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COUNTY OF DUMFRIES.

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FORTY-SECOND

ANNUAL REPORT

UPON THE

*Health and Sanitary Condition of  
the County*

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1932

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AND

Report on School Medical Inspection  
and Treatment

*For Year ending 31st July, 1933,*

BY


JOHN RITCHIE, M.B., Ch.B., M.R.C.P.Ed., D.P.H.,

*County Medical Officer.*

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# STAFF, 1932.

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JOHN RITCHIE, M.B., Ch.B., M.R.C.P.Ed., D.P.H.

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WM. CRUICKSHANK, Cert. of Roy. San.  
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JOHN SANSON, Cert. of Roy. San. Assoc. (8) Moffat District.  
A. A. OLIVER, Cert. of Roy. San. Assoc. (9) Langholm District.

To

*The Department of Health for Scotland.*

*The County Council of Dumfriesshire.*

Ladies and Gentlemen,

I have the honour of submitting my Report for 1932, being the Forty-second Annual Report on the Health and Sanitary Conditions of the County of Dumfriesshire.

I also submit the Report on School Medical and Dental Inspection and Treatment for the year ending 31st July, 1933. This has formerly been published separately, but this year it has been possible to get it ready in time for incorporation with the Annual Report for the County.

I am, Ladies and Gentlemen,

Your obedient Servant,

JOHN RITCHIE,  
*Medical Officer of Health.*

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# REPORT.

## VITAL STATISTICS.

### Population.

The Fourteenth Decennial Census of Scotland was taken on 26th April, 1931, but the full details for Dumfriesshire were not available until 1932.

The population of the County, including the Small Burghs but excluding the Large Burgh of Dumfries, amounted to 58,252 persons, of whom 28,044 were males and 30,208 females. This represents a decrease of 1390 (2·3%) since the Census of 1921. The decrease affects the whole County, except Sanquhar District, which shews an increase of 453 or 8·9% on the 1921 figures.

The Registrar-General's estimate to the middle of 1932 was 58,425.

The average density of population for the entire Landward area is 7 persons per 100 acres. It is highest in Annan District (20 per 100 acres), and lowest in Langholm and Moffat (2 per 100 acres).

The population of the various Local Government Districts was :—

Dumfries (1)	.....	.....	.....	6293
Dumfries (2)	.....	.....	.....	5187
Thornhill (3)	.....	.....	.....	7172
Sanquhar (4)	.....	.....	.....	5555
Annan (5) .....	.....	.....	.....	5001
Gretna (6)	.....	.....	.....	5640
Lockerbie (7)	.....	.....	.....	4935
Moffat (8) .....	.....	.....	.....	1904
Langholm (9)	.....	.....	.....	2811

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44,498

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The population of the Small Burghs was :—

Annan	.....	.....	.....	.....	3959
Sanquhar	.....	.....	.....	.....	1753
Lochmaben	.....	.....	.....	.....	1014
Lockerbie	.....	.....	.....	.....	2574
Moffat	.....	.....	.....	.....	2006
Langholm	.....	.....	.....	.....	2448
					13,754

Total Landward and Small Burghs—58,252.

#### POPULATION OF SPECIAL DISTRICTS.

	Water.	Drainage.	Lighting.	Scavenging
Bankshill	34	.....	.....	.....
Blackshaw	230	.....	.....	.....
Canonbie West	109	.....	.....	.....
Crawick	270	.....	.....	.....
Dalton and Kirkwood	99	.....	.....	.....
Dornock	.....	.....	.....	1308
Dumfries Landward	282	.....	.....	.....
Eaglesfield	569	569	.....	.....
Eastriggs	.....	925	925	.....
Ecclefechan	988	658	.....	614
Glencaple	201	201	.....	.....
Gretna	.....	1762	1762	1762
Kirkconnel	3329	3329	3329	3329
Lower Annandale	7925	.....	.....	.....
Moniaive	527	527	512	.....
Netherwood, Kelton, and Craigs	340	.....	.....	.....
Penpont	358	358	.....	.....
Rowanburn	237	207	.....	207
Ruthwell and East Raffles	615	.....	.....	.....
Thornhill	.....	1044	1044	1044

Among the Parishes, increases are shewn in Applegarth (3·2%), Closeburn (8·5%), Dalton (4%), Dryfesdale

(6·2%), Dumfries (1·8%), Ewes (2·6%), Holywood (2·3%), Hutton and Corrie (1·8%), Kirkconnel (15·9%), Lochmaben (8%), Wamphray (1%), and Westerkirk (1·1%).

The remainder shew decreases, varying from 17·5% in Moffat, 14·8% in Caerlaverock, and 14·7% in Canonbie to 1·1% in Sanquhar.

It is interesting to note how the population of the various parishes compares with what it was a century ago. Only 10 have a larger population now than in 1831—Annan, Dornock, Dryfesdale, Dumfries, Gretna, Kirkconnel, Kirkpatrick-Juxta, Langholm, Moffat, and Sanquhar. Amongst those, however, only Dryfesdale, Dumfries, and Kirkconnel are now at the maximum recorded during the century.

A number of rural parishes show a very marked fall in population. Caerlaverock, for example, has dropped from 1271 in 1831 to 681 in 1931; Canonbie from 2997 to 1498; Durisdeer from 1488 to 745; Glencairn from 2068 to 1352; Half-Morton from 646 to 274; Penpont from 1232 to 783; and Ruthwell from 1216 to 646.

**SMALL BURGHS.**—All the Small Burghs, except Langholm and Moffat, show an increased population since 1921. In Lockerbie the increase is 9·8%, in Sanquhar 3·1%, in Lochmaben 2·5%, and in Annan 0·8%.

Langholm, where the population has been diminishing since 1881, shows a decrease of 7·8%. The decrease at Moffat is 17·3%, but as the Census Report states—“this is doubtless attributable mainly, if not entirely, to the fact that the 1921 population was considerably inflated owing to the presence of summer visitors.”

### **Births.**

The total number of births in the County and Small Burghs (corrected for transfers) was 1039, of whom 542

were males and 497 females. The total is 10 more than that for the previous year, and represents an estimated birth-rate of 17·8 per 1000 estimated population. This is 0·8 below the rate for Scotland during the year.

Illegitimate births in the County and Small Burghs numbered 125, or 12 per cent. of the total. The illegitimate rate for Scotland was 7·1 per cent.

### Deaths.

The number of deaths in the County and Small Burghs, corrected for transfers "in" and "out," was 875. The death-rate, corrected and adjusted for age and sex distribution, was 13·3 per 1000, which is 1·3 above that of the previous year.

The numbers, causes, and age-periods of deaths are shown in the following table, arranged under the headings of the Short List of the Intermediate International List of Causes of Death as adapted for use in Scotland :

	All ages	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-
Measles . . . . .	5	1	3	1	...	...	...	...	...	...	...	...	...
Whooping-cough . . . . .	2	2	...	...	...	...	...	...	...	...	...	...	...
Diphtheria . . . . .	4	1	...	3	...	...	...	...	...	...	...	...	...
Influenza . . . . .	15	...	1	...	...	...	1	1	5	2	2	3	...
Other Epidemic Diseases . . . . .	2	...	...	...	...	...	...	...	...	1	1	...	...
Respiratory Tuberculosis . . . . .	36	...	...	...	...	10	12	2	5	1	1	...	...
Other Tuberculous Disease . . . . .	7	...	1	...	...	1	1	1	1	...	2	...	...
Other Infectious and Para- sitic Diseases . . . . .	2	...	...	...	...	...	...	1	...	1	...	...	...
Cancer (Malignant Disease) . . . . .	108	...	...	1	...	1	2	5	14	23	34	23	5
Diabetes Mellitus . . . . .	7	...	...	...	...	...	...	1	1	3	2	...	...
Other General Diseases . . . . .	24	3	...	1	1	2	2	3	3	4	1	4	...
Cerebral Hæmorrhage . . . . .	132	...	...	...	...	...	...	1	11	28	48	36	8
Other Diseases of Nervous System and Sense Organs . . . . .	27	7	1	...	...	...	1	4	7	3	2	2	...
Heart Disease . . . . .	188	...	...	...	...	1	3	4	11	30	62	62	15
Other Circulatory Diseases . . . . .	23	...	...	...	...	...	...	...	...	3	7	8	5
Bronchitis . . . . .	35	2	1	...	...	...	...	...	1	2	15	11	3
Pneumonia . . . . .	45	5	7	...	...	1	...	2	7	8	10	3	2
Other Respiratory Diseases . . . . .	7	1	...	...	...	1	...	1	1	2	1	...	...
Gastric and Duodenal Ulcer . . . . .	1	...	...	...	...	...	...	...	...	1	...	...	...
Diarrhœa, etc. . . . .	10	6	...	...	...	...	...	...	1	1	...	1	1
Appendicitis . . . . .	10	...	2	2	...	1	...	1	...	2	...	2	...
Cirrhosis of Liver . . . . .	1	...	...	...	...	...	...	...	...	1	...	...	...
Other Diseases of Liver . . . . .	2	...	...	...	...	...	...	...	1	...	1	...	...
Other Digestive Diseases . . . . .	8	1	...	...	...	...	...	1	...	...	4	1	1
Acute and Chronic Nephritis . . . . .	30	...	...	...	...	2	...	2	3	4	11	7	1
Other Genito-urinary Diseases . . . . .	10	...	...	...	...	1	...	1	1	1	1	4	1
Puerperal Causes . . . . .	1	...	...	...	...	...	...	1	...	...	...	...	...
Diseases of Skin and Loco- motor System . . . . .	2	...	...	...	1	...	...	...	1	...	...	...	...
Congenital Causes— Premature Birth . . . . .	35	33	1	...	...	1	...	...	...	...	...	...	...
Old Age . . . . .	45	...	...	...	...	...	...	...	...	1	4	20	20
Suicide . . . . .	2	...	...	...	...	...	1	...	...	...	1	...	...
Other Violence . . . . .	35	...	4	2	1	10	6	3	2	1	3	2	1
Ill-Defined or Unknown . . . . .	14	...	...	...	...	...	...	1	2	4	4	3	...
All Causes . . . . .	875	62	21	10	3	32	29	41	78	127	217	192	63

Of the total 875 deaths, 62 were of infants less than one year of age. The infantile mortality is 60 per 1000 births, which is, with the exception of the rate for 1930, the lowest figure recorded for the County and Small Burghs. The rate for all Scotland for 1932 was 86.

The death-rate from all forms of tuberculosis was 0·74 per 1000 living, a decrease of 0·05 on that for the previous year, and again well below the figure for all Scotland.

Deaths of mothers from diseases and accidents of pregnancy or parturition numbered 1, equivalent to a rate of less than 1 per 1000 births.

#### A. GENERAL.

The most important change affecting administration was the reduction of the number of Local Government Districts from 9 to 8, by combining Districts Dumfries I. and Dumfries II. In consequence, the number of Local Government Officers was reduced by one, and a junior clerk appointed to assist the officer for the Dumfries District, and to be available, if needed, for work in the head office.

The Registration Districts of North and South Kirkpatrick-Fleming were combined, and the Brydekirk District, which comprised parts of Annan Landward, Cummertrees, and Hoddum, was abolished.

#### B. GENERAL ENQUIRIES.

No general enquiries were instituted other than those found necessary in the course of routine work.

#### C. WATER SUPPLIES.

##### Special Water Districts.

**BANKSHILL.**—This District was extended by resolution of the County Council dated 11th May, 1932. Certain

“capital works” were authorised in consequence, comprising improvements at the intake, a storage tank, and 350 yards of piping for the supply of Banks Farm, and 116 yards of piping for the supply of two cottages which the County Council propose to erect.

BLACKSHAW.—As in former years, frequent complaints of shortage were received from this District. A great part of the distribution piping is old, leakage is frequent, and in consequence consumers in the higher parts are often short of water. Numerous attempts have been made to provide water for a large area which would include Blackshaw, but all have proved impracticable on financial grounds. Any large expenditure on an old and relatively costly pumping scheme is to be avoided if possible, but it seems that some will necessarily have to be incurred to bring the supply in this District up to a reasonable state of efficiency. A scheme for augmentation which had been considered by the former Dumfries District Committee was discussed by the Public Health Committee, but decision was deferred, pending further information on a proposal to supply Caerlaverock and other parishes adjacent with gravitation water.

CRAWICK.—Water is obtained from the Sanquhar Burgh supply. During the early part of the year complaints regarding shortage were received and investigation was undertaken. Pressure tests made at various points on the system showed that the subjects south of the railway viaduct had a reasonably satisfactory supply, but the remainder of the village had water at very low pressure, and sometimes none. The pipes are old, and sections cut out were found to be badly encrusted. As the population of this special district is only 270, the rateable value under £390, and many of the houses below modern sanitary standards, future action will require careful consideration.

DUMFRIES LANDWARD	} Nothing requiring comment was reported during the year.
EAGLESFIELD	
ECCLEFECHAN	

GLENCAPLE.—The reservoir was emptied and cleared of weeds during November. This supply stood out reasonably well during the dry period in summer.

KIRKCONNEL.—A number of improvements on this system were made during the year. A new intake was constructed for the "Old" supply in order to prevent choking of the inlet pipe, which used to occur during spates.

Three of the mechanical filters on the "New" supply were overhauled and reconstituted.

The most important work, however, was the provision of a new 4" pipe from Kellobank Bridge to Kirkconnel Cross. This has greatly improved the pressure in the village, which now can be entirely served from the "New" system, with the exception of Buttknowe, which stands high and requires occasional augmentation from the "Old" supply.

