	11·6	0·06
February ... ..	50	3	6·0	0·04
March ... ..	44	10	22·7	0·15
April ... ..	48	7	14·5	0·10
May ... ..	47	12	25·5	0·16
June ... ..	36	6	16·6	0·08
July ... ..	42	4	9·5	0·05
August ... ..	108	17	15·7	0·23
September ... ..	118	20	16·9	0·27
October ... ..	213	21	9·8	0·29
November ... ..	186	26	13·8	0·37
December ... ..	113	26	23·0	0·36
1908 ... ..	1048	157	14·9	0·18

It will be noted that there was a marked increase both in prevalence and mortality during the last five months of the year. The number of deaths during the first seven months of the year was exactly the same as in 1907, but during the last five months the number considerably exceeded the total for the whole of the previous year.

District  
incidence.

The greatest prevalence of the disease occurred in certain parts of the rural districts of Auckland, Chester-le-Street, Easington and Houghton-le-Spring, and in the urban districts it was also

unduly prevalent in Blaydon and Houghton-le-Spring during the last quarter of the year. Enteric fever.

The next table gives the total number of cases of enteric fever, the total deaths, the case-mortality and the death-rate during each of the last five years, and the marked increase in the prevalence of the disease during 1908 is to be noted, though there was fortunately a considerable fall in the case-mortality. Cases and deaths, 1904-8.

ENTERIC FEVER IN THE ADMINISTRATIVE COUNTY OF DURHAM.

Year.	No. of Cases.	No. of Death.	Case-mortality per cent.	Death-rate per 1,000 Population.
1904 ... ..	809	119	14·7	0·14
1905 ... ..	1,014	158	15·5	0·19
1906 ... ..	1,090	187	17·1	0·22
1907 ... ..	449	85	18·9	0·10
1908 . . . . .	1,048	157	14·9	0·18

In my last annual report I expressed the opinion that the diminished prevalence of enteric fever during 1907 was attributable more to climatic conditions than to improved sanitary circumstances, and the figures for 1908 undoubtedly support my views. As a general rule in this county, at any rate, the enteric fever prevalence varies more or less directly with that of diarrhoeal diseases, and there is no doubt that the latter largely depend on the temperature experienced. During the summer of 1908 the average temperature was considerably in excess of that for the previous year, and in addition there were more or less lengthy periods, especially during the early part of September, of excessively warm weather, with the result that both enteric fever and diarrhoeal diseases became unduly prevalent. Without doubt the most common cause of this disease in this county is the existence of local Climatic influence.

Causes.



Enteric  
fever.

insanitary conditions, such as foul conveniences and the organic pollution of the soil about dwellings. In several of the health reports reference is made to this fact, and also to the probability of the distribution of the infected matter by dust and flies. This is no doubt inevitable so long as excretal matter is stored for varying periods in close proximity to dwellings, for in the case of enteric fever, for instance, a patient suffering from the disease voids specifically infected excreta into the conveniences before it is recognised that the patient is so affected, and, therefore, before any precautionary measures can be taken. The conveniences thus become infected, and it is easy to understand how the infected matter may be carried by flies and by the distribution of infected dust during the process of scavenging, which is frequently performed during the day time, and not infrequently during the mid-day meal. Without doubt a great improvement has been effected in many sanitary districts by the abolition of the old-fashioned ashpit-privies in favour of the smaller ash-closet receptacles, which are much less liable to assist in the spread of filth diseases than were the older and more insanitary conveniences, but the general adoption of the water carriage system of excrement disposal will be necessary before we can hope to prevent the seasonal increase in enteric fever prevalence when the climatic conditions are favourable.

Milk and  
water  
supplies.

The milk supply does not appear to have been responsible for any of the outbreaks of enteric fever during 1908, but the Medical Officer of Health for Chester-le-Street was unable to absolve from suspicion the water supply to the eastern portion of his district in connection with the serious outbreak of enteric fever which occurred during the latter half of the year. The outbreak was the subject of a special report, and the facts contained therein certainly appear to warrant Dr. Taylor's suspicion as to the pollution of the water supply. On the other hand the Medical Officer of Health for the Urban and Rural Districts of Houghton-le-Spring, which are largely supplied with water from the same sources as the infected area of the Chester-le-Street Rural District, expressed the opinion in a special report on the enteric

fever prevalence, that the water supply had nothing to do with the outbreak, which in his opinion was caused by the consumption of infected mussels, by the objectionable condition of the ashpits and outoffices, and by indiscriminate visiting at infected houses.

Enteric  
fever.

The consumption of specifically infected mussels was, in the opinion of several medical officers of health, responsible for outbreaks of the disease; thus, in Spennymoor, 17 cases in the early part of the year appeared to owe their origin to the consumption of shell-fish, and a bacteriological examination of some of the mussels subsequently purchased in the streets indicated the presence of the bacillus coli in such large quantities as to suggest sewage contamination. A smaller outbreak occurred in the same district towards the end of the year. In the Sunderland Rural District 13 cases of enteric fever were attributed to mussel-eating, and smaller outbreaks are reported from the urban districts of Houghton-le-Spring, Seaham Harbour, Shildon, and the Easington Rural District (Seaham). From enquiries made by me it was evident that large quantities of mussels, which had been collected near the mouth of the Tees and from other places to which sewage had access, were hawked about the county by men out of employment who were trying to earn a livelihood by that means. The danger resulting from the consumption of mussels taken from sewage polluted waters has long been recognized, and steps ought to be taken, by legislation if necessary, to prevent the sale of shell-fish gathered from such positions. In several districts the medical officer of health caused hand-bills and posters to be circulated warning the public of the danger of eating shell-fish.

Mussel-  
eating.

An outbreak of enteric fever in the Coundon Grange and Eldon Lane portions of the Auckland Rural District was the subject of a special report by the Medical Officer of Health, and in his opinion the chief causes of the diseases were defective sewerage and insanitary conveniences, though he thinks the house-fly also played an important part in the spread of the disease.

Auckland  
R.D.  
outbreak.

With respect to the bacteriological diagnosis of suspected cases of enteric fever, the Medical Officer of Health for Spenny-

Bacterio-  
logical  
diagnosis.

Enteric  
fever.

moor makes the following remarks—"It is to be regretted that "the medical practitioners of the district do not make more use of "the facilities provided by the County Council for the examination "of the blood of suspected cases. Three cases were sent into the "hospital notified as enteric fever in which the subsequent history "negatived the diagnosis. This might have been prevented by a "blood examination."

District  
death-rates.

The highest death-rates from enteric fever occurred in Houghton-le-Spring, Seaham Harbour, Stanley, and in the rural districts of Auckland, Chester-le-Street, and Houghton-le-Spring (Northern Division).

### Continued Fever.

Increased  
prevalence.

There was an increase in the number of notified cases of this disease as compared with 1907, which corresponded closely with the rise in the enteric fever prevalence, 38 cases being reported as compared with 19 in the previous year. Nearly one-half of the cases occurred during October and November, which were the two months during which the most cases of enteric fever occurred, and there is very little doubt that most of the cases of continued fever should have been notified as enteric fever. Only two cases proved fatal.

### Puerperal Fever.

Midwives  
and pre-  
cautionary  
measures.

Excess of  
deaths over  
notified  
cases.

The decline in the prevalence of this disease noted in the two previous years was more than maintained during 1908, only 29 cases being notified as compared with 30 in the previous year. There were, however, 42 deaths from puerperal septic affections as compared with 25 in the previous year. Of the 22 deaths in the rural districts 16 occurred in those of Chester-le-Street and Easington. Nine cases which occurred in the practices of midwives were specially investigated, and all precautionary measures, including the temporary suspension of the midwives in question, were taken to prevent the spread of infection. The preponderance in number of deaths from puerperal septic affections over notified cases indicates that a considerable proportion of such cases are not notified by medical practitioners, and it is almost

impossible to ascertain what proportion of the fatal cases were under the care of midwives prior to the calling in of the medical practitioner who certified the death.

Puerperal fever.

All the fatal cases of puerperal fever in Stockton occurred in the practices of midwives.

### Erysipelas.

The notified cases of this disease declined from 706 to 624 and the deaths from 28 to 16. The majority of the deaths (11) occurred in the rural districts. In very few of the reports is any reference made to this disease, which appears to have very little relation to sanitary circumstances.

### Measles.

It rarely happens that there is a heavy mortality from this disease in any two successive years. In 1907 the number of deaths was very high (581), exceeding by more than four times the deaths registered for 1906 (138), and, as was to be expected, there was a marked reduction in 1908 when only 236 deaths occurred, equal to a death-rate of 0.27 per 1,000 population. This, however, exceeds the rate for England and Wales, which was as low as 0.22.

Reduced mortality.

The districts with the highest mortality from measles were Stockton and Brandon, and the rural districts of Durham and Sunderland. In Stockton in particular the mortality was very high, 70 deaths resulting, or nearly one-third of the total deaths registered in the county. Dr. Horne, of Stockton, refers at considerable length to this disease in his annual report, and he shows that 97 per cent. of the deaths in Stockton during 1908 were those of children under school age, and he urges that the right policy is to endeavour to delay an attack by measles owing to the fact that the older a child is the less likely is the disease to be fatal.

Distribution.

The question of school closure on account of the prevalence of measles is referred to in some of the annual reports, and it is becoming more generally recognised that from a public health

School closure.

Measles.

standpoint practically no good results from such closure when it is delayed until the school attendance is perceptibly diminished. The whole question of school closure is at present in an unsatisfactory position. Some medical officers of health, especially in urban areas, object to close schools on account of measles, under any circumstances; others confine their action with regard to closure to infants' departments; while others again apparently are willing to recommend the closure of all departments of a school as soon as an outbreak of measles seriously interferes with school attendance. Early in 1908 the Local Government Board issued a comprehensive memorandum on the "*Circumstances under which the Closing of Public Elementary Schools or the Exclusion therefrom of particular Children may be required in order to prevent the Spread of Disease,*" and as regards measles, especially in populous districts, the views of the Board are set forth in the following extract from the memorandum:—

L.G.B.  
Memo.

“ In view of the failure of school closure, when deferred until a considerable number of children have been attacked, to prevent the spread of measles a class closure of short duration after the occurrence of a single case of measles has been suggested. If this be done the class should be closed on the ninth day after the sickening of the first child, for a period of five days only, after which time only those who have sickened should be excluded, with those in the same households who have not had measles.”

“ The infection of measles is probably conveyed chiefly by the nasal mucus, but is less persistent than that of small-pox, scarlet fever, or diphtheria, and is not commonly conveyed by healthy persons; hence it is unnecessary to exclude from school the children of infected households if they have themselves had measles.”

London  
C.C. and  
school  
closure.

Included in the memorandum is an appendix which sets forth the practice of the London County Council (Education Department) in reference to the exclusion of children from school on account of infectious diseases, and the following excerpt appears to

me to indicate the most reasonable line of action to be followed by medical officers of health, except in the case of scattered rural areas:—"Children coming from houses in which either measles, "mumps, chickenpox, or whooping cough exist must be dealt with as follows:—(a) Children in schools other than infant schools who have not had the disease, and all children in infant schools must be excluded. (b) Children in schools other than infant schools who have had the disease need not be excluded."

As the great majority of children are attacked by measles before school age it would, in that case, rarely be necessary to exclude individual children in the senior departments from school on account of the prevalence of measles in their homes, and in that case there would be a considerable increase in the average attendance in those departments. At present, however, many medical practitioners advise parents to keep their older children from school as soon as a case of measles or whooping cough occurs in the house; and under such circumstances it is difficult for education authorities to at present insist that such children shall attend school. It appears to me desirable, though, that the attention of medical practitioners generally should be called to the views now held on this important matter by those most qualified to form an opinion.

In the following table the deaths and death-rates from measles for the last five years are given:—

Deaths and death-rates, 1904-8.

	ADMINISTRATIVE COUNTY.				
	1904.	1905.	1906.	1907.	1908.
Deaths from Measles ... ..	447	393	138	581	236
Death-rate from Measles per } 1,000 population ... .. }	0.55	0.48	0.16	0.69	0.27

During the year 34 departments or schools were temporarily closed on the recommendation of the Medical Officer of Health, owing to the prevalence of measles.

Schools closed.

## Whooping Cough.

Increased mortality.

There was a very marked increase in the mortality from this disease, 452 deaths equal to a death-rate of 0·53 per 1,000 population being registered as compared with 268 deaths and a mortality of 0·32 in 1907. The death-rate was somewhat higher in the urban than in the rural areas of the county. For England and Wales the death-rate was 0·27 per 1,000 population which is only one-half of the rate for this county.

Distribution.

The mortality was especially high in Stockton, Blaydon, Ryton, Southwick, Stanley, and in the rural districts of Chester-le-Street and Sunderland. The Medical Officer of Health for Ryton expresses the opinion that the mortality from whooping cough results from the want of appreciation by the mothers of the seriousness of the disease, and from carelessness in the exposure of children to infection, and he points out that not only is the disease immediately dangerous from its complications, but that it leads frequently to tubercular disease of the lungs later on in life. The Medical Officer of Health for Whickham says:—

Seriousness of whooping cough and carelessness of parents.

“A kind of fatalism exists as to its incidence, and yet the fact remains that it is extremely fatal, though very rarely so after the fifth year of life. If only infants and young children could be protected, it would almost cease to be a fatal disease, and surely something more than is done should be attempted to attain this result. A somewhat similar fatalism exists in regard to measles, but this is becoming mitigated and very earnest efforts are constantly made to defer an epidemic as long as possible because here also it is in infants and young children that nearly all fatalities occur. Every year that an epidemic can be postponed the fewer in the long run will be the fatalities.”

He also points out that during the past five years the deaths from whooping cough in his district were nearly double those from small-pox, scarlet fever, diphtheria, and typhoid fever taken together, and he adds:—

“The schools are certainly not blameless in the matter. I believe there is a rule forbidding children suffering from Whooping

“ Cough to attend school, but it is constantly and persistently ignored,  
 “ school board officers force them into school on the supposition  
 “ that if they do not vomit when they cough they can do no harm.  
 “ In spite of the utmost efforts and the strongest protests, I have  
 “ found it impossible to eradicate this opinion. Not being a  
 “ notifiable disease, the Medical Officer of Health does not get to  
 “ know more than a fraction of the cases, and the bulk of the  
 “ cases of older children are not attended by a doctor as these are  
 “ but seldom very ill, and they are consequently forced into school,  
 “ propagate the disease, which is in this way carried into homes,  
 “ infects young children, a considerable proportion of whom die.  
 “ The deaths are duly registered and everything is considered as  
 “ just in the order of providence.

Whooping  
Cough.

“ Now that such efforts are being made to moderate Infantile  
 “ Mortality surely we may hope that something more will  
 “ be done to prevent this unnecessary slaughter of the innocents.  
 “ I venture to think that I have made out a case at least for  
 “ special enquiry.”

In several other annual reports reference is made to the care-  
 lessness of parents both in regard to the treatment and isolation  
 of their children suffering from whooping cough.

Owing to the prevalence of whooping cough 15 departments  
 or schools were temporarily closed on the recommendation of the  
 Medical Officer of Health.

Schools  
closed.

### Diarrhœa.

The mortality from this disease was greater than for several  
 years past, 1,217 deaths being registered—equal to a death-rate of  
 1.44 per 1,000, as compared with 497 deaths and a death-rate of  
 0.59 in 1907. The county death-rate was nearly three times as  
 high as that for England and Wales (0.50). The mortality was  
 especially great among children during the first year of life, 954  
 deaths, or 78 per cent., being among children at that age period.  
 The excessive diarrhœal mortality was practically confined to the  
 three months of August, September, and October, when 884  
 deaths occurred; and it is exceptional that 309 of the deaths

Greatly  
increased  
mortality.Seasonal  
prevalence.



Diarrhœa.

occurred during the month of October. The mortality was considerably higher in the rural districts than in the urban areas, and very much lower in the five non-county boroughs than in the other urban areas. In the individual districts the mortality was especially high in Blaydon, Southwick, Spennymoor, Stanley, Willington, and in the rural districts of Chester-le-Street and Easington. On the other hand, in the country towns of Barnard Castle and Stanhope, and the purely rural areas of the county, the diarrhœal mortality was relatively very small. As I have pointed out in previous reports, the excessive prevalence of diarrhœa is directly dependent upon the climatic conditions during the summer months, hot dry periods, such as those experienced during part of the summer of 1908, always producing a high mortality, especially among our infant population. Organic pollution of the air and soil about dwellings is, as in the case of enteric fever, an important factor; but it is also certain that neglect of domestic cleanliness and improper feeding are largely responsible for the prevalence of epidemic diarrhœal diseases, and the remarks of the Medical Officer of Health for the Chester-le-Street Rural District in reference to flies and the keeping of animals may be quoted:—

Climatic influence.

Causes.

“ Diarrhœa is also a disease of communities, the denser the  
 “ population, all other things being equal, the greater the number  
 “ of cases of diarrhœa and *vice versa*. As I mentioned in my last  
 “ year’s report, the common house-fly is being blamed specially  
 “ as a disseminator of the poison of diarrhœa, and very likely it is  
 “ guilty to some extent. I specified the chief breeding places of  
 “ the house-fly in my last year’s report, but if I name them again  
 “ it will probably impress one’s memory a little more, viz., horse  
 “ manure heaps, rabbit hutches, hen pens, duck runs, and collec-  
 “ tions of spent hops, and all ashpits containing fermenting  
 “ vegetable matters. Assuming that the places enumerated are  
 “ the breeding places of the house-fly, and that the fly is as guilty  
 “ as he is painted, then it should be one’s endeavour to reduce to  
 “ a vanishing point these breeding places, especially if their  
 “ abolition is not a hardship on anyone and is a blessing to the

“people at large. One cannot probably abolish horse manure  
 “heaps, but they can be better kept, emptied oftener, and  
 “thoroughly disinfected at each emptying. Neither of these are  
 “attempted. The pit is left till overflowing, practically in all  
 “cases, and any attempt at disinfection is unknown. Horse  
 “manure pits should be emptied every week, then well brushed  
 “and cleaned with a recognised disinfectant, such as Cyllin Fluid,  
 “strong solution of Izal, or well douched out with boiling water.

“With reference to rabbit hutches, they are seldom, if ever,  
 “anything less than a filthy nuisance. The animals are generally  
 “kept in dark boxes, usually overcrowded, badly cleaned out, in  
 “small yards which are never intended for animal keeping, and  
 “their abolition would be a comfort to the animals and a good  
 “thing for the neighbourhood. The same remarks apply to  
 “pigeons, hens, ducks, and guinea pigs.

“Your Council should in all cases prohibit the keeping of  
 “animals in the backyard of the ordinary two or four-roomed  
 “house, whose area is somewhere about 200 square feet. There  
 “is not the least hardship or loss to anyone to forbid the keeping  
 “of animals in such places; hens and ducks cost much more  
 “than their produce pays, so that one cannot say that the  
 “prevention of keeping such is causing any loss to the income of  
 “anyone.

“This year the house-fly invaded the houses of all your  
 “district in huge numbers, and in many houses I have seen over  
 “and over again table, food, ceiling, and especially the bed,  
 “covered with flies.

“How easily food becomes covered with house-flies can  
 “readily be imagined. In the majority of cases the pantry is  
 “close to the yard, in other cases it communicates directly with  
 “the kitchen, and if the people wished to protect their food they  
 “find it impossible to do so.”

Diarrhoea.

Means of  
reducing  
mortality.

The Medical Officer of Health for Whickham specially refers to the importance of breast-feeding; and expresses the opinion that if breast-feeding became universal diarrhoea would become insignificant as a cause of death. The importance of clean milk and the value of domiciliary visits paid by Health Visitors are also urged by him as well as by several other Medical Officers of Health, as a means of reducing the mortality from diarrhoeal diseases.

Value of  
hygiene  
teaching.

It is universally admitted that the great majority of the deaths from epidemic diarrhoea are preventable, and, in this county at any rate, it has been found that the variations from the average of the infant mortality rate are almost entirely dependent on the prevalence or otherwise of epidemic diarrhoea. It is obvious, therefore, that in our endeavours to reduce the excessive infant mortality we must specially devote ourselves to the removal of the conditions which are responsible for diarrhoeal prevalence. There is no doubt as to the remedy, viz. :—cleanliness in the home, in the feeding, and in the air and soil about dwellings, and this cannot be too frequently impressed both on parents and also on our young population by means of the teaching of elementary hygiene in schools.

### Infectious Diseases Notification Act.

The following table gives the total number of notifications of infectious disease during each month of the year in the administrative county, and, compared with 1907, there was a rise in the figures for 1908, though they are still much below the average of previous years. The increase, as compared with 1907, was the result of the notification of a larger number of cases of enteric fever and scarlet fever, and there was a slight increase in the number of cases of diphtheria. On the other hand there was a distinct fall in the number of cases of erysipelas reported.

## INFECTIOUS DISEASES NOTIFICATION ACT.

Statement of notifiable diseases reported during each month of 1908.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Small Pox ...	...	1	...	...	...	...	1	...	...	...	...	...	2
Scarlet Fever ...	161	221	188	141	176	185	205	225	250	249	289	277	2567
Diphtheria ...	121	108	102	78	63	82	64	49	79	108	124	132	1110
Membranous Croup ...	3	6	9	2	2	...	...	4	2	1	2	5	36
Typhus Fever ...	...	...	...	...	...	1	...	...	...	...	...	...	1
Enteric or Typhoid Fever...	43	50	44	48	47	36	42	108	118	213	186	113	1048
Relapsing Fever ...	...	...	...	...	...	...	...	...	...	...	...	1	1
Continued Fever ...	1	3	1	1	1	2	3	5	1	9	7	4	38
Puerperal Fever ...	1	3	3	5	4	1	2	3	2	2	2	1	29
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	74	46	90	51	56	30	25	46	52	46	49	59	624
TOTALS ...	404	438	437	326	349	337	342	440	504	628	659	592	5456

### Isolation Hospitals.

District  
without  
hospitals.

Inadequate  
accommo-  
dation.

Number of  
cases  
isolated.

Darlington  
R.D.C.  
and U.D.C.  
renewed  
arrange-  
ment.

Lack of  
accommo-  
dation for  
diphtheria.

Although a joint hospital district was constituted for the Stanhope urban and Weardale rural districts in 1907, no progress was made towards providing the required hospital accommodation during 1908 owing to the great difficulty experienced by the Joint Committee in obtaining a suitable site. The Medical Officer of Health for Stanhope again urges the necessity for a hospital. In every other district in the county isolation hospital accommodation has been provided, though in some districts notably Hartlepool, Barnard Castle, Brandon, and the Easington rural district it is not adequate for the requirements of the district. Generally speaking, increased use is being made of the isolation hospitals in the county though it is to be noted that, as in the previous year, not a single case of infectious disease occurring in the Felling urban district was isolated in hospital. The total number of cases treated in isolation hospitals in the county during 1908 was 1,890, equal to 34·3 per cent. of the total cases notified, while in 1907 the number isolated was 1,289 or 33·8 of the total notified cases.

An arrangement has again been entered into between the Darlington Corporation and the Darlington Rural District Council for the isolation in the Borough hospital of patients from the latter district. The Medical Officer of Health for Chester-le-Street rural district points out that the hospital accommodation for his district is inadequate and that an additional ward for diphtheria patients should be provided, as well as means for isolating any doubtful cases. The Medical Officer of Health for the South Shields rural district also recommends the provision of hospital accommodation for diphtheria patients.

### Small-Pox Hospitals.

New  
hospitals.

The joint small-pox hospital for the Houghton-le-Spring and Hetton joint hospital district was completed and made ready for the reception of patients during the year. Arrangements were also made by the Durham and Brandon Joint Committee to purchase a site near Shincliffe which, however, did not come into

possession of the Committee until May, 1909. Negotiations proceeded satisfactorily during the year between the North-East Durham Joint Small-pox Hospital Board and the South Shields Corporation for the joint use of the latter's hospital. Pending a decision, the arrangement which had been made for the isolation in that hospital of any cases of small-pox which might occur in the joint hospital district was continued. The Medical Officer of Health for Durham again urges the necessity for small-pox hospital accommodation for the City and the Corporation is in communication with the Durham and Brandon Joint Hospital Committee on the matter.

Small-pox  
hospitals.

Durham  
U.D.

### Phthisis and Tuberculosis.

The number of deaths from phthisis (consumption of the lungs) was 808, equal to a death-rate of 0·95 per 1,000 population. This is the lowest rate ever recorded in the county. In the previous year, 817 deaths occurred, and the death-rate was 0·98. In the rural districts the rate was only 0·87, while it was as high as 1·14 in the five non-county boroughs. It is satisfactory to note that the county rate from phthisis was again lower than that for England and Wales (1·11). There was also a satisfactory fall in the deaths from other forms of tuberculosis from 667 to 598. The total death-rate from all tuberculous diseases in the administrative county was only 1·66 per 1,000 population, as compared with 1·78 in 1907.

Low death-  
rate.

In many of the reports reference is made to the various means to be adopted to prevent phthisis and its spread, and the bad effect of overcrowding and of the insanitary condition of dwelling houses as well as the risk of tuberculosis from the consumption of milk from tuberculous animals are emphasized. Thus, as respects housing, the Medical Officer of Health for Sunderland rural district says:—"I do not want to undervalue  
" the good results obtained from isolation and disinfection in all  
" infectious diseases, but it seems to me—judging from past  
" victories over microbic disease—if any permanent results are to  
" be obtained the only secure method of rooting it out is to

Means of  
prevention.

**Phthisis.** “remove the predisposing causes under which it is known to flourish. And the most important of these—at least in “Pulmonary Tuberculosis—is Housing.”

**Notifica-  
tion.**

With respect to the notification of phthisis, further experience of voluntary notification in Jarrow and Hebburn confirms its uselessness, for at Jarrow only 8 cases were notified during 1908, although there were 49 deaths; and in Hebburn there were 21 deaths, while only 26 notifications were received. In the health reports for Jarrow, Stanhope, and the Auckland rural district compulsory notification of phthisis is recommended, and the Medical Officer of Health for Weardale (St. John's) advocates the distribution of information to the public as to the best means to prevent consumption. As to notification, Dr. Nicoll of Jarrow says :—

“The voluntary notification of the disease must be looked upon as a failure, and for practical purposes valueless. From a health point of view this is altogether unsatisfactory, not only for the patient, but more so for those living in contact, who too often have not the slightest idea of the dangers to which they are exposed. They at any rate ought to be made alive to these dangers. This is a state of things which ought not to exist, and which to a great extent could be remedied by compulsory notification of the disease. The ordinary standpoint of common safety demands this, apart altogether from the fact that, until this is done, the disease, from a sanitary point of view, can only be treated in a very haphazard fashion.”

The Medical Officer of Health for Sunderland Rural District reports that a number of cows in his district were submitted to the tuberculin test.

**County  
anatoria.**

Respecting the sanatorium treatment of consumption, it is satisfactory to note that the excellent work of the Society for the Prevention and Cure of Consumption in the County of Durham continues to make progress. The Society's sanatorium at Horne Hall, Stanhope, was taxed to its fullest extent, 163 cases being

treated, while 233 patients applied for admission. By the payment of £75 a year a local authority can have the use of one bed in the Sanatorium, and in the administrative county the Corporation of Jarrow, the Hebburn Urban District Council, and the Chester-le-Street Rural District Council subscribe for beds, 19 patients being sent from those districts during 1908. Thirty-seven patients were also sent by Boards of Guardians in the county, the South Shields Guardians subscribing for three beds. The Society towards the end of 1908 purchased Leazes House, a mansion excellently fitted for the purpose and situated near Wolsingham, for the treatment of women consumptive patients. There will be accommodation in this new Sanatorium for 28 patients, and the 45 beds at Horne Hall will be reserved for male patients. The results obtained in the Sanatorium were generally very satisfactory, especially in the case of patients admitted when suffering from the disease in its early stages, but it is recognised that the after results would be greatly improved by an *After Care Association and an Out-door Working Colony*.

Phthisis.

Contributions from local authorities.

New Sanatorium for women.

Towards the end of 1908 the Local Government Board issued an order, "Public Health (Tuberculosis) Regulations, 1908," requiring the notification to Medical Officers of Health of cases of pulmonary tuberculosis occurring among the inmates of Poor Law Institutions, or among persons under the care of Poor Law Medical Officers, and the taking of certain measures in such cases. The order came into force on 1st January, 1909.

L.G. B. Order as to notification of Poor Law cases.

The question of utilising small-pox hospitals for the treatment of consumptive patients received the attention of several local authorities during the year. The small-pox hospital of the Lanchester Joint Hospital Board has for some time past been utilised for that purpose, and the Chester-le-Street Rural District Council have decided to make similar use of their new small-pox hospital. Respecting this matter the Medical Officer of Health for the Chester-le-Street Rural District Council says:—"The intention of your Council, at first at least, is to treat all suitable cases where any improvement is at all likely. Your idea is more to teach phthisical patients how to protect themselves and

Use of small-pox hospitals as Sanatoria.



**Phthisis.** “their relatives living in the same house than to treat those cases  
 “only which are discovered in the very early stages of the  
 “disease. By adopting this method I believe that more good  
 “generally can be done, because the greater number of phthisical  
 “patients can be got at and advised as to the best way of pro-  
 “longing their own lives and of protecting their families from  
 “being infected with this fatal scourge. Unfortunately, your  
 “proposed Sanatorium was not built for a Sanatorium, but for a  
 “Small-pox Hospital. The site is excellent for a Small-pox  
 “Hospital, but not so good for phthisis. The soil is clay, and the  
 “aspect has an eastern exposure.”

The Medical Officer of Health for Darlington suggests that the Borough Small-pox Hospital should be used for the treatment of phthisical patients, but the Local Government Board declined to sanction the use of the Houghton-le-Spring and Hetton Joint Small-pox Hospital for that purpose.

### **Acute Lung Diseases.**

The deaths from bronchitis, pneumonia, and pleurisy, which numbered 2,575 in 1907, declined to 2,375, equal to a death-rate of 2·81 as compared with a rate of 3·09 in the previous year. The mortality rate was practically the same in the urban as in the rural districts. The death-rate from this disease varied from 1·27 in the third quarter of the year to 4·37 in the first quarter. Many of the deaths from acute lung diseases, especially among infants, might be prevented with reasonable care on the part of the parents, and the practice of many mothers, mentioned in some annual reports, of taking their infants out in all weathers and at night time is to be deplored.

### **Malignant Diseases.**

The deaths registered from cancer and malignant diseases numbered 545. The mortality rate per 1,000 population was 0·64, which is practically identical with the rate in the two previous years. The mortality was greater in the urban than in the rural districts.

### Bacteriological Examinations.

The following table gives particulars of the specimens sent by medical practitioners in the administrative county for examination during 1908, in accordance with the arrangement made between the County Council and the Durham College of Medicine :—

	Number of specimens submitted.	Results.		
		Positive.	Negative.	In-conclusive.
Diphtheria ... ..	328*	128	179	19
Enteric Fever ... ..	145	88	56	1
Tuberculosis (Phthisis, &c.)	463	166	297	...
Ankylostomiasis ... ..	...	...	...	...
Totals... ..	936	382	532	20

\* Two specimens contaminated.

There was an increase in the number of specimens submitted for examination of 160 as compared with 1907, and the proportion of positive results was 40·8 per cent. as compared with 40·5 per cent. in 1907, and 41 per cent. in 1906. In several of the health reports there is an appreciatory reference to the arrangement made by the County Council with the Durham College of Medicine for the bacteriological examination of specimens without charge to the patient where the latter is unable to afford the expense.

Increase in examinations.

### Water Supply.

The county generally is well supplied with water, the western and southern populous areas mostly obtaining their supply from upland gathering grounds, whilst the eastern and north-eastern parts of the county are largely dependent on water obtained from deep wells in the magnesian limestone. In the

Water  
supply.

Dairy farm  
supplies.

Danger of  
river  
supplies.

agricultural areas many of the houses and farms obtain their water supply from wells, though in the Darlington, Durham, and Sedgfield rural districts much good work has been done in recent years by providing a constant and pure water supply to many farms. As to the quality of the county water supplies there was no reason to question the purity of the upland surface waters supplied by the public water companies and there was no evidence during 1908 of any outbreak of disease having resulted from the consumption of such waters. The towns of Darlington and Bishop Auckland and also to some extent Stockton and district are however supplied with water from rivers into which sewage or sewage effluents discharge and the potential danger from the use of such waters for drinking purposes must not be disregarded though in none of those areas was there any distinct evidence of water-borne disease during 1908.

Water  
supplies  
and enteric  
fever.