LOWER ANNANDALE.—Trouble was again experienced from heavy flooding in the drainage area, resulting in blockage of the reservoir bye-pass and pollution of the reservoir by muddy water. Unfortunately the formation of the ground at the top of the reservoir makes it difficult to prevent such accidents. The Minsca burn comes down a narrow glen with steep banks. After heavy rain this becomes a torrent, sweeping down great quantities of gravel and clay from the banks, which in many places have been stripped of turf and vegetation by successive floods. If, under such circumstances, the bye-pass becomes choked, the only exit for flood water is via the reservoir, and the consumers, for some time after, receive a supply of water containing a quantity of finely emulsified clay—harmless, no doubt, but of most uninviting appearance.

A report on the works necessary to protect the reservoir against such accidents was prepared by Messrs Warren & Stuart, civil engineers, and it is hoped that operations will be commenced early in the current year.

Damage by flooding of another sort occurred in the valley of the Kirtle. The main carrying water from

Kirtletonhead to the tanks at Douglas Farm crosses the stream at Winterhopehead. During a high spate one of the concrete piers supporting it was carried away, the bank much damaged, and the pipe left in a precarious condition. The necessary repairs were made, the pipe being taken under the stream instead of above it, so that it should be less liable to damage in future.

A problem has arisen in the vicinity of Tulliesfield at Todholes, where there are a number of small holdings. Those in recent years have commenced dairying, and as a result the consumpt of water in the area has greatly increased. The supply is by a two-inch pipe from the Annan-Kirkpatrick road, which was adequate for the needs of consumers when first constructed, but is now insufficient to meet the demand. The matter is one which will require attention in the near future.

Complaints regarding sediment in the water were received from two sources (apart from complaints due to the condition of the supply after the flooding in summer). One of those was referred to the engineers for report.

MONIAIVE.—There was a threatened shortage of water during the dry spells in spring and summer. The storage capacity of the reservoir is ample for the legitimate needs of the village, but leaks in the distributing piping depleted the supply to an alarming extent. Several serious leaks were detected and repaired, but water had to be rationed for a considerable time to avoid an actual shortage. Unfortunately most of the distributing piping throughout the village is old, and is now subjected to considerable pressure from the reservoir at Barbuie. The risk of leakage is therefore constantly present, and the nature of the soil on which the village is situated makes it very difficult to detect. A meter was fitted towards the end of the year, and showed a consumpt of water much in excess of what the ordinary needs of Moniaive could justify.

During the greater part of the year the supply is ample, despite leaks, but unfortunately when shortage

does occur it is generally during the holiday season, a matter of serious moment for Moniaive, which is popular as a holiday resort.

**NETHERWOOD, KELTON, AND CRAIGS.**—An adjoining proprietor made application for a supply of water to a number of farms contiguous to the District. As the water is derived from a private system and is barely adequate to the needs of consumers, it was considered inexpedient to grant the application.

Complaints of temporary shortage were again received from Trohoughton Cottages. This is not due to any lack of pressure, but seems to be caused by air-locking of the pipes.

**PENPONT.**—A reduced pressure in certain parts of the system was traced to a faulty air-valve, which was repaired.

There seems reason to suspect that a considerable amount of leakage takes place, though it is only necessary to ration water during severe drought.

**RUTHWELL AND RAFFLES.**—A considerable amount of vegetable growth in the reservoir was a cause of trouble throughout the greater part of the year. Had the reservoir been emptied and cleaned out in spring the matter could have been comparatively easily remedied, but it was postponed, and an exceptionally dry summer reduced the inflow to the reservoir to such an extent that it was manifestly impossible to empty it, and even ordinary scouring had to be limited. Naturally the water deteriorated and complaints of unpleasant taste were received. When the supply was restored to normal, the reservoir was emptied and thoroughly cleaned out.

Certain improvements at the main intake were authorised.

**ROWANBURN.**—Nothing requiring comment was reported during the year.

The chemical and bacteriological analyses of samples of water from the Special Water Districts will be found on pages 99 and 100.

**SUGGESTED NEW DISTRICTS.**—Despite many disillusionments, the attempt to devise some means by which rural areas may be supplied with gravitation water still continues. So far, the solution of the problem has proved impossible. The low rateable value of rural subjects, the long distances over which water has to be conveyed, and the high cost of construction have killed many promising schemes. There are still considerable areas where water can be obtained only in restricted quantity, of doubtful quality, and after the expenditure of time and labour. Those more fortunate persons to whom “water” is merely the immediate result of turning a tap would probably be surprised to learn the aggregate amount of time and exertion still spent daily by hundreds of people in walking to a spring or well, filling buckets and carrying them back! One is driven to wish that rural water supply might acquire a political importance, as housing has done, in which case the provision of Government grants for new water districts might be less impossible than it seems to be at present.

Only two special water districts have been formed in Dumfriesshire since the termination of the War—Rowanburn and West Canonbie, both in 1920. In the former case, the existing works were handed over to the local authority by the proprietor. In the latter, provision of works proved financially impracticable, and no public supply has yet been introduced.

The following table shows the principal schemes for public water supply in the County which have been discussed and found impracticable for financial reasons since 1912 :

Area.	Approx. Pop.	Date of Proposal.	Reasons for Abandoning.
1. Beattock and Vicinity ...	200	1912-1929.	Financially impracticable.
2. Dalton Special District...	98	1913	District formed. Supply financially impracticable.
3. Caerlaverock, parts of Dumfries Landward, and Rockhall Estate.	1853	1919	Financially impracticable.
4. West Canonbie ...	478	1920	District formed. Supply financially impracticable.
5. Dumfries Landward, Caerlaverock, parts of Holywood, Tinwald, Torthorwald, and Kirkmahoe.	4705	1926	Financially impracticable.
6. Dunscore and Vicinity ...	624	1927-31	Financially impracticable.
7. Vicinity of Lochmaben...	1190	1929	Financially impracticable.
8. Extension of Lower Annandale to comprise Cummertrees and parts of Middlebie and Hoddom.	1900	1931	Financially impracticable.

Besides the districts enumerated above, there are others badly supplied with water, but with a population and valuation so small that the formation of special districts is obviously impracticable unless they could be included in a large scheme.

Such are, for example, the southern part of Dryfesdale, the district immediately north of Lockerbie, the eastern part of Kirkmichael, and the western division of Dunscore.

There are, in addition, a number of estate supplies which, on account of an increased demand for water and increased cost of upkeep, will probably have to be taken over eventually by the County Council and formed into, or added to, special water districts.

Apart from any sum expended as purchase price for existing works in such cases, extra expenditure will almost always be required, as estate supplies are seldom so complete as those installed by Local Authorities, and there are generally within the area isolated subjects to which water has not yet been taken.

An important report was submitted by Messrs Warren & Stuart regarding the practicability of utilising sources in Closeburn and Kirkmichael for the supply of an extensive area, embracing eleven parishes, with a population of nearly 11,000 persons. The matter was still under consideration at the end of the year.

The expediency of creating a Special Water District in Thornhill and its vicinity was also discussed, and a sub-committee appointed to investigate the whole matter and report.

The agents for the proprietors of certain houses close to the burgh of Moffat asked the County Council to consider the expediency of forming a Special Water District in that area. After consideration the Council decided that in view of the small number of houses involved, and the fact that all were already supplied with gravitation water, it was undesirable that such a district should be formed.

A suggestion that the Lower Annandale area should be extended to include a number of subjects in Half-Morton was considered and a report obtained from Messrs Warren & Stuart. Financial considerations presented considerable difficulties, but the matter is still under review.

There are a number of districts very badly supplied with water which have been frequently reported. Examples are Kirkton, a considerable part of the parish of Holywood, and Dunscore. The two first named would have been included in the large water scheme of 1926, which had to be abandoned for financial reasons. The last named has been the subject of investigation several times during recent years. The village stands high, and no suitable source of water is known in the immediate neighbourhood. Ample supplies could be obtained at some distance, but the cost of constructing the necessary works and distributing the water has hitherto been prohibitive. The majority of the villagers at present obtain water from a dip well at the roadside. This practice has obtained for many years. It is laborious and inconvenient, and fraught with serious potential danger to the health of the village.

Several water supplies, apart from those taken in the Special Water Districts, presented points of special interest. Those are discussed in the reports from the laboratories, but some of the more important may be referred to here.

(1) Several samples were taken from a well supplying a row of cottages at Burnside, Kirknichael. Those cottages had been purchased by the former Dumfries District Committee with the intention of reconstructing them as roadmen's houses. This plan, however, had not been carried out, as the water supply—which had not been examined before the purchase was completed—was found to give a very bad chemical analysis. No other supply was available. An attempt was made to improve the well by cleaning it out and protecting it from surface pollution, and samples were examined from time to time. The results of the chemical analysis improved gradually, save in regard to the figure for chlorine, which, though reduced, remained persistently much above that for natural waters in the district. Finally, after an exhaustive analysis of the saline residue, and comparison with the figures obtained from a stream close at hand, it was decided that the high chlorine figure was presumably due to influx of a weak mineral water from a lower geological stratum. In view of the improvement in the chemical analysis and the fact that the bacteriological results had always been reasonably good, the water was finally classified as fit for drinking. It is interesting to note that the undoubted organic pollution which existed when the water was first examined masked the significance of the chlorine figure, and it was not until the well had been cleaned out and protected that the true condition of affairs was disclosed.

Data which have been gradually collected in the course of routine work during the past few years suggest that a somewhat high chlorine content characterises natural waters over a certain area in the County. How far this observation may be confirmed by future work remains to be seen.

(2) In consequence of a suggestion that water supplied to a group of farm cottages had a bad taste and was

affecting the health of the consumers, a number of samples were examined. The water was pumped from a well to a concrete collecting tank and thence distributed by copper pipes—55 yards of 1-inch copper piping leading to the farm house, and 127 yards of  $\frac{3}{4}$ -inch copper piping leading to the cottages. The analysis showed that the water was distinctly acid, and that though in the well and the collecting tank it shewed no trace of copper, samples drawn at the farm and at the cottages shewed respectively 0·1 and 0·47 parts of copper per 100,000, the higher amount at the latter being presumably due to the longer pipe of smaller bore and the smaller daily draw-off entailing a longer contact between the metal and the acid water. Lime was added to the supply to reduce the acidity, and a further sample taken at the end of the year shewed a greatly diminished amount of copper. The case is being kept under observation.

(3) Another case in which it was suggested that symptoms of copper poisoning might be due to water was investigated in the latter part of the year. An estate supply, serving a farm and a number of cottages, was implicated. Only three cottages received water through copper pipes, and in samples taken at each of those, copper was detected in varying amounts. It was not found at any other point on the system. The water in this case also was acid, though not to a high degree. Only one consumer ascribed symptoms of illness to drinking the water, and investigation did not bear out the suggestion that they could have been due to copper poisoning. Steps were taken to neutralise the acidity of the water, and the case is being kept under observation.

#### D. & E. DISPOSAL OF SEWAGE AND POLLUTION OF RIVERS.

(1) NITHSDALE.—No instance of serious pollution by coal washings was reported in the upper reaches during the year.

The works at Moniaive again caused trouble through the excessive pumping required during wet weather. As

no effective steps had been taken by the late engineer or the representatives of the late contractor to remedy the defects, Messrs Warren & Stuart, C.C.E., were instructed to prepare a report on the defects and the remedial works necessary.

In consequence of a drain having burst within the precincts of the bowling green, Thornhill, the condition of the sewer in East Morton Street was investigated. It was found to be connected to the Drumlanrig Street sewer. A chokage had occurred near its upper end, the joint above this had given way, and sewage was passing from an adjacent house connection through the leaky joint into an old stone-built drain which crossed immediately beneath. As the new main sewer runs through the bowling green and affords a more natural outfall for East Morton Street than that to Drumlanrig Street, the branch was lifted, relaid with a fall in the other direction, and connected to the main sewer in the bowling green.

The Thornhill sewage works continue to give a satisfactory effluent. The special constitution of the crude sewage reaching them makes continuous supervision specially necessary. The Kirkconnel and the Sanquhar works have also functioned well.

Proposals for a drainage scheme and an improved water supply for the village of Tynron were submitted by a private proprietor. Those were still under discussion at the end of the year.

(2) ANNANDALE.—Improvements at the sewer outfall for Moffat, designed to procure more rapid and complete mixture of the effluent and the stream, appear to have attained that object.

Various experiments have been made at Lockerbie works, with the object of seeing whether their functioning can be improved without reconstruction. Those are being continued.

The condition of the Turnmuir burn is often far from satisfactory. Fortunately the dilution when it reaches the Annan is sufficient to prevent serious pollution of the

river, but the state of the stream at the point where it passes under the road near Turnmuir Mill is sometimes very bad.

The modified scheme for draining Springfield, mentioned in last year's report, has not been adopted meantime.

(3) **ESKDALE.**—No matter requiring comment arose during the year.

While there is still room for improvement at certain places, the rivers in the County are, generally speaking, free from pollution.

#### F. HOUSING.

Some interesting points regarding housing are found in the Census report. The following table is extracted from that report, and shews the number of houses in the County Landward and Small Burghs at the 1931 census, arranged according to number of rooms, with the corresponding figures for 1921 for purposes of comparison:—

	1931.	1921.	Increase or Decrease.
1 Room .....	519	563	- 44
2 Rooms .....	3883	4107	- 224
3 Rooms .....	3567	3082	+485
4 Rooms .....	2236	2105	+131
5 Rooms .....	1236	1026	+210
6 Rooms .....	805	795	+ 10
7 Rooms .....	604	554	+ 50
8 Rooms .....	470	515	- 45
9 Rooms .....	326	306	+ 20
10 Rooms and over .....	530	574	- 44
	-----	-----	-----
Total .....	14,176	13,627	+549
	-----	-----	-----

The average number of persons per room in the County Landward has fallen from 1.09 in 1921 to 1.00, and in the Small Burghs from 0.97 to 0.92.

**NEW HOUSES.**—Plans for the construction of 14 new houses (7 subsidy, 7 non-subsidy) were approved.

One hundred and nine plans for alterations or additions to existing houses (including 37 applications made under the Housing (Rural Workers) Acts) were also submitted.

The following plans were also approved :—

Conversion of building into hostel.

Conversion of hostel into dwelling-house.

Erection of two wooden huts as temporary dwelling-houses.

Nine "non-subsidy" houses were completed during the year, the details being :—

With 3 rooms or less	.....	.....	2
With 4 rooms	.....	.....	6
With 5 rooms	.....	.....	1
With 6 rooms or more	.....	.....	.....
			—
Total	.....	.....	9

Four "subsidy" houses were completed during the year.

Five hundred and fifty dwelling-houses were inspected in the County Landward. Of those, 7 were found to be in a state so dangerous or injurious to health as to be unfit for human occupation, and not capable of being rendered fit at a reasonable expense. Notices in terms of Section 16 (1) of the Housing (Scotland) Act, 1930, had been made in respect of 7 before the end of the year.

One hundred and twenty-three intimations were sent to owners regarding defects insufficient to warrant action under Section 16 (1).

Intimations under Section 20 (1) of the Housing (Scotland) Act, 1925, requiring the introduction of sufficient water closet, accommodation were made in 36 cases. The necessary works were executed in 7 instances. 29 cases were pending at the end of the year.

One notice was served under Section 40 (1) of the Housing, Town Planning, etc. (Scotland) Act, 1919. The

requirement had not been complied with, nor had the necessary works been executed by the Local Authority at the end of the year.

#### G. HOUSING (RURAL WORKERS) ACTS.

There was a regrettable drop in the number of applications made under those Acts during 1932. Only 41 applications were received. Four of those were not approved as not coming within the scope of the Acts, leaving 37 cases in which Certificate A was issued. The localities in which the 37 houses are situated are:—

Glencairn, 5; Sanquhar, 3; Annan, 3; Canonbie, 3; Kirkmichael, 2; Eskdalemuir, 2; Lochmaben (Landward), 2; Middlebie, 2; Torthorwald, 2; Hutton and Corrie, 2; Applegarth, 2; Durisdeer, 2; Dumfries (Landward), Langholm, Kirkconnel, Cummertrees, Half-Morton, Tynron, and Penpont, 1 each.

The total applications approved since the Act came into force numbered 260, and up to the end of the year Certificate B had been issued in respect of 221 of those.

It is to be regretted that more proprietors do not take advantage of these Acts, which, so far as rural districts are concerned, constitute the most valuable legislative powers available for the improvement of housing. They make it possible to bring old houses up to what is practically the standard of new, at a much smaller cost than would be entailed by building. There are many houses which in the course of a few years will be the subject of orders under Section 14 of the Housing (Scotland) Act, 1930, entailing costly repairs, or which may, in fact, be regarded as proper subjects for a demolition order, but which could be brought up to sanitary standard and given a new lease of life by judicious expenditure under those Acts. It is probable that many proprietors will realise this after the Acts have ceased to operate and the subsidies have been withdrawn.

## H. TOWN PLANNING.

No discussions on this matter occurred during the year.

## I. INFECTIOUS DISEASES.

A total of 584 notifications was received from the County Landward and the Small Burghs. This is 139 less than the figure for the previous year. The reduction is largely due to the diminished prevalence of Scarlatina, only 143 cases of this disease having been notified, against 260 in 1931. The number of notifications of Diphtheria also fell by about a half. Chicken-pox, on the other hand, shewed a slight increase, and the other notifiable conditions remained much as in previous years.

The total cases notified and the age-periods in which they occurred were as follows :—

	All Ages.	Under 1	1-5	5-15	15-25	25-45	45-65	Over 65
Enteric Fever ...	5	...	...	...	2	1	2	...
Scarlatina ...	143	1	28	89	12	11	2	...
Diphtheria ...	43	...	8	16	11	8	...	...
Erysipelas... ...	23	1	...	...	1	5	11	5
Puerperal Fever ...	3	...	...	...	1	2	...	...
Ophthalmia Neonotorum ...	11	11	...	...	...	...	...	...
Chickenpox ...	140	5	30	97	5	3	...	...
Malaria ...	1	...	...	...	...	1	...	...
Encephalitis Lethargica ...	2	...	...	...	...	2	2	...
Acute Poliomyelitis	1	...	1	...	...	...	...	...
Acute Primary Pneumonia ...	63	3	10	20	5	9	9	7
Acute Influenzal Pneumonia ...	16	...	...	1	2	6	7	...
Pulmonary Tuberculosis ...	66	...	...	13	12	30	10	1
Non-Pulmonary Tuberculosis ...	57	...	10	17	15	9	4	2
Puerperal Pyrexia	10	...	...	...	4	6	...	...
Total ...	584	21	87	253	70	91	47	15

The distribution of cases throughout the County was as follows :—

	Dumfries I.	Dumfries II.	Thornhill.	Sanquhar.	Annan.	Gretna.	Lockerbie.	Moffat.	Langholm.	Total.
Enteric Fever ... ..	1	4	...	...	...	...	...	...	...	5
Scarlatina ... ..	5	7	37	57	6	2	18	4	7	143
Diphtheria ... ..	9	4	...	5	8	4	4	2	7	43
Erysipelas ... ..	8	1	2	5	5	1	...	1	...	23
Puerperal Fever ... ..	...	...	...	...	...	2	...	...	1	3
Ophthalmia Neonatorum ... ..	4	...	...	1	1	5	...	...	...	11
Chickenpox ... ..	52	6	7	2	28	4	6	15	20	140
Malaria ... ..	...	...	...	...	...	1	...	...	...	1
Encephalitis Lethargica ... ..	1	...	...	...	...	...	1	...	...	2
Acute Poliomyelitis ... ..	...	...	...	...	1	...	...	...	...	1
Acute Primary Pneumonia	20	8	4	5	8	8	6	1	3	63
Acute Influenzal Pneumonia	4	3	1	5	...	1	2	...	...	16
Pulmonary Tuberculosis ... ..	9	8	5	5	11	15	6	5	2	66
Non-Pulmonary Tuberculosis	11	12	3	11	5	4	5	3	3	57
Puerperal Pyrexia ... ..	2	...	1	...	1	...	...	6	...	10
<b>Total ... ..</b>	<b>126</b>	<b>53</b>	<b>60</b>	<b>96</b>	<b>74</b>	<b>47</b>	<b>48</b>	<b>37</b>	<b>43</b>	<b>584</b>

**Enteric Fever.**—Five notifications were received, which is one less than in 1931.

Four of those were from the parish of Holywood, where this disease has been unduly prevalent for the last three years. No cases of genuine Enteric Fever occurred in the parish from 1906 till 1930. Towards the end of the latter year, however, a farm servant developed the disease, returned to his home near Lockerbie before the nature of his condition was recognised, infected two brothers, and died.

A few weeks later another case occurred, ending fatally in January, 1931.

As both those cases had occurred shortly after the termination of the Ecclefechan outbreak of 1930, careful enquiries were made as to any connection the patients might have had with Ecclefechan. None could be detected.

A third case occurred in November, 1931, at the same house as the first of the two previous cases. Only three

persons were living in the house who had been in contact with both patients. All were carefully examined, but in none was any evidence of a "carrier" condition found.

A group of four cases developed between August and October, 1932. While investigating those it was discovered that a person who had been proved a typhoid carrier in 1926 while resident in another part of the County, and who had thereafter left Dumfriesshire, had returned in 1930 to a house in Holywood, and had been engaged at a dairy where two of the 1932 cases got unpasteurised milk. (The other two were apparently secondary to the first—one certainly was.) The great bulk of the milk from this dairy was sent outwith the County and pasteurised, and no cases were known to have occurred amongst those who drank it after pasteurisation. Further, it was found that drainage from the cesspool from the house where the carrier lived passed eventually to a stream which runs close to the farm at which two of the former cases had occurred in 1930 and 1931. Both were known to have been in the habit of drinking water from this stream, despite warnings that it was not intended for drinking purposes. Bacteriological examination of the contents of the cesspool by which the stream was polluted shewed the presence of typhoid bacilli.

Steps were at once taken to prevent the carrier taking any further part in the milk trade at the dairy implicated. It is obvious, however, that the present state of the law applying to such cases is very unsatisfactory. It should not be possible for a known chronic carrier to obtain employment at a dairy—or indeed in any business connected with the handling of food—and to continue so employed until a fresh outbreak draws attention to his presence. There is nothing obvious about the carrier to indicate his condition, and a prospective employer has no way of detecting it. It can be discovered only by bacteriological examination, and even this may be insufficient at times, as the actual excretion of typhoid bacilli is apt to be intermittent. Even if fresh legislation

be necessary to a satisfactory solution of the difficulty, it should not be beyond the limits of human ingenuity to devise legal machinery which, without being unduly oppressive on the unfortunate carrier, would prevent his transmitting a dangerous and often fatal disease to other persons.

Apart from those from Holywood, only one other case of typhoid was notified—a nurse in Lochmaben Hospital who contracted infection while on duty there.

The statistics of the notified cases of Enterica in the County and Small Burghs during the last five years are as follows :—

	1928.	1929.	1930.	1931.	1932.
Cases	3	5	70	6	5
Deaths			3	1	
Morbidity per 1000	0·05	0·08	1·2	0·12	0·08
Mortality per 1000			0·05	0·02	
Case-fatality per 1000			43	14	

**Scarlatina.**—The number of cases notified during the year was 143, which is 117 less than in 1931.

The main incidence again was in Upper Nithsdale, 94 cases having occurred in Thornhill and Sanquhar Districts. So far as Thornhill was concerned, the main incidence was during the first half of the year, though there was a small outbreak in Keir during August and September. In Sanquhar District the disease was fairly prevalent during the whole year, but was distinctly diminishing during the last quarter.

The remainder of the County shewed no specially heavy incidence.

An interesting case of mixed scarlatinal and diphtheritic infection occurred amongst members of a family resident partly in Lockerbie District, partly in Langholm District, and partly in the vicinity of Dumfries. Seven of those persons were admitted to hospital during the last quarter of the year, and five were found to be suffering from both diseases. So much visiting and revisiting had taken place

between the various members of the family that it proved impossible to identify the original source of infection with certainty, but fortunately it proved possible to confine it to members of the family.

Generally speaking, the disease was mild in type, which, as has been noted in previous reports, makes its control more difficult, as a proportion of cases escape notice.

The statistics of notified cases of Scarlatina in the County and Small Burghs during the last five years are as follows :—

	1928.	1929.	1930.	1931.	1932.
Cases	180	147	200	260	143
Deaths	1	2	1	1	.....
Morbidity per 1000	3.0	2.5	3.5	4.4	2.4
Mortality per 1000	0.02	0.04	0.02	0.02	.....
Case-fatality per 1000	5.5	13.6	5	3.8	.....

**Diphtheria.**—A total of 43 notifications was received from the County and Small Burghs, this being the smallest number for many years. There was no special local incidence. The greatest number of cases occurred in Dumfries 1, Annan, and Langholm Districts. Lockerbie and Moffat Districts, which in recent years have been remarkably free from this disease, had a total of 6 cases during 1932. Of those, however, one was bacteriologically negative, and one doubtful. No case occurred in Thornhill District during the year.

Of the 43 cases, 31 were confirmed by bacteriological examination, 1 was doubtful, and 11 were negative on each occasion when examined.

Forty cases were removed to hospital.

The statistics of Diphtheria in the County and Small Burghs during the last five years have been :—

	1928.	1929.	1930.	1931.	1932.
Cases	90	74	47	82	43
Deaths	2	.....	5	2	4
Morbidity per 1000	1.3	1.2	0.8	1.4	0.7
Mortality per 1000	0.03	.....	0.08	0.03	0.07
Case-fatality per 1000	22.2	.....	106	24	93

**Puerperal Fever and Puerperal Pyrexia.**—There were 3 cases of Puerperal Fever. Two were removed to hospital and one nursed at home. All made good recoveries.

Of 10 cases of Puerperal Pyrexia, 1 proved to be suffering from Tuberculosis. The patient was unfit to stand removal to hospital, which would have entailed carrying her a considerable distance over rough moorland to the nearest point that an ambulance could have reached. She was acutely ill, and died shortly after notification.

Of the remaining 9 cases, 2 were removed to Lochmaben Hospital and 1 to Annan Hospital. One of those at Lochmaben developed mental symptoms and had to be transferred to Crichton Royal Institution, whence she was later discharged as recovered. Five cases were notified from an institution, and were retained there. The remaining case was nursed at home.

The report on the Tuberculosis cases will be found on page 29.

The other notifiable conditions do not call for special remark.

Reference may be made to a non-notifiable condition which called for some investigation. This was a case of Undulant Fever—a disease which, so far as I know, had not previously been reported in Dumfriesshire. It is of considerable theoretical interest, and of practical importance. Its precise relationship, bacteriological and epidemiological, to the undulant fever which has long been endemic in the Mediterranean basin has still to be determined, and the fact that it appears to have shewn an increased incidence in many parts of Europe during the last few years makes it necessary to regard this disease as a possible administrative problem in the future. Fortunately there have not, so far, been many cases in Britain.

The patient in Dumfriesshire was a middle-aged man,

employed as a blacksmith. The diagnosis was made on bacteriological as well as clinical grounds.\*

### K. SCHOOL CLOSURE.

It was not found necessary to close any school on account of infectious disease during the year.