The water supplied from the magnesian limestone to the eastern and north-eastern parts of the district shows on chemical analysis a high degree of organic impurity but there is evidence that pollution of these waters can take place by percolation of surface and other impurities through clefts or faults in that particular formation. The Medical Officer of Houghton-le-Spring in past annual reports has drawn attention to the risk of such pollution and periodical examinations which have been made on behalf of the Sunderland Corporation indicate that bacteriologically the supply is not altogether satisfactory. Moreover, enteric fever was unduly prevalent during part of 1908 in certain areas supplied by water from the magnesian limestone and after careful enquiry into the causes of that disease in his district the Medical Officer of Health of the Chester-le-Street rural district could not absolve the water supply from the suspicion of being the chief factor of the outbreak. It is true that the Medical Officer of Health of the Houghton-le-Spring urban and rural districts came to a different conclusion as to the cause of a similar outbreak in his district though some cases of enteric fever in the Houghton-le-Spring urban district may have been caused by drinking water from local polluted sources. None of the water supplied from wells

in the magnesian limestone is so far as I know filtered and having regard to the possibilities of pollution I am strongly of opinion that the recommendation of the Medical Officer of Health of the Chester-le-Street rural district as to the proper filtration of such waters should be adopted.

Water supply.

Only a very small population of the county now obtains its water supply from village pumps or private wells, but many of these are from their position and construction liable to pollution. The action of the Weardale Rural District Council in supplying the many small villages in their area with constant supplies of pure water is much to be commended, and compares favourably with that of the Barnard Castle Rural District Council, in whose area there are still several villages where the water supply is not satisfactory. During 1908 the County Council pressed on the rural district council the importance of improving the water supplies to the villages of Staindrop, Middleton and Ingleton, and in the two first named villages some improvements were effected. The attention of the Durham rural district council was drawn by the County Council to the unsatisfactory water supplies to Brasside and Shadforth villages, and it has been decided to obtain a supply for the latter from the Weardale and Consett Water Company. A supply of water from the Sunderland and South Shields Water Company was laid on to the populous Tunstall district of the Sunderland rural district during the year, and steps are being taken to obtain a better distribution of the supply. The village of Hamsterley, in the Auckland rural district, is still without a proper supply of water, and the medical officer of health of the Stockton rural district urges the necessity for a better supply of water to the village of Wolviston. Improvements in the water supply are also recommended at Knitsley Station and Low Moor, in the Lanchester rural district.

New and improved supplies.

### Housing of the Working Classes.

This important subject is dealt with in a considerable proportion of the annual health reports at more or less length, and during the last ten years the improvement in the housing con-

Housing of  
Working  
Classes.

ditions of the county, as the result of the erection of new dwellings and the closing or reconstruction of many insanitary houses, is very marked. Improvements are recorded by the district medical officers of health in housing conditions in nearly all the populous parts of the county, though in several reports (Benfieldside, Barnard Castle, Brandon, Hetton-le-Hole, Auckland rural district, and Stockton rural district) information as to insanitary property is scanty or omitted. There are, however, still a very large number of houses occupied by the industrial classes which do not afford adequate accommodation for a working man and his family. The most objectionable type of dwelling is the old pit cottage, containing one living room and perhaps a small scullery or back kitchen on the ground floor, and a low attic which has no fireplace is approached by a stepladder and is insufficiently lighted and ventilated. In some districts this class of house has been largely reconstructed—in many instances by the owners without any direct pressure from the housing authorities—but in some other districts comparatively little has been done, and not only are the sanitary authorities reluctant to deal with such dwellings under the Housing Acts, but where they do take action they do not always receive that support from the magistrates which they might reasonably expect when they find it necessary to apply for closing orders. The difficulty in dealing with such dwellings is, as I have stated in previous reports, accentuated by the lack of housing accommodation, for in the event of permanent closure it is often impossible for the tenants to obtain another house, with the result that they have either to leave the district, which may involve great hardship, or they are taken in by the occupants of other houses, which thereby become overcrowded. The districts in which this type of house appears to be most numerous are Benfieldside, Consett, Hebburn, Stanley, Whickham, and the rural districts of Durham, Chester-le-Street, Easington and Houghton-le-Spring, but it is by no means confined to them. The minimum accommodation in any dwelling, whether it be a rented or "free" house, should be one healthy well-lighted and well-ventilated bedroom in addition to a living room, scullery,

Difficulties  
in dealing  
with  
insanitary  
houses.

Minimum  
accommo-  
dation  
required.

and pantry, and every sanitary authority should have this by no means ideal standard in view when dealing with defective dwellings.

Housing of  
Working  
Classes.

In most of the populous areas of the county the supply of houses does not meet the demand, although, as will be seen from the accompanying table, a very large number of new dwellings have been erected and occupied in many districts, and it is to be hoped that the Government Housing Bill introduced during the early part of 1908 will become law, as it not only greatly facilitates the erection of working-class dwellings by sanitary authorities, but it also removes many of the existing difficulties in the way of improving or closing insanitary houses. The following extract from a joint report of the Medical Officer of Health and Inspector of the Brandon Urban District issued in the early part of 1908, indicates how serious is the overcrowding in some parts of the county, for such conditions are by no means exceptional :—

Need of  
additional  
housing  
accommod-  
ation.

Over-  
crowding.

“ In consequence of the rapid growth of the population  
“ of this village, and the continued stagnation of the building  
“ operations therein, the housing accommodation has become  
“ quite inadequate. In this report it is pointed out that there  
“ are 100 houses containing exactly 800 inmates. Forty-six of  
“ these houses are only two-roomed dwellings, 35 are three-  
“ roomed, and only 19 are four-roomed houses. Many of the  
“ bedrooms are packed to an alarming extent, and the breathing  
“ space reduced to a minimum, a condition of things which must  
“ eventually have a depreciating effect upon the health of the  
“ village. We, therefore, are compelled to recommend the erection  
“ of at least 50 additional large four or five-roomed houses for  
“ this place at present.”

In some districts houses built of wood or of wood and brick, and defective in many particulars are still being occupied, *e.g.*, in Annfield Plain, Crook (Grahamsley), and in the rural districts of Easington (Horden), Lanchester (Ushaw Moor), and Sedgfield (Trimdon). In the Houghton-le-Spring rural district, however, a

Wood  
dwellings.

Housing of  
Working  
Classes.

large number of houses of this type situated near Penshaw have been replaced by others of a permanent nature, and of good construction, and the Medical Officer of Health recommends a like improvement in respect of similar houses in his district near Stonegate.

L.G.B.  
report—  
Hebburn  
U.D.

During the year a report by Dr. Reece, one of the Medical Inspectors of the Local Government Board, on an inspection made by him of the Hebburn Urban District, in which housing conditions were specially considered, was published, and it is to be hoped that the recommendations made by him, especially respecting insanitary houses at Hebburn Colliery, will be adopted by the District Council.

Sunderland  
R.D.C.  
housing  
scheme.

The scheme of the Sunderland Rural District Council for the erection of workmen's dwellings under Part III. of the Housing Act of 1890 in the parishes of Tunstall and Ryhope made satisfactory progress, and at the end of the year the erection of about 50 houses in each township was in progress.

County  
Council—  
Usworth.

In June an enquiry was held by the Local Government Board into an application of the County Council to borrow for a period of thirty years £12,000 for the purchase of land and the erection of houses in the parish of Usworth under Part III. of the Housing Act, 1890, the Chester-le-Street Rural District Council having been adjudged in default in this respect. The application was supported by the Parish Council and the local Miners' Lodge and was opposed by the colliery companies in the township and by the North-Eastern Railway Company. The sanction to the loan was subsequently given by the Board, but in order that reasonable rents might be charged and the scheme also be self-supporting, it was subsequently decided to apply to the Local Government Board to extend the period for repayment of the loan to \*50 years.

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\* The Board have since extended the period for repayment to 50 years, and the work of erecting 50 houses has been commenced.

The County Council during 1908 exercised its statutory powers under Section 45 (2) of the Housing of the Working Classes Act, 1890, in respect of 107 houses situated in the Easington Rural District (Horden and Wingate) and Houghton-le-Spring Rural District (Leamside), and they also, on default by the Rural District Councils, commenced proceedings for closing orders against the owners under that section in respect of 95 houses situated in the rural districts of Chester-le-Street (Grainger Terrace, 11); Easington (Wingate, 16); Houghton-le-Spring (Leamside, 55); and Lanchester (Ushaw Moor, 13).

Housing of Working Classes.

In addition, the attention of the District Councils was drawn to insanitary houses in Benfieldside, Brandon, Consett, Crook, Shildon, Whickham, Willington, and in the rural districts of Auckland, Chester-le-Street, Durham, Easington, Houghton-le-Spring, and Lanchester. The County Council also drew the attention of the District Councils to breaches of the building bye-laws in connection with the erection of dwellings in the rural districts of Easington (Dalton-le-Dale) and Houghton-le-Spring (Silksworth).

County Council's action respecting unhealthy dwellings.

Breaches of building bye-laws.

During the year a visit was paid to the Model Colliery Village of Brodsworth, near Doncaster, by several members of the County Health Committee and myself, and it affords an excellent example of what can be done towards providing well planned and excellently constructed houses at a reasonable rent in mining districts.

Model village.

The following table, compiled from information kindly supplied by the District Surveyors and Inspectors, gives the number and distribution of houses erected and occupied in the Administrative County during 1908.

New houses erected and occupied during 1908.



New houses  
erected and  
occupied  
during 1908.

District.	Number of New Houses Erected.	Number of New Houses Occupied.	Housing of the Working Class Acts.		
			Number of Dwellings Dealt with.	Number of Dwellings made Habitable.	Number of Dwellings Perma- nently Closed.
URBAN.					
Darlington Borough .. ..	249	249	..	1	..
Durham .. ..	14	14	28	26	..
Hartlepool .. ..	6	6	..	..	2
Jarrow .. ..	97	97	4	2	2
Stockton .. ..	157	157	..	..	7
Annfield Plain .. ..	106	106	..	..	21
Barnard Castle .. ..	7	7	..	..	..
Benfieldside .. ..	46	46	8	..	8
Bishop Auckland .. ..	100	76	1	..	1
Blaydon .. ..	296	296	54	36	9
Brandon and Byshottles .. ..	30	23	3	..	3
Consett .. ..	56	42	..	..	..
Crook .. ..	43	43	..	..	..
Felling .. ..	67	41	39	14	16
Hebburn .. ..	32	21	..	..	..
Hetton-le-Hole .. ..	37	29	..	..	..
Houghton-le-Spring .. ..	58	56	..	..	..
Leadgate .. ..	6	6	9	9	..
Ryton .. ..	88	93	2	..	2
Seaham Harbour .. ..	263	194	16	6	..
Sildon .. ..	63	63	..	..	..
Southwick-on-Wear .. ..	27	16	..	..	..
Spennymoor .. ..	46	40	2	..	1
Stanhope .. ..	3	3	..	..	..
Stanley .. ..	112	112	82	66	..
Tanfield .. ..	73	73	25	16	3
Tow Law .. ..	5	3	..	..	..
Whickham .. ..	149	108	8	1	7
Willington .. ..	22	22	14	4	5
RURAL.					
Auckland .. ..	239	239	5	4	..
Barnard Castle .. ..	10	9	..	..	..
Chester-le-Street .. ..	513	486	163	44	119
Darlington .. ..	25	23	..	1	..
Durham .. ..	131	131	52	20	5
*Easington .. ..	..	..	53	26	5
Hartlepool .. ..	4	2	..	..	..
Houghton .. ..	211	200	8	..	8
Lanchester .. ..	152	152	15	3	..
Sedgefield .. ..	300	300	43	21	14
South Shields .. ..	118	53	15	9	5
Stockton .. ..	58	58	..	..	4
Sunderland .. ..	127	119	5	4	1
Weardale .. ..	19	18	1	1	..
Administrative County ..	4165	3832	655	314	248

\* Plans passed for 238 houses, number actually erected not stated.

### House Drainage, Sewerage, and Sewage Disposal.

In many districts improvements are recorded in the drains and sewers and, generally speaking, the trapping of the house-drains is satisfactory. In only a small proportion of the dwellings in this county are there any sinks or drain connections within the dwelling. Where house-sinks are provided, the waste-pipe is invariably disconnected over an outside gully but the trapping of the waste-pipe is, in some districts, frequently not insisted upon. In such cases the sink may become not only a nuisance but a danger to health, for the waste-pipe becomes coated with decomposing matter, and the air drawn up the pipe by reason of the higher temperature in the house becomes foul and objectionable. Cases of actual illness resulting from this defect have come to my notice, and every sanitary authority should insist on the trapping of the waste-pipes of all sinks, lavatory basins, and baths.

Trapping  
of house  
drains.

A large number of old stone drains and sewers have been replaced by proper sanitary pipes in many districts, notably in Benfieldside, Crook, and Seaham Harbour. In the Houghton-le-Spring urban district serious subsidences in the sewers and at the sewage disposal works are reported, and when the land is quite settled the relaying of some of the sewers will be necessary. Very little was done during 1908 to abolish the defective open channels in the mining districts mentioned in my last annual report, and it is unnecessary for me to again refer to their objectionable features and their danger to health except to state that during 1908 they were undoubtedly responsible for the spread of enteric fever in some of those districts.

Open  
channels.

As regards sewage disposal, Local Government Board enquiries were held during 1908 at Bishop Auckland, Spenny-moor, and Stanhope into applications for loans or provisional orders for the compulsory purchase of lands in connection with sewage disposal works (see page lxiv). In connection with the sewage disposal at Witton Park, which pollutes the river Wear a little above the intake of the Bishop Auckland water supply, a satisfactory scheme of sewage disposal was prepared by the engineer appointed by the County Court and was submitted to the Local

L.G.B.  
enquiries.

Witton  
Park sewage  
disposal.

House  
drainage,  
sewerage  
and sewage  
disposal.

Government Board. The Board, however, were unable to sanction the loan for the work although the application for the loan was supported by the Rural District Council, as the works were not to be carried out by the District Council or on their responsibility, and it was necessary, therefore, to apply to the County Court Judge for an amending order constituting the Rural District Council the authority for carrying out the scheme. This has been done and the engineer's scheme with some slight alterations has been again submitted to the Local Government Board.

Kyo and  
Dipton.

As regards the disposal of the sewage of the villages of Kyo and Dipton in the Annfield Plain Urban District, the County Court Judge, at the instance of the County Council, made an order for the District Council to prevent the pollution from the existing works, and adjourned its enforcement *sine die*, with leave to the County Council to apply at any time if the District Council do not make satisfactory progress with the works necessary to prevent pollution.

Whickham  
and  
Sunniside.

A scheme of sewerage and sewage disposal for the Whickham and Sunniside portions of the Whickham Urban District, by which the sewage is collected and driven by compressed air to a point from which it can gravitate to the tidal waters of the Tyne, was completed in the early part of the year, and is, so far as I am aware, the first of its kind which has been laid down in the north of England. I understand that the scheme is working very satisfactorily.

Reports  
of Royal  
Commission  
on Sewage  
Disposal.

During 1908 the Royal Commission on Sewage Disposal issued its Fifth Report, in which the methods of treating and disposing of sewage are fully dealt with. The conclusions and recommendations of the Commission in this important matter are summarised at the end of the report in question, and they ought to receive the careful attention of all interested in or responsible for the disposal of sewage. Since the issue of the report the Local Government Board have modified their requirements in several important particulars in connection with the

granting of loans for the construction of sewage disposal works, and they do not now require, as a general rule, special storm water filters which, in my experience, are practically useless.

House  
drainage,  
sewerage,  
and  
sewage  
disposal.

The following table indicates the action which has been taken by the County Council, and the progress made by the district authorities towards preventing pollution of water-courses in the county. A list of places is also given where sewage disposal works are still needed for the prevention of pollution of important water-courses. From the periodical reports of the County Rivers' Inspector which were submitted during the year to the County Council, it is obvious that owing, in some cases to growth of population, in others to bad construction and inefficient supervision, a number of sewage disposal works in the county do not satisfactorily purify the sewage supplied to them. Several streams in the county are from time to time seriously polluted by coal-washings and waste products from manufactories, chemical works, patent coke ovens, colliery waste-heaps, etc. It is very difficult to effectively deal with such pollutions, as the powers given by the Rivers Pollution Prevention Acts are inadequate

County  
Council's  
action  
during 1908.

Sewerage and sewage disposal. Statutory notices served.

## A STATEMENT OF STATUTORY NOTICES SERVED DURING 1908 AND RESULTS.

Defendants.	Place.	Stream Polluted.	Date of Notice.	Result of Notice without Legal Proceedings.
Barnard Castle R.D.C. . .	Staindrop Sewage Works.	Langley Beck . .	15/5/08	New site for works selected.
Chester-le-Street R.D.C. . .	Plawsworth, &c. . . . .	Black Dene Burn . .	18/11/08	A joint meeting of the Committee of these two Councils has been called.
Durham R.D.C. . .	Kimbleworth Colliery . .	Black Dene Burn . .	18/11/08	
Darlington R.D.C. . .	Whessoe, Harrowgate Hill	Tributary of River Skerne	27/7/08	The D.C. are endeavouring to obtain land for purification works.
Durham R.D.C. . .	Crossgate Moor . . . . .	River Browney . .	27/7/08	Tenders to be invited for the construction of new purification works.
Durham R.D.C. . .	Bearpark Colliery . .	River Browney . .	27/7/08	Tenders to be invited for the construction of new purification works.
Sedgefield R.D.C. . .	Ferryhill (North Side) Sewage Works	East Howle and Tursdale Becks	18/5/08	Plans for extension of present disposal works have been approved.
Harehope Mining & Quarrying Co., Weardale	Harehope Quarry . .	Bollihope Burn . .	30/7/08	Refuse no longer turned into Burn.
Barnard Castle U.D.C. . .	Near Lendings Corn Mill, Barnard Castle	Small tributary of the Tees	31/1/08	Stream piped from source of pollution.
Blaydon U.D.C. . .	Chopwell Colliery and Blackhall Mill	River Derwent . .	15/5/08	Sewage is being temporarily run through a refuse heap and a new sewer has been provided at Blackhall Mill.
Brandon & Byshtottle U.D.C.	Steeburn Sewage Works.	River Deerness . .	31/1/08	Tanks repaired and Alumino-ferric adopted as a precipitant.
Tow Law U.D.C. . .	Tow Law . . . . .	Heathery Cleugh Burn	20/11/08	The D.C. are consulting with their Engineer.

A STATEMENT OF COUNTY COURT PROCEEDINGS TAKEN DURING 1908 AND RESULTS.

Defendants.	Place.	Stream Polluted.	Date of Proceedings.	Result of Action.
Auckland R.D.C. . . . .	Witton Park . . . . .	River Wear . . . . .	4/8/08	D.C. undertook to complete the necessary works through their Engineer, Mr. Brown, and the Court rescinded the previous Order of 16th April, 1907.
Sedgefield R.D.C. . . . .	Bishop Middleham . . . . .	Tributary of River Skerne . . . . .	14/4/08	Action withdrawn on completion of work.
Annfield Plain U.D.C. . . . .	Dipton . . . . .	Dipton Burn . . . . .	5/2/08	Order made against Defendant Council to put an end to the pollutions complained of.
Annfield Plain U.D.C. . . . .	Kyo . . . . .	Kyo Burn, &c. . . . .	5/2/08	Order made against Defendant Council to put an end to the pollutions complained of.
Tow Law U.D.C. . . . .	Tow Law . . . . .	River Deerness . . . . .	17/4/08	Tanks constructed and sewage removed from the river.

Sewerage and sewage disposal.

Legal Proceedings.

New  
Sewage  
Disposal  
Works.

SEWAGE WORKS PROVIDED DURING 1908:—

AUCKLAND RURAL DISTRICT—

Middlestone Moor.

BARNARD CASTLE RURAL DISTRICT—

Staindrop.

LANCHESTER RURAL DISTRICT—

Ushaw Moor.

SEDGEFIELD RURAL DISTRICT—

Bishop Middleham.

STOCKTON RURAL DISTRICT—

Stillington.

BRANDON URBAN DISTRICT—

Brownney Colliery.

TANFIELD URBAN DISTRICT—

Causey.

Works to  
be  
Provided

LIST OF PLACES WHERE THE DISTRICT COUNCIL AT THE END  
OF 1908 HAD UNDERTAKEN TO PROVIDE WORKS:—

AUCKLAND RURAL DISTRICT—

Witton Park; Eldon Colliery; Auckland Park Colliery;  
South Church; West Auckland, &c.; Byers Green; Tod  
Hills and Hunwick.

CHESTER-LE-STREET RURAL DISTRICT—

Ouston Colliery; Perkinsville, &c.

DURHAM RURAL DISTRICT—

Crossgate Moor and Bearpark Colliery.

EASINGTON RURAL DISTRICT—

South Hetton Colliery and Thornley Colliery.

SEDGEFIELD RURAL DISTRICT—

Ferryhill (North Side).

## BISHOP AUCKLAND URBAN DISTRICT—

Bishop Auckland.

Sewage  
disposal  
works.

## BLAYDON URBAN DISTRICT—

Blackhall Mill, Chopwell Colliery and Rowlands Gill.

## DURHAM URBAN DISTRICT—

Durham.

## SPENNYMOOR URBAN DISTRICT—

Spennymoor (whole district).

## STANHOPE URBAN DISTRICT—

Stanhope.

## TOW LAW URBAN DISTRICT—

Tow Law.

OTHER POLLUTIONS STILL REQUIRING ATTENTION:—Polluting  
districts.RIVER GAUNLESS AND TRIBUTARIES.

## AUCKLAND RURAL DISTRICT—

Butterknowle ; Copley Bent ; Low Evenwood<sup>d</sup>; The Oaks  
and a portion of Evenwood.RIVER SKERNE AND TRIBUTARIES.

## DARLINGTON RURAL DISTRICT—

Aycliffe and Whessoe.

RIVER BROWNEY AND TRIBUTARIES.

## CHESTER-LE-STREET RURAL DISTRICT—

Witton Gilbert.

## LANCHESTER RURAL DISTRICT—

Lanchester ; Ushaw Colliery ; Hamsteels Colliery<sup>g</sup> and Rail-  
way Terrace.

## CROOK URBAN DISTRICT—

Peases' West, Stanley.



Polluting  
districts,  
continued.

RIVER WEAR AND TRIBUTARIES.

AUCKLAND RURAL DISTRICT—

Sunnybrow ; Binchester Blocks.

CHESTER-LE-STREET RURAL DISTRICT—

Pelton Village ; Pelton Fell Colliery ; Plawsworth ; Plawsworth Bar, &c.

DURHAM RURAL DISTRICT—

East Hetton ; California, Coxhoe ; Kimblesworth.

WEARDALE RURAL DISTRICT—

Ireshopeburn ; Eastgate ; West end of Westgate.

WILLINGTON URBAN DISTRICT—

Page Bank and a portion of Willington.

Unsatisfac-  
tory sewage  
works.

SEWAGE WORKS FOUND TO BE INADEQUATE OR FREQUENTLY

UNSATISFACTORY DURING 1908 :—

AUCKLAND RURAL DISTRICT—

Coundon ; Challies Row, Newfield.

BARNARD CASTLE RURAL DISTRICT—

Staindrop ; Whorlton.

CHESTER-LE-STREET RURAL DISTRICT—

Chester-le-Street Sewage Farm ; New Lambton ; Sacriston (East Side).

EASINGTON RURAL DISTRICT—

Thornley Colliery.

HOUGHTON-LE-SPRING RURAL DISTRICT—

William Henry Pit, Fence Houses.

LANCHESTER RURAL DISTRICT—

Croniwell ; Esh Winning.

SEDGEFIELD RURAL DISTRICT—

Ferryhill (North Side).

STOCKTON RURAL DISTRICT—

Stillington Ironworks.

Unsatisfactory sewage works, continued.

ANNFIELD PLAIN URBAN DISTRICT—

Kyo; Dipton.

BENFIELDSIDE URBAN DISTRICT—

Shotley Bridge.

BRANDON AND BYSHOTTLES URBAN DISTRICT—

Lymington Terrace.

HOUGHTON-LE-SPRING URBAN DISTRICT—

Houghton-le-Spring.

SPENNYMOOR URBAN DISTRICT—

Ox Close, Spennymoor.

TOW LAW URBAN DISTRICT—

Tow Law.

**Excrement Disposal and Removal.**

Satisfactory progress continues to be made with the work of abolishing the ashpit-privy system in most districts. The ash-closets, which are taking their place, and are being provided for most of the new houses of the industrial classes, are infinitely more sanitary, but my remarks in my last annual report as to the necessity for better lighting and ventilation in the majority of such closets still apply. In several districts, of which may be mentioned Darlington, Barnard Castle, Houghton-le-Spring, Seaham Harbour, Southwick, and Willington, the advantages of water-closets over any other form of excrement disposal are emphasized. The Medical Officer of Health of Hartlepool, the houses in which are now all practically provided with water-closets, points out that enteric fever has practically ceased to exist in the town since the abolition of the ashpit-privy system, and in other towns where the water carriage system has become general similar results have been experienced to a very marked extent. On the other hand, in towns such as Nottingham and in districts

Abolition of midden-privies.

Excrement  
disposal  
and  
removal.

where the pail and privy systems are still largely in use, the mortality from enteric fever and diarrhœa is, in nearly every instance, above the average. Judging from the frequent references in the annual reports, no fact appears to have impressed itself more strongly on the district medical officers of health than that of the nuisance and injury to health resulting from the midden-privy system.

Scavenging.

As regards scavenging and the removal of house refuse, the sanitary authorities in nearly every populous district in the county make themselves responsible for the work, and either employ their own staff for the purpose or else let it to contractors. Generally speaking, the work appears to have been done fairly satisfactorily, though in some instances there has been difficulty in ensuring that the scavenging contractors at all times properly perform their duties, and, frequently, a considerable proportion of the time of the sanitary inspectors is taken up in supervising their work. The necessity for improving the scavenging arrangements is pointed out in the reports for Hebburn, Stanhope, and the Easington rural district. In the report for the Auckland rural district scavenging at night in those parts of the district which are not strictly rural is recommended. In some districts, notably in Crook and Willington, difficulty is being experienced in providing suitable refuse tips, and there, as well as in Barnard Castle and Spennymoor, the question of the necessity for refuse destructors is raised by the medical officers of health. In the report for the Weardale (St. John's) rural district the provision of refuse depots for the different villages is again recommended. The Medical Officer of Health for the Bishop Auckland urban district urges that steps should be taken to prevent the practice of householders of throwing refuse into the streets, and the Medical Officer of Health of the Durham rural district advises the adoption of bye-laws for private scavenging.

Importance  
of night  
scavenging.

Refuse tips  
and  
destructors.

### Dairies, Cowsheds and Milkshops.

The condition of these structures receives attention in most of the annual reports, though in some of them greater

prominence might with advantage have been given to the necessity for ensuring the purity of the milk supply. In some districts considerable improvements in the condition of the cowsheds are reported (Darlington, Stockton, and Sunderland rural district) but it is obvious from many of the reports that there is much room for improvement; thus the Medical Officer of Health for Shildon says:—"Most of the cowsheds are in much the same condition, wooden erections of unsatisfactory character, and many of the milkshops are still capable of improvement." The Medical Officer of Health for Spennymoor remarks that "there is great room for improvement in the way the cows are kept and in some cases in the personal cleanliness of those who handle the milk. Unfortunately the demand for milk in the district is in excess of the supply and this puts great temptation in the way of unscrupulous dealers. . . . I am afraid we can look for little improvement until the public awake to the importance of the question and decline to purchase their milk from any dealers who do not take every precaution to ensure its purity." It is obvious also from the report of the Medical Officer of Health for the Chester-le-Street rural district that an improvement in the conditions of the milk supply of that district is desirable and in support of the necessity for milk cleanliness, he quotes the following extract from the third interim report of the Commission on Tuberculosis which deserves public attention:—"The experiments which we have carried out with regard to the infectivity of the fæces of tuberculous cows were dictated by knowledge of the fact that dirt of various kinds from cows and the cowshed is almost constantly present in milk as it reaches the customer. Cows suffering from extensive tuberculosis of the lung must discharge considerable numbers of the bacilli from the air passages in the act of coughing, and some of the bacilli thus expelled may find their way into the milk. But our experiments indicate that the excrement of cows obviously suffering from tuberculosis of the lungs or alimentary canal must be regarded as much more dangerous than the matter discharged from the mouth or nostrils. We have found that

Dairies,  
cowsheds,  
and  
milkshops.

Importance  
of pure  
milk  
supplies.

Milk  
supplies  
and  
tuberculosis.

Dairies,  
cowsheds  
and milk-  
shops.

“even in cases with slight tuberculous lesions tubercle bacilli in  
“small numbers are discharged in the fæces, while as regards  
“cows clinically tuberculous our experiments show that the  
“fæces contain large numbers of living and virulent bacilli.  
“The presence of tuberculous cows in company with healthy  
“cows in the cowshed is therefore distinctly dangerous, as some  
“of the tubercle bacilli which escape from their bodies in the  
“excrement are almost certain to find their way into the milk.”

In the reports for Whickham, Willington, and for the Houghton-le-Spring and Weardale (St. John's) Rural Districts reference is also made to the necessity for the improvement of the condition of the cowsheds, and the Medical Officer of Health for Bishop Auckland urges stricter supervision over the milk supply.

Regulations  
as to air-  
space in  
cowsheds.

There is a great want of uniformity in the regulations in force in this county as to the air-space in cowsheds. In some regulations no minimum cubic air-space is stipulated; in others it is required only in cases where the cows are practically stall-fed during the whole year, no definite cubic air-space being specified where the animals are habitually turned out during the summer and during a portion of each day throughout the year, and consequently it is, in practise, very difficult for sanitary authorities, even if they desire it, to insist on a reasonable air-space. All regulations under the Dairies and Milkshops Order require to be sanctioned by the Local Government Board, but the Board have not adopted any definite rule as to the minimum cubic air-space in cowsheds, for quite recently they have sanctioned regulations for sanitary districts in this county, in some of which a minimum cubic space per cow is required in every cowshed, while in others no minimum space is specified where the cows are turned out during a portion of each day. This matter was brought to the notice of the County Health Committee towards the end of 1908, and the County Council subsequently communicated with the district sanitary authorities recommending the adoption of a regulation requiring a minimum of 600 cubic feet of air-space and 50 square feet of floor area per cow in all cowsheds.

## Slaughter-Houses.

In most districts more or less satisfactory supervision over these structures appears to be made by the sanitary officials, but in the existing conditions under which cattle are killed in private slaughter-houses, not only are nuisances liable to arise owing to the situation of the slaughter-houses and in the disposal of the offal, but adequate supervision of the meat supply is impossible and unnecessary suffering to the animals is likely to occur. There is no public slaughter-house in any part of the administrative county, but reference is made to the desirability of such provision in the reports for Felling, Hebburn, Hetton, Southwick and Spennymoor. The slaughter-houses are neither licensed nor registered in the Whickham Urban District, or the Easington Rural District. Bye-laws have been adopted by the Chester-le-Street Rural District Council and are awaiting the sanction of the Local Government Board. Generally speaking, only a passing reference is made in the district annual reports to slaughter-houses, and in some of them no reference at all is made to the subject.

Desirability  
of public  
slaughter-  
houses.

Bye-laws.

## Food and Drugs Act.

The number of samples taken for analysis in the Administrative County, exclusive of boroughs, by the county or district officials during 1908 was 1069, and of these 115, or 10·7 per cent., were certified to be adulterated. In the previous year the number analysed was 925, of which 93, or 10 per cent., were found to be adulterated.

The administration of the Act in the non-county boroughs is undertaken by the local officials, and of the 336 samples taken for analysis, 34, or 10·1 per cent., were certified to be adulterated.

As to what constitutes a reasonable milk standard is still a much discussed question, and although at the time the fixing of a standard of 8·5 per cent. of non-fatty solids and 3 per cent. of fat appeared to be satisfactory to farmers and dairymen, there is an increasing difficulty in getting convictions for adulteration, even when samples of milk are found on analysis to fall considerably

Pure milk  
standards.

below those standards, in consequence of evidence being adduced to the magistrates that the milk has not been tampered with, and that the fat of milk of individual cows may fall below the 3 per cent. standard. It is very rare indeed, however, that the milk from individual cows falls below the standard, and even in such instances it can probably be accounted for by bad feeding or other circumstances which can be avoided by careful milking and by proper attention to the cows. The results of analysis of many thousands of samples of milk prove that the fat averages at least 3·5 per cent. This fact is well known in the dairy trade, and, in some instances, unscrupulous milk dealers have been known to take advantage of it and to add skimmed milk or water, so as to reduce the percentage of fat to the Government standard. In the interest of a pure and wholesome milk supply there should be a rigid adherence to the very reasonable standard of 3 per cent. of fat, and milk should be considered to be adulterated when it falls below that standard.

### **Factories and Workshops.**

In only a few reports is the condition of these places discussed at any length. As a rule, the information on this subject is, for the most part, confined to statistics entered in the table issued by the Secretary of State for inclusion in the annual reports of medical officers of health. In most districts it would appear that the sanitary state of the factories and workshops is fairly satisfactory. Judging by the information supplied by the district annual reports, very few persons undertake work in their homes.

### **Common Lodging Houses.**

Only short reference is, as a rule, made in the district annual reports to the sanitary state and management of these houses, but many of them are old buildings of poor construction and, for the most part, the accommodation is not such as to commend itself to a decent working man. In some districts, notably in Consett, a great improvement in the common lodging house accommodation has been made within recent years. Generally speaking, more

supervision is now exercised by the district sanitary authorities than was formerly the case. In my opinion, the provision by the sanitary authorities in the populous districts in this county of properly constructed and well managed lodging houses would be a great boon to many single working men, and would do a great deal to relieve the overcrowding and other objections associated with the accommodation of lodgers in already often overcrowded dwelling houses.

Common  
lodging-  
houses.

### Streets and Back Streets.

Reference is made in many of the reports to the condition of the streets and back streets which, in bad weather, in many of the urban and rural districts, is deplorable. In many parts of the county, however, impervious footpaths have been laid down, to the great convenience and comfort of foot passengers, even though the streets remain unmade, but in some districts it is still a common thing to see new houses erected and occupied without any footpath or impervious pavement being provided along their fronts, and, consequently, not only is their appearance unsightly, but roof and surface water to a varying extent find their way into the foundations of the dwellings and cause dampness of the walls. Although district authorities may not have the power to insist on the construction of impervious pavement along the fronts of new buildings, I feel sure that, in the majority of cases, if the district surveyors would make a general rule to point out to those about to build houses the advantages of such pavement, it would in most instances be provided.

Advantages  
of imper-  
vious  
pavements.

In several townships in the rural districts, *e.g.*, in the rural districts of Auckland, Chester-le-Street, Easington, and Sedgfield, steps have been or are being taken to put into force the Private Street Works Act, 1892.

### Bye-Laws.

In only a few of the annual reports is any reference made to the sufficiency or otherwise of the bye-laws relating to public health which are in force in the county. In some districts, steps



Bye-laws.

were taken to revise the building bye-laws, but I have no definite information as to what progress was made in that direction. Under the Public Health Act, 1875, bye-laws with respect to new streets and buildings are in force in every district in the county except the rural district of Sedgefield, and new bye-laws are being framed for that district. Regulations under the Dairies, Cowsheds, and Milkshops Order are in operation in every district except Tow Law; but, so far as my information goes, regulations for slaughter-houses have not been adopted in five urban and six rural districts, while in four urban and seven rural districts there appear to be no bye-laws in respect of common lodging houses. Bye-laws for the regulation of offensive trades are in force in five urban districts. During the year the Local Government Board refused an application of the Chester-le-Street Rural District Council to amend their building bye-laws so as to require among other things the provision of deafening or sound-proof floors in flats and tenements. The Houghton-le-Spring Rural District Council have decided to increase the minimum yard area in the case of double tenemented houses.

Sound-proof floors for tenemented houses.

### Midwives Act.

Supervision.

As Executive Officer under the Midwives Act I am responsible for the supervision of the certified midwives in the county, and as far as possible the County Midwives Inspector (Miss Lee) visits each midwife in practice at least once a quarter. In April Dr. Gilmore-Cox resigned her appointment as one of the midwives inspectors, and owing to the reduction in the number of midwives it has since been possible for one inspector to exercise the necessary supervision, more especially as the majority of the midwives now recognise the importance of cleanliness, and have a better knowledge of their duties. Cases of puerperal fever in the practice of the midwives receive the special attention of myself or my assistant.

Resignation of inspector.

General improvement of midwives.

Number of certified and practising midwives.

The number of certified midwives living in the county on the 31st March, 1909, was 223, the same number as in the previous year, but only 55 of these held the certificate by virtue of having

passed the examination of the Central Midwives Board or an examination recognised by the Board. Only 171 midwives notified their intention to practise during 1908, as compared with 186 in 1907.

Midwives Act.

During 1908 nine cases of puerperal fever in the practices of midwives in the county were brought to my notice, and all necessary precautions to prevent the spread of infection were insisted upon. The number of still-births notified to me by midwives was 78, and 66 intimations of midwives sending for medical help were also received, as were also notices of the deaths of 20 mothers and infants in the practices of midwives. All such deaths were the subject of special enquiry by the Midwives Inspector.

Puerperal fever.

Midwives' notifications.

The names of four midwives were removed from the Midwives Roll on account of misconduct, while 21 were similarly removed at their own request or with their consent. The number of midwives warned by the Executive Officer for breaches of the Rules of the Central Midwives Board was 24, and one was also censured by the Midwives Committee. One midwife was formally reported to the Central Midwives Board for misconduct under Section 8 (2) of the Midwives Act, 1902.

Removals from Roll for misconduct, &c.

From statistics prepared for me by the Midwives Inspector it appears that the number of births attended by certified midwives in the Administrative County during 1907 was 4,503, which is equal to only 15 per cent. of the total registered births; that out of 151 certified midwives carrying on practice only 18 were trained, that 90 of the midwives, or 59 per cent., were illiterate; and that the age of 72 of the certified midwives exceeded 60 years.

Extent of midwives' practices.

Having regard to the possible shortage of midwives after March, 1910, when no woman will be permitted to practise as a midwife habitually and for gain, the County Midwives Committee has recommended the Education Committee to institute midwifery scholarships for women who are prepared to practise as midwives in the county.

Proposed midwifery scholarships.

## Elementary Schools.

The sanitation of schools is now the subject of periodical reports by me as School Medical Officer, and it need not, therefore, be dealt with in this report.

Medical  
inspection  
of school  
children.

For the carrying out of the work of medical inspection of the children, three whole-time Assistant School Medical Officers and three Nurses were appointed, and during 1908 3,669 children were inspected. As I have already presented a full report on the Medical Inspection of School Children during 1908 to the Education Committee, no reference need be made to it in this report, beyond stating that the organisation of the work threw a great strain on the staff of the County Health Department, which, to some extent, interfered with its ordinary work.

School  
closed for  
infectious  
disease.

There was a considerable reduction in the number of elementary schools closed during 1908, owing to the diminished prevalence of measles. The question of school closure has been referred to at some length in the early part of this report. (Measles).

## Sanitary Legislation, 1908.

No important acts were passed during the year, but the Government introduced a Housing and Town Planning Bill, which contains many valuable provisions, one of the most important of which, in my opinion, is that the Sanitary Authorities will themselves be enabled to issue closing orders respecting insanitary property, no reference to the magistrates being necessary. The Bill was referred to a Special Committee of the House of Commons, and amended in some important particulars, but, up to the end of 1908, no further progress had been made with it.

## Adoptive Acts.

During the year the County Council sent a communication to the different sanitary authorities recommending the adoption of such sanitary provisions of the Public Health Acts (Amendment)

Act, 1907, as might be applicable to the districts and by the end of the year replies had been received, from which it appeared that in one district (Blaydon) the Local Government Board had already sanctioned certain parts of the Act; that 18 sanitary authorities had made application to the Local Government Board for sanction to adopt parts of the Act; and that 20 councils had the matter under consideration.

Adoptive  
Acts.  
P.H.A.  
(Amend-  
ment) Act,  
1907.

The Notification of Births Act was adopted during 1908 by the urban district councils of Shildon, Southwick, Stanley, and Whickham, and health visitors were subsequently appointed to carry out the provisions. (See "Infant Mortality.") The Act was also adopted in the Borough of Stockton.

Notification  
of Births  
Act.

The Local Government Board sanctioned during the year the application of the Chester-le-Street Rural District Council to adopt sections 29, 30, and 31 of the Public Health Acts (Amendment) Act, 1890, which deal with the licensing and change of occupation of slaughter-houses.

P.H.A.  
(Amend-  
ment) Act,  
1890.

### 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 —

1908.	Applicant.	Amount.	Purpose.	Result.
Mar. 6	Stanhope U.D.C.	..	A Provisional Order to empower the U.D.C. to put in force with reference to certain lands required by them for purposes of sewage disposal, the powers of the Lands Clauses Acts with respect to the purchase and taking of lands otherwise than by agreement.	Sanctioned.
„ 6	Do.	£3,521	Sewerage and Sewage Disposal Works.	Sanctioned.
April 2	Spennymoor U.D.C.	..	A Provisional Order to empower the U.D.C. to put in force with reference to certain lands required by them for purposes of sewage disposal, the powers of the Lands Clauses Acts with respects to the purchase and taking of lands otherwise than by agreement.	Sanctioned.
„ 3	Bishop Auckland U.D.C.	£28,900	Sewerage and Sewage Disposal Works.	Sanctioned.
June 2	Durham County Council.	£12,000	The provision of 50 workmen's dwellings at Usworth, in the Chester-le-Street Rural District.	Sanctioned.
Sept. 30	Jarrow Corporation.	£3,117	Work of Private Street improvement.	Sanctioned.
„ 30	Do.	£183	Works of sewerage.	Sanctioned.

### County Council Enquiries.

No enquiries bearing on public health administration were held by the County Council during the year 1908 :—

The following table and chart give certain monthly vital statistics, and appended to the report are other statistical tables. (See index).

TABLE SHEWING THE NUMBER OF BIRTHS, DEATHS, AND DEATHS FROM THE CHIEF ZYMOTIC DISEASES IN THE ADMINISTRATIVE COUNTY OF DURHAM, DURING EACH OF THE MONTHS OF 1908.

	Births.	Deaths.	Deaths under 1 year.	Total Zymotic Deaths.	Small-pox.	Scarlet Fever.	Diphtheria and Membranous Group	Fevers (Enteric and Continued).	Measles.	Whooping Cough.	Whooping Diarrhoea.
JANUARY ..	2643	1449	426	162	..	5	19	5	43	71	19
FEBRUARY ..	2502	1239	355	129	..	6	21	3	25	55	19
MARCH..	2711	1427	367	158	..	6	15	10	40	55	32
APRIL ..	2498	1159	300	110	..	4	12	7	29	44	14
MAY ..	2931	1069	288	109	..	5	9	13	17	45	20
JUNE ..	2844	1035	276	103	..	11	8	7	17	22	38
JULY ..	2711	984	279	119	..	5	4	4	12	21	73
AUGUST ..	2590	1328	567	409	..	4	6	17	8	31	343
SEPTEMBER ..	2562	1147	460	297	..	2	9	20	7	27	232
OCTOBER ..	2575	1394	591	399	..	2	18	21	14	35	309
NOVEMBER ..	2419	1238	384	166	..	5	9	26	11	24	91
DECEMBER ..	2311	1342	457	117	..	7	22	26	13	22	27
TOTALS ..	31297	14811	4750	2278	..	62	152	159	236	452	1217

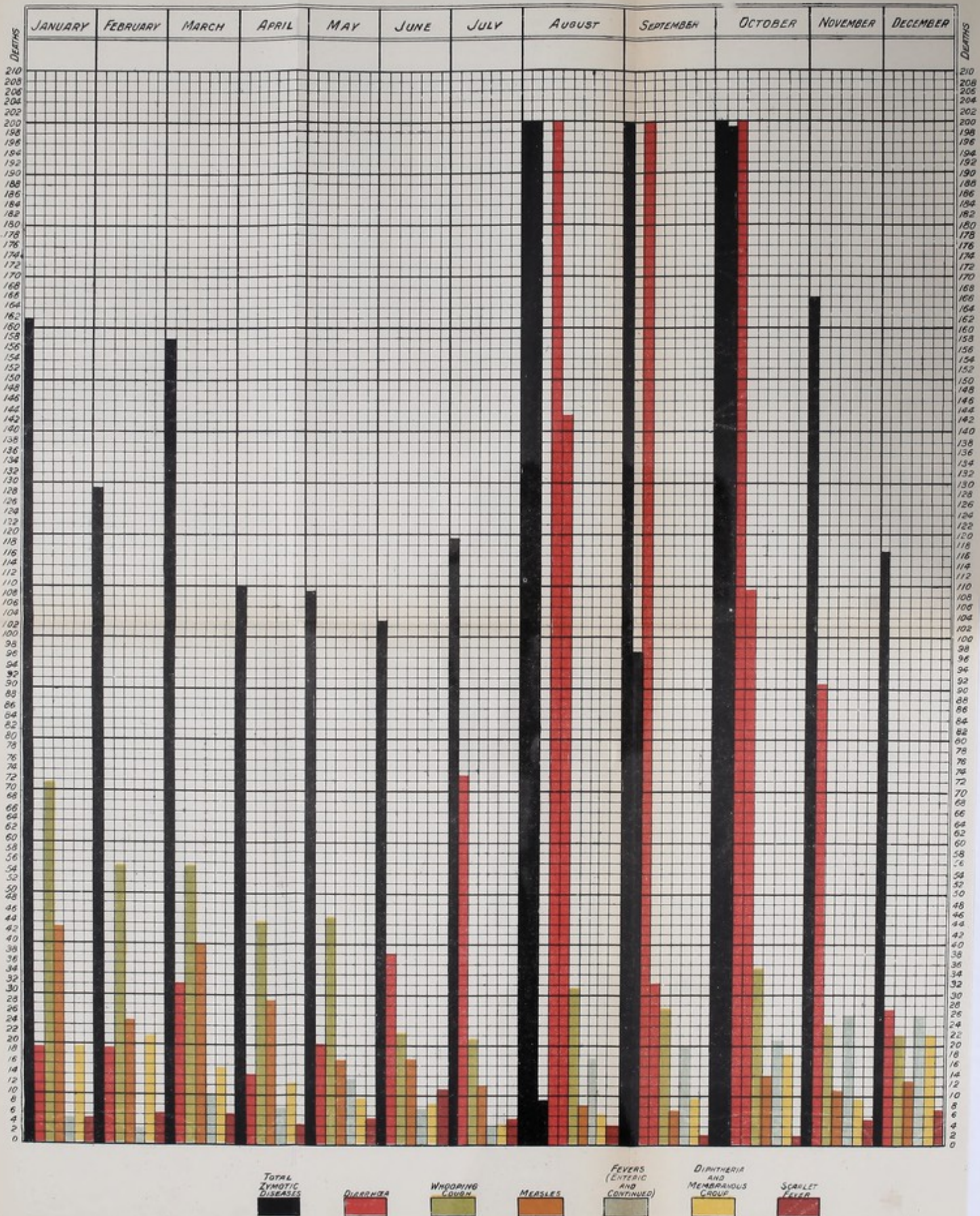
Year	1880	1881	1882	1883	1884	1885	1886	1887	1888
1880	100	100	100	100	100	100	100	100	100
1881	100	100	100	100	100	100	100	100	100
1882	100	100	100	100	100	100	100	100	100
1883	100	100	100	100	100	100	100	100	100
1884	100	100	100	100	100	100	100	100	100
1885	100	100	100	100	100	100	100	100	100
1886	100	100	100	100	100	100	100	100	100
1887	100	100	100	100	100	100	100	100	100
1888	100	100	100	100	100	100	100	100	100

This table shows the results of the survey conducted in the year 1880. The data is presented in a tabular format, with columns representing the years from 1880 to 1888. The rows represent the different categories of the survey. The values in the cells represent the results of the survey for each category and year.





CHART SHOWING THE NUMBER OF DEATHS DURING EACH MONTH OF 1908 FROM THE SEVEN CHIEF ZYMOTIC DISEASES.



NOTE.— There were no deaths from small-pox during the year.

In the months of August, September and October, the Total Zymotics and Diarrhoea columns are, for convenience, widened instead of heightened.

# BOROUGHS.

## DARLINGTON.

JAMES LAWRENCE, M.D., Medical Officer of Health.

### Vital Statistics.

	1908.	1907.
Estimated Population .. ..	51,000	50,000
Birth-rate .. .. .	80·88	28·2
Death-rate .. .. .	15·00	14·4
Zymotic death-rate .. .. .	1·56	0·88
Phthisis death-rate .. .. .	1·15	0·94
Total Tuberculosis death-rate	1·62	1·50
Respiratory diseases death-rate .. .. .	1·76	2·3
Infant mortality-rate per 1,000 births .. .. .	118	115

### Infectious Diseases—Cases & (Deaths).

	1908.	1907.
Total notifications .. .. .	159	136
Smallpox .. .. .	nil.	1
Scarlet fever .. .. .	50	52
Diphtheria .. .. .	74	53
Fevers (Enteric, &c.) .. .. .	21	17
Puerperal fever.. .. .	2	1
Cases treated at hospital ..	122	106
Measles .. .. .	(15)	(4)
Whooping cough .. .. .	(18)	(21)
Diarrhœa .. .. .	(36)	(4)

Population is probably considerably under-estimated. (See page iii.)

## GENERAL SANITATION.

*Water* obtained from the Tees was abundant, and yielded regularly an excellent analysis.

*Scavenging* was done very satisfactorily.

*Housing*.—(a) New Houses: 249 were built, making an increase of over 2,500 houses since the census year 1901. (b) Insanitary Property: Two houses which were closed have since been rendered habitable. Privy-middens were replaced by 76 water-closets and 44 small privy-ashpits; 102 ashpits were replaced by ash-boxes.

*Nuisances*.—Nearly 2,000 formal and informal notices were served. A number of nuisances relating to overcrowding, gipsy vans located within the borough on waste land without provision of water and sanitary accommodation, pig-sties, &c., were dealt with.

*Dairies and Cowsheds*.—Eighty-three vendors of milk are registered. Four dairymen and three cowkeepers who had insufficient accommodation have relinquished their milk trade.

*Slaughter Houses* were well maintained, but Dr. Lawrence says: "It is almost impossible to prevent diseased meat being brought to market at times from so many slaughter houses as exist now, and the time cannot be far distant when a public abattoir will become a necessity, and this will be a great safeguard to the public from the risk of being supplied with either diseased or tuberculous meat."

*Food and Drugs.* —It is stated that "During the year a large number of samples of food, drugs, and spirits have been submitted for analysis. There were 99 samples of milk taken, and 18 were found to be more or less below the standard of pure milk. Sixteen of the purveyors were written to by the Town Clerk, and in one case, where the fat was deficient to the extent of 11.3 per cent., proceedings were taken, and also in another case, where the deficiency of fat was 12 per cent., but both cases were dismissed. It is useless for the Sanitary Authority to try to maintain the standard of purity in food if, in such cases as these, the magistrates will not assist them in their efforts, which are not due to vindictiveness, but to maintain the standard of purity of the food supply, and to act as a guarantee to the purchaser that he will get what he asks for when he goes to the market. One sample of gin was found to be 40 degrees under proof, and one sample of Scotch whisky 25 degrees under proof. The vendor of the gin was fined 5s. and costs and the vendor of the whisky written to by the Town Clerk. A letter of warning was also written to the vendor of a sample of milk containing 49 grains per gallon of boric acid, but otherwise of standard quality. One sample of treacle was found to contain glucose syrup, and no action has been taken in this case, but instructions issued for further samples to be taken. There were samples of the following taken among others, and all found pure, viz., butter, flour, bread meal, oatmeal, tapioca, lard, arrowroot, ground rice, and raspberry jam. Altogether 150 samples were analysed during the year."

*Factories, Workshops, and Work-places* were inspected on 320 occasions. Ten notices were served, and 28 nuisances, relating

to want of cleanliness (15), defective ventilation (2), overcrowding (2), sanitary accommodation, &c. (9), were abated, Dr. Lawrence says that "practically no notice was taken of "circulars sent out to employers likely to engage out-workers, "and that in consequence the houses of the latter could not be "inspected." Dr. Lawrence concludes that "the only course to "take will be to summon one or two employers and the lists will "be quickly forthcoming after that."

### SANITATION REQUIREMENTS.

1. The substitution of water-closets or ash-closets for insanitary privy-middens.
2. The conversion of the Small-pox Hospital into a temporary Sanatorium for the treatment of Consumption.

## DURHAM.

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

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	17,200	17,200
Birth-rate .. .. .	26·10	25·8
Death-rate .. .. .	17·79	17·2
Zymotic death-rate.. .. .	2·26	1·28
Phthisis death-rate .. .. .	0·98	1·22
Total Tuberculosis death-rate	1·56	1·86
Respiratory diseases death-		
rate .. .. .	3·19	2·84
Infant mortality-rate per 1,000		
births .. .. .	175	187

#### *Infectious Diseases—Cases & (Deaths.)*

	1908.	1907.
Total notifications .. .. .	51	31
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	20	14
Diphtheria .. .. .	13	9
Fevers (Enteric, &c.) .. .. .	10	3
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital .. .. .	23	14
Measles.. .. .	(2)	(9)
Whooping cough .. .. .	(4)	(nil).
Diarrhoea .. .. .	(26)	(11)

Vaccination. (See page xiv). Smallpox hospital. See page xxxiii).

### GENERAL SANITATION.

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

*Sewerage.*—Further progress is reported with the works, which it is hoped will be completed in July, 1909. All the main

sewers have been laid to the works at Barker's Haugh, and it is anticipated that the remainder of the houses, which are at present draining into the river, will soon be connected up to the sewerage system.

*Housing.*—(a) New Houses: 14 were built. (b) Insanitary Property: 26 houses were rendered habitable and 2 houses were closed, as a result of action under Part ii. of the Housing of the Working Classes Act. Twenty-seven ashpit-privies were replaced by water-closets; 8 cases of overcrowding were abated as the result of notice. Dr. Vann says:—“In a town such as Durham it is a very  
“difficult matter to bring all the houses into such a sanitary state  
“as might be desired. In some portions of the town, such as the  
“lower part of South Street and Crossgate and part of Millburn-  
“gate, the streets are so placed as to render it impossible to have  
“the free space about the houses which is so desirable without  
“such an amount of demolition as would be a very serious under-  
“taking indeed.”

*Nuisances.*—791 were abated; 827 informal and 107 formal notices were served.

*Common Lodging Houses* (7).—Notices were served with respect to dilapidations and insanitary ashpits, defective walls, defective sewerage, and the defects were remedied in all instances.

*Cowsheds* were, as a rule, found satisfactory.

*Slaughter Houses* (17) are better maintained, but the removal of offal was not always done satisfactorily.

*Food and Drugs.*—The 21 samples which were taken yielded satisfactory analyses.

*Workshops* (175) were inspected on 237 occasions: 25 nuisances relating to want of cleanliness (17), ventilation (1), overcrowding (1), sanitary accommodation (6), were detected

and 21 have been abated. Four under-ground bake-houses are in use.

### SANITARY REQUIREMENTS.

The provision of smallpox hospital accommodation.

## HARTLEPOOL.

J. RAWLINGS, M.R.C.S., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	24,000	24,000
Birth-rate .. .. .	29.29	28.9
Death-rate .. .. .	14.75	15.6
Zymotic death-rate .. .. .	1.41	1.5
Phthisis death-rate .. .. .	0.95	0.87
Total Tuberculosis death-rate	1.91	1.79
Respiratory diseases death-rate .. .. .	2.25	3.1
Infant mortality-rate per 1,000 births .. .. .	127	116

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	85	42
Smallpox .. .. .	nil.	nil.
Scarlet fever.. .. .	64	27
Diphtheria .. .. .	9	5
Fevers (Enteric, &c.).. .. .	4	2
Puerperal fever .. .. .	nil.	nil
Cases treated at hospital ..	6	3
Measles .. .. .	(4)	(10)
Whooping cough.. .. .	(5)	(11)
Diarrhoea .. .. .	(17)	(11)

Enteric fever. (See page xvii.)

### GENERAL SANITATION.

*Water* was abundant, and of good quality; 3 samples were analysed.

*Sewerage.*—The sewerage system and the refuse destructor acted satisfactorily.

*Housing.*—(a) New Houses: 6 were built and occupied. (b) Insanitary Property: 2 houses were closed as unfit for habitation, and 3 houses were purchased by the Corporation and demolished. Dr. Rawlings says:—“The housing question and closing of “insanitary dwellings is still, in my opinion, the most important “factor with regard to the health of the town, and I hope that “improvement in these directions will soon take place.”

*Nuisances.*—301 were abated.

*Common Lodging-Houses* were inspected regularly.

*Dairies, Cowsheds and Milkshops.*—There are 33 vendors of milk, but only 2 cowkeepers in the district.

*Slaughter-Houses* (26) were maintained satisfactorily.

*Food and Drugs.*—98 samples were analysed. Five out of 36 samples of milk were adulterated. Proceedings were taken against the vendors, who were fined in sums varying from 10/- to £3.

## SANITARY REQUIREMENTS.

Improvements in the housing accommodation.

## JARROW-ON-TYNE.

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

### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	34,700	34,700
Birth-rate .. .. .	33·40	33·3
Death-rate .. .. .	16·13	16·1
Zymotic death-rate .. .. .	1·47	0·98
Phthisis death-rate .. .. .	1·41	1·52
Total Tuberculosis death-rate	2·04	2·27
Respiratory diseases death		
rate .. .. .	2·68	3·4
Infant mortality-rate per 1,000		
births .. .. .	130	121

### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	101	142
Smallpox .. .. .	nil.	nil.
Scarlet Fever .. .. .	40	55
Diphtheria .. .. .	24	27
Fevers (Enteric, &c.) .. .. .	8	11
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	33	47
Measles .. .. .	(8)	(2)
Whooping cough .. .. .	(4)	(2)
Diarrhoea .. .. .	(32)	(18)

The death-rate was lowest on record. Voluntary notification of phthisis is, for practical purposes, valueless. (See page xxxiv.) Bed at the Stanhope Consumptive Sanatorium at the disposal of the Corporation.

## GENERAL SANITATION.

*Water* is supplied by the South Shields and Sunderland Water Company.

*Sewerage.*—The sewers acted efficiently. There are four outfalls into the Tyne and three into the Don.

*Scavenging* was done satisfactorily by contractors. The refuse is carried out to sea.

*Housing.*—(a) New Houses: 19 self-contained and 39 tenemented houses (78 flats) were built. (b) Insanitary property—Dr.

Nicoll says : “ In the older parts of the town, such as in North, “ East, and parts of the Central Wards, we have the most difficulty “ in keeping houses, which are in themselves in a more or less “ state of natural decay, from being made very much worse by the “ habits of the people who, too often, occupy them. In these “ districts too, we have very often small yards, with too often “ narrow and badly-bricked lanes, conditions which do not tend “ towards a satisfactory sanitary state. So far as the yards are “ concerned, these are being improved so far as circumstances will “ allow, cement being substituted for brick whenever possible, and “ now only a very few—probably not more than a dozen brick “ yards remain in the Borough. The back lanes also are being “ rapidly macadamised, and during the year all the old privy-middens “ have been swept away, so that taken altogether, the sanitary “ condition of these areas have and are being very rapidly im- “ proved.” Forty-seven earth-closets and three water-closets were substituted for privy-ashpits. There now only remain 2 ashpit-privies, which are attached to unoccupied houses in the Borough.

*Nuisances.*—The inspector in his report, which is appended, states that 2,554 nuisances were abated ; 2,554 informal and 7 formal notices were served.

*Streets.*—The macadamising of the back streets “ is now “ being systematically and energetically carried out.”

*Milkshops* (69), *Dairies* (5) were maintained satisfactorily.

*Food and Drugs.*—59 samples were analysed and 7 were found to be adulterated. Convictions were obtained against three vendors of milk and against a vendor of camphorated oil.

*Factories and Workshops* were found satisfactory except in two instances, where the defects have since been remedied.

## SANITARY REQUIREMENTS.

None mentioned.



## STOCKTON.

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

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases &amp; (Deaths).</i>		
	1908.	1907.		1908.	1907.
Estimated Population .. ..	54,242	55,023	Total notifications .. .. .	243	210
Birth-rate .. .. .	31·11	30·2	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	17·51	17·3	Scarlet fever .. .. .	87	60
Zymotic death-rate .. .. .	2·72	1·7	Diphtheria .. .. .	79	58
Phthisis death-rate .. .. .	1·21	1·25	Fevers (Enteric, &c.) .. .. .	34	52
Total Tuberculosis death-rate	2·24	2·34	Puerperal fever.. .. .	6	3
Respiratory diseases death-			Cases treated at hospital ..	160	128
rate .. .. .	2·54	3·43	Measles .. .. .	69	31
Infant mortality-rate per 1,000			Whooping cough .. .. .	32	25
births .. .. .	150	115	Diarrhoea .. .. .	28	15

Seven cases of enteric fever probably resulted from the consumption of infected mussels. (See page xxi.) All the cases of puerperal fever were attended by midwives. Bye-laws against spitting were adopted. Disinfection of dwellings was effected where deaths from phthisis have occurred. Measles mortality. (See page xxiii.) The Notification of Births Act was adopted.

## GENERAL SANITATION.

*Water* was satisfactorily supplied by the Tees Valley Water Board.

*Sewerage.*—1,649 lineal yards of new sewers with 23 man-holes and 10 flushing shafts were laid. The sewage is discharged into the River Tees.

*Housing.*—(a) New houses: 157 were built. (b) Insanitary Property: 6 two-roomed cottages and one common lodging-house were closed as unfit for habitation; 99 water-closets were substituted for 65 common privies and 34 pan-privies. Approximately, 6,765 houses have common privies, 462 houses have pan-privies, and 3,579 houses have water-closets. Dr. Horne says: “For the first year on record no privies or pan-closets have been built in connection with new houses.” “So far as new houses are concerned, the public may, with safety, now be left to take care of itself; there need, I think, be no fear that the demand for water-closets will not become more and more emphatic, and no doubt your Council will continue to encourage so healthful a preference. The substitution of water-closets for privies in old

“property, when the latter are for any reason especially  
 “objectionable, is however a somewhat different thing, and  
 “opposition to this policy cannot be said to have yet entirely  
 “disappeared, although it seems to have approached near the  
 “vanishing point. The attitude of those who seem to cling to the  
 “dangerous and disgusting privy system is, to say the least,  
 “somewhat remarkable and difficult to understand, because they  
 “do not hesitate from time to time—and with just cause—to  
 “complain of nuisances inherent to the system. The latter fact  
 “appears to be fully realised, because at such times it is  
 “invariably very considerably explained that no suggestion of  
 “negligence by those responsible for the scavenging operations is  
 “intended. Working men leaving home on their way to work in  
 “early morning are said to be nauseated by the stench arising  
 “either from the filth in process of removal or from the fouled  
 “street surfaces before cleansing operations have been completed.  
 “Special liability to this is incurred by passing through the back  
 “street.”

*Nuisances.*—2,878 were abated, and 490 first notices and 109 final notices were served.

*Common Lodging-Houses* (19) were for the most part inspected weekly, with the result that stricter attention has been paid to the observance of the bye-laws.

*Slaughter-Houses* (29) were for the most part subjected to weekly inspections. The Inspector, whose report is appended, states that “the structural conditions of the slaughter-houses in  
 “many instances is anything but satisfactory, also the accommo-  
 “dation is very limited, and I think the question of providing a  
 “public abattoir should be seriously taken into consideration by  
 “the Council.”

*Food and Drugs.*—28 samples, consisting of milk 21, butter 5, lard 1, and yeast 1 were analysed. One sample of milk contained 12·60 per cent. of added water, another was deficient in fat 14 per cent., and 2 were deficient in fat to the extent of 13·4 per cent. One vendor was fined 5/- (with 9/- costs) and the other two

were warned. Three carcasses of beef, 24 rabbits, and 1 beast's liver were surrendered. One carcass of beef was seized and destroyed.

*Factories* (50), *Workshops* (149), *Workplaces* (64), *Domestic Workshops* (52), and *Bake-houses* (50) were inspected on 208 occasions. Fifty-five nuisances were detected, of which 37 were remedied.

### SANITARY REQUIREMENTS.

The abolition of privies and pan closets.

## URBAN DISTRICTS.

### ANNFIELD PLAIN.

T. BENSON, L.R.C.P., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	15,800	15,200
Birth-rate .. .. .	36·83	33·8
Death-rate .. .. .	15·37	15·2
Zymotic death-rate .. .. .	2·78	1·57
Phthisis death-rate .. .. .	0·31	0·72
Total Tuberculosis death-rate	0·69	1·31
Respiratory diseases death-rate.. .. .	2·02	3·15
Infant mortality-rate per 1,000 births .. .. .	142	142

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	103	120
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	64	75
Diphtheria .. .. .	15	18
Fevers (Enteric, &c.) .. .. .	14	15
Puerperal fever.. .. .	nil.	1
Cases treated at hospital ..	52	39
Measles.. .. .	(nil.)	(4)
Whooping cough .. .. .	(7)	(7)
Diarrhœa .. .. .	(26)	(2)

### GENERAL SANITATION.

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

*Sewerage.*—The sewage disposal works for Kyo and Dipton are being enlarged and a new sewer is to be laid to connect South Medomsley with Dipton works.

*Scavenging* was satisfactorily done by the Council's own employees and the refuse was removed by contractors to tips which are situated so as to cause no nuisance.