### L. LIST OF HOSPITALS.

### M. BRIEF REVIEW OF THE HOSPITAL POSITION IN THE AREA.

There has been no material change in the position since last year. Unfortunately the many urgent matters falling to be dealt with by the Public Health Committee has made it impossible to devote time to the consideration of the Council's functions, as extended by the Act of 1929, in respect of hospital provision within their area.

As will be seen from the table on page 27, the number of admissions of patients suffering from infectious disease to the Council's hospitals was considerably less than during the previous year, so that a good deal of the available accommodation was not used. Castlehill Hospital, of course, remained empty during the year, as no cases of Smallpox were notified, and Eskdale Hospital has been closed since October and put under supervision of a caretaker. A private establishment, St. Fechan's Sanatorium, was also closed.

The total number of admissions to the Council's hospitals (exclusive of Tuberculosis) during 1932 was 205, which is 134 less than during 1931. (The total comprises transfers from one hospital to another, admissions of non-notifiable infectious disease, etc., and is therefore greater than the total of patients notified during the year and removed to hospital.

\* For a considerable time it has been a rule in the County Laboratory that all samples of blood from cases of continued fever (suspected enteric, etc.) are tested against the organism of Undulant Fever as a routine.

Details are as follows :—

	Enteric Fever.	Scarla- tina.	Diph- theria.	Other.	Total.	Deaths.
Lochmaben .....	4	41	28	7	80	1
Thornhill .....	.....	86	.....	2	88	.....
Annan .....	.....	10	11	10	31	2
Eskdale .....	.....	2	4	.....	6	.....
	—	—	—	—	—	—
Total .....	4	139	43	19	205	3

The lack of any definite scheme for the hospital treatment of the various conditions which are reported in connection with the Maternity and Child Welfare Scheme and the Medical Treatment of School Children Schemes is seriously hampering this branch of the work. This is specially noticeable in regard to orthopædic cases. Those often entail prolonged treatment, and beds are not easily obtainable for them.

#### N. AMBULANCE SERVICE.

A series of breakdowns, some occasioning considerable inconvenience, indicated that the Lochmaben ambulance was no longer fitted for service, and the Public Health and Public Assistance Committee decided that a new vehicle should be provided. Enquiries as to the most suitable type were being made at the end of the year.

#### O. OUT-PATIENTS DEPARTMENT.

A report on the patients treated at Kirkbank Clinic will be found on page 28.

#### P. MEDICAL CARE AND NURSING OF THE SICK POOR.

No material change has been made on the arrangements detailed on pages 44-51 of my report for 1930.

### Q. VENEREAL DISEASES.

During the year 93 new patients attended at Kirkbank.

Of these, 11 were Syphilis (7 Male, 4 Female—11·8%).

58 were Gonorrhœa (53 Male, 5 Female—62·5%).

23 were Non-specific Venereal (17 Male, 6 Female—24·7%).

1 was Non-Venereal (Male).

Two Syphilis cases were congenital.

Forty-six old cases continued treatment.

Attendances totalled 1021, exclusive of those for irrigation.

The age-incidence was as follows :—

Age.	Syphilis.		Gonorrhœa.		Non-specific Venereal.		Non-Venereal.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	
Under 1	.....	.....	.....	.....	.....	.....	.....	.....	.....
1 and under 5	.....	.....	.....	.....	.....	.....	.....	.....	.....
5 and under 15	.....	1	.....	1	.....	.....	.....	.....	2
15 and under 25	.....	2	1	30	3	8	3	.....	47
25 and over	.....	4	3	23	1	9	3	1	44
	—	—	—	—	—	—	—	—	—
Total	.....	7	4	53	5	17	6	1	93

Seventy-nine Wassermann examinations and 267 examinations for Gonococci were made in connection with the Clinic during the year.

The percentage figures of Gonorrhœa and Syphilis bear out the admittedly greater prevalence of the former disease.

The incidence of Venereal Disease in the area served by the Clinic is doubtless higher than the above total would indicate, as a certain number of cases, who are either unsuitable or unwilling to attend the Clinic, are treated by general practitioners; while others, though probably a comparatively small number, through ignorance or apathy fail to seek medical advice, and remain untreated. Female cases would in all probability be found to form the majority of the latter type.

No cases of Syphilis reported while in the sero-negative

stage, all yielding marked positive reactions on blood examination.

No cases of dual infection with Syphilis and Gonorrhœa reported during the year.

Three cases were sent to the Edinburgh Royal Infirmary, as obviously outwith the scope of an out-patient clinic, thanks being again due to Mr Lees for his readiness to admit such cases to his wards.

Treatment has been on the lines formerly adopted, no new drugs having justified their substitution for those formerly employed.

Attendances have been satisfactory, and, as before, the inducing of patients to take an active collaboration in their own treatment has been found to be of marked benefit, particularly to their mental attitude.

### R. TUBERCULOSIS.

The total number of notifications of Tuberculosis from the County and Small Burghs was 123.

The statistics of notification from 1914 onwards are given in the following table:—

Year.	Total Notifications.	Pulmonary.	Non-Pulmonary.	Rate per 1000.
1914	131	83·2%	16·8%	2·4
1915	134	66·4%	33·6%	2·5
1916	198	71·7%	28·3%	3·4
1917	171	68·4%	31·6%	2·6
1918	157	74·5%	25·5%	2·4
1919	139	68·3%	31·7%	2·3
1920	127	74·0%	26·0%	2·2
1921	138	70·0%	30·0%	2·3
1922	118	68·6%	31·4%	2·0
1923	134	63·4%	36·6%	2·3
1924	151	58·9%	41·1%	2·5
1925	156	70·0%	30·0%	2·6
1926	140	50·0%	50·0%	2·3
1927	138	60·1%	39·9%	2·3
1928	146	66·4%	33·6%	2·4
1929	148	54·7%	45·3%	2·5
1930	134	56·0%	44·0%	2·3
1931	121	53·7%	46·3%	2·0
1932	123	53·7%	46·3%	2·1

The death-rate from Tuberculosis was 0·74 per 1000, slightly below that for the previous year. The Pulmonary and Non-pulmonary rates were 0·62 and 0·12 respectively.

The fall in the death-rate from Tuberculosis since 1891 is shewn in the following table :—

	Pulmonary.	Non-pulmonary.	Total.
1891-1910 (mean) ....	1·647	0·692	2·339
1911-1920 (mean) .....	1·028	0·353	1·381
1921 .....	0·839	0·117	0·956
1922 .....	0·859	0·214	1·073
1923 .....	0·910	0·240	1·150
1924 .....	0·699	0·290	0·989
1925 .....	0·921	0·301	1·222
1926 .....	0·693	0·270	0·963
1927 .....	0·722	0·387	1·109
1928 .....	0·828	0·236	1·064
1929 .....	0·510	0·209	0·719
1930 .....	0·543	0·156	0·699
1931 .....	0·45	0·34	0·79
1932 .....	0·62	0·12	0·74

It will be seen that the rate is now consistently at a much lower level than it was at the beginning of the present century. Whether the rate of fall is accelerating or lagging it would be difficult to say, as the figures are too small to warrant drawing statistical conclusions.

Dr W. I. Robertson reports as follows :—

During the year ending 31st December, 1932, 123 notifications of Tuberculosis were made to this department.

Of these, 66 were Pulmonary (29 Male, 37 Female), and 57 Non-pulmonary (29 Male, 28 Female).

The Non-pulmonary cases were :—

Superficial Glands .....	24
Abdomen .....	14
Bones and Joints .....	13
Spine .....	3
Lupus .....	2
Other Parts or Organs .....	1

The Quarterly incidence was as follows :—

	Pulmonary.	Non-pulmonary.
First Quarter	14	18
Second Quarter	22	15
Third Quarter	15	12
Fourth Quarter	15	12
	—	—
	66	57

**Incidence in County Districts, including  
Small Burghs.**

Districts.	Pulmonary.		Non-pulmonary.		Total.
	M.	F.	M.	F.	
Dumfries I.	5	4	4	7	20
Dumfries II.	3	5	6	6	20
Thornhill	3	2	1	2	8
Sanquhar	2	3	5	6	16
Annan	4	7	3	2	16
Gretna	7	8	3	1	19
Lockerbie	3	3	3	2	11
Moffat	2	3	2	1	8
Langholm	—	2	2	1	5
	—	—	—	—	—
Total	29	37	29	28	123

**T.B. Age-Incidence.**

	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and over	Total
<b>Pulmonary.</b>									
Males	—	—	6	3	9	5	6	—	29
Females	—	—	7	9	11	5	4	1	37
<b>Non-pulmonary.</b>									
Males	—	5	9	9	2	—	4	—	29
Females	—	5	8	6	4	3	—	2	28
	—	—	—	—	—	—	—	—	—
Total	—	10	30	27	26	13	14	3	123

**Occupation.**

Patients notified were employed as follows :—

Domestic Duties .....	34
Clerk, Labourer, Farm Worker (each) .....	4
Railway Worker, Dairyman, Hawker, Mill Worker, Typist, Gardener (each) .....	2
Greener, Electrician, Mason, Quarryman, Joiner, Baker, Tailor, Glovemaking, Doctor, Drover, Hairdresser, Laundry Worker, Stonebreaker (each) .....	1
Children of School Age .....	30
Under School Age or No Occupation .....	22

**Disposal of Cases.**

Admitted to Lochmaben Sanatorium .....	47
Admitted to Dumfries and Galloway Royal Infirmary.....	12
Admitted to Royal Infirmary, Edinburgh .....	1
Inmates of Crichton Royal Institution .....	7
Sanatorium or Hospital previously .....	8

Twenty-two patients occupied shelters, and 56 were in receipt of medical comforts during the year.

## S. MATERNITY AND CHILD WELFARE AND SCHOOL HEALTH SCHEMES.

### (a) Maternity and Child Welfare.

#### (1) MIDWIVES (SCOTLAND) ACT, 1915, AND MIDWIVES AND MATERNITY HOMES (SCOTLAND) ACT, 1927.

Notice of intention to practise within the County and Small Burghs was given, as required by Section 18 of the principal Act, by 13 midwives.

The following is extracted from the return for 1932 made to the Department of Health for Scotland :

	Total in Area.	In Midwives' Practice.
Births .....	1039	69
Deaths within 10 days of birth .....	30	.....
Cases of Ophthalmia Neonatorum .....	11	.....
Cases of Puerperal Sepsis .....	3	.....
Deaths from Puerperal Sepsis .....	.....	.....
Cases of Puerperal Pyrexia .....	10	.....
Deaths from Puerperal Pyrexia.....	.....	.....
Still-births .....	24	2

Medical aid was summoned by Midwives in 8 cases under Section 22 of the Midwives (Scotland) Act, 1915.

The classes of emergency were :—

Perineal Tear .....	3	Incomplete Abortion .....	1
Retained Placenta .....	1	Persistent R.O.P. ....	2
Uterine Inertia .....	1	Bronchitis and Asthma .....	1
Contracted Pelvis .....	2	Prolonged Labour .....	1

No matter calling for special attention arose during the year.

Forty-eight visits to District Nurses and 21 domiciliary visits to Midwives were made by the Health Visitors.

*Maternity Homes.*—There are no registered Maternity Homes in the County. Moffat Cottage Hospital, which has a maternity block, is exempted from registration under Section 15 (1) (a) of the 1927 Act.

## (2) NOTIFICATION OF BIRTHS ACTS, 1907-1915.

The total number of births notified in the County and Small Burghs was 1050. This includes 24 still-births, which are notifiable, though not registrable.

In addition, 68 transfers regarding infants under 1 year, and 70 transfers regarding children aged 1 to 5 years, were received from other authorities.

*Visitation and Supervision.*—The total number of domiciliary visits paid by Health Visitors and District Nurses under the Maternity and Child Welfare Scheme was

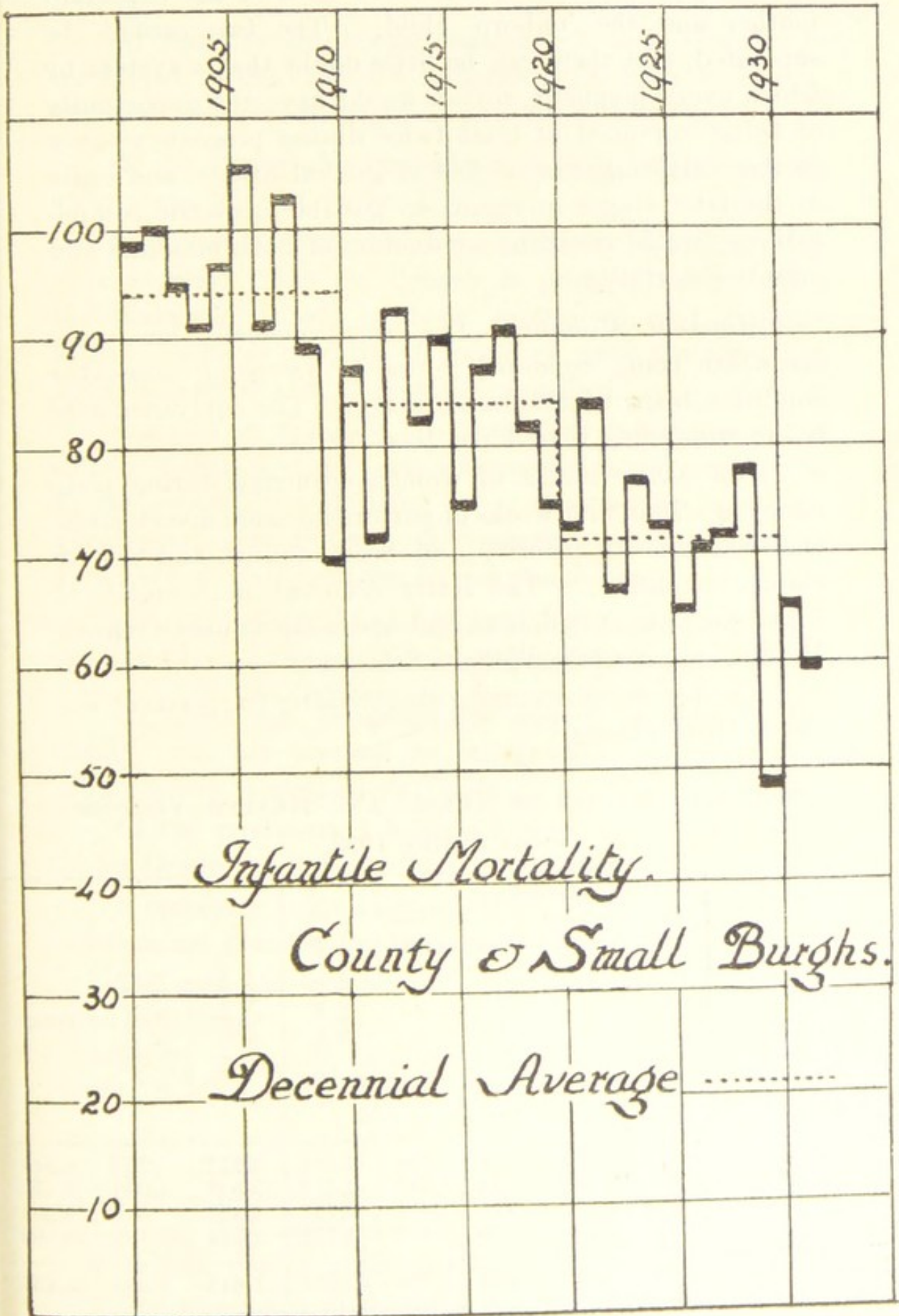
30,372. The table on page 36 shews the distribution of the work.

*Infantile Mortality.*—The figure for 1932 was 60 per 1000 births—the second lowest recorded during the present century. The chart shows the movement of this rate since 1901, the decennial averages being shewn as dotted lines. Making all allowances for the errors inherent in small numbers, the chart does suggest a considerable fall.

When the figures are analysed, deaths occurring within four weeks of birth being separated from those occurring between the fourth and the fifty-second week, it is found that the reduction is almost entirely in the second class. The proportion of infants dying within four weeks of birth—the “neonatal” rate—remains almost constant. During the decade 1911-1920 it was just under 38 per 1000 births, from 1921 to 1930 it was 35, while the figures for 1931 and 1932 were 33 and 36 respectively.

Such neonatal deaths comprise the majority of those due to ante-natal causes or to accidents of childbirth, while those due to environmental causes—*e.g.*, digestive diseases, bronchitis, pneumonia, and infectious diseases generally—fall into the later group. The curve shown in the chart suggests that the deaths due to “environmental” causes are being steadily reduced, while those due to ante-natal causes show little change.

While it may be difficult to conceive of a society from which ante-natal causes of infant deaths have been altogether eliminated, it is justifiable to suppose that a considerable reduction might be achieved by a more complete system of ante-natal care than is at present available. As was noted in last year's report, the number of “first visits” to expectant mothers falls far short of the number of confinements during the year. During 1932 the number of such visits was 398, while the number of births was 1039. Allowing for the number of women who make private arrangements for ante-natal supervision, there must be a considerable number who do not receive any advice prior to the date of confinement. This is a



matter which concerns the welfare both of the expectant mother and the unborn child. The two cannot be separated, and there can be little doubt that a system by which every pregnant woman would have the opportunity of being examined at least twice during pregnancy—once in the early stages in respect of general fitness, and again in the later stages in regard to possible obstetric complications—would result in a reduction of both maternal and infantile mortality.

*Maternal Mortality.*—This was unusually low, only one death being registered as due to puerperal causes, the condition being uterine hæmorrhage. The equivalent rate is something less than 1 per 1000 births.

Two other deaths of women occurring during pregnancy or within four weeks of parturition were investigated. One was due to pleurisy and heart failure and one to chronic nephritis. The latter occurred in hospital, to which the patient had been sent under the County Councils Maternity and Child Welfare Scheme.

Another death occurring shortly after confinement was due to tuberculosis.

STATUTORY DUTIES OF NURSES AND HEALTH VISITORS.  
Visits during 1932.

Quarter	Tuberculosis.	Maternity.				Infants (Under one year).	Children (1-5 years).	School Children.	Total.
		Ante-Natal.		Post-Natal.					
		First Visits.	Re-visits.	First Visits.	Re-visits.				
1	770	117	267	104	1,290	3,001	3,237	755	9,541
2	577	92	250	94	1,544	2,758	3,078	1,097	9,490
3	463	109	202	111	1,491	2,737	2,377	812	8,302
4	402	80	209	86	1,413	2,772	2,953	1,189	9,104
Totals	2,212	398	928	395	5,738	11,268	11,645	3,853	36,437
		30,372							

## T. MILK AND DAIRIES (SCOTLAND) ACTS.

(1) Bacteriological examination of milk samples is conducted in the Council's Laboratory, County Buildings, Dumfries (see report, pages 74 and 79).

(2) No appreciable quantity of milk is consigned from other areas to the County.

Any complaint from another authority regarding dirty milk supplied from the County is promptly dealt with, the premises visited, methods scrutinised and samples taken. This is repeated if necessary until the fault has been discovered and, if possible, remedied.

Samples are taken by the Veterinary Inspectors in the course of their routine visits whenever circumstances point to the desirability of doing so. Samples are also frequently taken at the various creameries where milk from a number of consigners can be got at one time.

(3) One outbreak of infectious disease during the current year was traceable to milk (see page 22).

(4) There are 16 producers and 5 retailers in the County who are licensed to sell graded milk under the Milk (Special Designations) Order.

Of the producers, 1 holds a licence for Certified Milk, 13 for Grade "A" (T.T.), and 1 for Grade "A."

A creamery holds a licence to sell Pasteurised, and the retailers are licensed for the sale of Grade "A" (T.T.).

The years in which producers' licences were granted were as follows :—

Certified (1)	...	...	1928				
Grade "A" (T.T.)	(13)	1924(1)	1926(2)	1927(2)	1928(3)	1929(1)	
		1930(1)	1931(2)	1932(1)			
Grade "A" (1)	...	1931					

The administration of those Acts has been carried out along the same lines as in previous years, and no special difficulty or problem has been encountered.

The amount of work which has to be accomplished by the Veterinary Inspectors, however, has been steadily

increasing. The number of herds registered has increased from 986 to 1027 in the course of the year. In addition, a number of premises in the southern part of the County, previously registered for sale of butter only, are now selling milk wholesale. A progressively greater amount of time is required every year for discussing problems with dairymen and giving advice. This, of course, simply means that greater use of the Veterinary Inspectors' services is being made by persons employed in the dairy trade. This is very satisfactory, but entails greater difficulty in carrying out routine inspections.

The classification of dairy herds is the same as in previous years, Class 3 comprising those which are registered for sale of small quantities of butter only. If those, numbering 423, be deducted from the total, there remains 603. The total number of routine inspections during the year was 1100.

The number of bacteriological examinations made during the year is 68 in excess of those for 1931. This branch of the work is of great importance. It could be much extended if laboratory space were available.

In this connection it is to be noted that the importance of co-operation between the milk-consuming and the milk-producing areas is not yet fully realised. Only a very small number of reports or complaints are received annually from authorities to whom Dumfriesshire milk is consigned. During the year under review only one intimation of tuberculosis was received from another authority. I should be glad to believe that this small number actually represents the total regarding which complaint would be justifiable, but I fear that such optimism is unfounded. It is not practicable to devise a system of dairy inspection so complete as to guarantee that no untoward incident can occur in the intervals between visits, but an arrangement by which the consuming authority regularly examined the great bulk of the milk consigned to it, and reported all unsatisfactory results to the producing authority, would be of great value in directing

immediate attention to the quarters where it was most required.

The number of animals reported and examined under the Tuberculosis Order, 1925, was 419, which is 12 more than in the preceding year. The number of cases confirmed and slaughtered, however, was only 168, as against 200 in 1931. Those classed as "advanced tuberculosis" numbered 60, or 36%, as against 39% in 1931 and 74% in 1926.

Details of the work under the Milk (Special Designations) Order, 1930, appear in Table V. There was no increase in the number of graded herds during the year under review. The great difference between the price paid to the producer and that demanded from the customer appears to be the main reason for the relatively small amount of graded milk produced.

Mr Davidson reports :—"There is a decided increase in the number of premises conforming to the bye-laws, and during the past year a large number of farmers have made improvements, which, though they have not brought their premises up to the standards required, have materially helped in the ultimate object of improving the health and cleanliness of the cows, and in this connection I have given considerable advice at the time of herd inspection. The improvement in equipment, such as steam pressure boilers and water bowls, still continues, as these are now recognised as necessary to good farming."

Mr Sangster reports a similar improvement in the northern part of the County.

Both Inspectors remark on the absence of any increase in the production of graded milk. Mr Davidson writes :—"The position as regards Grade 'A' (T.T.) milk is more or less stationary. One producer gave up his licence during the year, as he found it impossible to find a market for his milk and was sending it to a local creamery along with other milk from 'non-Tuberculin Tested' cows. The

other producers have only found a market for a certain percentage of their produce, the remainder being sold as ordinary milk. The position as regards the Tuberculin Tests shows a steady improvement, two herds having no reactors at the last tests and another only one reactor. The other two herds, being started from what might be termed a 'flying stock,' are greatly improved, especially as in each case there is now available a supply of calving heifers reared on the premises. There is an increase in the number of herds, which, I think, could comply conveniently, as regards reactors, with the requirements of the Milk (Special Designations) Order, the owners having been carrying out a modified eradication scheme under my direction."

Dealing with the northern part of the County, Mr Sangster writes:—"Great difficulty is being experienced in the marketing of graded milk, and during the summer a good deal was made into cheese. As noted in last year's report, a considerable quantity of milk produced in this area is retailed in Dumfries, Thornhill, Sanquhar, Kirkconnel, and the surrounding districts, while a considerable amount is going to England. The price received for graded milk by the producers is not encouraging to the farmers, and were it not for the advantages gained from the stock of a tubercle free herd there would be few, if any, premises licensed under this Order. The price the producer gets compares badly with that paid by the consumer. I am led to believe that, in one city in England, Certified milk is retailed at as much as 1s 3d per quart and Grade 'A' (T.T.) at 1s per quart. Grade 'A' (T.T.) milk is sent to this same city from Dumfriesshire, and the local producer is paid at the rate of 1s 1d per gallon in the winter months and 9d per gallon in the summer months. The high price to the consumer is one of the greatest obstacles in the way of increasing the demand."



Table IV.

EXTRACT FROM RETURNS UNDER TUBERCULOSIS ORDER, 1925.  
 REPORTS MADE ON ANIMALS ON REGISTERED PREMISES.

	Milk producing.	Butter producing.	Total.
Reports received and examined ...	392	27	419
Cases confirmed and slaughtered ...	151	17	168
Cases found at Post-mortem to be :—			
(a) Not Tuberculosis ... ..	...	...	...
(b) Advanced Tuberculosis ...	51	9	60
(c) Not Advanced Tuberculosis ...	100	8	108
Confirmed cases reported by County			
Veterinary Inspector ... ..	87	1	88

Table Va.

MILK (SPECIAL DESIGNATIONS) ORDER, 1930.

Certified	Class of Licence. Producers.					Milk Samples Examined.			Tuberculin Tests.				
	Grade "A" (T.T.)	Grade "A."	Pasteur- ised.	Retailers	Visits,	Bact.	Chem.	Total.	Herds, One Test.	Herds, Two Tests.	Routine Tests.	Interim Tests.	Total.
1	13	1	1	5	305	116	102	218	4	10	1319	60	1379

Table Vb.

## TUBERCLE FREE HERDS.

## (i) Certified.

Name and Address of Dairy.	Average Herd.	Estimated Gallons per Annum.
Wm. A. Thomson, Dalpeddar, Sanquhar	28	
Total ... ..	28	23,800

## (ii) Grade "A" (T.T.).

A. & A. Kirkpatrick, Barr, Sanquhar ...	96	
Jas. Howie & Sons, Muirside, Holywood	50	
Wm. Brown, Drumcork, Thornhill ...	53	
R. Dickie, Knockenjig, Kirkconnel ...	52	
D. Kirkpatrick, Auchenbainzie, Penpont	61	
J. S. Laidlaw, Glengar, Penpont ...	29	
Robt. Millar, Shawsholm, Closeburn ...	73	
The Directors, C.R.I. Farm, Dumfries ...	110	
D. & G. D. Wyllie, Hannah, Cummertrees	57	
Wm. Halliday, Gillesbierigg, Boreland ...	44	
J. Jamieson, Roundbush, Dornock ...	35	
M. Sloan, Hunterhouse, Lochmaben ...	30	
R. Graham, Blackford, Lockerbie ...	29	
Total ... ..	719	441,639

## (iii) Not Licensed.

Nine herds ... ..	354	216,310
Grand Total ... ..	1101	681,749

- (iv) Premises Licensed for Retailing Certified or Grade "A" (T.T.):  
 J. Doyle, Temperance Hotel, Penpont.  
 Co-operative Society, Sanquhar and Kirkconnel.  
 T. J. B. Sime, High Street, Annan.  
 Wm. Thomson, 105 Central Avenue, Gretna.  
 Messrs Edgar, 78 High Street, Langholm.

## MEAT INSPECTION.

Table VI. summarises the results of meat inspection during the year so far as the County Veterinary Inspectors are concerned, and includes inspections at Lockerbie abattoir. Notes on meat inspection in the other Small Burghs will be found in the appropriate sections of this report.