*Housing*.—(a) New houses: 104 self-contained and 2 tenemented houses were built. (b) Insanitary Property: 3 houses were closed by magistrates' order; 18 houses at South Pontop, rendered unsafe for habitation by subsidences, were closed. Dr. Benson calls attention to a considerable amount of old property in various parts of the district which requires improvement, notably at Annfield Plain, South Pontop, New Cornwall, West Kyo, Dipton, Flint Hill, Hill Top, and Lily Cottages. Improvements are noted at Greencroft (new yards to houses), and South Medomsley (out-offices and roads).

*Common Lodging Houses* (3) were decently maintained but two of the houses are old and dilapidated.

*Milk Supply*.—The report states:—"Although there are no milk dealers, there is a plentiful supply of milk for the district distributed from door to door. All who provide the supply are cow-keepers either occupying farms or renting a piece of land, none of the cows being entirely stall-fed. The byres attached to farms are after one model, and fairly good, the others are merely wooden structures often deficient in ventilation. The cows frequently present a dirty appearance, being allowed to lie down in their own excrement."

*Slaughter-Houses* are reported to be satisfactory, as were also *Factories* (9), *Workshops* (21) which were inspected on 60 occasions.

### SANITARY REQUIREMENTS.

1. Improvements in the housing accommodation as detailed in the report.
2. Improvements in the cowbyres.

## BARNARD CASTLE.

ALFRED H. SEVIER, M.B., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases &amp; (Deaths).</i>		
	1908.	1907.		1908.	1907.
Estimated Population .. ..	4,684	4,665	Total notifications .. ..	9	10
Birth-rate .. .. .	23·27	25·0	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	17·07	19·7	Scarlet fever .. .. .	3	1
Zymotic death-rate .. .. .	0·85	1·5	Diphtheria .. .. .	nil.	6
Phthisis death-rate .. .. .	1·25	2·7	Fevers (Enteric, &c) .. .. .	3	nil.
Total Tuberculosis death-rate	1·70	4·07	Puerperal fever .. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at hospital.. ..	nil.	nil.
rate .. .. .	2·13	2·7	Measles .. .. .	(nil.)	(2)
Infant mortality-rate per 1,000			Whooping cough .. .. .	(2)	(1)
births .. .. .	91	102	Diarrhoea .. .. .	(1)	(3)

## GENERAL SANITATION.

*Water Supply* was satisfactory.

*Sewerage.*—A new sewer was laid to the Railway Station. The sewage farm worked efficiently.

*Scavenging* was done systematically. Dr. Sevier recommends the provision of a refuse destructor, as it is difficult to obtain suitable sites for tips.

*Housing.*—(a) New Houses: 7 were built and occupied; a considerable demand exists for small houses for the working classes. (b) Insanitary Property. The report contains no detailed information, but Dr. Sevier states:—“ I have during the past year, “ assisted by your Inspector, instituted a thorough systematic “ house to house inspection of the town by devoting to this “ purpose one day a week. The results of this visitation have “ from time to time been reported to you, and various deficiencies “ in sanitary arrangements and in connection with the Housing of the “ Working Classes Act, such as overcrowding, etc., brought before “ your notice. We have gone over a considerable portion of the “ town, and I hope by the end of the present year to have com- “ pleted the entire area. The main defect found was in the “ continued existence of too many privy-middens, which I hope “ will all in time be converted into proper sanitary water-closets.”

*Nuisances.*—106 out of 108 nuisances reported were remedied.

*Milk Supply.*—The dairies and cowsheds were fairly satisfactory in the majority of cases. The Bye-laws have been revised, and it is anticipated that the ventilation of some of the cowbyres will be improved.

*Slaughter-houses* (9).—Most of them were maintained satisfactorily; 3 nuisances were dealt with.

*Factories and Workshops* were regularly inspected, and the majority of them were found to be satisfactory.

### SANITARY REQUIREMENTS.

1. The provision of a refuse destructor.
2. The substitution of water-closets for insanitary privy-middens.

### BENFIELDSIDE.

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

#### *Vital Statistics.*

	1908.	1907.
Estimated population .. ..	7,650	7,650
Birth-rate .. .. .	32·28	30·3
Death-rate .. .. .	18·69	19·0
Zymotic death-rate .. .. .	2·48	1·43
Phthisis death-rate .. .. .	1·30	1·56
Total Tuberculosis death-rate	1·56	2·35
Respiratory diseases death-rate .. .. .	2·48	2·87
Infant mortality-rate per 1,000 births .. .. .	174	155

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	23	24
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	2	6
Diphtheria .. .. .	7	4
Fevers (Enteric, &c.) .. .. .	7	3
Puerperal fever .. .. .	nil.	nil.
Cases treated at hospital ..	6	
Measles .. .. .	(1)	(3)
Whooping cough .. .. .	(9)	(1)
Diarrhoea .. .. .	(9)	(6)

### GENERAL SANITATION.

*Water* was supplied satisfactorily by the Weardale and Consett Water Company. About 20 houses draw their supplies from wells.

*Sewerage.*—108 yards of old stone sewers have been replaced by 9-inch sanitary pipes, but the report states that “there are still “a number of leaky old stone drains that ought to be replaced by “sanitary piping as soon as possible.” Improvements to the sewage disposal works are contemplated in the immediate future.

*Scavenging* is undertaken by contractors, and the work is now done more systematically than formerly.

*Housing.*—(a) New Houses: 46 were built during the year. (b) Insanitary Property: 34 out of 42 old houses which were condemned in 1907 have been improved. The remainder (8) have been closed. A number of other houses in the district are stated to require improvement. Fifteen ash-closets and 2 water-closets were built in place of ashpit-privies. Thirty-seven informal notices and 3 formal notices were served for the abatement of nuisances.

*Dairies and Cowsheds*, on the whole, were maintained satisfactorily.

*Slaughter-houses* were kept in a fair condition.

*Factories* (3), *Workshops* (25) were inspected on 50 occasions, and found to be maintained satisfactorily. A licence was granted to one underground bake-house.

The report is brief, and might with advantage give more detailed information concerning the insanitary houses in the district and also contain references to the refuse tips, common lodging-houses, and the streets.

### SANITARY REQUIREMENTS.

1. Further improvements in housing accommodation.
2. Replacement of the old stone drains by proper pipe sewers.

## BISHOP AUCKLAND.

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

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	13,136	12,969
Birth rate .. .. .	33·03	30·8
Death-rate .. .. .	17·05	19·1
Zymotic death-rate .. .. .	1·97	2·61
Phthisis death-rate .. .. .	0·83	1·23
Total Tuberculosis death-rate	1·59	2·93
Respiratory diseases death-rate..	2·20	3·15
Infant mortality-rate per 1,000 births .. .. .	126	172

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications.. .. .	121	48
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	65	8
Diphtheria .. .. .	22	16
Fevers (Enteric, &c.) .. .. .	20	9
Puerperal fever.. .. .	nil.	1
Cases treated at hospital ..	27	12
Measles.. .. .	(1)	(19)
Whooping cough .. .. .	(5)	(4)
Diarrhoea .. .. .	(17)	(9)

## GENERAL SANITATION.

*Water.*—Three filter beds are in use at the Council's Waterworks. The supply is abundant and pure.

*Sewerage.*—Dr. McCullagh says :—“ This question, which has been under consideration for a long time, is approaching a solution, and I believe the scheme which will be carried out will be found efficacious, and much less costly than was at first expected.”

*Scavenging* was satisfactorily done. Dr. McCullagh again recommends the prosecution of persons detected disposing of their refuse in the back streets.

*Housing.*—(a) New Houses : 100 were erected and 76 occupied. (b) Insanitary Property : One house was closed under the Housing of the Working Classes Act, 1890 ; 35 yards were paved ; 11 water-closets and 32 ash-closets were built in place of privy-middens.

*Nuisances.*—32 informal and 27 formal notices were served : 57 nuisances were abated.

*Streets.*—£2,000 was spent in private street works with respect to 14 streets.

*Dairies and Cowsheds.*—Dr. McCullagh states :—“ The cowsheds in the Urban District are in good repair and clean, but the



“ great proportion of our milk supply is obtained from dairies  
 “ outside the town. I think the quality of the milk is generally  
 “ good, but I have received complaints about the dirty state of  
 “ the milk-carts, cans, and milk men in a few instances. I advise  
 “ that the Nuisance Inspector be directed to warn those who  
 “ offend in matters of cleanliness.”

*Slaughter-Houses* were maintained satisfactorily.

*Workshops* (63).—43 inspections were made: defective conditions due to uncleanness (1) and overcrowding (2) were detected and remedied.

### SANITARY REQUIREMENTS.

1. Stricter supervision of the milk supply.
2. Prevention of the practice of householders throwing refuse into the streets.

## BLAYDON.

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

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	26,357	25,000
Birth-rate .. .. .	41·35	36·7
Death-rate .. .. .	15·51	14·6
Zymotic death-rate .. .. .	3·41	2·56
Phthisis death-rate .. .. .	0·49	0·80
Total Tuberculosis death-rate	0·79	1·48
Respiratory diseases death-rate .. .. .	2·42	2·28
Infant mortality-rate per 1,000 births .. .. .	159	139

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	175	116
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	63	61
Diphtheria .. .. .	45	25
Fevers (Enteric, &c.) .. .. .	49	19
Puerperal fever .. .. .	nil.	1
Cases treated at hospital.. .. .	112	57
Measles .. .. .	(5)	(25)
Whooping cough.. .. .	(22)	(2)
Diarrhoea .. .. .	(58)	(25)

### GENERAL SANITATION.

*Scavenging* required considerable supervision. Notices had to be served on the Blaydon contractor who was in arrears with his work.

*Housing.*—Insanitary Property: 54 houses were dealt with under the Housing of the Working Classes Act and as a result 36

houses were rendered habitable and a block of 32 tenements at "Turret Place" were reduced to 16 tenements. Eight houses at Winlaton were demolished by magistrates' order. Two cases of overcrowding and 26 houses in a foul condition were dealt with. Twenty-two privy-middens were abolished; 16 water-closets and 62 ash-closets were built; and 190 conveniences were repaired. Action was taken regarding 1636 nuisances.

*Common Lodging-Houses* (2).—Twelve notices were served to secure lime-washing and ventilation.

No reference is made in the report to water supply, sewerage, and the condition of the cow-sheds.

*Dairies and Milkshops*.—There are 5 registered purveyors of milk. One notice was served for lime-washing.

*Slaughter-Houses*.—Four notices were served on owners for the remedying of defective conditions.

*Factories and Workshops*.—Fifty-three inspections were made. Four nuisances were abated by service of notice.

## SANITARY REQUIREMENTS.

None mentioned.

## BRANDON AND BYSHOTTLES.

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

### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	17,923	17,563
Birth-rate .. .. .	36·93	35·1
Death-rate .. .. .	17·85	14·6
Zymotic death-rate .. .. .	3·06	1·8
Phthisis death-rate .. .. .	0·66	1·19
Total Tuberculosis death-rate	1·84	1·70
Respiratory diseases death-rate .. .. .	3·45	2·27
Infant mortality-rate per 1,000 births .. .. .	191	140

Smallpox hospital. (See page xxxiii.)

### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	225	36
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	162	4
Diphtheria .. .. .	31	9
Fevers (Enteric, &c.) .. .. .	20	7
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	80	5
Measles.. .. .	(13)	(6)
Whooping cough .. .. .	(4)	(13)
Diarrhoea .. .. .	(23)	(10)

## GENERAL SANITATION.

*Water.*—The Weardale and Consett Water Company supply the whole district with the exception of a few farms and isolated buildings. The water is good and abundant.

*Sewerage.*—700 yards of 9-inch sewer were laid to connect the Isolation Hospital with the main sewer. Seven hundred and thirty-one yards of new sewers, with 22 manholes, were laid at Brandon. It is recommended that High Brandon should be connected with the main sewage disposal system as soon as possible. The Browney sewage disposal works, consisting of a catch-pit, 2 settling tanks, dosing chamber of 6,000 gallons capacity, 2 rough filters and 2 fine filters, have been constructed.

*Scavenging* was fairly satisfactorily carried out by contract, though it was necessary to serve 59 notices on the contractors (13 in number) during the year. The refuse is deposited at the Council's tips or is used as manure. The tips at Littleburn and Langley Cottages are nearly filled up. A new site has been acquired at Alum Waters.

*Housing.*—(a) New Houses: It is stated that a large number were erected during the year. (b) Insanitary Property: 3 houses were closed at Brickflats, Lymington Terrace; 14 houses were enlarged at North Terrace, Waterhouses; 125 back yards were improved (cemented out and redrained); and 40 cases of overcrowding were abated. Three hundred and forty-nine new ash-closets were erected—at New Brancepeth (60), Brandon Colliery (60), The Boyne (104), Littleburn (101), &c. Practically no insanitary conveniences of the privy-midden type now remain at Littleburn or The Boyne.

*Nuisances.*—In connection with houses 358 notices were served and 615 nuisances were abated.

*Dairies and Cowsheds.*—Of 33 cowsheds inspected, 9 were defective in respect of cleanliness, overcrowding, paving, &c. Notices were served and the nuisances were abated.

*Factories (5) and Workshops (23).*—28 inspections made; 3 nuisances detected and abated.

There are no common lodging-houses in the district. The report contains no mention of slaughter-houses, and attention is not directed to any insanitary property which may require improvement.

### SANITARY REQUIREMENTS.

1. The connection of High Brandon with the main sewerage system as soon as possible.
2. The paving of footpaths.

## CONSETT.

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

#### *Vital Statistics*

	1908.	1907.
Estimated Population .. ..	10,969	10,783.
Birth-rate .. .. .	33·91	31·3
Death-rate .. .. .	17·32	16·2
Zymotic death-rate .. .. .	2·00	0·92
Phthisis death-rate .. .. .	1·45	0·64
Total Tuberculosis death-rate	2·27	1·66
Respiratory diseases death-rate...	2·64	3·15
Infant mortality-rate per 1,000 births .. .. .	201	139

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	13	31
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	2	10
Diphtheria .. .. .	5	7
Fevers (Enteric, &c.) .. .. .	3	1
Puerperal fever.. .. .	nil.	1
Cases treated at hospital ..	5	3
Measles.. .. .	(nil.)	(3)
Whooping cough .. .. .	(6)	(3)
Diarrhoea .. .. .	(15)	(1)

### GENERAL SANITATION.

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

*Sewerage.*—The main portion of the sewage was satisfactorily treated by land irrigation at Stannifordam. The sewage from the south-eastern part of the district is now being satisfactorily purified by the new bacterial beds at Crookhall. Extensions to these works are contemplated. New sewers are being laid on the east side of the Medomsley Road and to the north side of Buddle Street. Plans for a 12-inch sewer of 2,000 lineal yards to connect the Templetown area with the main outfall and for a 15-inch outfall

of 3,000 lineal yards to similarly deal with the sewage at present discharging into the Benfieldside district, are under consideration.

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

*Housing.* (a) New Houses: Sixty-six were built and 42 occupied. Plans for 56 houses were passed and others for 104 four-roomed houses at Delves Lane are under consideration. The demand for small houses is stated to be greater than ever. (b) Insanitary property; Plans for the re-construction of 40 cottages of the "Company Rows" are under consideration. In view of the fact that the cottages are undergoing extensive re-construction Dr. Macintyre recommends that the ground-floor rooms should also be raised. Nos. 7 to 13, John Street, have been repaired and provided with water-closets. The back-to-back houses in John and Pitt Streets are being converted into four-roomed houses with through ventilation. It is recommended that Nos. 1 to 12, Pitt Street, and 6 to 15, Trafalgar street, should be treated similarly. Further progress has been made with the work of abolishing the ashpit-privies. There are now in use in the district 739 ashpit-privies and 559 ash-closets.

*Nuisances.*—One hundred and five were abated by the service of informal notices.

*Streets.*—Twelve thousand square yards of tar macadam were laid in six streets. In the course of time, the remainder of the streets will be dealt with similarly.

*Common Lodging Houses.*—These number four and were inspected regularly. Two owners were summoned for breaches of bye-laws.

*Schools.*—A new school in Gladstone Square, accommodating 1,376 scholars, has been opened by the County Council.

*Dairies and Cowsheds.*—The greater part of the milk is imported from the Lanchester Rural District. The cowsheds, &c., within the district, are stated to be regularly inspected and satisfactorily maintained.

*Slaughter-houses* are registered and were well-maintained.

*Factory and Workshops.*—Seventy-seven were kept in good order. Forty-eight inspections were made.

## SANITARY REQUIREMENTS.

Improvements to houses Nos. 1 to 12, Pitt Street, and 6 to 15, Trafalgar Street, and to other insanitary houses in the district.

## CROOK.

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

### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	11,800	11,800
Birth-rate .. .. .	34·40	32·2
Death-rate .. .. .	17·87	17·5
Zymotic death-rate .. .. .	2·37	2·7
Phthisis death-rate .. .. .	0·67	0·76
Total Tuberculosis death-rate	1·35	1·44
Respiratory diseases death-rate .. .. .	3·64	3·9
Infant mortality-rate per 1,000 births .. .. .	155	165

### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	73	66
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	23	40
Diphtheria .. .. .	21	19
Fevers (Enteric, &c.) .. .. .	23	3
Puerperal fever.. .. .	2	nil.
Cases treated at hospital .. .	28	27
Measles.. .. .	(nil.)	(7)
Whooping cough .. .. .	(7)	(12)
Diarrhoea .. .. .	(13)	(7)

A combination of several sanitary authorities for providing a consumptive sanatorium is recommended. Increased prevalence of enteric fever attributed to insanitary conditions—midden-privies, etc.

## GENERAL SANITATION.

*Water* was supplied by the Weardale and Shildon Water Company to the whole district with the exception of a few outlying farms. The supply is ample and of excellent quality.

*Sewerage.*—New sewers were laid in Percy Street, Crook, and for six houses at Billy Row. An extension is being made from Whitewell Terrace to the Aged Workers' Homes. The main sewers are periodically flushed.

*Scavenging* was done satisfactorily, except in one instance, where proceedings had to be taken against the contractor. The

two tips at Crook, one situated near the Tow Law railway and the other in High Hope Street, were very offensive during the summer months and are rapidly becoming filled up. Dr. Mackay recommends the provision of a refuse destructor. In the colliery villages the contractors, who are all farmers, use the refuse as manure.

*Housing.*—(a) New Houses: 53 were built and 43 occupied. (b) Insanitary Property—The Roddymoor Huts (three dwellings) were closed; a house at West Road, which was also closed, has since been reconstructed. Improvements are noted to the Wood Houses. Fifty insanitary privy-middens were replaced by ash-closets or water closets. Dr. Mackay once more calls attention to the necessity for abolishing privy-middens, and making improvements to yards (cementing out and provision of proper drainage and gullies) in the colliery villages.

*Nuisances.*—126 were abated by the service of 140 informal and 4 formal notices.

*Streets.*—Seven streets and four cross streets were made during the year.

*Dairies and Cowsheds.*—Two new byres were erected and improvements with regard to lighting, paving, and ventilation to some others have been made.

*Slaughter Houses* were regularly inspected. Reference is made to unsatisfactory premises in Hope Street.

*Factories (15) and Workshops (33).*—Thirty-eight inspections were made and four notices were served with respect to cementing out of lemonade factory, provision of convenience to bake-house, provision of proper means of access to another bake-house, and prevention of overcrowding in boot-shop. From the table of inspections given it appears that these defective conditions have not yet been remedied.

### SANITARY REQUIREMENTS.

1. More rapid abolition of open middens in Crook.
2. Cementing of yards in Crook.

3. Provision of a refuse destructor as soon as possible.
4. Paving and making of remainder of back streets, and repairing of roads in colliery villages.
5. Abolition of the remaining segment sewers.

## FELLING.

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

### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	26,940	26,300
Birth-rate .. .. .	33·18	33·0
Death-rate .. .. .	15·88	16·6
Zymotic death-rate .. .. .	2·04	2·4
Phthisis death-rate .. .. .	0·89	1·06
Total Tuberculosis death-rate	3·97	3·00
Respiratory diseases death-rate .. .. .	3·00	3·03
Infant mortality-rate per 1,000 births .. .. .	140	125

### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	173	151
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	132	99
Diphtheria .. .. .	18	25
Fevers (Enteric, &c.) .. .. .	8	9
Puerperal fever.. .. .	2	4
Cases treated at hospital .. .. .	nil.	nil.
Measles .. .. .	(2)	(20)
Whooping cough .. .. .	(11)	(20)
Diarrhœa .. .. .	(30)	(10)

Comment is made on the fact that of the 18 notified cases of diphtheria, confirmation by bacteriological examination was only resorted to in 4 instances. The importance of bacteriological examination of swabs from the throats of convalescent diphtheria patients before they are allowed to mix with other persons is urged.

## GENERAL SANITATION.

*Water* is supplied by the Newcastle and Gateshead Water Company. Water was laid into 43 houses at Bill Quay and Windy Nook.

*Scavenging* was satisfactorily done by the Council's own workmen. The destructor worked well and dealt with 8,705 tons of refuse.

*Housing.*—(a) New Houses: Plans were passed for 87 houses of which 67 have been erected and 41 occupied. (b) Insanitary Property: 39 houses were dealt with under the Housing of the Working Classes Act with the result that 4 were closed by magis-



trates' order, 12 were closed voluntarily by the owners, and 14 were rendered habitable. Improvements to 14 houses in Dees Square and to houses in Sandmill Row, and Windy Nook are also noted. Thirty-two other houses were discontinued as dwelling-houses. In the report of the Inspector of Nuisances, which is appended, it is stated that 273 informal and 11 formal notices were served and that 278 nuisances were abated. The improvements effected include ash-pit-privies (48) demolished, ash-closets (76) and water-closets (4) erected, yards paved (30), cement floors laid (26), pantries provided (10), &c. The Inspector also calls attention to the unsatisfactory condition of the houses in Pump Row, Smoky Row, and Sunderland Terrace at Wardley Colliery.

*Dairies and Cow-sheds.*—There are 16 cowkeepers and 42 registered milksellers. Notices were served in respect to overcrowding (1), insufficient light and ventilation (1), lack of cleanliness (1).

*Slaughter-Houses* (20) were maintained satisfactorily. Dr. Peacock states that the butchers are themselves in favour of a public slaughter-house and he says, "I again advocate a public slaughter-house as I am certain it could be made a paying concern, as from our Refuse Destructor we could supply unlimited boiling water for an abattoir."

*Food and Drugs Act.*—Twenty-four samples were analysed, of which one sample of whisky, and two of milk contained added water.

*Factories* (8), *Workshops* (47), and *Work-places* (9) were all inspected. One nuisance (insufficient sanitary accommodation) was abated. The homes of two outworkers were visited.

No reference is made in this report to sewerage and common lodging-houses.

### SANITARY REQUIREMENTS.

The provision of a public slaughter-house.

## HEBBURN.

A. M. G. WALKER, L.R.C.P., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	23,577	23,577
Birth-rate .. .. .	34·22	35·3
Death-rate .. .. .	14·12	15·9
Zymotic death-rate .. .. .	1·90	1·68
Phthisis death-rate .. .. .	0·89	0·97
Total Tuberculosis death-rate	1·31	1·95
Respiratory diseases death-rate .. .. .	2·58	3·6
Infant Mortality-rate per 1,000 births .. .. .	127	129

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	126	137
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	50	84
Diphtheria .. .. .	23	13
Fevers (Enteric, &c.) .. .. .	8	13
Puerperal fever .. .. .	1	2
Cases treated at hospital .. .. .	59	94
Measles .. .. .	(1)	(18)
Whooping cough.. .. .	(13)	(2)
Diarrhœa .. .. .	(25)	(9)

Handbills and posters as to feeding and management of children distributed by registrars.

## GENERAL SANITATION.

*Water* was supplied by the Sunderland and South Shields Water Company from the Boldon reservoirs. It was of good quality and plentiful. Three wells, which are stated to yield good water, are also in use in the district.

*Sewerage.*—Flushing of the sewers and drains was carried out periodically.

*Scavenging* was done satisfactorily. The refuse was chiefly dispatched to sea in hoppers, but some was disposed of on to land. Dr. Walker says:—“The early completion of the Quay and the “purchasing of hoppers, or the erection of a refuse destructor is “what is required.”

*Housing.*—(a) New Houses: 32 were built. (b) Insanitary property:—No detailed information is given but Dr. Walker’s report contains the following explanatory paragraph: “Concerning “improvements that would be beneficial to the district I cannot “suggest more than I did in my last year’s report, and which “suggestions have been freely commented upon by the Local “Government Board’s Medical Officer, Dr. Reece. It rests “entirely with you as my Council to act, and I sincerely “hope that next year I will have the pleasure of reporting the

“steps taken towards the removal of insanitary defects, over-crowding, etc., that at present are to be found when inspecting the district.” Seventy-seven ashpit-privies were replaced by 169 ash-closets. There now remain only 158 ashpit-privies in the district.

*Nuisances.*—328 informal and 40 formal notices were served, and 311 nuisances were abated.

*Streets.*—It is stated that many back lanes and streets have been relaid with tar macadam.

*Common Lodging-House* (1) was maintained satisfactorily.

*Dairies and Cowsheds.*—There are 6 licensed cowkeepers and 30 milk shops. The Inspector of Nuisances, whose report is appended, states that “some of the cowsheds are old, and ought to be pulled down, as they are badly lighted, ventilated and paved.”

*Slaughter-Houses* (10) were regularly inspected. Some were not always found satisfactory. Dr. Walker recommends the provision of a public slaughter-house.

*Workshops* (42) were inspected on 42 occasions. One nuisance (insufficient sanitary accommodation) was detected and remedied.

## SANITARY REQUIREMENTS.

1. Better means for the disposal of refuse either by the completion of the Quay and the purchase of hoppers, or by the erection of a refuse destructor.

2. A public abattoir.

3. Improvements in housing accommodation, as recommended by the Medical Officer of Health and the Medical Inspector of the Local Government Board.

## HETTON-LE-HOLE.

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

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases &amp; (Deaths).</i>		
	1908.	1907.		1908.	1907.
Estimated Population .. ..	14,600	14,400	Total notifications .. .. .	186	106
Birth-rate .. .. .	38·76	36·6	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	16·43	15·9	Scarlet fever .. .. .	134	49
Zymotic death-rate .. .. .	3·28	2·36	Diphtheria .. .. .	9	31
Phthisis death-rate .. .. .	1·16	0·83	Fevers (Enteric, &c.) .. ..	29	13
Total Tuberculosis death-rate	1·43	1·31	Puerperal fever.. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at Hospital ..	34	29
rate.. .. .	2·53	2·7	Measles.. .. .	(7)	(4)
Infant mortality-rate per 1,000			Whooping cough .. .. .	(9)	(6)
births .. .. .	136	144	Diarrhoea .. .. .	(25)	(17)

Five of the cases of enteric fever were probably caused by the eating of mussels.

## GENERAL SANITATION.

*Water Supply* was sufficient and satisfactory and is supplied by the Colliery Company.

*Sewage Disposal.*—The bacterial beds yielded an excellent effluent, but some trouble was caused by subsidences.

*Scavenging.*—Under the terms of the new contract, the work, during the months of June to September, is done between the hours of 10 p.m. to 6 a.m.

*House Accommodation.*—(a) New Houses: An active demand for new houses continues. (b) Insanitary Property: Improvements (provision of self-contained yards with new coal-houses and ash-closets) have been made by the Hetton Coal Company to their houses in Lyons Street and Francis Street. The report further states: “The condition of your district is generally satisfactory and owners, as a rule, have endeavoured to keep their property in a fair state of repair. It is to be feared there is considerable overcrowding in some cases, and this is a matter by no means easy of detection. Your officers, however, try to prevent such as far as possible.”

*Streets.*—Dr. Adamson calls attention to the fact that houses are still being built and occupied without the streets being properly made, and recommends immediate improvement in this respect and urges that a start should also be made with some of the older streets.

*Common Lodging-Houses* (2) are under the same management and are well maintained.

*Dairies and Cowsheds.*—A general improvement in the cowsheds is noted, though some do not yet come up to the 600 cubic feet per cow standard. Further improvements in this respect are anticipated.

*Slaughter-Houses* were well maintained, but the necessity for a public slaughter-house is once more urged, for the reason that it is quite impossible to exercise supervision over the meat in private premises. The carcass of a tuberculous beast (the first that has come under the observation of the Medical Officer of Health during the past 13 years) was surrendered.

*Workshops.*—In two instances improvements to the sanitary arrangements were made.

The report is lacking information regarding sewerage, number of new houses built, nuisances abated, and inspections made of factories and workshops.

The report concludes with an appreciation of the services rendered by Mr. Baty, the late Clerk.

### SANITARY REQUIREMENTS.

1. Further improvements to the insanitary property in Back Market Street.
2. A public slaughter-house.
3. The proper making, channelling, &c., of all the streets in the district which are in a bad condition. For several years past Dr. Adamson has made this recommendation.

## HOUGHTON-LE-SPRING.

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

*Vital Statistics.*

	190 <sup>2</sup> .	1907.
Estimated Population .. ..	9,725	9,425
Birth-rate .. .. .	37·63	36·7
Death-rate .. .. .	19·64	16·2
Zyrotic death-rate.. .. .	2·26	1·16
Phthisis death-rate .. .. .	1·13	1·06
Total Tuberculosis death-rate	1·64	1·81
Respiratory diseases death-		
rate .. .. .	4·21	2·97
Infant mortality-rate per 1,000		
births .. .. .	191	147

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	88	62
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	22	18
Diphtheria .. .. .	10	19
Fevers (Enteric, &c.) .. .. .	36	5
Puerperal fever.. .. .	nil.	1
Cases treated at hospital ..	16	8
Measles.. .. .	(nil.)	(4)
Whooping cough .. .. .	(2)	(1)
Diarrhoea .. .. .	(13)	(4)

New smallpox hospital completed. (See page xxxii.) Special report on typhoid epidemic. Outbreak probably started by the consumption of mussels and disease spread by infection from ashpits and privies. Marked freedom from the disease of houses provided with water-closets and ash-closets. (See page xx.)

## GENERAL SANITATION.

*Water.*—A supplementary supply from Stony Gate is now obtained from the Sunderland and South Shields Water Company, and no further trouble is anticipated in the future.

*Sewerage.*—The main bulk of the sewage after undergoing treatment in septic tanks is purified by land irrigation, but rather unsatisfactorily. The difficulty of disposing of the crops is given as the reason for not increasing the area of the sewage farm. The night sewage is purified by filter beds. The latter were damaged by subsidence, and after some delay two others were put into working order. The outfall sewers from the Villa estate, Chilton Moor, and the main outfall are working unsatisfactorily owing to subsidences. It will be necessary to relay these sewers as soon as the subsidences cease. The sewers were flushed and disinfected during the dry weather.

*Scavenging* was performed very unsatisfactorily by some of the contractors. The District Council, after some consideration, have abandoned the idea of employing their own workmen to do the work on account of the initial cost of acquiring plant and sites for tips. There being no back entrance to the houses in Union

Street, the contents of privies, &c., have to be carried through the houses, and numerous complaints were received from the tenants of the nuisance created thereby.

*Housing*.—(a) New Houses: Plans for 50 dwelling-houses were passed and 60 new houses were occupied. A considerable development of the district is stated to be occurring. (b) Insanitary Property: Attention is called to the bad state of repair of Wood Houses, Colliery Row, but otherwise the report contains no information on this subject. The colliery houses are stated to have been kept in a good state of repair. The need for proper drainage of downcomers is mentioned, and it is recommended that the insanitary privies and ashpits (1,262 in number) should be replaced by modern conveniences.

*Nuisances*.—Not mentioned.

*Streets*.—The condition of many of the private streets is again referred to and action under the Private Streets Works Act is recommended. Ironside Street has been thus dealt with during the present year.

*Common Lodging-Houses* (3).—Concerning one situated in Gas House Lane and named the “Lambton Boarding House,” Dr. Park says—“This is a substantial and commodious building with proper accommodation for some 70 lodgers. It is heated with stoves and is provided with a system of baths. Altogether, the building is a credit to the owners, and supplies a want which has long been felt in the district. The management, however, is not all that could be desired. The owners claim that the house is a “Boarding House,” and not a “Common Lodging-house,” and therefore does not require to be registered and placed under the supervision of your Council. In my judgment it is a “Common Lodging-house,” and should be registered at once. In addition to labourers and others who may live there for a few days or a few weeks together, the majority of the lodgers are of the itinerant class who may seek shelter for the night only or for a day or two at the most. All have to provide and cook their own food.”

*Dairies and Cowsheds* were kept in a satisfactory state.

*Slaughter-Houses* were well maintained but Dr. Park strongly protests against slaughtering being permitted in the shops. A demonstration of the "humane" system of slaughtering was given to the butchers in the town and the method has been adopted by 2 of them.