It would be desirable, as noted last year, to have arrangements similar to those with Lockerbie in the other Small Burghs. This, however, will entail a reconsideration of the existing system, as the Inspectors' time is already fully occupied.

Table VI.  
MEAT INSPECTION BY COUNTY VETERINARY INSPECTORS.  
Synopsis of Tables showing Meat and Offal condemned.

Bovines except Calves.			Sheep.			Calves.			Pigs.																	
Carcass.	Quarters.	Meat—Lbs.	Heds.	Lungs.	Liver.	Other Offal.	Carcass.	Quarters.	Mutton—Lbs.	Liver.	Other Offal.	Carcass.	Offal.	Weight. Lbs.	Carcass.	Offal.	Carcass.	Weight. Lbs.	Carcass.	Offal.	Pork—Lbs.	Heds.	Liver.	Other Offal.	Carcass.	Weight. Lbs.
4538½	2368	127202	796629	25372	19277	12	3	526	1005½	82	1055	3380½	55	397	3147	387	...	344	17	24	29	344	303			

## OTHER SANITARY WORK.

### DISPOSAL OF REFUSE.

Ecclefechan Dump.—As noted in last year's report, this dump is now full. Several sites were suggested and reported on, but in no case was the proprietor prepared to sell land to the Council for this purpose. It appears probable that compulsory powers to acquire land will have to be exercised.

Kirkconnel Dump.—The space available for dumping here has now been exhausted, and justifiable complaints have been received regarding the amount of rubbish carried off by the stream. An alternative site was suggested, but was regarded as unsuitable. No further progress had been made at the end of the year, but at the time of writing a site has been located which, it is hoped, may be available for dumping.

No point of special interest arose in regard to the other special scavenging districts.

The inadequacy of scavenging at Moniaive has frequently been commented on. Every summer heaps of decomposing refuse are found at various points along the course of the stream, awaiting a spate which will remove them out of sight and out of mind. One is loth to suggest the formation of a special scavenging district in a village which is already heavily rated, but no other solution seems possible, unless the inhabitants can themselves arrange to dispose of refuse in some less objectionable way.

A report was made on the condition of a road known as "Peter's Loaning," which runs from Watchhill, Annan, to Kimmeter Green on the Kirkpatrick Road. The whole surrounding area is flat and badly drained, the result being that the surface of a portion of the loaning became so water-logged with surface water and domestic slops as to be nearly impassable in wet weather. A certain amount of improvement followed the service of notices on proprietors of houses situated in the loaning, but the whole position in that area is unsatisfactory. A special drainage

district would solve the difficulty, but as the houses to be served are scattered, and the total valuation low, that solution is at present outwith the scope of practical politics.

#### PUBLIC CONVENIENCE AT MONIAIVE.

In consequence of representations as to the inconvenience caused by the lack of any sanitary accommodation at Moniaive for the use of passengers by bus, a site was purchased and plans prepared for a building to contain lavatory and w.c. accommodation for both sexes. The estimated cost, unfortunately, proved higher than had been anticipated, and the proposal is held up meantime, so that the travelling public must continue "doing their ease at the close heidis as is maist uncomely to be sene," if one may quote from a minute of the Town Council of Edinburgh, who apparently were confronted by a similar problem in the year of grace 1580. *Tempora mutantur*, yet it is pleasant to catch those echoes across the centuries!

#### OFFENSIVE TRADES.

An application by the Kirkconnel Co-operative Society, Ltd., to establish a tallow-melting business in their premises at Kirkconnel was granted.

#### NOMADS.

A report was made to the Public Health Committee regarding a nuisance at Newfield, near Dumfries, where a number of caravan dwellers had been allowed to camp under conditions which seemed to constitute a nuisance. A notice was served in terms of Section 20 of the Public Health (Scotland) Act, 1897, on the proprietor of the ground, and matters were improved thereafter so far as the particular site complained of was concerned.

#### BURIALS.

An unusual case occurred of a body being buried in the churchyard at so shallow a level that it was held desirable to petition the Sheriff for warrant to exhume and re-inter. The warrant was granted, exhumation carried out, and the body re-interred in a more seemly manner.

## Report upon Public Assistance Work for Year 1932.

During the course of the year—the second complete year for which the County Council has exercised the new statutory powers in Public Assistance administration conferred upon it by the Local Government (Scotland) Act, 1929—the increase of need and destitution in the County, referred to in last year's report, has continued steadily, as is borne out by the following comparative tables relating to Numbers of Poor and Number of Applications. The most notable increase took place in the number of destitute able-bodied unemployed poor, more than double the number chargeable as at 31st December, 1931, being in receipt of assistance on the corresponding date in 1932. This again is attributed to the growing number of disallowed cases on the Registers of the Ministry of Labour, and to the general conditions of agricultural and industrial depression.

### APPLICATIONS FOR RELIEF.

Number of Applications for Public Assistance.

District No.	No. of Applications	Withdrawn by Applicant.	Refused by Committee	Relief offered not accepted.	Granted Relief.			Total Relieved.
					Out-door.	In-door.	Institutional Lunacy Cases etc.	
1	148	4	7	2	111	14	10	135
2	84	1	5	1	46	29	2	77
3	165	6	4	...	145	10	...	155
4	117	...	15	2	85	11	4	100
5	78	...	2	1	62	10	3	75
6	110	2	3	4	84	14	3	101
7	16	...	...	...	12	3	1	16
8	53	1	4	2	33	8	5	46
9	21	...	2	...	12	2	5	19
Total	792	14	42	12	590	101	33	724
Total for year 1931	603	19	49	21	360	119	35	514

## NUMBER OF REGISTERED POOR CHARGEABLE TO COUNTY.

Classification.	At 31st December, 1932.			At 31st December, 1931.		
	Poor Persons	Dependents.	Total	Poor Persons	Dependents.	Total.
Ordinary— Outdoor	401	508	909	350	409	759
Do. Indoor	57	2	59	72	9	81
Boarded-out						
Children ...	84	...	84	70	...	70
Lunatic and Mental						
Defective ...	169	...	169	167	...	167
Able-bodied						
Unemployed ...	112	326	438	50	178	228
Total ...	823	836	1659	709	596	1305

## INDOOR POOR.

There were 57 persons in receipt of indoor relief at 31st December, 1932. In addition 19 cases boarded by the Corporation of Glasgow were also under the supervision of the Authority at Rowantree House.

## SUSPENSE POOR.

At end of year 30 cases were chargeable on the Roll of Suspense Poor. In 17 of these the settlement was still undetermined, the remainder being without any available settlement in Scotland.

## LUNATIC POOR AND MENTAL DEFECTIVES.

The following are the numbers of this class of poor chargeable to the County at 31st December, 1932 :—

	In Institutions.	Boarded-out.	Totals.
Lunatic Poor ...	140	11	151
Mental Defectives ...	12	6	18
Totals ...	152	17	169
Totals as at 31st December, 1931 ...	153	14	167

### VAGRANTS.

The number of vagrants dealt with and relieved during 1932 was 12,096. The two previous years' figures were as follows :—9183 in 1931, and 8634 in 1930.

This problem, which is occupying the attention of authorities in many parts of the country, is becoming of serious dimensions. In some areas a scheme of co-operation between Public Assistance Departments and the Police Services has been adopted with beneficial results.

### CLAIMS FROM OTHER AUTHORITIES.

Of 125 claims received from Other Authorities, 84 were finally admitted, 37 refused, 1 withdrawn, and 3 were still under consideration at end of year.

### CLAIMS AGAINST OTHER AUTHORITIES.

Claim was made against Other Authorities in respect of 69 poor persons becoming chargeable in this County, and of that number 52 were successfully established.

### POORHOUSES.

The management of the Council's poorhouses situated at Rowantree House, Thornhill, and Notwen House, Kirkpatrick-Fleming, was again carried out in a satisfactory manner during the year. At Rowantree House a firewood industry similar to that at Notwen House was introduced, in order that suitable and profitable work may be engaged in by the able-bodied inmates. The Department of Health intimated their consent to the withdrawal of the County Council from Hawick Poorhouse Combination, but the terms and conditions of withdrawal have not yet been determined.

### PROSECUTIONS.

In seven instances the Chief Public Assistance Officer applied for warrants for apprehension of husbands in desertion, in terms of Section 80 of the Poor Law (Scotland) Act, 1845. One was arrested and sent to prison for 30 days ; one had not been traced ; and another made a satisfactory settlement for repayment of advances before

warrant was put into force. Of the remaining four cases, three were continued for sentence to enable the offenders to make satisfactory arrangements for the support of their dependents, and one who was appearing before the Sheriff for the second time, having repaid the Council's outlays and given an undertaking to provide for his wife, was discharged by the Sheriff with an admonition.

#### REPAYMENT OF ALIMENT.

In every case where there are relatives liable for support, and considered in a position to meet their obligation, efforts are made to obtain recovery of the advances made or contributions towards repayment. During the year the amount recovered, including sums refunded from Workmen's Compensation settlements, arrears of Unemployment Benefit, Widow's Pensions, and other sources, was £997 2s. This figure, which represents a satisfactory proportion of the expenditure for aliment, is a valuable saving to the rates of the County.

#### CHILDREN ACT, 1908.

The Local Government Officers continued to act as Infant Life Protection Visitors within their districts, the total number of visits made being 99. The following statement shows the number of cases dealt with during the year, and the number on the Register at end of year:—

#### CHILDREN ACT, 1908.

Dist. No.	No. of Cases. 1st Jan., 1932.	Intimations Received.	Deaths.	Removals, etc.	No. of Cases. 31st Dec., 1932.
1	5	7	...	8	4
2	...	1	...	1	...
3	8	2	...	3	7
4	14	7	1	9	11
5	7	4	..	5	6
6	3	3	...	4	2
7	...	...	...	...	...
8	...	1	...	...	1
Totals	37	25	1	30	31
Previous Year	46	22	1	30	37

## VACCINATION DEFAULTERS.

The number of defaulters reported by the Registrars was 127, as per the undernoted table, which indicates the manner in which they were disposed of. Orders to Vaccinate were issued to the Medical Officers in 80 cases.

District No.	Successfully Vaccinated.	Certified In susceptible	Postponements still current, 31st Dec., 1932.	Certified Not Traced.	Reported to Other Authorities.	Died before Vaccination.	Still Unvaccinated 31st Dec., 1932.	TOTAL.
1	12	3	6	2	9	...	3	35
2	3	...	...	...	...	...	...	3
3	7	7	...	...	3	1	3	21
4	2	...	...	...	...	...	...	2
5	11	...	1	...	2	...	1	15
6	11	...	1	...	0	1	2	20
7	10	3	5	...	...	...	2	20
8	9	...	1	...	1	...	...	11
	65	13	14	2	20	2	11	127

## TRANSITIONAL PAYMENTS.

The arrangements detailed in the Report for 1931 continued in force throughout 1932, and, as is borne out by the following figures, resulted in a greatly increased volume of work devolving upon the Sub-committee and Headquarters Staff and District Officers.

## NUMBER OF NEW CLAIMS.

Total Determinations Issued	Dealt with as follows :—		
	Full Standard Rate.	Reduced Rate.	Nil Assessment.
1161	255	696	210

## NUMBER OF RE-ASSESSMENTS.

Total Determinations Issued.	Dealt with as follows :—		
	Increased Assessment.	Reduced Assessment.	No Change.
5532	625	603	4304

Average Number of Determinations issued per week, 138.

#### RELIEF FROM PAYMENT OF RATES.

The services of the Local Government Officers were utilised for the investigation of circumstances in the cases of applicants for exemption from payment of assessments, and this procedure was found of considerable value in securing accurate information and in facilitating the work of the Sub-committee.

#### MEDICAL SERVICE.

Dr Robertson, Medical Officer for Kirkmahoe Parish, resigned, and Dr Campbell, Dumfries, was appointed interim Medical Officer in his place.

Arrangements were made with the Lower Annandale Nursing Association to have the services of one of their nurses available at Notwen.

Apart from those matters the Public Assistance Medical Service was carried on in the same way as in previous years.

## SMALL BURGHS.

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The following excerpts from the reports by the Sanitary Inspectors of the Small Burghs deal with those services which were not transferred to the County Council by the Local Government Act of 1929 :—

### BURGH OF ANNAN.

Mr Rodger reports :—

“ **Water.**—The water supply is by gravitation, and is a good upland surface water which receives filtration before being delivered to the consumers.

Owing to several indirect complaints being received as to a shortage of water occurring in the higher district of the town, the Town Council at once instigated a survey of the water system, and found that for the proper working of the system several new valves had to be installed in place of those defective and some others cleaned. A fractured pipe was also discovered. It was replaced, and after these alterations were completed an improvement in the supply was noted.

A survey of private connections and taps was also carried out, and where wastage of water was detected these were immediately repaired. I may state that in many of the instances where an alleged shortage of water was supposed to exist, the fault lay entirely in the fact that the stop-cocks were partially choked. The Town Council are alive to this fact, and are urging proprietors to have their connections inspected at intervals so that they will always be kept clear of incrustation.

An analysis of the water was taken, and the Analyst's report is appended :

## ANALYST'S REPORT.

“ The following results expressed in parts per 100,000 :—

Mark and denomination of the sample.	Annan Town Council Water Supply for Domestic Purposes.		
Total Solid Matter in Solution	...	...	7.12
Oxygen required to Oxidize in 15"	...	...	0.121
Oxygen required to Oxidize in 3 hours	...	...	0.239
Ammonia	...	...	0.001
Ammonia from Organic Matter by Distillation from Alkaline Permanganate	...	...	0.014
Nitrogen as Nitrates	...	...	None.
Combined Chlorine	...	...	0.70
Nitrogen as Nitrites	...	...	None.

The sample was clear, faintly yellow, and odourless. It contained a very minute trace of suspended matter, which consisted of vegetable debris, hydrated oxide of iron, diatoms, and a few infusoria and particles of silicious matter.

The water is a good upland surface water, well suited for drinking and all domestic purposes.”

As the pipes throughout the Burgh have not been scraped for some considerable time, the Town Council hope to have several sections attended to during this year.

**Drainage.**—The sewers of the Town have been working in a very satisfactory manner for the past year. During the year several heavy rains have been experienced, but I am glad to say that no recurrence of flooding—dealt with in my last report—has occurred. As the sewers in this district have not a great deal of fall, it is necessary in the summer time to have the drains flushed periodically to ensure that the heavier excreta is efficiently carried to the mouth of the sewer, and so avoid accumulation which leads to chokage. About 250 yards of the main sewer were scraped during the year.

During the summer a field adjoining the public road was found to be saturated with sewage, and on investigation the nuisance was traced to a conduit which crossed

the road from the field opposite. This conduit carried surface water from the latter field, but when crossing the road it was connected to an old disused sewer which had not been disconnected from the manhole in the existing system. I am under the impression that this connection was to relieve the conduit of surface water when taxed to overflowing point, but unfortunately the sewage was gaining access from the manhole into the old disused sewer and thence into the conduit, which became choked in the field, subsequently saturating the field in one part with sewage. To repair this defect the old sewer was sealed, the conduit repaired, and the field cleared of all sewage matter.

**Scavenging.**—The scavenging of the Town has been carried out efficiently. At the present time the Town Council are considering the advisability of purchasing a new horse and dust-cart in place of an aged horse and a very cumbersome dust-cart as at present, with a view to having this part of the work brought up to an efficient standard. A great deal of time has been expended on the free coup. Several alterations have been made, such as extending an earth wall along one side so as to enclose the whole area and arrest paper from floating into the adjoining river when high tides occur. The number of loads conveyed to the tip for this year numbered 1976, being 1729 of refuse and 247 of paper. The streets are kept in a cleanly state, and no complaints regarding these have been received.

**Nuisances.**—During this year nuisances have not been so numerous as last, but where these have been reported notices have at once been sent out, and I must say proprietors in most cases have the nuisance remedied at the earliest possible moment after notification. One fruit dump within the Burgh which was causing a nuisance has now been cleared, and the decaying matter is collected from the premises daily. There is only one privy midden in the burgh, and this cannot be avoided, as owing to the

houses being erected on the opposite side of the L.M.S. railway bridge from the Town, sufficient fall cannot be gained to extend the sewer to this area. During the year 17 new water supplies and 1 w.c. have been introduced into houses which were without these conveniences.

**Factories and Workshops.**—Periodical visits are made to these premises. This year 72 visitations were made, and it gives me pleasure to say that they have all been kept in a cleanly condition.

**Housing and Town Planning.**—Under the Housing Acts many visitations have been made to several insanitary houses throughout the Burgh. A list was drawn up, numbering 52 more or less insanitary houses, with a view to closing same, and before doing so the Town Council advised the proprietors what was required to render the houses habitable with a view to having the defects remedied. Several proprietors have taken advantage of this consideration, and to those who are dilatory the Town Council intend to issue the statutory notice. The Town Council are at present decided on building eight houses under the Slum Clearance Act, and hope to instal in them families drawn from eight of the most insanitary houses in the Burgh.

**Slaughter-house.**—These premises are vested in the Local Authority and looked after by them. The premises are used by the local butchers and farmers from the surrounding districts. All killing is done by humane killers. Several improvements have been carried out on the structure to make it wind and water tight, so that it can be kept in a proper and clean condition. During the year the number of animals slaughtered was as follows :—

Cattle	...	...	...	...	491
Sheep	...	...	...	...	1994
Pigs	...	...	...	...	421
Calves	...	...	...	...	52
Lambs	...	...	...	...	11

The only complaint received regarding these premises referred to insufficient light, and the Town Council had an extra window installed immediately.

**Meat Inspection.**—During the year the number of animals seized and destroyed was 9. These seizures are made under the warrant of a Magistrate.

**Foods and Drugs.**—The work under this headline is administered by the officials of a Joint Committee of the County Council and Burgh.

**Schools.**—There are three schools situated in the Burgh, and these have been visited periodically and found to be looked after in a most favourable manner.

**Lodging-houses, Tents, and Vans.**—There are no Common Lodging-houses in the Burgh, but a Common Merse is provided as a resting-place for caravans which are passing through the Town.

**Dairies, Cowsheds, and Milkshops.**—There is only one milkshop in the Burgh, which is kept in a sanitary condition.

**Interments.**—During the year no interments have been carried out.

**Burial Grounds.**—There are two burial grounds in Annan, but these are now out of use. These are attended to periodically.

**Bye-laws.**—The only bye-laws existing are for the surveillance of the slaughter-house, and they are strictly adhered to."

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## BURGH OF SANQUHAR.

**Water Supply.**—Investigations regarding the excessive consumption referred to in previous reports have been continued. On 27th April the afternoon draw-off was

equivalent to 73·7 gallons per head. At 9.45 p.m. it was about 60 gallons per head. Readings taken at midnight on two occasions shewed that at that time the amount of water flowing from the tank was equivalent to about 33 gallons per head per day.

Those figures show some improvement on the previous years, but are still much too high.

Investigations were carried out during the year by the late Mr W. C. Easton, Glasgow, and subsequently by Mr H. M. Ross. Those were commenced in August, and were still in progress at the end of the year. A large number of leaks were detected and repaired, the most serious being at the clear water tank. There is no doubt that further investigation and constant supervision would lead to a still greater improvement.

**Drainage and Sewage Works.**—The new sewage works, referred to in last year's report, have now been in operation over a full year, and analyses made of the effluent shew that they are operating efficiently. (See Laboratory Report, page 89.)

**Housing.**—Twenty-six dwelling-houses were reported on in the course of the year. None were in such a condition as to be reported unfit for human habitation.

Six intimations were sent regarding insufficient water-closet accommodation. This was provided in each instance.

Eighteen plans for improvement or repairs to existing houses were submitted.

**Slaughter-house.**—This has been visited from time to time and found well conducted.

**Common Lodging-house.**—This has been kept under supervision. A modern w.c. has now been fitted to replace an old and insanitary trough closet.

**Other Sanitary Work—Nuisances.**—Six intimations were sent regarding nuisances or defects.

## BURGH OF LOCHMABEN.

**Water Supply.**—This is of good quality, and adequate storage is available. The consumpt, however, seems unduly high, and is presumably largely due to waste through defective fittings. As the town is about 175 feet above sea level and the reservoirs, about  $2\frac{1}{2}$  miles away, are some 325 feet higher, the pressure is considerable, and a small leak, if undetected, entails serious loss.

The works comprise a sand filtration plant delivering into a clear water tank. In view of the distance from the town, and the numerous other duties to be performed by the Water Officer, it seems probable that the works cannot receive the amount of attention necessary to maintain filtration at its optimum. The matter, at the time of writing, is under consideration by the Town Council.

**Drainage.**—The town's sewers and sewage works have functioned satisfactorily during the year.

**Housing.**—The new houses at the Glebe were approaching completion at the end of the year, and demolition orders were served on a number of the worst houses at Marjoriebanks.

Twenty-three inspections were made during the year, and two notices sent to proprietors regarding defects. The necessary works had in one instance been completed at the end of the year.

One house was renovated under the Burgh's Approved Scheme under the Housing (Rural Workers) Acts.

Alterations were made on 4 existing premises.

**Nuisances.**—Seventeen intimations were issued regarding nuisances or defects.

## BURGH OF LOCKERBIE.

Mr Walker reports :—

**“ Water Supply.**—The Town is provided with an ample supply of pure water, gathered from hill pasture into a large reservoir situated fully 500 feet above sea level and about five miles from the town. It has a capacity of fifteen and a half million gallons. During the year the water in the reservoir never fell more than a few inches. The water from the reservoir is conveyed by a seven-inch main to the filter beds and storage tank situated in close proximity to the town and at a height of 173 feet above the centre of the town, which gives the supply sufficient gravity force to supply all parts of the town with sufficient pressure. The filter beds are two in number, each with a filtering area of 1200 square feet, the filtering medium being best Arran sand. The storage tank is in two sections, entirely closed in, and has a total capacity of 240,000 gallons. During the year the town has had an uninterrupted supply of pure water. Constant attention to house fittings helps considerably in maintaining a good supply.

**Sewage Disposal.**—The sewers throughout the town continue to work satisfactorily. Even during the extra heavy rains that occurred during the year there were no instances of any of the sewers becoming overloaded.

All new house drains and alterations to drains during the year were carried out under my supervision.

**Sewage Works.**—At the sewage works, which are situated about a mile to the west of the town, a considerable amount of repair work has been carried out. All the working parts have been dismantled and worn-out parts refitted. Still further improvements are to be carried out under the direction of the Medical Officer of Health.

**Slaughter-houses.**—The slaughter-houses are suitably situated. There are the main buildings which are used

by the local butchers ; closely adjoining them is a specially constructed building, with a special railway siding, which is used solely for the slaughtering of sheep for the London markets. The premises are well equipped and are kept in good order. During the year the number of animals slaughtered were as follows :—

Cattle	...	...	...	...	554
Calves	...	...	...	...	774
Heifers	...	...	...	...	18
Pigs	...	...	...	...	186
Sheep	...	...	...	...	31,997
					<hr/>
Total	...	...	...	...	33,529

This amount of slaughtering necessitates the removal of a very large quantity of garbage, which at present is successfully disposed of to a local farmer. During the year the premises were inspected by Dr Leighton, Inspector of Slaughter-houses for the Department of Health for Scotland.

The inspection of meat is under the supervision of the County Veterinary Officer.

**Scavenging.**—The cleansing arrangements for the town are as follows :—

The household refuse is collected by two carts three days in the week. The town is divided into districts. The central parts are collected first, and the outlying parts later. The coup, which is on the land reclamation principle, is situated on the outskirts of the town. It is a new site, and was opened early in the year. Before the refuse is tipped on the land the peat moss is dug out to a depth of two feet and laid on top for covering. The quantity of refuse handled in the year is approximately one thousand tons. Later on in the year the coup was inspected by the Chief Cleansing Inspector for the Department of Health for Scotland, who reported very satisfactorily on its condition.

The Town Council during the year had under consideration the procuring of a motor vehicle for the collection of the house refuse, but after considering the matter thoroughly and acting on the advice of the Chief Cleansing Inspector of the Department of Health, who strongly advised retaining our present system, it was decided to make no change for the present.

There is also a weekly collection of waste paper, which is carted to a suitable site about a mile from the town, where it is incinerated.

**Schools.**—Lockerbie Academy is the only school situated within the Burgh. It is a modern building, well equipped with modern sanitary arrangements.

**Workshops.**—The number of workshops in the Burgh is 21. They are all well situated and provided with sanitary accommodation. The largest business in the town is the Dumfriesshire Dairy Company, which is a modern and up-to-date building, and the sanitary arrangements are kept in good order.

**Factories.**—There are no factories situated within the Burgh.

**Common Lodging-house.**—There is only one common lodging-house within the Burgh. It is a small house consisting of two rooms and a kitchen. It can be considered as adequate and under satisfactory management.

**Burial Grounds.**—There is only one burial ground situated in the Town, and the interments now are very few. The management is under the Local Authority.

**Nuisances.**—The nuisances that occurred during the year were nearly all in the nature of choked drains, and were abated without much trouble.

**Bakehouses.**—There are four bakehouses in the Burgh, which are all in good order. Improvements were carried out at one of the houses in order to make it a more spacious building.

**Dairies.**—There are two registered dairies within the Burgh, both of which are satisfactory.

**Sanitary Conveniences.**—Inspections during the year in regard to this work have resulted in five houses being provided with indoor sinks and water supplies.

The number of houses without water supplies and sinks inside are 43, which are as follows :—

- 7 single taps serving 2 tenants.
- 3 single taps serving 3 tenants.
- 1 single tap serving 2 tenants.
- 5 single taps serving 1 tenant.
- 1 single tap serving 1 tenant.

Number of water-closets used in common :—

Number of w.c.'s serving 2 tenants	...	...	13
Number of w.c.'s serving 3 tenants	...	...	2
Number of w.c.'s serving 4 tenants	...	...	1
Number of w.c.'s serving 5 tenants	...	...	0
Dry Closets	...	...	nil.
Privy Middens	...	...	nil.
Ashpits	...	...	nil.

**Plans.**—Plans were passed by the Local Authority for the following :—

New Houses	...	...	6
Additions to Buildings	...	...	6
Alterations to Buildings	...	...	4
Garages, Outhouses, etc....	...	...	5
			—
Total	...	...	21

**BURGH OF MOFFAT.**

Mr Sanson reports :—

“ **Water.**—The Burgh is fortunate in having an excellent supply of water, which is of good quality and ample quantity. The supply is drawn from hill pasture lands, where the risk of contamination is slight. Near the head of the Annan Valley, on the lands of the Granton Estate, several wells have been formed. Those wells have been sunk well below the impervious stratum on which the sub-soil water rests, and their supply is obtained from water which has percolated through the porous strata from distant points. From the wells the water is led into an underground concrete tank. This tank is of small dimensions, and provides storage which would only last a few hours. It has not been found necessary to provide any form of filtration, and the water is taken direct from the tank into the town mains. No complaints as to shortage of water have been received, and the daily average consumpt for the past twelve months has been 99·5 gallons per head of population. It has been found from observations made at the storage tank that there is no variation in the water level throughout the year, the flow of water from the wells being more than sufficient for the needs of the town. The daily average consumpt for the Burgh during the year was 229,164 gallons.