*Factories and Workshops* were regularly inspected but tables of inspection are not given in the report. One defect (insufficient sanitary accommodation) was detected and remedied.

### SANITARY REQUIREMENTS.

1. An improvement in the condition of the private streets.
2. Proper drainage of downcomers.
3. The remedying of the defects in the sewers arising from subsidences.
4. The construction of conveniences of a modern type in place of insanitary privy-middens, especially in Union Street.
5. The registration of the Lambton Boarding House.

### LEADGATE.

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

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	4,800	4,750
Birth-rate .. .. .	36·87	33·2
Death-rate .. .. .	14·58	14·7
Zymotic death-rate .. .. .	3·54	2·73
Phthisis death-rate .. .. .	0·83	0·63
Total Tuberculosis death-rate	1·04	1·05
Respiratory diseases death-rate .. .. .	1·45	2·5
Infant mortality-rate per 1,000 births .. .. .	141	101

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	8	20
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	3	12
Diphtheria .. .. .	nil.	3
Fevers (Enteric, &c.) .. .. .	3	1
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital .. .. .	1	5
Measles .. .. .	(nil.)	(4)
Whooping cough .. .. .	(5)	(1)
Diarrhoea .. .. .	(12)	(8)

### GENERAL SANITATION.

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



*Sewerage.*—The disposal works acted satisfactorily. Two new sewers were laid.

*Scavenging* is still performed by the owners, but steps were taken to prevent gross accumulations of refuse from occurring.

*Housing.*—(a) New Houses: 7 were built during the year. (b) Insanitary Property: The report contains only a few brief remarks on this subject. Dr. Allen says "Improvement has been the order of the day and progress in this respect has been maintained. One exception has been the slowness of the re-building of the remainder of the Consett Iron Co.'s houses." Temporary improvements were made to some old cottages belonging to the Consett Iron Company and cement floors were laid in the cottages in Tin Street. Five water-closets replaced ash-pit privies.

*Nuisances.*—Not mentioned.

*Streets.*—A quarter of a mile of asphalted footpath was laid and a number of trees were planted.

*Dairies, Milkshops, and Slaughter-Houses* are reported to be satisfactory.

*Factories and Workshops* (16) were inspected on 38 occasions and were found satisfactory.

### SANITARY REQUIREMENTS.

None mentioned.

The report is Typewritten.

## RYTON.

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

#### *Vital Statistics*

	1908.	1907.
Estimated Population .. ..	11,450	10,800
Birth-rate.... ..	35.98	32.5
Death-rate .. ..	12.75	13.0
Zymotic death-rate .. ..	2.35	2.12
Phthisis death-rate .. ..	0.43	0.46
Total Tuberculosis death-rate	1.13	1.01
Respiratory diseases death-rate.. ..	1.13	1.57
Infant mortality-rate per 1,000 births.. ..	114	125

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. ..	124	97
Smallpox .. ..	nil.	nil.
Scarlet fever .. ..	56	40
Diphtheria .. ..	42	43
Fevers (Enteric, &c). .. ..	19	7
Puerperal fever.. ..	1	nil
Cases treated at hospital ..	33	12
Measles .. ..	(nil.)	(7)
Whooping cough .. ..	(9)	(2)
Diarrhoea .. ..	(12)	(7)

Mortality from whooping cough attributed to the want of appreciation of the seriousness of the disease on the part of mothers, and the resulting carelessness in the exposure of children to infection, and the want of careful treatment from the idea of its non-necessity. Reference is made to the practical advantage of bacteriological examination from a preventative point of view as shown in two cases convalescent from diphtheria. "In one, after six weeks' convalescence, a swab from the throat was found to show numerous bacilli, which explained the origin of the disease in another member of the family, and in another a school teacher was about to resume her duties at school. Before doing so, however, a swab from her throat was taken, and showed organisms. She was not allowed to return to her duties till a second swab taken two or three weeks afterwards was found to be free from organisms."

### GENERAL SANITATION.

*Water.*—On November 1st, 1908, under the provisions of the Blaydon and Ryton Water (Transfer) Act, 1908, the duty of supplying the district with water devolved upon the Newcastle and Gateshead Water Company. A satisfactory supply is anticipated.

*Sewerage.*—Slight extensions were made. The sewers were regularly cleansed and disinfected.

*Scavenging* was fairly satisfactorily done.

*Housing.*—(a) New Houses: 88 were built and 93 occupied during the year. (b) Insanitary Property: Two houses were closed voluntarily; 54 ash-closets and 2 water-closets were built in place of ashpit-privies; 19 defective yards were repaired.

*Nuisances.*—111 were abated by service of 97 informal and 21 formal notices.

*Streets.*—Improvements to footpaths and to certain roads are mentioned, but others, as also the back streets, are stated to require attention.

*Dairies, Cowsheds, and Slaughter-Houses* received supervision, but no details are given.

*Factories and Workshops.*—There are no factories in the district, and no mention is made of workshops.

Appended is the report of the Inspector from which some of the figures quoted above are taken.

### SANITARY REQUIREMENTS.

Improvements to the roads and back streets.

## SEAHAM HARBOUR.

L. GERALD DILLON, M.D., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	12,500	11,750
Birth-rate .. .. .	37·60	41·6
Death-rate .. .. .	18·88	20·0
Zymotic death-rate .. .. .	2·00	3·23
Phthisis death-rate .. .. .	1·12	1·10
Total Tuberculosis death-rate	3·04	3·23
Respiratory diseases death-rate.. .. .	2·72	2·9
Infant mortality-rate per 1,000 births .. .. .	144	141

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	43	23
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	9	9
Diphtheria .. .. .	7	10
Fevers (Enteric, &c.) .. .. .	23	1
Puerperal fever... .. .	nil.	nil.
Cases treated at hospital .. .. .	13	3
Measles .. .. .	(1)	(22)
Whooping cough .. .. .	(5)	(11)
Diarrhoea .. .. .	(13)	(1)

Twelve cases of enteric fever were attributed to insanitary pail-closets, and the substitution of water-closets is recommended.

## GENERAL SANITATION.

*Water* is pumped from the magnesian limestone measures. It yielded satisfactory analyses on the two occasions it was analysed.

*Sewerage.*—Five hundred and eighty yards of stone drains were replaced by pipe sewers.

*Scavenging* was done satisfactorily by the Council's own workmen. The refuse was disposed of as manure or tipped into the sea.

*Housing.*—(a) New Houses: 221 were erected, 152 were occupied. (b) Insanitary Property: Beyond the statement that "many of the old houses are not suitable homes for the working classes," this subject is not discussed in the report. From the report of the Inspector of Nuisances, which is appended, it appears that 139 informal and 45 formal notices were served, and 184 nuisances were abated. Nine notices were served under the Housing of the Working Classes Act with respect to 16 houses, 6 of which were rendered habitable. Forty-five yards were re-paved. Dr. Dillon recommended that all yards paved with cobble stones should be cemented or asphalted as they are a fruitful source of infantile diarrhoea in hot weather, also that all insanitary pail-closets be replaced by water-closets.

*Common Lodging-Houses* (3) were conducted satisfactorily.

*Milkshops* (27) *Dairies* (2): In 6 milkshops, defective conditions were found and remedied. The cowsheds were satisfactory.

*Food and Drugs*.—Eight samples were analysed, two of which were found to be adulterated.

*Factories* (7), *Workshops* (19), *Bake-Houses* (47): Four bake-houses were found defective as regards cleanliness. The table of inspections is not appended to the report.

*Streets and Slaughter-Houses* are not referred to in this report.

### SANITARY REQUIREMENTS.

1. The cementing or asphaltting of all improperly paved yards and footpaths.
2. Improvement of the present sewerage system.
3. The re-placing of all insanitary pail-closets by water-closets.

## SHILDON.

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

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	13,687	13,403
Birth-rate .. .. .	37·55	32·3
Death-rate .. .. .	15·40	18·5
Zymotic death-rate .. .. .	2·33	2·23
Phthisis death-rate .. .. .	1·38	0·89
Total Tuberculosis death-rate	2·26	1·64
Respiratory diseases death-rate .. .. .	2·55	4·17
Infant mortality-rate per 1,000 births .. .. .	101	182

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	109	113
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	28	45
Diphtheria .. .. .	47	42
Fevers (Enteric, &c.) .. .. .	26	8
Puerperal fever.. .. .	nil.	2
Cases treated at hospital .. .. .	67	55
Measles.. .. .	(3)	(9)
Whooping cough .. .. .	(11)	(7)
Diarrhoea .. .. .	(11)	(5)

The District Council are urged to supply diphtheria antitoxin gratuitously to medical practitioners as many of the deaths would be prevented by its use. Many cases of enteric fever attributed to specific infection of ash-closets. Two cases possibly caused by the consumption of mussels. Notification of Births Act adopted, and County Health Visitor appointed. (See page lxiii.)

## GENERAL SANITATION.

*Water Supply* was satisfactory.

*Sewerage*.—Good effluents were obtained at the disposal works. Defective sewers in Elmbank Road, Back York Street, Station Street, and Mechanic Street have been relaid. The sewers were flushed at regular intervals.

*Scavenging* was well done. The destructor dealt satisfactorily with 10,650 loads of refuse.

*Housing*.—The remarks on this subject are brief, and no details are given. Dr. Fielden says: "Much good general sanitary work has been completed during the year. Thirty or more water-closets have been substituted for very objectionable privy-ashpits. A large number of foul conditions about dwelling-houses, and structural defects of various kinds, have been rectified. Defective traps and a large number of other faults in connection with house drainage have been remedied."

*Streets*.—Several front streets and a number of back streets were made.

*Cowsheds and Milkshops* were all inspected twice. Most of the premises, but especially the cowsheds, require improvement.

*Slaughter-Houses* were well maintained.

*Factories* (14), *Workshops* (32), were inspected 92 times and were found satisfactory.

## SANITARY REQUIREMENTS.

1. To continue the abolition of midden-privies.
2. To continue the cementing or asphaltting of open spaces and back yards.
3. To continue with the making of front and back streets.
4. The erection of new cowsheds and dairies where necessary.
5. The gratuitous supply of diphtheria anti-toxin to medical practitioners in the district.

## SOUTHWICK-ON-WEAR.

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

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	15,148	15,148
Birth-rate .. .. .	38·35	35·3
Death-rate .. .. .	18·35	16·1
Zymotic death-rate .. .. .	2·77	1·7
Phthisis death-rate .. .. .	1·12	0·5
Total Tuberculosis death-rate	1·38	1·25
Respiratory diseases death-rate .. .. .	3·30	2·9
Infant mortality-rate per 1,000 births .. .. .	187	132

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	67	73
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	44	53
Diphtheria .. .. .	8	7
Fevers (Enteric, &c.) .. .. .	14	10
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital .. .. .	48	39
Measles.. .. .	(4)	(10)
Whooping cough .. .. .	(17)	(3)
Diarrhoea .. .. .	(16)	(10)

Notification of Births Act adopted and County Health Visitor well received. (See page lxiii.) Substitution of water-closets for midden-privies recommended. (See page liii.)

## GENERAL SANITATION.

*Water* is supplied by the Sunderland and South Shields Water Company. A supply was laid on to Witherwack Farm and it is recommended that the same should be done to Thistley Hall.

*Sewerage.*—Three new sewers were laid and three more were partly relaid. A few additional manholes were also provided.

*Scavenging* was well done by the Council's own workmen. The refuse is disposed of on land as manure.

*Housing.*—(a) New Houses: 27 were erected and 16 occupied. The building trade was very slack, owing to the depression in the ship-building trade. (b) Insanitary Property: 49 water-closets and 2 ash-closets were substituted for privy-middens. No information with regard to improvements made, or required to be made, to property is given in the report. Dr. Carruthers states that overcrowding has increased owing to the amount of unemployment.

*Nuisances.*—In the summary appended by the Inspector of Nuisances, it is stated that 265 nuisances were abated by the service of notices.

*Dairies and Cowsheds* were found in good order. The cows were inspected by a veterinary inspector, but none were found to be suffering from tuberculosis of the udder.

*Slaughter-Houses.*—The consideration of the construction of a public slaughter-house has been deferred owing to the difficulty of obtaining land.

*Factories* (15), *Workshops* (24), *Workplaces* (1), and *Home-Workers* (3) were inspected on 194 occasions. In no instance is any defective condition mentioned.

### SANITARY REQUIREMENTS.

1. Abolish privy-ashpits and ash-closets and substitute for them water-closets.
2. A public slaughter-house.
3. A public mortuary.

### SPENNYMOOR.

W. MUSSELLWHITE, M.R.C.S., D.P.H.,  
Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	16,870	16,842
Birth-rate .. .. .	42.20	41.1
Death-rate .. .. .	18.60	21.6
Zymotic death-rate .. .. .	2.78	4.2
Phthisis death-rate .. .. .	0.77	1.06
Total Tuberculosis death-rate	1.12	1.79
Respiratory diseases death-rate.. .. .	3.37	4.03
Infant mortality-rate per 1,000 births .. .. .	160	154

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	114	82
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	52	40
Diphtheria .. .. .	10	16
Fevers (Enteric, &c.) .. .. .	43	18
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	82	56
Measles.. .. .	(nil.)	(29)
Whooping cough .. .. .	(8)	(3)
Diarrhoea .. .. .	(31)	(29)

The birth-rate was the highest on record. Outbreaks of enteric fever due to mussels. (See page xxi. Health Visitor urgently needed.)

### GENERAL SANITATION.

*Water* is supplied by the Weardale and Consett Water Company. Dr. Musselwhite thinks beneficial results have been obtained by the covering in of the Spennymoor reservoir. The Company's water has been laid on to Ox Close Farm and to

Butcher Race Cottages. It is recommended that the same should be done for Whitworth Farm and for several outlying farms at present unsatisfactorily supplied.

*Sewerage.*—The works for the Spennymoor Ward are out of order and practically useless; the sewage from the other wards (Tudhoe and Ferryhill) flows straight into the River Wear. A Local Government Enquiry held in April decided in favour of one works for the district and now that the difficulty of obtaining land has been solved by obtaining powers from the Local Government Board for compulsory purchase of a site, it is anticipated that they will be constructed without delay.

*Scavenging* was not done satisfactorily by some of the contractors. The disposal of refuse has caused considerable expense and is unsatisfactorily achieved owing to the absence of suitable sites for tips. Dr. Mussellwhite recommends that a refuse destructor be acquired.

*Housing.*—(a) New Houses: 46 were erected. There is still pressing need for additional houses. Dr. Mussellwhite states that “some of the new houses which have been built within the last two or three years have been erected in a very unsatisfactory manner with bad materials. It is a pity the Council have not more power in the matter.” (b) Insanitary Property: two houses were closed as unfit for habitation. Overcrowding was abated in eight instances. Alluding to the houses of the working classes Dr. Mussellwhite says “The attention of the Council has been frequently called to the number of back-to-back houses in the district. There are many serious objections to these, the chief being the want of proper ventilation. They are also without pantries and sculleries. This means that everything—washing, baking, cooking, feeding, the pitman’s daily bath and often sleeping have to be carried on in a room in which the food is kept and which has no proper ventilation. How can people live healthy lives under such conditions? I will give an instance. I received a notification of enteric fever in Burnett Street. The house was a back-to-back one occupied by a man, his wife (the patient) and



“ one child. The patient was in the living-room ; there was no  
 “ pantry ; the food was kept in a cupboard under the stairs also in  
 “ the living room. On asking to see the closet, I was taken a  
 “ short distance down the street through a passage into a yard  
 “ containing 6 closets. These were supposed to be used by 11  
 “ families. As a matter of fact 2 were wet and dirty and appeared  
 “ not to be used, the inmates apparently preferring the cleaner and  
 “ drier ones. I was told that 4 families were using the closet in  
 “ which the excreta from this patient was being put. The result  
 “ was that the closet was usually full up if not overflowing before  
 “ the scavenger came round. Anything more calculated to spread  
 “ infectious disease it would be difficult to imagine. Where you  
 “ have closets common to two or more families difficulties of this  
 “ kind will constantly arise. They lead to constant bickerings and  
 “ are nearly always in a dirty condition. I should recommend the  
 “ Council to take the matter of these back-to-back houses into  
 “ serious consideration with a view to having the worst of them  
 “ at least converted into houses with through ventilation.”

*Nuisances.*—198 informal and 263 formal notices were served and 403 nuisances were abated. Ninety-seven midden-privies were demolished and replaced by earth-closets or water-closets. The owners of a site habitually used by van-dwellers were compelled to provide a water supply and proper closet accommodation.

*Back Streets.*—A number of back streets require to be made and it is recommended that tar macadam should be used in preference to ordinary macadam in view of the fact that it is less absorbent and can be more easily cleaned ; moreover, Dr. Mussellwhite is of the opinion that tenants take more trouble to sweep and keep clean the tar macadamised roads.

*Common Lodging-Houses* (5) are regularly inspected.

*Dairies and Cowsheds.*—The County Council Inspector obtained convictions against 3 dealers for adulterating their milk. The cowsheds were regularly inspected and lime-washing was enforced. A cowshed at Burton Beck is reported to be damp and insanitary.

*Slaughter-Houses* are well maintained, but most of them are undesirably close to dwelling-houses.

*Factories and Workshops* were inspected on 147 occasions, and 8 nuisances were abated.

### SANITARY REQUIREMENTS.

1. The gradual abolition of back-to-back houses.
2. The making up of many of the back streets.
3. One or more up-to-date Dairies and Milk Shops.
4. A Public Slaughter-house.
5. A proper system of sewage disposal.
6. A Refuse Destructor.
7. A lady Sanitary Inspector.

## STANHOPE.

JOHN GRAY, M.B., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	2,006	1,993
Birth-rate .. .. .	22·43	22·0
Death-rate .. .. .	11·96	17·5
Zymotic death-rate .. .. .	nil.	0·5
Phthisis death-rate .. .. .	0·49	2·00
Total Tuberculosis death-rate	0·49	3·01
Respiratory diseases death-rate .. .. .	1·49	1·00
Infant mortality-rate per 1,000 births .. .. .	44	68

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	16	15
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	10	1
Diphtheria .. .. .	2	13
Fevers (Enteric, &c.) .. .. .		nil.
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital .. .. .	no hospital.	
Measles .. .. .	(nil.)	(nil.)
Whooping cough .. .. .	(nil.)	(nil.)
Diarrhoea .. .. .	(nil.)	(nil.)

### GENERAL SANITATION.

*Water.*—There was a slight deficiency during August and September, but the supply has since been augmented by the tapping of two additional springs at Mogshaw, which yield about 2,400 gallons per diem. It is stated that some of the service mains require renewing.

*Sewerage.*—A new main sewer to East Square was laid in place of an old stone sewer. The main sewer through the Butts, which during floods was liable to be blocked, was cleaned out.

*Scavenging* was efficiently done, but certain back premises mentioned in previous reports are still difficult of access.

*Housing.*—(a) *New Houses*: Dr. Gray makes the following remarks:—“The old aerated water manufactory in Graham Street has been converted into three dwelling-houses. After house to house inspection with your Inspector, Mr. Ridley, I reported as follows: ‘These new dwelling houses have been occupied without being certified. It is regrettable that plans for such houses should ever have been passed, as they certainly could not be interpreted to comply with your Council’s Bye-laws with respect to new streets and buildings. There is insufficient yard space and accommodation, and some of the sanitary arrangements are of the most crude description.’” (b) *Insanitary property*: 3 ash-closets were converted into water-closets; 3 yards were concreted; and 2 stone drains were replaced by sanitary pipe drains. There are still a few uncovered ash-pits, but the general sanitary condition of the district is reported to be very good.

*Nuisances.*—46 were abated by the service of informal notices.

*Dairies and Cowsheds.*—Dr. Gray says:—“I would refer your Council to my Annual Report for the year 1906. So far as I know nothing was done as a result of special report of that year.”

*Slaughter-Houses* were well maintained.

*Factories and Workshops.*—From the table it appears that there are none in the district.

## SANITARY REQUIREMENTS.

1. Some means of isolation of cases of diphtheria, scarlet fever and enteric fever.

2. Better means of access to back premises to facilitate public scavenging.

3. Notification of phthisis.

The District Council should not allow buildings to be occupied unless they satisfy the requirements of the building bye-laws.

## STANLEY.

T. BENSON, L.R.C.P., Medical Officer of Health.

### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	20,500	19,000
Birth-rate .. .. .	39·80	37·3
Death-rate .. .. .	18·14	15·4
Zymotic death-rate .. .. .	3·51	1·6
Phthisis death-rate .. .. .	1·26	0·31
Total Tuberculosis death-rate	2·04	1·26
Respiratory diseases death-rate .. .. .	3·65	2·81
Infant mortality-rate per 1,000 births .. .. .	191	177

### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	121	115
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	43	36
Diphtheria .. .. .	46	25
Fevers (Enteric, &c.) .. .. .	22	30
Puerperal fever.. .. .	nil.	1
Cases treated at hospital .. .. .	94	56
Measles.. .. .	(1)	(18)
Whooping cough .. .. .	(29)	(2)
Diarrhoea .. .. .	(31)	(3)

Notification of Births Act adopted. County Health Visitor well received. (See page lxiii).

## GENERAL SANITATION.

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

*Sewerage.*—An excellent effluent was obtained at both the sewage disposal works. Small subsidiary schemes are required for the treatment of sewage from some blocks of houses at Red Row, Kyo Lane, and Kip Hill.

*Scavenging* is done by contract under the supervision of the Inspector. The refuse is disposed of at present without causing a nuisance to houses in the neighbourhood, but it is anticipated that some other method of disposal will soon become necessary.

*Housing.*—(a) New Houses: 112 self-contained and 40 tenemented were built. (b) Insanitary Property: Dr. Benson calls attention to a considerable amount of old property which is in need of improvement, more especially at:—

- (1) South Moor: High South Moor (20 houses), the Barracks (19 houses), and Quaking Houses (50 houses). All these houses are of the same type, namely, two rooms, one of which is an unceiled attic which is approached by a step-ladder. There are no back doors and the streets are unmade.
- (2) Oxhill: Joicey's Houses (64 houses). New out-offices required.
- (3) Havannah: Laxey Terrace (8 back-to-back houses) and Scott Street, George Street, and Albert Street. Small houses with no through ventilation and step-ladders to bedrooms.
- (4) Joicey Square: Cross Rows (48 back-to-back houses).
- (5) High Street, Stanley, and opposite road (back-to-back houses).

Improvements are noted to a few houses and 47 out-offices have been reconstructed.

*Nuisances.*—110 were abated by the service of notices.

*Cowsheds* (8), *Milkshops* (4).—Cowsheds are fairly well ventilated, but require more attention in the matter of cleanliness.

*Slaughter-Houses and One Common Lodging-House* were maintained satisfactorily.

*Factories* (13), *Workshops* (39) were inspected on 52 occasions. One nuisance due to want of cleanliness was detected and remedied.

## SANITARY REQUIREMENTS.

1. Improvement of the housing accommodation in the older parts of the district.
2. Greater cleanliness of the cowsheds.

## TANFIELD.

T. BENSON, L.R.C.P., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	9,600	9,300
Birth-rate .. .. .	36·97	34·4
Death-rate .. .. .	15·00	14·8
Zymotic death-rate .. .. .	2·81	2·5
Phthisis death-rate .. .. .	0·83	0·86
Total Tuberculosis death-rate	1·66	1·61
Respiratory diseases death-rate.. .. .	2·70	2·47
Infant mortality-rate per 1,000 births .. .. .	107	118

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	90	107
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	28	46
Diphtheria .. .. .	29	40
Fevers (Enteric, &c.) .. .. .	8	5
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	44	55
Measles.. .. .	(3)	(3)
Whooping cough .. .. .	(3)	(4)
Diarrhoea .. .. .	(6)	(2)

## GENERAL SANITATION.

*Water* supplied by the Weardale and Consett Water Company was satisfactory.

*Sewerage.*—The various works in the district acted satisfactorily. It is stated that the sewerage and drainage of the district is practically complete.

*Scavenging* was done satisfactorily by contract. The refuse is disposed of on tips which are situated so as to cause no nuisance.

*Housing.*—(a) New Houses: Seventy-one self-contained and two tenemented houses were built. (b) Insanitary Property: Dr. Benson calls attention to a considerable amount of old property, which is in need of improvement, at the following

places:—White-le-Head (29 houses), Corven Houses, Tantobie (30 houses), Tanfield Lea (27 houses), Tanfield (14 houses), Clough Dene, Mountsett Cross Rows, Hobson (38 houses), and Burnopfield (12 houses). Improvements are more specially required to the property at White-le-Head, Tantobie, and Clough Dene, as will be seen from the following quotations:—“White-le-Head. The houses “comprising this village are not built on any arranged scheme, but are “planted down indiscriminately, so that there are neither streets “nor footpaths. The great objection in the village seems to be “lack of ventilation by the absence of back doors. In the centre “of the village there are 29 houses in this state. The same applies “to Corven Houses, but in addition four of these are damp and “otherwise defective, and the out-offices are dilapidated. Those “that possess upstairs rooms are in the majority of cases reached “by step-ladders. There are eight one-roomed houses in occupa- “tion. . . . Tantobie.—In this village the same state of things “occurs as in White-le-Head, even as far as the arrangement of “houses is concerned. There are about 30 houses with no back “doors and only very limited ventilation from small pantry “windows. Many of the upstairs rooms are reached by step- “ladders, and the out-offices are not only scanty but incon- “veniently placed. . . . Clough Dene—The majority of the houses “here can be fitly described as hovels. Six houses in the valley “are without back doors, with imperfect ventilation, with step- “ladders where there are up-stairs rooms, with some damp floors, “and with water to carry from a distance.”

*Dairies and Cowsheds.*—The milk supply is satisfactory. The cowkeepers are reported to have fairly decent byres.

*Slaughter-Houses* eight were maintained free from nuisance.

*Factories* (8) and *Workshops* (9) were inspected on 38 occasions and were found to be satisfactory.

### SANITARY REQUIREMENT.

Improvements to the housing accommodation of various villages (mentioned above).

## TOW LAW.

J. H. NAISMITH, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases &amp; (Deaths).</i>		
	1908.	1907.		1908.	1907.
Estimated Population .. ..	4,871	4,371	Total notifications .. .. .	16	17
Birth-rate .. .. .	31·42	30·6	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	12·35	12·5	Scarlet fever .. .. .	3	3
Zymotic death-rate .. .. .	0·45	1·3	Diphtheria .. .. .	1	4
Phthisis death-rate .. .. .	0·68	0·22	Fevers (Enteric, &c.) .. ..	3	2
Total Tuberculosis death-rate	0·68	0·68	Puerperal fever.. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at hospital ..	6	nil.
rate .. .. .	2·97	2·51	Measles .. .. .	(nil.)	(2)
Infant mortality-rate per 1,000			Whooping cough .. .. .	(nil.)	(2)
births .. .. .	72	97	Diarrhoea .. .. .	(2)	(2)

## GENERAL SANITATION.

*Water* is supplied by the Weardale and Consett Water Company. Dr. Naismith states that “it is only on rare occasions that it departs from a high standard of excellence.”

*Sewerage.*—“The drainage is now being carried on very satisfactorily since the new installation; but, as you are aware, the sewerage output is regarded as unsatisfactory, and so must engage your attention on a more fitting occasion.”

*Scavenging* was satisfactorily carried out by contractors.

*Housing.*—Dr. Naismith states: “The housing question remains in *statu quo*. On the whole the houses are in a fair state of repair, but the properties being old, they need constant attention to keep them up to the normal standard.” Improvements were made to a number of houses as follows:—New ash-closets (8), yards paved (10), and spouting and drains repaired (57).

*Nuisances.*—26 informal notices were served and 24 nuisances abated. Appended is the report of the Inspector of Nuisances, from which some of the figures quoted above are taken.

*Streets.*—Dr. Naismith strongly recommends that something should be done to the back streets, many of which he states are “well nigh impassable” during the winter months.



*Milk.*—Local supplies are used only. Dr. Naismith states that “the cowsheds have not yet advanced to any great extent, “but are, on the whole, cleanly and looked after.”

*Slaughter-Houses, Factories (2), Workshops (2)* were maintained satisfactorily.

### SANITARY REQUIREMENTS.

An improvement in the condition of the back streets.

## WHICKHAM.

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

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	16,195	15,686
Birth-rate .. .. .	35·81	36·3
Death-rate .. .. .	14·6	17·5
Zymotic death-rate .. .. .	1·97	2·8
Phthisis death-rate .. .. .	1·17	1·40
Total Tuberculosis death-rate	1·85	2·17
Respiratory diseases death-rate.. .. .	2·59	3·12
Infant mortality-rate per 1,000 births .. .. .	127	138

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	99	62
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	40	29
Diphtheria .. .. .	44	23
Fevers (Enteric, &c.) .. .. .	2	3
Puerperal fever.. .. .	2	nil.
Cases treated at hospital ..	25	11
Measles.. .. .	(1)	(25)
Whooping cough .. .. .	(12)	(8)
Diarrhoea .. .. .	(16)	(5)

Whooping cough. (See page xxvi.) The Notification of Births Act adopted and arrangement made for the appointment of women who will act both as Health Visitors and District Nurses. (See pages viii., x. and lxiii.) Confirmation by bacteriological examination in cases of diphtheria is urged, especially in the cases of convalescents, and also the importance of hospital isolation of cases of scarlet fever and diphtheria, where home isolation is not possible.

### GENERAL SANITATION.

*Water.*—Marley Hill is supplied by the Weardale and Consett Water Company and the rest of the district by the Newcastle and Gateshead Water Company. Negotiations are proceeding for a supply to some houses at the Brickworks, Swalwell.

*Sewerage.*—The main drainage scheme has been completed by the inclusion of Whaggs, Cornmoor Road, Millfield Road, Sunnyside, and parts of Marley Hill. It has now been decided to connect up the remainder of Marley Hill. Byermoor is still

drained by open channels. New drainage has been laid at Pit Row, Whickham, Quality Row, and Dark Entry, Swalwell; Malting Yard, Poorhouse Yard and a portion of Waterside require similar improvements.

*Scavenging* was satisfactorily done by the Council's own workmen. Dr. Smith points out that the removal of refuse slightly more frequently than at weekly intervals would materially diminish the fly nuisance.

*Housing*.—(a) New Houses: 149 were erected and 108 were occupied. (b) Insanitary Property: 8 houses were dealt with under the Housing of the Working Classes Act, with the result that 7 (at Dunston) were permanently closed and one was rendered habitable. Satisfactory improvements were made to the following properties at—

- (1) Whickham: Houses repaired or reconstructed in Pit Row, Rectory Cottages, and Lower Row, Middletown. The houses in Top Row and Cross Row, Middletown, have also been greatly improved, but require fireplaces in the bedrooms and cement floors in the kitchens.
- (2) Swalwell: Yards paved to a number of houses in the Waterside.
- (3) Marley Hill: Back-to-back houses in Post Office Row reconstructed, yards in High Row cemented.

Improvements are recommended as follows at—

- (1) Swalwell: Cementing of yards and floors for the remaining houses in Waterside and of houses in Brewery Bank.
- (2) Marley Hill: Reconstruction of the back-to-back houses in High Row, Crookgate, and on the Hill.

*Nuisances*.—1024 formal and 3 informal notices were served; 1032 nuisances were abated.

*Streets*.—Improvements are being affected at Whickham (Rectory and Whaggs Lane), but a large amount of work still requires to be done to the roads and streets at Whickham, Swalwell, and Marley Hill.

*Dairies and Cowsheds.*—In many cases the cowsheds are defective as regards ventilation and lighting. Dr. Smith is of the opinion that a minimum of 800 cubic feet of air-space per cow should be allotted. The bye-laws at present in force only require 500 cubic feet.

*Slaughter Houses* still remain unregistered but are subjected to regular inspection.

*Factories, Workshops* (14) are reported to be satisfactory.

The report concludes with an appreciation of the work done by Mr. Dinsdale, the Inspector of Nuisances; a summary of this work, from which some of the facts mentioned above are taken, is appended to the report.

### SANITARY REQUIREMENTS.

1. Improvement of the housing accommodation in certain parts of the district.
2. Increased ventilation and lighting of the cowbyres.
3. Registration of the slaughter-houses.

### WILLINGTON.

R. E. BROWN, L.R.C.P., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	7,959	7,949
Birth-rate .. .. .	35·30	36·9
Death-rate .. .. .	22·86	15·4
Zymotic death-rate .. .. .	2·88	2·7
Phthisis death-rate .. .. .	0·50	0·50
Total Tuberculosis death-rate	1·00	0·63
Respiratory diseases death-rate.. .. .	4·27	3·01
Infant mortality-rate per 1,000 births .. .. .	241	142

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	60	55
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	20	36
Diphtheria .. .. .	17	6
Fevers (Enteric, &c.) .. .. .	10	2
Puerperal fever.. .. .	1	nil.
Cases treated at hospital ..	46	37
Measles .. .. .	(3)	(9)
Whooping cough .. .. .	(2)	(2)
Diarrhoea .. .. .	(17)	(9)

Very high total death-rate and infant mortality-rate.

## GENERAL SANITATION.

*Water.*—The district is well supplied by the Weardale and Consett Water Company. No wells are now in use, though the outlying farms are dependent upon springs. Samples from the latter have recently been analysed, but the result of analysis is not stated.

*Sewerage.*—The treatment of the Willington sewage by continuous filtration (Stoddart's method) is unsatisfactory, and secondary treatment by land irrigation has to be resorted to. Dr. Brown recommends the construction of a new filter, the clinker at present in use being unsatisfactory. The Willington Burn and the River Wear are still being polluted by sewage from Willington (high part), and Page Bank Colliery respectively. A scheme for the treatment of the Page Bank sewage is now under consideration.

*Scavenging* was done satisfactorily. In Stockley the colliery owners undertake the scavenging and provide their own tips. In Willington the refuse is in part disposed of on a colliery tip and to farmers, and the remainder goes to the Council tips at Low Willington. The lease of the site of the latter expires in a year's time, and as there is no other site for a tip available in the district, the provision of a refuse destructor has become an urgent necessity. Dr. Brown says:—"Some fouling of the streets by the emptying of the midden-privy contents from the back-yards still takes place in some parts of the district. This ought to be remedied immediately."

*Housing.*—(a) New Houses: 22 were erected during the year. (b) Insanitary Property: At Oakenshaw 38 houses were re-constructed so as to provide excellent accommodation; 44 yards were re-paved; 129 ash-closets and 19 water-closets have been substituted for privy-middens. Dr. Brown briefly calls attention to certain defective conditions which require attention, viz.:—(1) A number of single houses in all parts of the district with unceiled, low attics. (2) Back-to-back houses in Mill Street,

High Street, Commercial Street, Park Terrace, and Low Willington, and also at Page Bank Colliery. (3) A considerable number of houses with defective spouting. (4) A very large number of open privy-middens.

*Nuisances.*—374 were abated; 715 formal and 96 informal notices were served.

*Streets.*—Lydia Street has been properly made and paved, and it is recommended that the other back streets should be dealt with similarly.

*Dairies and Cowsheds.*—The dairies are reported to be kept clean, but many of the cowbyres require improvements with respect to ventilation and lighting. Two new cowbyres of a satisfactory design were built during the year.

*Slaughter-Houses* (6) are registered and are regularly inspected. Certain defective conditions mentioned in the Assistant County Medical Officer's report on the district are again referred to by Dr. Brown.

*Factories* (10), *Workshops* (28), were inspected by both the Medical Officer of Health and the Sanitary Inspector on 116 occasions. Notices were served for defective sanitary accommodation (6) and other nuisances (3), with the result that 4 of the nuisances were abated.

### SANITARY REQUIREMENTS.

1. The substitution of ash-closets for the open privy-middens.
2. The substitution of water-closets and pails or buckets for the dry refuse where the contents of the privy-middens have to be wheeled from the back-yards and deposited on the streets.
3. The repairing and paving of the footpath on the north side of the main street be done as soon as possible.
4. The making, paving, and channelling of the private streets (Chapel street in particular) which are still in a bad condition.
5. Immediate attention to the cowsheds which are defective in their lighting and ventilation.

6. Improvements to the housing accommodation.
7. The covering-in of the ditch by the roadside, south of Lingey Close Farm on the main turnpike, as it is a most dangerous place.
8. The provision of a refuse destructor.
9. The construction of a new filter bed at the sewage works.

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## RURAL DISTRICTS.

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### AUCKLAND RURAL DISTRICT.

J. G. WILLIS, L.R.C.P., D.P.H., Medical Officer of Health.

<i>Vital Statistics.</i>	1908	1907.	<i>Infectious Diseases—Cases &amp; (Deaths).</i>	1908.	1907.
Estimated Population .. ..	59,840	59,045	Total notifications .. .. .	401	280
Birth-rate .. .. .	35·94	34·3	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	16·81	15·7	Scarlet fever .. .. .	163	150
Zymotic death-rate .. .. .	2·33	1·9	Diphtheria .. .. .	76	40
Phthisis death-rate .. .. .	0·61	0·86	Fevers (Enteric, &c.) .. ..	116	36
Total Tuberculosis death-rate	1·10	1·42	Puerperal fever.. .. .	1	5
Respiratory diseases death-rate..	2·70	2·65	Cases treated at hospital ..	114	60
Infant mortality-rate per 1,000			Measles.. .. .	(14)	(55)
births .. .. .	147	123	Whooping cough .. .. .	(18)	(17)
			Diarrhœa .. .. .	(73)	(25)

Special report on enteric fever. Insanitary conveniences and the common house-fly were the chief causes of its prevalence. (See page xxi.).

### GENERAL SANITATION.

*Water.*—The Weardale and Consett Water Company supply most of the district. The supply is stated to be pure and wholesome.

*Sewerage.*—New works on the double contact system were constructed at Middlestone Moor. New primary filters were added to the Coundon works, where also two new secondary

filters are in course of construction. The Dene Beck scheme which will deal with the sewage from Coundon Grange, Eldon, Eldon Lane, and South Church, is reported to be making rapid progress. Joint schemes are under consideration for (1) West Auckland, St. Helen's, Fylands, and Tindale Crescent, (2) Byers Green, and Todhills, (3) Hunwick, and Sunnybrow, and when these and the Witton Park scheme are completed, Dr. Willis anticipates that the Wear and its tributary, the Gaunless, will be freed from sewage pollution so far as his district is concerned.

*Scavenging* is done by contract in the populous townships. Some of the contractors required considerable supervision on the part of the Inspectors. Dr. Willis recommends that the scavenging should be carried out at night time in those parts of the district which are not strictly rural.

*House Accommodation.*—(a) New Houses: 239 were built and occupied during the year. (b) Insanitary Property: 20 houses were closed as unfit for habitation. 217 nuisances due to structural defects in houses were remedied. 233 ash-closets and 4 water-closets were built in place of ashpit-privies.

*Streets.*—Progress with the making of streets is reported. Dr. Willis strongly recommends that all the back streets in the district be made.

*Dairies and Cowsheds* (186) are registered and periodically inspected. Many improvements to cowbyres are reported to have been made during the year. Six nuisances were abated.

*Schools.*—Certain insanitary conditions have been found at Black Boy and Middlestone Council Schools and at Coundon and Merrington Church Schools. Reports have been sent to the County Council and to the managers of the Church Schools. Middridge School was closed for 2 weeks (measles, whooping cough, and diphtheria), and Witton-le-Wear School for 3 weeks (measles).

*Common Lodging-houses* (2), *Factories* (17), *Workshops* (91), and *Workplaces* (1) are reported to be satisfactory. No table of inspections is appended to the report.

The information regarding the house accommodation of the district is meagre and there is no mention made of the slaughter-houses.

Appended are the reports of the Inspectors from which it appears that 918 nuisances were abated during the year as the result of the service of 855 informal and 282 formal notices.

### SANITARY REQUIREMENTS.

1. Compulsory notification of phthisis.
2. The making of the back streets.
3. Scavenging at night-time in those parts of the district which are not strictly rural.

### BARNARD CASTLE RURAL DISTRICT.

JAMES C. NELIGAN, L.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases &amp; (Deaths).</i>		
	1908.	1907.		1908.	1907.
Estimated Population .. ..	11,808	11,660	Total notifications .. .. .	41	52
Birth-rate .. .. .	27·84	23·6	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	15·92	15·2	Scarlet fever .. .. .	8	15
Zymotic death-rate .. .. .	1·86	0·6	Diphtheria .. .. .	26	18
Phthisis death-rate .. .. .	0·76	0·77	Fevers (Enteric, &c.) .. .. .	1	2
Total Tuberculosis death-rate	0·93	1·28	Puerperal fever.. .. .	nil.	1
Respiratory diseases death-			Cases treated at hospital ..	8	4
rate.. .. .	1·69	1·28	Measles.. .. .	(3)	(7)
Infant mortality-rate per 1,000			Whooping cough .. .. .	(6)	nil.
births .. .. .	112	130	Diarrhoea .. .. .	(5)	(1)

The mortality from diphtheria was very high (0·67 per 1,000 population).

### GENERAL SANITATION.

*Water* was scarce at Cockfield in August and September and a scheme for augmenting the supply to the service reservoir at Penny Hill is under consideration. At Newbiggin the work of



laying on a supply to the houses has been completed. At Staindrop 16 houses were connected with the Tees Valley Water Board's main. At Middleton 400 yards of cast iron pipes have been laid to replace the old earthenware mains.

*Sewerage* is reported to be satisfactory throughout the district. New disposal works have been made at Staindrop.

*Scavenging* at Cockfield was satisfactorily done by contractors employed by the local authority. Elsewhere, the tenant is responsible for his own scavenging. Forty-one notices were issued for the abatement of nuisances caused by neglect to scavenge.

*Housing*.—(a) New Houses : 10 were built. (b) Insanitary Property : 1 house was closed, another was reconstructed, and structural defects were remedied in 29 instances. Nuisances caused by defective yards (5), defective drainage (24), foul conditions (2), and overcrowding (2 instances) were abated. Twenty-five midden-privies were replaced by ash-closets, pail-closets, or water-closets.

*Nuisances*.—198 were abated by service of 41 statutory and 169 informal notices.

*Dairies and Cowsheds* (29).—A general improvement is reported. Two cowsheds were rebuilt and 5 others were improved.

*Slaughter-Houses* (13).—Two new slaughter-houses have been built to replace 2 that were condemned, 6 other premises have been improved, and 7 unlicensed premises have been condemned.

*Common Lodging-Houses* (1), *Factories* (14), and *Workshops*, (38) were reported to be satisfactory.

### SANITARY REQUIREMENTS.

None mentioned.

## CHESTER-LE-STREET RURAL DISTRICT.

JOHN TAYLOR, M.D., D.P.H., Medical Officer  
of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	74,916	72,911
Birth-rate .. .. .	37·49	34·7
Death-rate .. .. .	17·68	16·4
Zymotic death-rate .. .. .	3·52	1·5
Phthisis death-rate .. .. .	0·85	0·79
Total Tuberculosis death-rate	1·56	1·57
Respiratory diseases death-rate..	2·49	2·64
Infant mortality-rate per 1,000 births .. .. .	176	148

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	685	498
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	890	264
Diphtheria .. .. .	104	128
Fevers (Enteric, &c) .. .. .	112	23
Puerperal fever .. .. .	4	4
Cases treated at hospital ..	124	40
Measles.. .. .	(17)	(45)
Whooping cough .. .. .	(46)	(4)
Disorrhœa .. .. .	(159)	(42)

Additional isolation hospital accommodation is necessary. (See page xxxii.) Effectual disinfection of houses under the supervision of the Sanitary Inspectors is recommended. Highest incidence of enteric fever occurred since 1893 and its prevalence was the subject of a special report. (See page xx.) Prevention of infantile diarrhœa. (See pages xxviii.—x xx.) More rigid exclusion from school of all children suffering from whooping cough urged.

## GENERAL SANITATION.

*Water.*—Whilst the district generally is well supplied with water by public companies, Dr. Taylor considers it desirable that the Sunderland and South Shields Water Company and the Lambton Collieries, Limited, should filter their supplies, and that the latter Company should increase their storage. Water has been laid into 93 houses at Team Colliery and 42 houses at Harraton, but the three Barmston farms are still dependent upon shallow wells. A supply to the houses at Pennyfine (Lamesley) and the Paper Mill (Urpeth) is also needed.

*Sewerage.*—The Chester-le-Street sewage works are reported to be quite inadequate for dealing with the amount of sewage received, and to be most offensive and insanitary. The construction of works for the disposal of the sewage from Ouston and Perkinsville is under consideration. Sewers have been laid in the villages of Ouston, Ewehill and Perkinsville, and similar work is in progress for a portion of Eighton Banks (near the Church). Altogether some three miles of sewers were laid during the year.

*Scavenging.*—The greater part of the district is scavenged by contract. Two or three of the contractors performed their work unsatisfactorily in one or two districts, notably at Washington village and Eighton Banks, and required constant supervision on the part of the Inspectors. Plawsworth is now scavenged by contract, which leaves only about 10 per cent. of the population dependent upon the efforts of private scavengers.

*Housing.*—(a) New Houses: 491 houses were built and occupied during the year at Washington (108), Birtley (95), Witton Gilbert (63), Usworth (57), Lamesley (43), &c. (b) Insanitary Property: 79 houses were closed as unfit for habitation at Usworth (28), Washington (18), Chester-le-Street (16), &c. Dr. Taylor reviews the sanitary conditions of the various townships in the district at considerable length, and mentions the improvements effected during the year and the conditions which urgently require to be remedied in the immediate future. Improvements consisting of repairs and alterations to houses (325), erection of ash-closets (629) and water-closets (41), and drainage of houses (300) were effected during the year. The back-to-back houses in John Street, James Street and South Row, and Grange Terrace, Pelton Fell, were converted into through houses. It is recommended that a number of houses which are back to back, damp, or otherwise unfit for habitation, should be dealt with in the immediate future at the following places:— (a) Barmston, Pattinson Town (damp or back-to-back houses, with insanitary conveniences) and Barmston Hill Top (back-to-back tenements); (b) Birtley, Brown's Buildings (22 houses requiring to be raised), Vigo (2 houses defective generally), Napier Terrace (18 houses back-to-back, with insanitary conveniences, and poor pantries), St. Bede's Row (29 flats, defective generally), North Side (number of houses unfit for habitation), and at Atkinson's Buildings, where there are 6 houses, regarding which Dr. Taylor says: "They are chiefly inhabited by aged women, "some receiving parish relief. They are respectable, clean old "bodies, and it would, I dare say, be a hardship to suggest "turning them out, yet I think it would be quite fair to say to

“the owner: ‘These houses are not to be occupied after the  
 “‘present tenants voluntarily leave them’” ; (c) Burnmoor,  
 Engine Row, Elba, and New Lambton (houses poor, and insani-  
 tary conveniences); (d) Harraton, Nova Scotia and Fatfield  
 (a number of damp houses, with insanitary conveniences); (e)  
 Great Lumley (number of houses defective generally, and unfit  
 for habitation); (f) Plawsworth (number of houses defective  
 generally, with insanitary conveniences); (g) Usworth, Taylor’s  
 Row, The Square, and Old Hall (unfit for habitation); and (h)  
 Washington, Engine Square and Old Row (defective generally  
 and unfit for habitation). Considerable improvements with  
 respect to the conveniences, pavements of yards, footpaths, &c.,  
 are also required in several parts of the district, notably in  
 Chester-le-Street township (a number of houses with insanitary  
 conveniences and defectively paved yards); Pelton township—  
 Stone Row, Grange Villa, and West Pelton (about 200 houses with  
 insanitary conveniences and unpaved yards); Urpeth township—  
 Wood Row, Palace Row, Quality Row (Beamish), and Eden  
 Terrace South (insanitary conveniences); Usworth township—  
 Penshaw View (30 houses, unpaved yards and insanitary con-  
 veniences); Washington township—Shafto Terrace (unpaved  
 yards and insanitary conveniences).

*Streets.*—Under the Private Street Works Act, 1892, some  
 improvements have been made at Chester-le-Street, but a con-  
 siderable number of streets still require to be made, and similar  
 improvements are needed at Usworth, Lamesley, and Washington.  
 At the latter place certain streets have been scheduled under the  
 Act.

*Common Lodging-houses* (3) were maintained satisfactorily.

*Dairies and Cowsheds* (127) are registered and inspected  
 regularly. Improvements were obtained in 20 instances. The  
 advisability of adopting new bye-laws is under consideration.

*Slaughter-Houses* were maintained satisfactorily. The bye-  
 laws will be enforced as soon as they are sanctioned by the Local  
 Government Board.

*Factories and Workshops* are reported to have been inspected regularly. A few nuisances respecting ventilation and cleanliness were remedied.

### SANITARY REQUIREMENTS.

1. Filtration of waters supplied from the magnesian limestone formation.

2. Improvements in the housing accommodation (as mentioned above).

3. Making of the back streets at Chester-le-Street, Usworth, Lamesley and Washington.

4. The construction of an additional pavilion at the Isolation Hospital, so as to provide accommodation for the treatment of three infectious diseases (enteric fever, scarlet fever and diphtheria) concurrently.

5. Provision of the necessary plant and labour for the disinfection of houses and clothing.

### DARLINGTON RURAL DISTRICT.

ROBERT H. MEIKLE, M.B., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	9,591	9,591
Birth-rate .. .. .	30·65	28·4
Death-rate .. .. .	13·97	19·4
Zymotic death-rate .. .. .	0·31	0·4
Phthisis death-rate .. .. .	1·04	1·14
Total Tuberculosis death-rate	1·87	2·18
Respiratory diseases death-rate .. .. .	1·56	2·71
Infant mortality-rate per 1,000 births .. .. .	95	102

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	26	42
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	7	13
Diphtheria .. .. .	8	12
Fevers (Enteric, &c.) .. .. .	5	7
Puerperal fever .. .. .	nil.	nil.
Cases treated at hospital .. .	4	7
Measles .. .. .	nil.	(6)
Whooping cough .. .. .	(2)	(3)
Diarrhoea .. .. .	(1)	(4)

### GENERAL SANITATION.

*Water.*—The supply to Great Aycliffe was improved by roofing in the storage tank. The Brafferton water from the public

pump was found to be polluted. The well was cleaned out and cement lined for a depth of a few feet and a new pump was installed. The supply is now satisfactory. At Summerhouse, where 2 cases of enteric fever occurred, it was found that the well-water was polluted by surface water and in the immediate vicinity was found a cesspool. These defective conditions have since been remedied.

*Sewerage.*—The new works at Blackwell (septic tank and land filtration) yielded a good effluent and the works at Low Coniscliffe, Hurworth, and Redworth, acted satisfactorily. The sewer-  
ing of Haughton-le-Skerne is practically completed and notices have been served for connecting the house-drains to the sewers. Plans are being prepared for the re-sewering of part of Heighington. The sewerage scheme of Houghton-le-Side was abandoned and the report states that “every house is now efficiently drained “into cesspools.” A considerable portion of the main sewer at Middleton-St.-George was relaid and a great improvement effected thereby.

*Scavenging* was satisfactorily done at Low Dinsdale, Haughton-le-Skerne, and Hurworth, but at Cockerton it was necessary to re-let the contract owing to the unsatisfactory way the work was done.

*Housing.*—(a) New Houses: 26 were built and plans for 30 more were passed. (b) Insanitary Property: A house-to-house inspection was made at High Coniscliffe. A number of defective conditions (dampness, defective paving, drainage, and insanitary conveniences) were remedied after service of notices. At Killerby one house was demolished and has since been rebuilt. At Piercebridge a number of insanitary privy-middens have been covered in.

*Nuisances.*—198 were abated.

*Streets.*—It is recommended that the back street at Brussleton Houses, Redworth, should be paved.

*Dairies and Cowsheds* were inspected and some defective conditions with respect to ventilation, drainage and cleanliness

were remedied by the service of notices. At Toy Top Farm, near Heighington, where a case of diphtheria occurred, considerable improvements were made to the dairy.

*Factories and Workshops* were all inspected. One nuisance (insufficient sanitary accommodation) was remedied.

### SANITARY REQUIREMENTS.

1. Paving of the back street at Brussleton Houses, Redworth.
2. Appointment of a Lady Health Inspector.

## DURHAM RURAL DISTRICT.

A. T. HARRISON, L.S.A., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	28,932	28,568
Birth-rate .. .. .	36·81	32·6
Death-rate .. .. .	17·83	17·7
Zymotic death-rate .. .. .	1·97	2·4
Phthisis death-rate .. .. .	0·79	1·08
Total Tuberculosis death-rate	1·79	1·71
Respiratory diseases death-rate.. .. .	2·73	2·73
Infant mortality-rate per 1,000 births .. .. .	156	143

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	99	79
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	38	24
Diphtheria .. .. .	23	29
Fevers (Enteric, &c.) .. .. .	29	14
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	67	40
Measles.. .. .	(14)	(40)
Whooping cough .. .. .	(6)	(1)
Diarrhœa.. .. .	(26)	(18)

### GENERAL SANITATION.

*Water* is supplied by (1) the Weardale and Consett Water Company (upland surface water) to Croxdale, St. Oswald's, Neville's Cross, Broompark, Ushaw Moor, Bearpark, Framwellgate Moor, Pity Me, Kimblesworth, Coxhoe, Shincliffe, Whitwell and Sherburn House, Belmont, Pittington, Littleton, Sherburn Hill and Sherburn. (2) Messrs. Walter Scott & Company (subsoil water which has percolated through limestone strata) to Old Cassop, Quarrington Hill, Cassop Colliery, and Kelloe. (3) Weardale Coke and Coal Company to Ludworth. The Weardale and Consett Water Company extended their mains to Low Butcher

Race, towards the expenses of which work the District Council, the Spennymoor Urban District Council, and the owners of the property contributed. Supplies from the same Company were also laid on to 2 houses at East House, Gilesgate Moor, and 2 houses at Stonebridge. Shadforth village, which is dependent upon shallow wells, is to be supplied by the Weardale and Consett Water Company as soon as the sanction of the Local Government Board to a loan for carrying out the work is obtained. Old Quarrington, Cold Knuckles Farm, Sherburn, Brasside, Cassop Smithy and Strawberry Hill Farms, and Broomside Pit Cottages are still without a proper water supply.

*Sewerage.*—New sewers and works (open septic tanks and land irrigation) have been constructed at Bowburn. Land has been acquired for works at Shadforth and Bearpark and a contract has been let for the construction of works at Crossgate Moor. Sewage disposal schemes for Sherburn Hill, Framwellgate Moor, High Pittington, Kimblesworth, and Pity Me are under consideration. Various becks are polluted with sewage from the following places:—East Hetton and California, Ludworth and Shadforth, Littleton and Low Pittington; the river Browney is also markedly polluted by sewage from Bearpark and Crossgate Moor. New sewers have been laid at Clarence Ville; Low New Row, East Hetton; Davy Lamp; Hallgarth Street, Sherburn; and in 17 new streets at Bowburn, TurSDale, Clarence Ville, Auton Stile, and Shincliffe Colliery. Dr. Harrison recommends that Ludworth village should be sewered.

*Scavenging* devolves upon the occupiers at St. Oswald's, Sherburn Hospital, Whitwell, Brancepeth, and Shincliffe. Dr. Harrison recommends that the model bye-laws in respect to private scavenging should be adopted, also that public scavenging should be introduced at Shincliffe, and, in future, all contracts for scavenging should be renewable at the end of one year instead of three years, as at first.

*Housing.*—(a) New Houses: 131 were completed and occupied, and plans for 8 new streets and 105 new dwelling-houses were



passed. (b) Insanitary property: Dr. Harrison says, "the house accommodation for the working-classes in many parts of the district is adequate and good. In the older parts, however, especially east of Durham City, and at Framwellgate Moor, many of the houses are of a poor type, and are in, or are fast approaching a condition of unfitness for human habitation." Two cottages were closed at Crow's House, Shadforth. *Notices were served on the owners of the following property*: at Ernest Place, Belmont, (20 houses,) insanitary ashpit privy-middens; Front Double Row, Quarrington Hill, (35 houses,) defective floors, middens, yards, and inadequate water supply; Burrell Street, Kelloe, (31 houses,) low attic bedrooms, insanitary conveniences, and open channels; Avenue, Pond, and Short Rows, Shincliffe Bank Top, (50 houses); White Lane Terrace, Ushaw Moor, (35 houses,) insanitary conveniences and defective paving. *Improvements have or are being made to the following properties*: at Lancaster Street, Kelloe, (35 houses,) raising of attics, provision of wash-houses, coal-houses, pantries, and ash-closets; Heysham Terrace, Kelloe, (17 houses,) re-constructed but still require further improvements in respect of lighting, ventilation of stair-case, provision of conveniences and coal-houses, abolition of ashpit-privies, and paving of front street; Davy Lamp, improvements made to a number of houses in respect of floors, stair-cases, windows, and conveniences; Low Pittington, (4 houses,) cement floors and yards, and new doors and windows; Sherburn, floors of a number of houses cemented, and abolition of step-ladders, but a number of houses still require stair-cases instead of step-ladders; Broompark, (43 houses,) ash-closets and coal-houses provided, and yards and front streets cemented; Close Row, Framwellgate Moor, three pairs of houses demolished, and ash-closets and coal-houses erected on the site thus obtained: similar improvements are required at Pump Row and Smokey Row. *Improvements are required to the following property*: at Long, Short, and Wood Rows, Brasside, defective houses; Hett, (25 houses,) dampness and defective roofs and spouting; Kimblesworth, a number of insanitary conveniences; Shadforth Terrace, Ushaw Terrace, and Margaret Street, Lud-

worth, houses damp and defective generally; Lambton Street, Sherburn Hill, houses defective, brick-floors damp, badly lighted and ventilated, and no provision for surface drainage; Bearpark, insanitary conveniences.

*Nuisances.*—767 were abated; 921 notices were served.

*Dairies and Cowsheds.*—Dr. Harrison says in his report: “In  
“ a small number of cases the conditions under which milk is  
“ produced in your district has been found to be unsatisfactory,  
“ and more stringent measures should be adopted to bring about  
“ improvement in this respect. For this purpose I recommend  
“ that a Committee of your Council be appointed, before whom  
“ the names of all persons on the register of milk-sellers should  
“ be read over once a year. In all cases where the milk-seller  
“ has, after due warning, neglected to comply with the Regula-  
“ tions, I recommend that his name be removed from the register.  
“ Towards the end of the year it has been decided that, in all  
“ cases where it may appear necessary, samples of milk shall be  
“ submitted for bacteriological examination, with a view to the  
“ detection of the organism of tuberculosis.”

*Slaughter-Houses.*—It is reported that “the premises of a  
“ few butchers in a small way of business have required frequent  
“ inspection to cause them to be kept in a reasonably sanitary  
“ condition.” Two carcasses of tuberculous meat were condemned  
and destroyed.

*Factories and Workshops* were inspected on 122 occasions. Defective conditions relating to cleanliness (22), ventilation (16), and sanitary accommodation (8), were detected and remedied.

Appended are the reports of the Surveyor and the Inspector of Nuisances, from which some of the facts mentioned above are taken.

### SANITARY REQUIREMENTS.

1. Improvements to the housing accommodation (as detailed above).
2. The sewerage of Ludworth village.

3. Public scavenging at Shincliffe.
4. Adoption of model bye-laws at places where the scavenging devolves upon the occupiers.
5. Adoption of the Notification of Births Act and appointment of a Health Visitor.

## EASINGTON RURAL DISTRICT.

JAMES ARTHUR, L.R.C.P., D.P.H., Medical Officer  
of Health.

### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	54,614	52,336
Birth-rate .. .. .	38·23	34·5
Death-rate .. .. .	16·66	17·5
Zymotic death-rate .. .. .	2·92	2·5
Phthisis death-rate .. .. .	0·76	0·76
Total Tuberculosis death-rate	1·39	1·47
Respiratory diseases death-rate .. .. .	2·45	2·80
Infant mortality-rate per 1,000 births .. .. .	162	162

### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	508	508
Smallpox .. .. .	1	nil.
Scarlet fever .. .. .	280	297
Diphtheria .. .. .	70	116
Fevers (Enteric, &c.) .. .. .	109	31
Puerperal fever.. .. .	6	2
Cases treated at hospital .. .. .	45	34
Measles .. .. .	(7)	(37)
Whooping cough .. .. .	(19)	(30)
Diarrhoea .. .. .	(106)	(28)

Several cases of enteric fever attributed to the eating of shell-fish (mussels); other cases mostly associated with dirt and insanitary conditions. (See pages xix. and xxi). Reference is made to the co-incident prevalence of enteric fever and diarrhoea.

## GENERAL SANITATION.

*Water.*—It is stated that “the negotiations for a supply to “South Hetton by the Sunderland and South Shields Water “Company are completed, the contract let and the work, which is “to be paid for out of the current rate over three half-years, is “nearly completed. Wingate Lane and High Wheatley Hill are “to have a supply from the same source as Thornley, viz., from the “Weardale Steel, Coal and Coke Company.” The water from the magnesian limestone strata supplying the greater part of the district was of a most satisfactory quality. The improvement of the Hutton Henry supply is under consideration, and pure supplies are needed for some outlying farms and cottages, which are at present dependent upon shallow wells.

*Sewerage.*—2,950 yards of new sewers were laid during the year; at Murton 1,200 yards of 9-inch sewers, with manholes and ventilating shafts, were laid in place of open channels. Further improvements are to be made to the drainage of this village. Sewers were also laid at Haswell, South Hetton, Stationtown, Wingate, Shotton, and Kelloe. The new works (percolating filters) for the north-east half of Haswell have been completed, and schemes for South Hetton, Easington and Thorpe, and Seaton and New Seaham, are being prepared. The extension of the Thornley and Wheatley Hill works is proceeding.

*Scavenging* is done by contractors throughout the district. A contractor was fined for neglect at Thornley, and complaints were also received from Murton, Trimdon and Horden. Dr. Arthur recommends that the large ashpits should be abolished and that the scavenging should be more frequently done in warm weather.

*Housing.*—(a) New Houses: Plans for 238 houses were passed—at New Seaham (113), Murton (42), Trimdon (15), Dalton-le-Dale (11), Horden (11), &c. (b) Insanitary Property: Five houses were closed; 16 statutory notices under the Housing of the Working Classes Act were served in respect to 235 houses, and negotiations with the owners are still proceeding. Dr. Arthur states that “there is still much old property in the district, some “very bad, particularly in the villages of Haswell and Easington.” Improvements to houses have or are being made at the following places:—Wingate (13 houses rebuilt, low attic raised, staircase substituted for step-ladder, and new conveniences); Thornley (the Company have undertaken to reconstruct 20 houses every year); Murton (40 back-to-back houses are to be converted into 20 through houses); Wingate Lane (3 houses rebuilt); South Wingate (18 one-roomed houses have been converted into 9 through houses).

*Streets.*—Four streets have been scheduled under the Private Street Works Act at Haswell (2 streets), and Station Town (2 streets). Similar improvements are under consideration for Thornley (1 street) and Wheatley Hill (1 street). It is recommended that the Private Street Works Act should be adopted

conjointly with the Sedgefield Rural District for the purpose of making Luke Street and Rodwell Street, Trimdon Colliery, also that the back streets at Murton should be made.

Public urinals have been erected at Thornley (2), Murton (1), Wingate (1). The construction of others at Station Town and Trimdon is under consideration.

*Dairies, Cowsheds and Milkshops* (36) are registered. Five notices for neglect of cleanliness were served on the owners of dairies and 19 notices on the owners of cowsheds. The smaller cowsheds are stated to be defective in respect of air-space, etc.

*Slaughter-Houses* are not registered, but are inspected regularly. 28 notices for neglect of whitewashing and cleanliness were served. Three parts of a tuberculous bullock were seized from a butcher's premises.

*Common Lodging-Houses* (3) are stated to be "all in poor condition." Nine informal notices with respect to cleanliness were served, but were not satisfactorily attended to.

*Factories* (13), *Workshops* (87), *Work-places* (20) and *Bake-houses* (2) were inspected on 412 occasions. Nuisances with respect to cleanliness (11), ventilation (4), and sanitary accommodation (2), were remedied.

### SANITARY REQUIREMENTS.

1. Improvements to the housing accommodation, notably at Easington and Haswell.
2. The abolition of large insanitary ash-pits.
3. More frequent scavenging, especially in warm weather.
4. Improvements to back streets, notably at Murton, Wheatley Hill and Trimdon Foundry.
5. The licensing of all slaughter-houses.

## HARTLEPOOL RURAL DISTRICT.

T. G. AINSLEY, M.D., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	2,355	2,355
Birth-rate .. .. .	22·50	18·6
Death-rate .. .. .	11·04	14·4
Zymotic death-rate .. .. .	1·27	0·4
Phthisis death-rate .. .. .	nil.	nil.
Total Tuberculosis death-rate	nil.	0·42
Respiratory diseases death-rate .. .. .	1·27	2·54
Infant mortality-rate per 1,000 births .. .. .	132	113

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	5	2
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	nil.	1
Diphtheria . . . . .	5	nil.
Fevers (Enteric, &c.) .. .. .	nil.	1
Puerperal fever .. .. .	nil.	nil.
Cases treated at hospital.. ..	nil.	nil.
Measles .. .. .	nil.	nil.
Whooping cough .. .. .	(2)	nil.
Diarrhoea .. .. .	nil.	nil.

## GENERAL SANITATION.

*Water.*—The use of the pump at Greatham has been discontinued, and a satisfactory supply is now obtained from the Water Company.

*Sewerage.*—By frequent use of a flushing van the condition of the sewers in the Greatham district has been greatly improved.

*Housing.*—(a) New Houses: 4 plans were passed. (b) Insanitary Property: 2 dilapidated cottages at Hart were demolished; 8 ashpit-privies were replaced by ash-closets.

*Nuisances.*—23 informal and 11 formal notices were served, and 23 nuisances were abated.

*Dairies and Cowsheds.*—Further improvements are reported. Three cowsheds were rebuilt.

*Factories and Workshops* were maintained satisfactorily. The table of inspections is not appended.

The report contains no mention of scavenging and slaughterhouses. Appended is the report of the Inspector of Nuisances, from which some of the figures mentioned above are taken.

## SANITARY REQUIREMENTS.

None mentioned.

## HOUGHTON RURAL DISTRICT.

(Northern Division).

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

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	17,705	16,890
Birth-rate .. .. .	41.45	38.1
Death-rate .. .. .	18.35	16.7
Zymotic death-rate .. .. .	3.44	0.8
Phth'isis death-rate .. .. .	0.45	0.77
Total Tuberculosis death-rate	1.01	1.42
Respiratory diseases death- rate .. .. .	3.28	3.68
Infant mortality-rate per 1,000 births .. .. .	190	163

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	172	103
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	74	64
Diphtheria .. .. .	10	14
Fevers (Enteric, &c.) .. .. .	75	12
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	22	5
Measles.. .. .	(nil.)	(6)
Whooping cough .. .. .	(18)	(3)
Diarrhoea .. .. .	(30)	(3)

Enteric fever seriously prevalent. (See page xx). Several cases attributed to the eating of mussels.

## GENERAL SANITATION.

*Water* is supplied by the Sunderland and South Shields Water Company to Newbottle village and Bank Head from Stoney Gate pumping station. Sunnyside is supplied from Houghton. Low Lambton and Coxgreen are dependent upon local wells. The rest of the district is supplied from the East Herrington pumping station owned by the Lambton Collieries. The Sunderland and South Shields Water Company extended their mains to furnish a supply to the Dubmires building Estate and the High Newport Building Estate. Negotiations are proceeding for providing water to 10 houses at Low Lambton which are dependent upon a well 110–180 yards distant, and to a few houses at Plains Brickyard, Silkworth, which have no proper supply.

*Sewerage.*—Land has been acquired for the extension of the William Henry Pit sewage disposal works. Sewers were relaid at Carr Row, Shiny Row, and Station Avenue, Fence Houses.

*Scavenging* is done by contract. In the Dubmire and Sunnyside districts the work was done unsatisfactorily and in consequence it was necessary to relet the contracts.

*Housing.*—(a) New Houses: 211 were built during the year. With respect to the alleged violation of the bye-laws on the High Newport Estate, the Council have agreed to insert in their new

bye-laws a clause to provide that double tenemented houses shall have 50 feet more area in the rear than for a single house. (b) In-sanitary Property: 8 houses at Newbottle were closed as result of action taken under the Housing of the Working Classes Act, 1890. It is recommended that the Wood Houses, Stoney Gate, which are only temporary erections, should be placed by permanent buildings.

*Streets.*—Sanction has been obtained for making the streets at Penshaw and similar improvements are required on the High Newport Building Estate at Mill Terrace, and Eden Terrace, Shiney Row. Powers have also been obtained from the Local Government Board to name streets and number houses at Herring-ton West, Newbottle, Offerton, Penshaw, and Silkworth.

*Slaughter Houses* (12) are registered and were well main-tained.

*Dairies and Cowsheds* were maintained satisfactorily, as were also *Factories and Workshops* (9).

### SANITARY REQUIREMENTS.

1. The replacement of the Wood Houses, Stoney Gate, by buildings of a permanent character.

2. The making of the streets on the High Newport Building Estate and at Shiney Row.

## HOUGHTON RURAL DISTRICT. (Southern Division).

J. R. SUTHERLAND, L.R.C.P., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	4,824	4,824
Birth-rate .. .. .	34·82	34·4
Death-rate .. .. .	15·96	14·5
Zymotic death-rate .. .. .	1·45	1·0
Phthisis death-rate .. .. .	0·20	0·82
Total Tuberculosis death-rate	1·03	1·03
Respiratory diseases death-rate.. .. .	2·48	2·90
Infant mortality-rate per 1,000 births .. .. .	172	120

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	35	26
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	22	11
Diphtheria .. .. .	5	6
Fevers (Enteric, &c.) .. .. .	3	1
Puerperal fever.. .. .	nil.	1
Cases treated at hospital .. .. .	4	5
Measles .. .. .	(nil.)	(4)
Whooping cough .. .. .	(1)	(nil.)
Diarrhoea .. .. .	(5)	(nil.)



## GENERAL SANITATION.

*Water.*—West Rainton was satisfactorily supplied. No information is given regarding the rest of the district.

*Scavenging* in Pit House Lane was irregular, but was satisfactorily done at West Rainton.

*Housing.*—Insanitary Property: Houses have been repaired at Pit House Lane, Cocken Terrace, and Wood Row, Leamside. Dr. Sutherland says: "Middle Rainton does not improve, and I do not think it will ever be better till the inside, within the triangular boundary of the village is completely done away with."

*Dairies and Cowsheds.*—The cowsheds were kept clean and were limewashed every 3 months, but defective conditions (overcrowding and defective drainage) are noted at Homer Hill Farm and Stable Farm and at Rainton Gate.

*Slaughter-Houses* were maintained satisfactorily.

There are no common lodging-houses or workshops in the district.

## SANITARY REQUIREMENTS.

1. Improvements to the housing accommodation at Middle Rainton.

2. Improvements to cowsheds.

LANCHESTER RURAL DISTRICT.  
(Lanchester Division).

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

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	22,570	22,114
Birth-rate .. .. .	37.66	33.8
Death-rate .. .. .	15.33	14.2
Zymotic death-rate .. .. .	2.34	2.0
Phthisis death-rate .. .. .	1.01	0.90
Total Tuberculosis death-rate	1.68	1.35
Respiratory diseases death-rate..	3.19	3.34
Infant mortality-rate per 1,000 births .. .. .	146	133

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	108	64
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	31	22
Diphtheria .. .. .	29	15
Fevers (Enteric, &c.) .. .. .	29	12
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	84	38
Measles.. .. .	(3)	(21)
Whooping cough .. .. .	(8)	(4)
Diarrhoea .. .. .	(29)	(10)

Whooping cough fatally prevalent at Burnhope and schools temporarily closed.

## GENERAL SANITATION.

*Water* is supplied to the district generally by the Weardale & Consett Water Company. At Low Town near Greencroft water from an uncovered well is used.

*Sewerage* throughout the district was satisfactory. Sinks are required at many houses at Hill Top, Malton Colliery, and also at licensed premises at Burnhope.

*Scavenging* is done by a contractor at Esh, but in the rest of the district by colliery owners and in a few instances by occupiers themselves.

*Housing.*—Insanitary Property—Action was taken under the Housing of the Working Classes Act with regard to 12 houses. Cemented yards were provided to houses in Railway and Wylam Streets, Craghead; and Church Street and Eastwood Row, Burnhope. A number of houses at East Hedleyhope and Hedleyfell Cottages were also greatly improved. Ashclosets have replaced ashpit-privies at Church Street and Eastwood Row, Burnhope; Esh Winning; and Quebec. Similar improvements are required at West Row and William Steets, Ushaw Moor; and Low Town. Cementing of yards is required at Durham Road; Esh Winning; Newhouse Cottages; and Marley's houses, Malton Colliery. Dr. Wilson says "to allow yards of this description to continue in this state is a menace to the health of the inhabitants."

*Nuisances.*—726 were detected, and 642 were abated. Seven cases of overcrowding were dealt with.

*Cowsheds* (57).—The majority of the cowsheds are well lighted and ventilated. Dr. Wilson recommends that a byre at Esh should not be used for milch cows in its present insanitary condition (defective ventilation and paving).

*Slaughter-Houses.*—Two premises at Cornsay Colliery, were found in a very insanitary condition owing to neglect to lime-wash.

*Factories and Workshops* were supervised and found to be satisfactory.

### SANITARY REQUIREMENTS.

1. Protection of the water supply (open well) at Low Town.
2. Improvements to the housing accommodation and abolition of ash-pit-privies as detailed in the report.

## LANCHESTER RURAL DISTRICT. (Medomsley Division.)

W. T. BOLTON, L.R.C.P., Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	8,932	8,815
Birth-rate .. .. .	32·6	27·4
Death-rate .. .. .	14·10	15·8
Zymotic death-rate .. .. .	2·24	1·7
Phthisis death-rate .. .. .	0·67	1·24
Total Tuberculosis death-rate	0·89	1·81
Respiratory diseases death-rate...	2·57	3·06
Infant mortality-rate per 1,000 births .. .. .	123	178

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	25	30
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	14	16
Diphtheria .. .. .	3	7
Fevers (Enteric, &c.) .. .. .	5	1
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	16	16
Measles.. .. .	(nil.)	(9)
Whooping cough .. .. .	(nil.)	(2)
Diarrhoea .. .. .	(17)	(4)

### GENERAL SANITATION.

*Water* is supplied to the district by the Weardale and Consett Water Company. At Knitsley Station Cottages an improved supply is required.

*Sewerage.*—A defective stone sewer was replaced by 6 inch sanitary piping at Ebchester. In the rest of the district the sewerage systems worked satisfactorily.

*Scavenging* was on the whole well attended to by the colliery owners and occupiers of private property.

*Housing.*—(a) New Houses: 58 were built and occupied. (b) Insanitary Property: A dilapidated cottage at Medomsley was closed. Improvements are noted to the following property.—Bradley Cottages (floors and yards cemented, ash-closets built, and back street made); Middle Row, Hamsterley Colliery (back doors provided, yards cemented, ash-closets built); Derwent Cottages (houses reconstructed and ash-closets built). Insanitary privy-middens were replaced by 48 ash-closets and 1 water-closet. Improvements are required to the following property.—The Riverside Houses or Milkwell Burn (2 roomed houses, defective generally, low unceiled attics); Delves Terrace (defective yards and outoffices); Templetown Village (defects mentioned in previous report); Stannefordham Cottages (insanitary outoffices).

*Nuisances.*—494 were detected and most of them were abated.

*Streets.*—Improvements to the back streets at Templetown Village are required and Dr. Bolton says—“The question of making or otherwise improving the back streets at the several villages throughout this district ought to have the attention and consideration of the District Council.”

*Dairies, Cowsheds, and Slaughter Houses* “with the exception of two or three cases” were maintained satisfactorily.

*Workplaces* were inspected on 8 occasions and no nuisances were detected.

### SANITARY REQUIREMENTS.

1. Improvements to the houses mentioned in the report.
2. Improvements to the back streets throughout the district.
3. The provision of a better water supply to the Knitsley Station Cottages.

## SEDFIELD RURAL DISTRICT.

FREDERICK HUNTON, M.D., Medical Officer of Health.

*Vital Statistics.*

	1909.	1907.
Estimated Population .. ..	29,710	28,211
Birth-rate .. .. .	36·85	33·4
Death-rate .. .. .	16·02	14·6
Zymotic death-rate .. .. .	2·55	1·5
Phthisis death-rate .. .. .	0·84	0·67
Total Tuberculosis death-rate	1·11	0·92
Respiratory diseases death-		
rate.. .. .	3·16	2·23
Infant mortality-rate per 1,000		
births .. .. .	160	153

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	213	203
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	121	122
Diphtheria.. .. .	25	36
Fevers (Enteric, &c.) .. .. .	44	14
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	44	54
Measles.. .. .	(2)	(12)
Whooping cough .. .. .	(20)	(2)
Diarrhoea .. .. .	(37)	(14)

Infant mortality and health visitors. (See page viii). Whooping cough spread owing to the want of care on the part of parents in isolating patients.

## GENERAL SANITATION.

*Water Supply.*—No reference is made to this subject.

*Sewerage.*—4,306 yards of sewers were laid. For the abatement of a nuisance caused by the works at West Cornforth it is recommended that the settling tank be covered in.

*Scavenging.*—Towards the end of the year the contractors complained that they were unable to do the work at night (as stipulated in the contract for the more populous parts of the district) because of the bad state of the roads.

*Streets.*—Dr. Hunton's remarks are of a general nature. He says: "I am in despair on this subject, for, notwithstanding my constant urging for years of the needs of Ferryhill, Cornforth, and Trimdon, in regard to the question of making streets, drainage, &c., it is with more than regret I have to report that nothing has been done; it would be difficult for anyone to exaggerate the serious state of affairs now existing there. I have previously reported to you that the so-called streets are nothing better than a collection of cesspools, and that you have not a much higher death-rate, or a serious outbreak of epidemic diseases as a consequence, is a piece of good fortune that you have already trifled with too long."

*Nuisances.*—530 were abated.

*Common Lodging-Houses* were frequently inspected, and 16 notices regarding cleanliness were served.

*Workshops* (27) were inspected 84 times, and 3 notices were served with respect to defective or insufficient sanitary accommodation.

### SANITARY REQUIREMENTS.

Improvements to the streets at Ferryhill, Cornforth, and Trimdon.

## SOUTH SHIELDS RURAL DISTRICT.

W. ARMSTRONG, L.R.C.P. Medical Officer of Health.

#### *Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	12,002	11,737
Birth-rate .. .. .	33·32	29·2
Death-rate .. .. .	17·58	13·2
Zymotic death-rate .. .. .	2·33	1·1
Phthisis death-rate .. .. .	1·41	1·19
Total Tuberculosis death-rate	2·66	1·61
Respiratory diseases death-rate.. .. .	2·41	2·04
Infant mortality-rate per 1,000 births .. .. .	140	116

#### *Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	87	65
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	29	12
Diphtheria .. .. .	23	20
Fevers, (Enteric, &c.) .. .. .	20	11
Puerperal fever.. .. .	1	1
Cases treated at hospital ..	25	17
Measles.. .. .	(4)	(nil.)
Whooping cough .. .. .	(1)	(4)
Diarrhoea .. .. .	(13)	(2)

Accommodation for diphtheria patients in isolation hospital recommended.

### GENERAL SANITATION.

*Water* is supplied by the Sunderland and South Shields Water Company to the whole of the district except a few out-lying farms, some of which are unsatisfactorily supplied from wells.

*Sewerage.*—Over 1,300 yards of new sewers were laid but the district is still insufficiently sewered and drained. A number of sewers are stated to be defectively laid and constructed and the

sewers at Whitburn, Cleadon, and Monkton, are insufficiently ventilated. The sewage is discharged into the Tyne or the sea.

*Scavenging* is done by contractors. The work was unsatisfactorily performed at Boldon and a new contractor has been appointed. Twenty-six notices were served upon various contractors for neglect. The refuse is disposed of on to land, except at Boldon Colliery where a tip, situated between Brockley Whins and Hedworth, is used.

*Housing*.—(a) New Houses: 118 were built at Boldon (59), Whitburn (17), Harton (14), Boldon Colliery (6), &c., and 53 were occupied. (b) Insanitary Property: Harper's Buildings and Coxon's property at West Boldon were closed as unfit for habitation. Improvements are noted at the following places;—Boldon Colliery (cement floors laid in 14 houses); The Square, West Boldon (new pantries, repairs to houses, and asphalt paving in yard). Improvements in respect to drainage, conveniences, &c. are also noted in other parts of the district.

*Nuisances*.—135 were abated.

*Streets*.—Three streets have been paved at Boldon Colliery. A number of streets at East Boldon and Whitburn require similar attention.

*Dairies and Cowsheds* (77) were systematically inspected. Some defective conditions (overcrowding, choked drains, accumulation of dung, neglect of whitewashing) were found and remedied.

*Slaughter-Houses* (10) were maintained fairly satisfactorily. Five notices were served for the abatement of foul conditions. Two tuberculous carcasses were seized at West Boldon and proceedings were taken against the tenant of the premises who was fined £20 and costs by the magistrates. A third carcass, also tuberculous, was surrendered by the Boldon Co-operative Stores.

*Factories and Workshops* (15) were inspected 31 times. Six notices were served and the defective conditions due to uncleanness (1) and insufficient or defective sanitary accommodation (5) were remedied.

## SANITARY REQUIREMENTS.

1. Extensions and improvements to the sewerage system.
2. Construction of an additional pavilion at the fever hospital for the treatment of diphtheria or doubtful cases of scarlet fever.

## STOCKTON RURAL DISTRICT.

J. W. BLANDFORD, L.R.C.P., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	19,081	18,881
Birth-rate .. .. .	29·55	27·5
Death-rate .. .. .	12·99	13·2
Zymotic death-rate .. .. .	0·68	1·0
Phthisis death-rate .. .. .	1·10	0·68
Total Tuberculosis death-rate	1·67	1·05
Respiratory diseases death-rate .. .. .	1·51	2·91
Infant mortality-rate per 1,000 births .. .. .	95	107

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	105	88
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	29	41
Diphtheria .. .. .	49	32
Fevers (Enteric, &c.) .. .. .	10	10
Puerperal fever .. .. .	3	1
Cases treated at hospital ..	47	23
Measles .. .. .	(2)	(3)
Whooping cough .. .. .	(2)	(8)
Diarrhoea .. .. .	(4)	(5)

Better construction of cowbyres with the object of preventing the spread of tuberculosis in cattle is recommended.

## GENERAL SANITATION.

*Water* was supplied plentifully by the Tees Valley Water Board to the greater part of the district, but again the Company have failed to give a continuous supply to Wolviston. The supply for this place was "frequently off for hours in the middle of the "day." Dr. Blandford says:—"When the Board applied for their "new act one condition on which opposition was dropped was a "better supply of water to Wolviston. Although the Company's "memory has repeatedly been jogged the supply is no better. I "urge that the Company be made to redeem their promise, for the "present supply is a great inconvenience to the inhabitants and a "danger to health, besides the fact that the consumers are paying "for what they don't get."



*Sewerage*:—The irrigation works at Stillington have been completed but means for the better distribution of the sewage is required. Works are required for Wolviston, as the beck is being contaminated. The sewers acted efficiently. To meet the developments at Norton it is proposed to lay a new sewer down Portrack Lane and to instal a pumping station to drive the sewage from the Beaconsfield Street area into the new sewer.

*Scavenging* was well done by contractors though a little irregularly in one or two districts.

*Housing*.—New Houses: 58 were built, in the parish of Norton (35), Billingham (10), and in the agricultural area (13).

*Streets*:—The new streets at Norton have been scheduled and will be made during the summer months.

Dr. Blandford says:—"I must congratulate the Authority on "the efficient way in which they require the making of the streets "by paving, flagging, and channelling. The streets when made "in such an efficient manner can be thoroughly and easily "cleansed, and I believe that keeping the streets clean and free "from dust is a large factor in keeping a district healthy."

*Dairies and Cowsheds* (66).—The report of the Inspector, which is appended, states that most of the cowsheds were satisfactory. One was closed and another requires to be dealt with similarly, as it cannot be made fit. Two byres were rebuilt and nuisances in 17 others were abated by serving informal notices.

Improvements made or required to insanitary property, and slaughter-houses are not mentioned in the report. There are no common lodging-houses in the district.

*Workshops* (12) were inspected on 37 occasions and *Premises of Outworkers* (2) were visited on 8 occasions.

### SANITARY REQUIREMENTS.

1. Means for the better distribution of the sewage at the Stillington works.
2. Sewage disposal works for Wolviston.
3. A constant water supply for Wolviston.

## SUNDERLAND RURAL DISTRICT.

ROBERT STOBO, M.B., B.Hy., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	29,511	28,819
Birth-rate .. .. .	33·61	35·7
Death-rate .. .. .	15·82	15·0
Zymotic death-rate .. .. .	3·04	1·1
Phthisis death-rate .. .. .	0·78	0·79
Total Tuberculosis death-rate	1·35	1·52
Respiratory diseases death-rate.. .. .	3·21	2·88
Infant mortality-rate per 1,000 births .. .. .	152	128

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	152	154
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	64	98
Diphtheria .. .. .	25	28
Fevers (Enteric, &c.) .. .. .	38	11
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	64	42
Measles .. .. .	(21)	(9)
Whooping cough .. .. .	(22)	(9)
Diarrhœa .. .. .	(39)	(9)

Several cases of enteric fever traced to consumption of musse's. (See page xxi). Diphtheria favoured by damp surroundings, such as unpaved streets. Tuberculosis. (See page xxxiii). Infant mortality at Tunstall. (See page vii).

## GENERAL SANITATION.

*Water.*—With a few exceptions the whole district is supplied by the Sunderland and South Shields Water Company. This Company's mains have been carried into New Silksworth, and action is being taken to have the water laid on to the houses in the village. Arrangements have also been made for a public supply to 3 outlying farms, and some neighbouring cottages in the Parish of Tunstall.

*Scavenging* was well done on the whole, but Dr. Stobo complains that the work is unduly disorganised by snow-storms and holidays.

*Housing.*—(a) New Houses: 127 were erected—at Ryhope (79), Fulwell (25), Ford (14), &c. The new houses being built by the District Council under the Housing of the Working Classes Act in the Parishes of Ryhope and Tunstall are nearing completion. (b) Insanitary Property: One house was closed and 3 others are being dealt with under the Housing of the Working Classes Act. Fourteen tenements formed by the division of small houses into 2 or more tenements were dealt with, and the owners

were compelled to let the houses to single tenants only. One hundred and twenty ash-closets and 5 water-closets replaced ash-pit-privies. Action with regard to certain houses in Blind Lane, Tunstall, has been deferred pending the completion of the new houses being built by the District Council in that Parish.

*Nuisances.*—433 were abated; 232 informal and 206 formal notices were served.

Dr. Stobo states: “It was your Council’s intention to carry out another large paving scheme in the various Parishes in your District, but I believe that you have found it necessary to modify your original scheme at the request of some of the Parish Councils, owing to depression of trade. It is to be hoped that your entire scheme will not be indefinitely postponed, as I am sure such work will have a material effect on the health of the inhabitants in your district.”

*Dairies and Cowsheds.*—The majority of the cowsheds are reported to be very satisfactory. The report states: “There were altogether 36 dairy farms, having 515 milch cows. Of that number 62 have been tested by the Tuberculin test, and the farmers had certificates that they were free from Tuberculosis. There is every indication that this number is likely to gradually increase. Farmers are now beginning to be of opinion that it pays to have a tested herd.” Mr. Mitchell, Veterinary Surgeon, who made an inspection of the cows in the district, discovered 3 cows suffering from tuberculous disease of the udder. The cows were isolated and the milk was condemned as unfit for human consumption.

*Factories and Workshops.*—(46) were all visited. Failure to affix abstracts on the walls under the Factory and Workshop Act in 9 instances was reported to the Inspector of Factories.

### SANITARY REQUIREMENTS.

None mentioned.

WEARDALE RURAL DISTRICT.  
(Derwent Division.)

ANDREW VEITCH, M.D., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	450	440
Birth-rate .. .. .	11·11	6·8
Death-rate .. .. .	20·00	11·3
Zymotic death-rate.. .. .	nil.	nil.
Phthisis death-rate .. .. .	nil.	nil.
Total Tuberculosis death-rate	nil.	nil.
Respiratory diseases death-		
rate.. .. .	2·22	nil.
Infant mortality-rate per 1,000		
births .. .. .	200	nil.

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	1	nil.
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	nil.	nil.
Diphtheria .. .. .	1	nil.
Fevers (Enteric, &c.) .. .. .	nil.	nil.
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	no hospital.	
Measles .. .. .	(nil.)	(nil.)
Whooping cough .. .. .	(nil.)	(nil.)
Diarrhoea .. .. .	(nil.)	(nil.)

GENERAL SANITATION.

*Water.*—Natural springs are numerous, and the water is good and abundant. Edmondbyres and Ruffside have public supplies.

*Scavenging.*—The refuse is satisfactorily disposed of as manure or is thrown on to waste land on the moors. There are two water-closets in the district, the rest of the houses being provided with privies.

*Housing.*—Dr. Veitch says: "This is ample. Many of the "houses are unoccupied. A few of the older houses are built back "to back. At the village of Ruffside two houses have been "partially reconstructed, the woodwork being renewed; there "are no back doors at these houses."

*Nuisances.*—No complaints were received.

There are no lodging-houses, slaughter-houses, factories, or workshops. The condition of the cowsheds is not mentioned.

SANITARY REQUIREMENTS.

None mentioned.

## WEARDALE RURAL DISTRICT.

(Stanhope Division).

JAMES BANNERMAN, M.B., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	2,615	2,615
Birth rate .. .. .	27·53	24·4
Death-rate .. .. .	11·08	13·3
Zymotic death-rate .. .. .	nil.	nil.
Phthisis death-rate .. .. .	0·76	2·33
Total Tuberculosis death-rate	1·14	2·29
Respiratory diseases death-rate..	0·76	0·76
Infant mortality-rate per 1,000 births .. .. .	55	46

*Infectious Diseases—Cases & (Deaths).*

	1908	1907.
Total notifications .. .. .	9	38
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	1	23
Diphtheria .. .. .	4	8
Fevers (Enteric. &c.) .. .. .	1	nil.
Puerperal fever .. .. .	nil.	nil.
Cases treated at hospital ..	No hospital.	
Measles.. .. .	(nil.)	(nil.)
Whooping cough .. .. .	(nil.)	(nil.)
Diarrhoea .. .. .	(nil.)	(nil.)

## GENERAL SANITATION.

*Water*, supplied by the Council, was abundant. Twenty-three houses at Frosterley were connected with the mains. Similar improvements are required at Buckler Dale Farm.

*Sewerage*.—The works at Frosterley, Hill End, Crawleyside, and Rookhope acted satisfactorily.

*Housing*.—New Houses: 15 were built and occupied at Frosterley and 2 houses are being built at Bridge End. One house was reconstructed at Frosterley.

*Nuisances*.—At Crawleyside nuisances caused by neglect of scavenging were dealt with; otherwise few occurred in the district.

*Factories* (1 whinstone) and *Limestone Quarries* (7) were conducted satisfactorily.

## SANITARY REQUIREMENTS.

None mentioned.

## WEARDALE RURAL DISTRICT.

(St. John's Division).

JOHN EASTON, L.R.C.P., Medical Officer of Health.

*Vital Statistics.*

	1908.	1907.
Estimated Population .. ..	3,186	3,186
Birth-rate .. .. .	21·02	24·4
Death-rate .. .. .	17·26	18·9
Zymotic death-rate .. .. .	nil.	nil.
Phthisis death-rate .. .. .	1·25	1·25
Total Tuberculosis death-rate	1·25	1·25
Respiratory diseases death-rate.. .. .	0·94	0·31
Infant mortality-rate per 1,000 births .. .. .	134	76

*Infectious Diseases—Cases & (Deaths).*

	1908.	1907.
Total notifications .. .. .	5	9
Smallpox .. .. .	nil.	nil.
Scarlet fever .. .. .	2	3
Diphtheria .. .. .	1	1
Fevers (Enteric, &c.) .. .. .	nil.	nil.
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	no hospital.	
Measles.. .. .	(nil.)	(nil.)
Whooping cough .. .. .	(nil.)	(nil.)
Diarrhoea .. .. .	(nil.)	(nil.)

## GENERAL SANITATION.

*Water* has been laid on to 12 houses, and the public supplies of St. John's and Wearhead have been improved by replacing the sanitary piping by cast-iron pipes.

*Sewerage* at Wearhead, St. John's Chapel and Westgate was satisfactory. Ireshopeburn has been sewered, and 1½ acres of land has been acquired for the sewage works.

*Housing.*—(a) New Houses: Two are being built at Wearhead. (b) Insanitary Property: Improvements were made to the Commercial Hotel, St. John's Chapel; four cottages at Burnfoot, St. John's Chapel, in a dangerous condition, were partly dismantled.

*Cowsheds.*—One new byre was erected, and another was improved with respect to ventilation.

## SANITARY REQUIREMENTS.

1. Refuse depôts for the different villages.
2. The continuance of the work of improving the cowbyres.
3. The continued distribution of information to the public in regard to the best means of preventing consumption.

## WEARDALE RURAL DISTRICT. (Wolsingham Division).

R. H. O. GARBUTT, L.R.C.P., Medical Officer of  
Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases &amp; (Deaths).</i>		
	1908.	1907.		1908.	1907.
Estimated Population .. ..	3,600	3,600	Total notifications .. .. .	7	76
Birth-rate .. .. .	22·50	26·6	Smallpox .. .. .	nil.	nil.
Death-rate .. .. .	15·27	11·3	Scarlet fever .. .. .	nil.	53
Zymotic death-rate .. .. .	0·55	1·6	Diphtheria .. .. .	4	17
Phthisis death-rate .. .. .	0·83	0·55	Fevers, (Enteric, &c.) .. ..	1	2
Total Tuberculosis death-rate	1·94	0·83	Puerperal fever .. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at hospital ..	No hospital.	
rate.. .. .	2·50	2·77	Measles.. .. .	(1)	(1)
Infant mortality-rate per 1,000			Whooping cough .. .. .	(nil.)	(nil.)
births .. .. .	98	104	Diarrhoea .. .. .	(1)	(1)

### GENERAL SANITATION.

*Water* from the Weardale and Consett Water Company's mains has been laid on to 6 houses, bringing the total number of houses thus supplied up to 497. Bradley Hall and Dene House Farms were also similarly supplied, but High Wiserley Farm is still without a proper water supply.

*Sewerage.*—Thornley village was sewered and the house drainage was connected up.

*Scavenging* was done satisfactorily by the contractor.

*Housing.*—(a) New Houses: 3 were erected. (b) Insanitary Property: A few houses were respouted and 3 ash-closets were built. Improvements are required to an insanitary yard and ash-pit privy belonging to a house in Meadhope Street, where a case of enteric fever occurred.

*Nuisances* (3) were abated.

*Cowsheds* (30) were inspected and notices in most instances were served for improvement of the lighting, paving, and drainage. One new byre was built and 8 were greatly improved.

*Factories and Workshops* were maintained satisfactorily.

### SANITARY REQUIREMENTS.

An improved water supply to High Wiserley Farm.

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## PORT SANITARY DISTRICTS.

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### HARTLEPOOL PORT.

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

*Hospital.*—The number of patients admitted into Hospital was 31 as compared with 50 in the previous year. Of these only two were removed from vessels, viz., two cases of typhoid fever, the remainder being patients from the Boroughs of West Hartlepool (24), and Hartlepool (5). Three of the cases of enteric fever treated proved fatal. Dr. Biggart states that the Hospital is in good sanitary condition and repair, and that it is capable of meeting the requirements of the locality. The drainage and sanitary arrangements are stated to be working satisfactorily.

The new regulations relating to unsound food and foreign meat were put into operation. 3,500 eggs and 2 cases of oranges were seized and destroyed.

*Inspection of Ships.*—2 cases of infectious disease, as mentioned above, were imported by vessels arriving at the port. One hundred and twenty-six vessels were inspected by the Medical Officer of Health and there were 7 re-visits; the vessels which were inspected including 51 with cases of sickness on board, 61 which came from suspected or infected ports, 8 with sanitary defects, 4 with stowaways on board, and 2 with dead bodies on board. A number of ships arrived from the Baltic and North Sea ports during the year and, in view of the epidemic of



cholera in Russia, careful attention was given to these ships. These ships and their crews were carefully inspected, but no cases of cholera were detected. The number of vessels inspected by the Port Sanitary Inspectors was 1,726, and there were 324 re-visits, the nationality of the vessels numbering 739 British, 303 Swedish, 222 Norwegian, 146 Danish, 116 German, and 57 Russian, &c.

*Structural and Sanitary Defects.*—The report states that 185 cases of structural defects were noted on vessels, of which 181 were remedied. Also 18 nuisances from choked water-closet pans were abated and 18 water tanks were cleansed. A number of ships were cleansed and painted, and a quantity of dirty bedding was destroyed.

## RIVER TYNE PORT.

W. EDMUND HARKER, M.D., D.Hy., Medical Officer  
of Health.

*Diseases on Shipboard.*—The following cases were reported:—

	On voyage.	On or after arrival.
Smallpox and suspected smallpox	—	1
Measles ... ..	2	—
Typhus fever... ..	2	—
Scarlet fever ... ..	1	—
Enteric fever .. ...	19	12
Cholera ... ..	2	—
Choleraic diarrhœa, etc. ... ..	13	8
Malarial fever ... ..	114	7
Dysentery ... ..	14	—
Beri Beri ... ..	12	9
Influenza .. ...	22	

Vessels to the number of 58 were visited by the Medical Officer of Health on account of reported or suspected sickness,

and a list of the vessels so boarded, and giving their nationality, port of departure, nature of sickness, and general remarks, is tabulated in the report.

During the year 32 cases were treated in the Floating Hospital, the patients all being removed from vessels, and one of them, suffering from dysentery, died. No cases of cholera or plague were imported during the year.

*Vessels from Infected or Suspected Ports.*—938 vessels were boarded by the Port Officers on account of their coming directly, or otherwise, from foreign ports infected, or suspected to be infected, with cholera, yellow fever, plague, or smallpox. The names of the infected or suspected ports are given in the report.

*Emigrants.*—The number of known emigrants passing through the port during 1907 was 3,421, and they were all bound for America. All emigrant vessels were inspected and kept under supervision, and information as to emigrants debarking and proceeding overland to other British ports continues to be forwarded to the respective ports.

*General Sanitary Work.*—The number of vessels inspected by the Port Inspectors was 10,603, and, in addition, visits to 18 water-boats and 17 gangways were paid. Of the vessels inspected, 6,331 were British, the others including 1,217 Norwegian, 889 German, 585 Danish, 500 Swedish, 304 Spanish, and 303 Dutch. In 845 vessels there were structural defects and 332 were in a dirty condition. Details of structural defects are given in the report. 1,947 vessels coming from foreign ports were inspected. Special cargoes inspected numbered 1,250, the majority of the cargoes (963) being fish. Four cargoes of frozen meat were inspected.

*Water Supply.*—The water-boats were examined as usual and their tanks found to be in good condition, while the drinking water of 91 vessels, which came from ports infected, or suspected to be infected with cholera, was changed and the tanks purified.

*Disinfection.*—32 vessels and several lots of clothing and bedding were disinfected, while 514 old beds were burnt, and 14 lots of filthy clothing destroyed on account of infection.

Five smoke nuisances were detected, and the offender in each instance was communicated with, while the cleansing of foul fishing-boats and cattle-ships was performed as usual under the supervision of the Inspectors.

From one cargo it was necessary to seize and destroy 83 carcasses of frozen mutton, and from another 56 bags containing boned beef, sheep's kidneys, and hearts, &c.

The Public Health (First Series: Unsound Food) Regulations and the Public Health (Foreign Meat) Regulations are being enforced by the Port Sanitary Authority pending the decision of the Local Government Board on this matter.

**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 1908 (Estimated).	Births.	Deaths.	Birth-rate	Death-rate.	Zymotic death-rate.	Infant Mortality per 1,000 Births.	Phthisis death-rate.	Lung Diseases death-rate.	Number of Cases Notified.	Hospital accommodation?	Number of cases removed to Hospital.	Percent age of Notified cases removed to Hospital.	Deaths occurring within District, exclude 1.	Deaths occurring outside District, include 1.
<b>BOROUGHS.</b>																	
Darlington .. ..	J. Lawrence, M.D. .. ..	3956	51000	1575	765	39.88	15.00	1.55	118	1.15	1.76	159	Yes	122	76.7	20	6
Darham .. ..	A. M. Vann, M.R.C.S. .. ..	1065	17200	449	806	26.10	17.79	2.26	175	0.98	3.10	51	Yes	23	45.0	68	3
Hartlepool .. ..	J. Rawlings, M.R.C.S. .. ..	735	24000	704	354	29.29	14.75	1.41	127	0.95	2.25	85	Yes	6	7.0	22	41
Jarrow .. ..	J. M. Nicoll, M.B. .. ..	1064	31700	1159	560	33.40	16.13	1.47	190	1.41	2.68	101	Yes	33	32.6	1	65
Stockton .. ..	Thomas Horne, M.D. .. ..	3031	54242	1688	950	31.11	17.51	2.72	150	1.21	2.54	243	Yes	160	65.8	27	22
<b>URBAN DISTRICTS.</b>																	
Aunfield Plain .. ..	T. Benson, L.R.C.P. .. ..	3489	15800	582	243	36.83	15.37	2.78	142	0.31	2.02	103	Yes	52	50.4	..	21
Barnard Castle .. ..	A. H. Sevier, M.B. .. ..	560	4684	109	80	23.27	17.07	0.85	91	1.25	2.13	9	Yes	Nil.	Nil.	8	1
Benfieldside .. ..	Wm. Allen, M.D. .. ..	1525	7650	247	143	32.28	18.69	2.48	174	1.30	2.48	23	Yes	6	26.0	..	11
Bishop Auckland .. ..	T. A. McCullagh, M.R.C.S. .. ..	691	13136	434	224	33.03	17.05	1.97	126	0.83	2.20	121	Yes	27	22.3	41	..
Blaydon .. ..	H. Morrison, M.B., B.S., B.Hy.	9323	26357	1090	409	41.35	15.51	3.41	159	0.49	2.42	175	Yes	112	64.0	2	12
Brandon & Byshottles	H. Smith, M.D. .. ..	6669	17923	662	320	36.93	17.85	3.06	191	0.66	3.45	225	Yes	80	35.5	..	7
Consett .. ..	A. D. M. Macintyre, M.B. .. ..	1005	10969	372	190	33.91	17.32	2.00	201	1.45	2.64	13	Yes	5	38.4	1	21
Crook .. ..	A. Mackay, M.D. .. ..	4056	11800	406	211	34.40	17.87	2.37	155	0.67	3.64	73	Yes	28	38.3	..	10
Felling .. ..	W. E. Peacock, M.D., B.Hy. .. ..	2684	26940	894	428	33.18	15.88	2.04	140	0.89	3.00	173	Yes	Nil.	Nil.	..	29
Hebburn .. ..	A. M. G. Walker, L.R.C.P. .. ..	1241	23577	807	333	34.22	14.12	1.90	127	0.89	2.58	126	Yes	59	46.8	2	24
Hetton-le-Hole .. ..	J. Adamson, M.D. .. ..	1617	14600	566	240	38.76	16.43	3.28	136	1.16	2.53	186	Yes	34	18.2	..	7
Houghton-le-Spring .. ..	D. S. Park, F.R.C.S. .. ..	1551	9725	366	191	37.63	19.64	2.26	191	1.13	4.21	88	Yes	16	18.1	3	4
Leadgate .. ..	Wm. Allen, M.D. .. ..	1836	4800	177	70	36.87	14.58	3.54	141	0.83	1.45	8	Yes	1	12.5	..	..
Ryton .. ..	James W. Smith, M.D. .. ..	5169	11450	412	146	35.98	12.75	2.35	114	0.43	1.13	124	Yes	33	26.6	1	4
Seaham Harbour .. ..	L. Gerald Dillon, M.D. .. ..	1101	12500	470	236	37.60	18.88	2.00	144	1.12	2.72	43	Yes	13	30.2	2	22
Schildon .. ..	S. Fielden, M.D. .. ..	1066	13687	514	211	37.55	15.40	2.33	101	1.38	2.55	109	Yes	67	61.4	..	9
Southwick-on-Wear .. ..	John J. Carruthers, M.B. .. ..	856	15148	581	278	38.35	18.35	2.77	187	1.12	3.30	67	Yes	48	71.6	..	32
Spennymoor .. ..	W. Mussellwhite, M.R.C.S., D.P.H.	3388	16870	712	314	42.20	18.60	2.78	160	0.77	3.37	114	Yes	82	71.9	..	17
Stanhope .. ..	John Gray, M.B. .. ..	216	2006	45	24	22.43	11.95	Nil.	44	0.49	1.49	10	No*	Nil.	Nil.	7	2
Stanley .. ..	T. Benson, L.R.C.P. .. ..	3593	20500	816	372	39.80	18.14	3.51	191	1.26	3.65	121	Yes	94	77.6	..	23
Tanfield .. ..	T. Benson, L.R.C.P. .. ..	4779	9600	355	144	36.97	15.00	2.81	107	0.83	2.70	90	Yes	44	48.8	7	9
Tow Law .. ..	J. H. Naismith, M.D. .. ..	477	4371	137	54	31.42	12.35	0.45	72	0.68	2.97	16	Yes	6	37.5	..	..
Whickham .. ..	Andrew Smith, M.D. .. ..	5914	16195	580	238	35.81	14.6	1.97	127	1.17	2.59	99	Yes	25	25.2	..	14
Willington .. ..	R. E. Brown, L.R.C.P. .. ..	3793	7959	281	182	35.30	22.86	2.88	241	0.50	4.27	60	Yes	46	76.6	..	7

\* Hospital accommodation for small-pox cases only.



TABLE A1.

ADMINISTRATIVE COUNTY OF DURHAM.

DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES.

URBAN 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 65	65 and upwards.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria & Membranous Croup.	Croup.	FEVERS.				Epidemic Influenza.	Dysentery.	Enteritis.	Puerperal fever.	Erysipelas.	Other Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Diseases.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Cirrhosis of Liver.	Nephritis.	Diseases of the Urinary Organs.	Diseases of the Circulatory System.	Diseases of the Nervous System.	Diseases of the Digestive System.	Diseases of the Genito-Urinary System.	Diseases of the Skin.	Diseases of the Bones and Joints.	Diseases of the Senses.	Diseases of the Heart.	Accidents.	Suicides.	All other Causes.
														Typhus.	Enteric.	Other Continued.	Other.																											
Darlington .. ..	765	187	78	33	30	225	203	15	1	18	8	2	2	2	23	36	9	4	57	26	34	61	28	1	75	5	1	19	2	66	14	6	292											
Durham .. ..	806	79	45	7	7	56	72	2	1	4	3	1	3	26	5	17	10	13	31	20	1	3	5	2	9	3	29	7	5	103														
Hart'epool .. ..	354	90	45	13	19	115	72	4	4	5	4	1	2	17	2	23	22	36	15	4	2	5	17	1	40	12	116																	
Jarrow .. ..	560	151	74	21	24	179	111	8	1	4	4	2	2	3	32	1	49	22	19	41	62	12	3	6	22	4	50	51	3	189														
Stockton .. ..	955	254	149	40	40	287	185	69	32	12	1	7	7	34	2	4	1	4	66	56	38	74	61	3	4	11	2	13	77	89	306													
Annfield Plain ..	243	83	30	11	13	61	45	5	7	3	1	3	26	4	5	6	11	17	15	5	12	13	24	14	85																			
Barnard Castle ..	88	10	3	1	4	35	35	2	1	1	1	1	1	1	1	6	2	8	2	8	2	1	1	20	1	31																		
Benfieldside .. ..	143	43	11	6	8	47	28	1	9	4	9	4	9	10	2	7	5	14	1	5	20	1	55																					
Bishop Auckland ..	229	58	27	8	12	60	64	1	5	4	2	1	5	18	1	3	13	11	13	19	13	1	1	2	12	4	19	4	77															
Blaydon .. ..	409	174	64	16	12	93	50	5	1	22	1	2	3	3	58	1	1	8	13	8	15	30	34	5	4	17	7	27	8	2	134													
Brandon & Byshottles	320	127	53	10	9	69	52	13	4	4	8	3	3	23	3	12	21	9	30	30	2	1	1	21	6	19	7	3	98															
Consett .. ..	190	75	19	7	7	51	31	6	1	1	1	1	15	3	16	9	6	12	15	2	3	2	22	6	14	4	53																	
Crook .. ..	211	63	27	9	9	55	48	7	4	1	4	1	13	7	8	8	9	14	29	4	1	8	3	22	13	55																		
Felling .. ..	999	126	74	13	26	106	54	2	3	14	4	2	2	4	30	8	1	24	22	18	28	52	1	2	5	36	1	20	9	2	109													
Hebburn .. ..	333	103	60	9	13	107	41	1	2	13	3	1	1	25	5	21	10	12	16	45	1	1	16	2	36	12	110																	
Hetton-le-Hole ..	240	77	35	11	7	61	49	7	5	9	2	1	2	25	17	4	10	22	15	3	19	3	21	5	1	69																		
Houghton-le-Spring..	191	70	25	6	5	49	36	2	2	2	5	13	2	11	5	5	15	26	4	1	2	4	3	2	4	9	2	22																
Leadgate .. ..	70	25	11	4	4	23	7	5	2	9	4	1	12	1	5	8	7	10	3	5	10	7	3	60																				
Ryton .. ..	147	47	27	4	5	31	33	2	9	4	5	1	13	3	14	24	8	14	20	2	15	28	14	2	66																			
Seaham Harbour ..	236	68	39	17	12	62	38	1	5	1	5	1	13	3	19	12	6	24	11	7	2	21	4	65																				
Shildon .. ..	211	52	40	11	13	61	34	3	11	3	3	4	1	11	3	1	19	12	6	24	11	7	2	21	4	96																		
Southwick-on-Wear..	278	110	40	11	8	68	41	4	1	17	2	1	16	10	2	17	4	9	32	17	1	16	4	23	4	2	96																	
Spennymoor .. ..	314	115	37	6	12	88	56	1	8	1	5	1	3	31	4	13	6	15	21	36	2	2	1	16	4	25	11	2	106															
Stanhope .. ..	23	2	1	2	11	7	7	1	29	2	1	8	2	31	10	26	16	9	32	42	1	1	4	15	1	29	6	105																
Stanley .. ..	372	156	59	16	14	84	43	1	1	29	2	1	8	2	31	10	8	8	6	7	19	1	3	10	2	1	56																	
Tanfield .. ..	151	38	22	10	12	44	25	3	4	3	8	3	1	6	1	1	3	8	8	6	4	1	1	4	2	4	2	22																
Tow Law .. ..	54	10	3	3	20	18	1	12	2	1	16	2	19	11	8	11	8	11	5	1	2	11	7	18	7	1	71																	
Whickham .. ..	238	74	34	6	11	74	59	3	2	1	6	17	1	4	4	9	21	13	3	10	5	11	5	1	65																			
Willington .. ..	182	68	16	4	11	42	41	3	2	1	6	17	1	4	4	9	21	13	3	10	5	11	5	1	65																			
TOTAL .. ..	8212	2535	1147	307	361	2304	1558	144	36	264	86	24	65	1	72	568	85	10	4	21	501	339	330	661	663	16	96	55	23	387	84	705	236	34	2702									

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.



**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 (Estimated).	Births.	Deaths.	Birth-rate	Death-rate.	Zymotic death-rate.	Infant Mortality per 1,000 Births.	Phthisis 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. G. Willis, L.R.C.P., D.P.H. . .	57334	59840	2151	1006	35·94	16·81	2·33	147	0·61	2·70	401	Yes	114	28·4	8	30	
Barnard Castle ..	James C. Neligan, L.R.C.S. . .	79961	11808	329	188	27·84	15·92	1·86	112	0·76	1·69	41	Yes	8	19·5	..	7	
Chester-le-Street ..	J. Taylor, M.D., D.P.H. . .	34620	74916	2809	1325	37·49	17·68	3·52	176	0·85	2·49	685	Yes	124	18·1	..	14	
Darlington .. ..	Robert H. Meikle, M.B. . .	42019	9591	294	134	30·65	13·97	0·31	95	1·04	1·56	26	Yes†	4	15·3	..	11	
Durham .. ..	A. T. Harrison, L.S.A. . .	31053	28932	1065	516	36·81	17·83	1·97	156	0·79	2·73	99	Yes	67	67·6	5	23	
Easington .. ..	J. Arthur, L.R.C.P., D.P.H. . .	37018	54614	2088	915	38·23	16·66	2·92	162	0·76	2·45	503	Yes	45	8·9	16	14	
Hartlepool .. ..	T. G. Ainsley, M.D. . .	19090	2355	53	26	22·50	11·04	1·27	132	nil	1·27	5	Yes†	nil	nil	130	..	
Houghton .. ..	D. S. Park, F.R.C.S. . .	8398	17705	734	325	41·45	18·35	3·44	190	0·45	3·38	172	Yes	22	12·7	..	14	
Houghton .. ..	J. R. Sutherland, L.R.C.P. . .	4794	4824	168	77	34·82	15·96	1·45	172	0·20	2·48	35	Yes	4	11·4	..	4	
Lanchester .. ..	J. Wilson, M.D. . .	29949	22570	860	356	37·66	15·33	2·34	146	1·01	3·19	108	Yes	84	77·7	66	12	
Lanchester .. ..	W. T. Bolton, L.R.C.P. . .	21193	8932	292	126	32·6	14·10	2·24	123	0·67	2·57	25	Yes	16	64·0	..	1	
Lanchester .. ..	Frederick Hunton, M.D. . .	45006	29710	1095	476	36·85	16·02	2·55	160	0·84	3·16	213	Yes	44	20·6	143	13	
Sedgefield .. ..	W. Armstrong, L.R.C.P. . .	12073	12002	400	211	33·32	17·58	2·33	140	1·41	2·41	87	Yes	25	28·7	278	5	
Stockton .. ..	J. W. Blandford, L.R.C.P. . .	34539	19081	564	248	29·55	12·99	0·68	95	1·10	1·51	105	Yes†	47	44·7	..	18	
Sunderland .. ..	Robert Stobo, M.B., B.Hy. . .	6980	29511	992	467	33·61	15·82	3·04	152	0·78	3·21	152	Yes	64	42·1	..	36	
Weardale .. ..	Andrew Veitch, M.D. . .	13144	450	5	9	11·11	20·00	nil	200	nil	2·22	1	No*	..	..	..	..	
Weardale .. ..	James Bannerman, M.B. . .	24864	2615	72	29	27·53	11·08	nil	55	0·76	0·76	9		..	..	..	..	4
Weardale .. ..	John Easton, L.R.C.P. . .	36096	3186	67	55	21·02	17·26	nil	134	1·25	0·94	5		..	..	..	..	1
Weardale .. ..	R. H. O. Garbutt, L.R.C.P. . .	21552	3600	81	55	22·50	15·27	0·55	98	0·83	2·50	7		..	..	..	..	1

\* This district has hospital accommodation for small-pox cases only in the adjoining urban district.

† In these districts arrangements have been made by which fever patients may be removed to the hospital



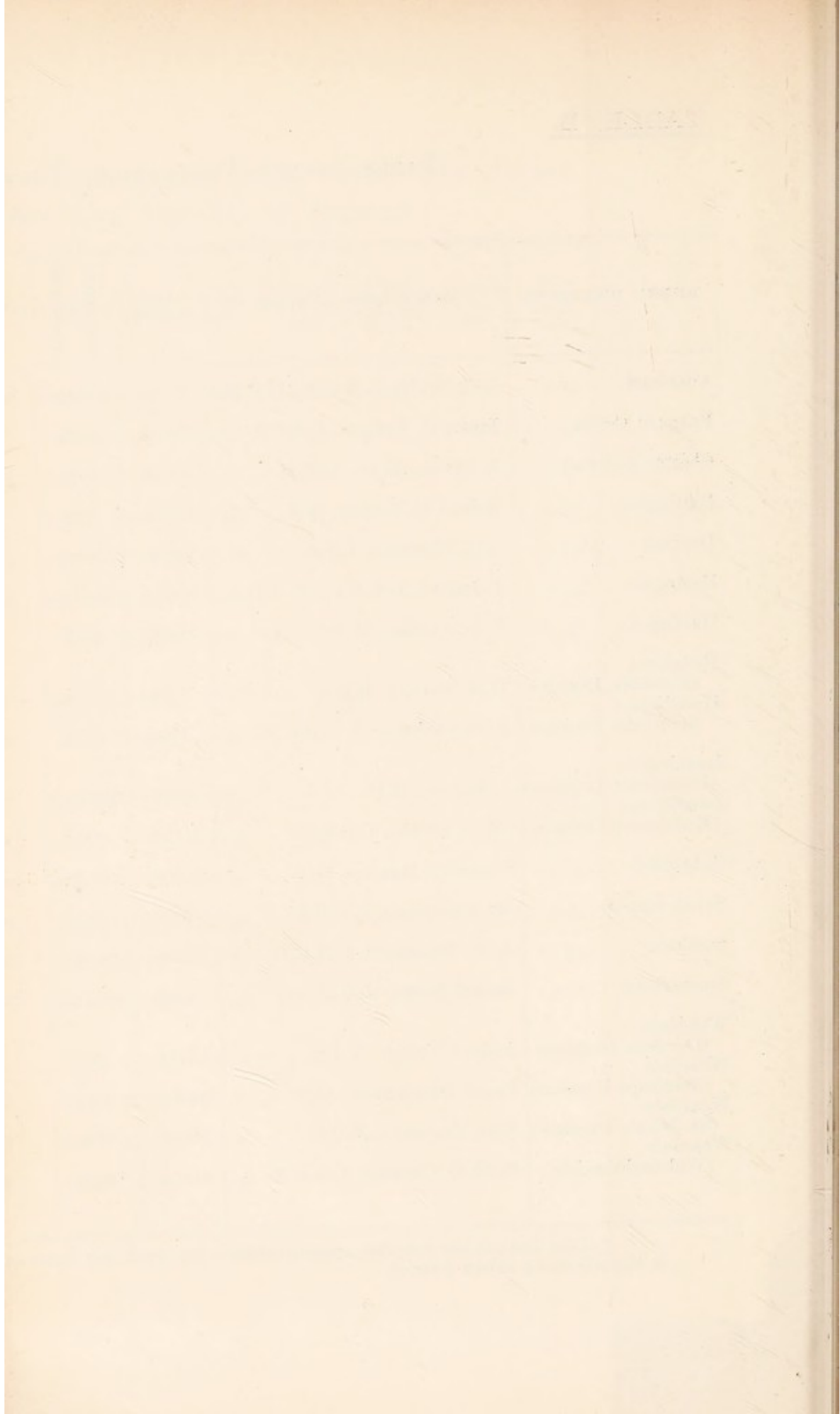


TABLE B1.

ADMINISTRATIVE COUNTY OF DURHAM.

DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES.

RURAL DISTRICTS.	DEATHS AT SURJOINED AGES.						DEATHS FROM SURJOINED CAUSES.																														
	At all Ages.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria & Membranous Croup.	Croup.	Typhus.	Enteric.	Other Cont'd.	Epidemic Influenza.	Dysentery.	Enteritis.	Paratyphoid Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Hemiplegia.	Other Diseases of Respiratory Organs.	Alcoholism or other causes of Liver.	General Diseases.	Preterm Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.
Auckland .. ..	1006	317	135	33	50	244	227	..	11	3	18	11	3	..	21	..	16	73	12	2	1	..	37	29	29	78	83	1	12	5	..	42	4	83	34	6	389
Barnard Castle ..	188	37	18	10	5	56	62	..	3	..	6	8	..	..	..	..	1	5	..	..	..	..	9	2	7	13	6	1	2	2	..	9	2	30	4	..	78
Chester-le-Street ..	1325	497	176	53	53	342	201	..	17	13	46	13	..	..	16	..	3	159	3	8	1	12	64	53	44	64	122	1	13	7	3	78	3	94	53	5	430
Darlington .. ..	184	23	13	4	11	46	32	..	..	..	2	..	2	..	..	..	4	1	1	..	..	..	10	8	6	10	5	..	..	1	..	6	..	13	5	..	60
Durham .. ..	498	167	65	24	26	125	91	..	14	2	6	5	..	..	4	..	5	26	3	..	..	..	23	29	8	32	47	..	5	2	..	27	9	49	12	5	185
Easington .. ..	910	333	132	26	31	231	158	..	7	3	19	8	2	..	17	..	5	106	10	5	1	5	42	34	18	66	64	4	13	6	..	52	17	38	32	1	335
Hartlepool .. ..	26	7	2	2	..	6	9	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	2	2	1	..	..	2	..	2	..	1	1	..	11
Houghton (Northern Division)	325	141	45	3	13	76	48	..	..	1	18	3	1	..	9	..	..	30	3	..	1	..	8	10	7	35	23	2	..	4	..	10	4	15	12	1	128
Houghton (Southern Division)	77	23	9	3	7	15	14	..	..	..	1	..	..	..	1	..	2	5	1	..	..	..	1	4	2	6	5	1	..	..	5	1	9	7	2	23	
Lanchester (Lanchester Division)	356	126	48	25	20	75	62	..	3	1	8	5	..	..	7	..	1	29	4	..	..	..	23	15	8	35	37	..	..	1	..	26	2	20	14	..	117
Lanchester (Medomsley Division)	126	35	17	4	3	41	25	..	..	..	..	..	2	..	1	..	..	17	5	1	1	..	6	2	8	8	15	..	..	..	5	1	9	3	1	41	
Sedgefield .. ..	476	176	63	20	22	121	74	..	2	6	20	6	..	..	5	..	5	37	5	..	..	..	25	8	16	42	51	1	4	2	..	59	6	38	18	3	117
South Shields ..	201	56	21	9	9	63	43	..	4	..	1	5	..	..	5	..	..	13	..	..	1	..	17	15	9	12	17	..	1	2	2	9	6	13	5	..	64
Stockton .. ..	248	54	23	14	15	85	57	..	2	1	2	4	..	..	..	..	4	4	1	2	..	..	21	11	17	15	14	..	..	2	..	8	2	23	14	1	100
Sunderland .. ..	467	151	80	16	12	121	87	..	21	..	22	2	..	..	6	..	4	39	3	..	1	..	23	17	22	48	44	3	12	2	1	16	..	36	14	3	128
Weardale (Derwent Division)	9	1	..	..	..	6	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2	1	..	4
Weardale (Stanhope Division)	25	4	1	..	..	6	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	5	2	..	..	..	2	1	3	..	..	..	9	
Weardale (St. John's Division)	54	9	4	1	2	22	16	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	4	..	2	..	3	..	..	7	..	14	2	..	..	20	
Weardale (Wolsingham Div.)	55	24	3	3	2	13	10	..	1	..	..	..	..	..	..	..	2	1	..	..	..	..	3	4	2	3	6	..	2	1	..	..	1	7	3	..	19
TOTAL .. ..	6506	2197	855	250	281	1657	1236	..	88	30	171	71	11	..	92	..	54	545	51	18	7	17	318	242	213	472	543	14	65	39	6	363	59	497	234	28	2258

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.



**TABLE C.**

Tabulated Statement of the chief Vital Statistics of the Administrative County of Durham for the year 1908, compiled from the monthly returns supplied to the County Medical Officer by the Registrars.

**1908.**

	Population (Estimated 1908).	Births.	Deaths.	Zymotic Deaths.	Per 1,000 Population.				Death under 1 year per 1000 Births.	Percentage of Uncertified Deaths to Total Deaths	
					B rth- rate.	Death- rate.	Zymotic Death- rate.	Phthisis Death- rate.			Bronchitis Pneum'nia & Pleurisy Death-rate
Boroughs ...	177,747	5,550	2,934	377	31.2	16.5	2.12	1.14	2.61	136	2.9
Other Urban Districts	308,970	11,606	5,322	851	37.5	17.2	2.75	0.95	2.87	156	3.5
Rural Districts ...	357,053	14,141	6,555	1,050	39.6	18.3	2.94	0.87	2.86	154	2.8
Administrative County	843,770	31,297	14,811	2,278	37.0	17.5	2.69	0.95	2.81	151	3.1
England and Wales ...	35,348,780	942,611	521,643	46,306	26.5	14.7	1.29	1.11	2.30	121	1.4







TABLE D1.

INSPECTORS' REPORTS—RURAL.

RURAL DISTRICTS.	PUBLIC HEALTH ACTS—NOTICES SERVED AND NUISANCES ABATED.	PUBLIC HEALTH ACTS—NOTICES SERVED AND NUISANCES ABATED.														Samples of Water taken for Analysis.	Samples of Water condemned as unfit for use.	Samples of Unwholesome Food.	Convictions for Unwholesome Food.	Total of Infected Buildings Destroyed.	Houses Disinfected after Infection.	Schools Disinfected after Infection.	Prosecutions for Exposure of Infected Persons or Things.	Convictions for Exposure of Infected Persons or Things.			
		Foul Conditions.	Dwellings, Houses and Schools.	Over-crowding.	Loosing-houses.	Dairies and Milk-shops.	Cowsheds.	Bakehouses.	Slaughter-Houses.	Allyols and Fryers.	Deposits of Refuse and Manure.	Water Closets.	Defective Yard Farnag.	Defective Drains.	No Discom- from Sewers.										Other Faults.	Water Supply.	Pigsties.
AUCKLAND— Population, 53,840 Inspectors of Nuisances— J. Liddle and V. D. Dowson	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	5 3 8	236 18 217	5 1 4	3 4 3	5 4 1	185 57 177	96 129 155	4 4 4	125 31 86	27 10 34	1 1 2	203 19 200	4 9 1	2 9 2	23 21 13	855 282 918	10	8	276	293	3					
BARNARD CASTLE— Population, 11,828 Inspector of Nuisances— Robert Brown	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	2 2 2	29 29 29	2 1 1	1 1 1	4 4 4	8 15 15	34 34 41	41 41 1	1 5 5	5 5 5	5 5 5	24 24 24	2 1 2	1 2 2	13 13 13	169 198 198			8	20						
CHESTER-LE-STREET— Population, 74,916 Inspectors of Nuisances— G. B. Brown, R. J. Swaddle, and J. E. Harrison	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	69 7 68	400 8 418	46 9 37	2 1 1	48 4 41	2 2 2	600 12 643	76 12 70	47 2 53	138 11 95	19 2 17	5 8 5	330 8 326	18 2 28	7 2 4	14 2 11	96 6 114	1977 65 1934	1			1	1			
DARLINGTON— Population, 5,591 Inspector of Nuisances— William Pallister	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	2 1 1	15 12 12	6 1 5	2 1 1	6 3 3	1 1 1	20 23 4	4 4 2	2 2 4	5 3 4	5 3 4	60 29 3	3 4 15	5 10 1	2 2 2	198 134 4	4	4		4	26	2				
DURHAM— Population, 28,932 Inspector of Nuisances— James Manzie	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	76 36 76	116 36 104	11 3 38	33 3 25	33 3 25	20 20 20	52 52 2	2 2 2	63 45 45	63 45 45	63 45 45	4 4 4	10 10 10	10 10 10	29 29 29	438 400 400	4	2		63	63	1				
EASINGTON— Population, 54,514 Inspector of Nuisances— William Emery	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	27 5 32	21 20 10	9 7 5	19 18 18	19 18 18	28 28 28	43 43 16	16 16 16	6 6 6	28 28 13	13 13 13	40 40 40	2 2 2	4 1 1	1 1 1	30 5 30	302 302 302	1	1		49	48				
HARTLEPOOL— Population, 2,345 Inspector of Nuisances— W. Burton, Junr.	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	3 1 3	27 16 24	5 7 5	3 1 3	3 1 3	35 135 33	3 7 3	3 7 3	9 141 8	9 141 8	9 141 8	61 17 61	4 4 4	4 4 4	19 83 19	169 418 163				9	73	3				
HOUGHTON— Population, 22,529 Inspector of Nuisances— W. Morley	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	3 2 3	27 16 24	5 7 5	3 1 3	3 1 3	35 135 33	3 7 3	3 7 3	9 141 8	9 141 8	9 141 8	61 17 61	4 4 4	4 4 4	19 83 19	169 418 163				9	73	3				
LANCHESTER— Population, 31,502 Inspectors of Nuisances— J. R. Lupton & G. W. Westgarth	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	1129 16 1109	9 7 1109	2 1 1	40 1 31	40 1 31	16 135 16	271 135 202	8 6 8	6 141 225	3 13 3	2 15 2	97 13 94	36 11 11	21 21 21	309 83 296	2202 418 2034										
SEDFIELD— Population, 29,710 Inspectors of Nuisances— J. Stones and G. S. Thompson	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	2 2 2	16 16 16	129 128 128	1 1 1	130 135 6	6 6 2	15 12 6	15 12 2	115 44 140	115 44 140	115 44 140	2 2 2	1 2 2	2 2 2	127 127 127	548 578 578	1			20	110					
SOUTH SHIELDS— Population, 19,002 Inspector of Nuisances— William Welsh	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	15 15 15	7 13 2	2 4 4	4 4 4	4 4 4	5 19 5	9 26 5	5 26 5	8 9 13	15 21 21	4 6 11	8 11 11	1 2 2	2 2 2	36 36 36	135 171 171			3	1	29	69				
STOCKTON— Population, 19,081 Inspector of Nuisances— J. Franklin	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	5 1 6	41 2 42	1 1 1	3 1 3	14 1 15	1 2 6	64 2 66	2 1 3	3 1 28	16 16 16	16 16 16	93 2 95	3 1 3	4 1 5	1 1 2	12 13 12	292 13 304	4	1		105	9				
SUNDERLAND— Population, 29,511 Inspector of Nuisances— Ernest Hitchen	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	30 5 35	12 2 14	9 2 4	7 4 7	7 4 7	1 166 185	42 11 28	17 11 13	13 3 11	4 3 7	11 3 7	32 6 38	8 2 8	4 2 6	2 1 3	1 4 34	30 236 413				9	163	3			
WEARDALE— Population, 9,851 Inspector of Nuisances— W. Morley Egglestone	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice . . .	5 1 6	41 2 42	1 1 1	3 1 3	14 1 15	1 2 6	64 2 66	2 1 3	3 1 28	16 16 16	16 16 16	93 2 95	3 1 3	4 1 5	1 1 2	12 13 12	292 13 304	2	1		9	9				