**Housing.**—A slum clearance scheme was submitted to the Department of Health for approval, and after a public enquiry the order was confirmed with certain modifications. The Council have carried out a re-housing scheme in connection with the order, and notice has been served on the occupiers of the houses in the clearance area in terms of Section 27 (1) of the Housing (Scotland) Act, 1930. There is still a shortage of houses suitable for the working classes, and the Council have had a large number of applications for the three houses at the Rogermoor Scheme, which have been advertised to let.

## Common W.C.'s.

Serving two tenants	...	...	...	...	7
Serving three tenants	...	...	...	...	2
Houses without water and sink inside the house					2
Dry closets	...	...	...	...	nil.
Privy middens	...	...	...	...	nil.
Ashpits	...	...	...	...	nil.

**Drainage.**—The purification works are of modern design, having only been in operation since March, 1929. The effluent is discharged into the river Annan, and every effort is made to prevent the pollution of the stream. The work which was carried out by the Council during the year with a view to freeing the sewers as far as possible from the large quantities of sub-soil water which was finding its way into them has had most satisfactory results. The dairy average flow from the works has been reduced from 326,000 gallons during 1931 to 264,164 gallons for 1932.

**House Drainage.**—Every care is taken to see that all drains to new buildings are put down in accordance with modern sanitary regulations. Inspections are made and the smoke test applied before the work is covered up, and in some cases the drains are again tested before the buildings are occupied.

**Cleansing.**—A daily house-to-house collection of refuse is made throughout the town by two horse-drawn vehicles, one covered and one uncovered. The system has been found to be very efficient. The collection is usually completed throughout the town before 11 a.m. A weekly collection of waste paper from trade premises is made, and the paper is burned at the refuse tip. A weekly collection of tins, etc., is also made throughout the town, and special collections of street sweepings are also made. The refuse tip is situated outside the Burgh boundary, and was formerly waste land. The refuse is dumped

in layers and covered by a layer of soil and allowed to consolidate before the next layer of refuse is laid on. Empty tins, etc., are buried. Precautions are taken to control the rat pest, with very satisfactory results. The whole scavenging system is well organised and efficiently carried out.

**Nuisances.**— There were twenty-one complaints received during the year which were enquired into. The number of nuisances dealt with was thirty-two, and in connection with these one intimation notice was issued. In no case was it found necessary to send out statutory notices in terms of Section 20 of the Public Health (Scotland) Act, 1897.

The nuisances dealt with were mostly damp and defective walls, defective floors, choked drains and water-closets.

**Slaughter-house.**— The public slaughter-house is being maintained in a satisfactory manner. The premises are under the control of the Town Council, and are kept clean and free from objectionable odours. During the year several improvements and repairs have been carried out, including floor of the main building relaid with concrete; parts of the inside walls refaced with snowcrete cement plaster; floor of courtyard relaid with concrete; roof, gates, and doors and part of the drainage system repaired.

Four sheep carcasses, together with a large number of sheep livers, were condemned and destroyed with the owner's consent.

Animals slaughtered during the year numbered :—

Cattle	...	...	...	...	260
Sheep	...	...	...	...	1777
Pigs	...	...	...	...	15

**Schools.**— The schools in the Burgh were periodically visited during the year. Moffat Academy has been taken

down, and a new school is now being erected on the site. Halls and other suitable buildings in the town are being used as schoolrooms meantime. Those places have been visited regularly, and in each case it was found that the premises were being well kept.

**Factories and Workshops.**—In the supervision of the factories and workshops in the Burgh 118 visits of inspection were made, and the premises were generally found to be well kept.

**Bakehouses.**—There are four bakehouses in the Burgh, one of which was built during the year under review. In the design of the building and the methods of construction the most modern ideas were incorporated. The machinery is of the latest type, and no effort is being spared by the proprietor to maintain a high standard of cleanliness. Regular visits of inspection have been made to the remaining premises, and in one case the proprietor was called upon to have the premises lime-washed and the window cleaned.

**Common Lodging-houses.**—There is no common lodging-house in the Burgh. There is a rest house, where vagrants are given two meals and shelter for one night. It is under the control of the County Council, and is well conducted and kept scrupulously clean.

**Dairies.**—There is one milkshop in the Burgh. The premises are visited monthly, and on each occasion they were found to be in a satisfactory condition.

**Burial Grounds.**—The burial ground in the Burgh is under the control of the Town Council. It is seldom used, and is kept in good order.

## BURGH OF LANGHOLM.

Mr Oliver reports :—

**“ Water Supply.**—The water supply has been maintained in a satisfactory condition during the year, and an adequate supply of excellent water has been available.

The mains, valves, fittings, etc., have been regularly inspected and properly maintained.

The catchment area and springs when visited were found to be free from any indication of contamination.

**Drainage and Sewage Disposal.**—The drainage and sewerage systems are well maintained, and continue to give a satisfactory service.

The dragging apparatus advised in my last report was purchased and put into operation during the year, with commendable results.

All connections to the main sewers and other work on private drainage systems were inspected and tested before being put into use.

The sewage disposal works at Landsend were kept in good working order, and the outfall effluent discharging into the river Esk has been satisfactory.

Two hundred and seventy-seven loads of sludge removed from the precipitation and screening chambers were disposed of at the refuse coup, where it was properly covered with fulzie.

**Scavenging and Cleansing.**—The routine work of scavenging and cleansing has been carried out as in former years, both services having proved satisfactory.

Several complaints were received regarding a dust nuisance arising from the lack of suitable covers on the dustcart. To remedy this, the Town Council have decided to purchase a new cart of modern design fitted with dust-proof covers.

The refuse coup at Wauchope, where the collections are disposed of, is being kept in a reasonable condition,

and the campaign against vermin is being successfully continued.

The closed incinerator, installed last year for the purpose of burning paper, etc., has effected a marked improvement.

One thousand three hundred and thirty-three loads of household refuse and 206 loads of waste-paper were collected and disposed of.

**Nuisances.**—The usual routine inspections were carried out and several minor nuisances dealt with. In no case was it found necessary to ask the Local Authority to institute statutory proceedings.

There are no closets on the conservancy system, earth closets, or privies within the Burgh. The number of water-closets used in common and houses without inside water supply and sink accommodation are as follows:—

Common water-closets serving 2 tenants	...	...	42
Common water-closets serving 3 tenants	...	...	22
Common water-closets serving 4 tenants	...	...	3
Common water-closets serving 5 tenants	...	...	2
Common water-closets serving 6 tenants	...	...	1
Houses without inside water supply and sink accommodation	...	...	72
Ashpits serving one house only	...	...	5

The Town Council reviewed the foregoing list and decided to serve notices in terms of Section 246 of the Burgh Police (Scotland) Act, 1892, in twenty-two cases where the necessary works were deemed to be practicable and expedient. In fifteen of the cases dealt with the work has been carried out, or is in hand and will be completed at an early date. In the remaining seven cases no action has been taken.

Included in the list there are several cases where the work is both necessary and practicable, and I would again ask the Town Council to give these cases their consideration, also to enforce their statutory powers in the seven cases where their notices have not been complied with.



- (b) Cases where works carried out by Local Authority after failure of owners to do so ... nil.
- (c) Cases still pending ... .. nil.
4. Number of houses of (a) one apartment, and (b) two apartments, for erection of which the consent of the Local Authority has been given in terms of Section one hundred and eleven ... nil.

#### HOUSING, TOWN PLANNING, &C. (SCOTLAND) ACT, 1919.

5. Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply :—
- (a) Cases where requirements complied with by owners ... .. nil.
- (b) Cases where works carried out by Local Authority after failure of owners to do so ... nil.
- (c) Cases still pending ... .. nil.

#### HOUSING (SCOTLAND) ACT, 1930.

6. Number of dwelling-houses in respect of which notices were served under Section 14 (1)... .. 1
7. Number of dwelling-houses rendered fit for human habitation following on notices under Section 14 (1) ... .. nil.
8. Number of dwelling-houses in respect of which work has been done by the Local Authority under Section 15 (1) ... .. nil.
9. Number of dwelling-houses in respect of which, in terms of Section 17, a demolition order or closing order under Section 16 (3) has been substituted for a notice under Section 14 (1) ... .. nil.
10. Number of dwelling-houses in respect of which notices were served in terms of Section 16 (1) ... nil.
11. Number of dwelling-houses referred to in 10 :—
- (a) which have been rendered fit for human habitation ... .. nil.

- (b) in respect of which undertaking has been given that the house will not be used for human habitation until it has been rendered so fit ... .. nil.
- (c) in respect of which demolition orders have been made under Section 16 (3) ... .. nil.
- (d) in respect of which closing orders have been made under Section 16 (3) and (4) ... .. nil.
12. Number of dwelling-houses in respect of which closing orders have, in terms of Section 16 (3), been determined by the Local Authority, following upon the houses having been rendered fit for human habitation ... .. nil.
13. Number of houses in respect of which advances have been made in terms of Section 34 towards cost of repairs, and amount so advanced... .. nil.

I have to report an improvement in the housing conditions during the year. Out of the 17 houses reported on as being unfit for human habitation, six became unoccupied and were closed by the owners without statutory notice, three are occupied by tenants over seventy years of age and will be closed as soon as they are untenanted.

Four houses are being reconstructed under the Town Council's Scheme in terms of the Housing (Rural) Workers Act, 1926, and will be ready for occupation, by working class tenants, early in the new year, and plans have been passed for the reconstruction of two further houses under the same scheme. In both cases the owners have signified their willingness to allow these houses to be used for re-housing purposes if suitable tenants are put forward."

## LABORATORY REPORTS.

### A. BACTERIOLOGICAL LABORATORY.

County Health Office,  
County Buildings, Dumfries,  
6th May, 1933.

To

*The County Medical Officer,  
County Buildings, Dumfries.*

Sir,

I beg to submit my report of the Bacteriological work performed in this laboratory during 1932.

Four thousand seven hundred and sixty-three bacteriological examinations were made during the twelve months ending 31st December, 1932, being a decrease of 167 on the previous year.

Although several items show an increase in the number of examinations done, the total for the year shows a slight decrease owing to a large fall in the number of swabs submitted for Diphtheria.

For the purpose of comparing the figures of examinations made during 1932 and 1931, the following data are given :—

	1932.	1931.	Increase or Decrease.	
Swabs for Diphtheria	1125	1850	.....	725
Sputa	373	435	.....	62
Widals	185	180	5	.....
Blood Cultures	7	8	.....	1
Blood Examinations	95	55	40	.....
Cerebro-Spinal Fluid	39	31	8	.....
Fæces	90	112	.....	22
Urine	282	178	104	.....
Pus and Pathological Fluids	74	96	.....	22
Miscellaneous	229	90	139	.....
Wassermann	208	228	.....	20
Gonococci	347	246	101	.....
Milk	1239	1003	236	.....

	1932.	1931.	Increase or	Decrease.
Water .....	269	215	54	.....
Histological .....	61	62	.....	1
Anthrax .....	115	119	.....	4
Vaccines .....	25	22	3	.....
<hr/>				
Total .....	4763	4930	690	857

Decrease, 167.

*Swabs for Diphtheria.*—These have been taken for the purpose of diagnosis, of determining the length of treatment, and of detecting carriers. They are not a true index of the amount of Diphtheria present in an area, as in some cases it is necessary to take six or seven, or even more, swabs before reporting that the throat is free from *C. Diphtheriæ*. Large variations may be expected from year to year. The year 1932 shows a decrease of 725. The number of swabs taken in the County of Dumfriesshire fell from 900 to 629. In the area outwith the County served by this laboratory the number of swabs submitted in the same period has fallen from 950 to 496.

*Sputa* show a decrease of 62.

Of the total of 373, 325 were examinations for the tubercle bacillus, the remaining 48 being for the determination of the causal organisms in respiratory diseases.

*Widal's reaction* for bacilli of the enteric group shows a figure much the same as that of last year.

*Venereal Disease.*—To help the detection of this in suspected patients, 347 examinations were done for Gonococci and 208 Wassermann reactions were done. This latter figure shows a slight decrease, but the number of examinations for Gonococci shows a decided increase.

*Milk.*—The examinations of milk again show an increase, a total of 1239 being done as compared with 1003 for the year 1931. Of the 1239 done, 727 were done for the County Authorities and 512 for outside sources. As regards Dumfriesshire, these milks taken from various sources were subjected to examinations for (1) Bacterial count, (2) Presence of tubercle bacillus, (3) Presence of

other pathogenic organisms, *e.g.*, the causal organism of mastitis.

Examinations for the tubercle bacillus numbered 279, of which 14 were positive. These figures are not an index of bovine tuberculosis, as animals which are obviously tuberculous from a clinical point of view are often taken under the Tuberculosis Order without a bacteriological examination. The samples submitted are usually those in which there is an element of doubt.

One hundred and fifty-three milks were tested for organisms other than tubercle bacilli and 295 milks for bacterial count. Out of this latter number 128 were for the purpose of testing graded milks, and 167 for testing non-graded milks. Separate tables showing details of bacterial counts are given.

The following bacteriological standards for graded milk have been prescribed by the Scottish Department of Health:—

*Certified.*—The milk must not contain more than 30,000 organisms per c.c., or any *Bacillus Coli* in 1/10th c.c.

*Grade A (Tuberculin Tested) and Grade A.*—The milk must not contain more than 200,000 organisms per c.c., or any *Bacillus Coli* in 1/100th c.c.

*Anthrax.*—The number of examinations for Anthrax shows little change. Of the total of 115, 9 were positive.

*Histological examination* of tissue still continues, and 61 specimens were submitted. Of this number, 32 came from Dumfries and Galloway Royal Infirmary.

The examinations of the tissues were made for the purposes of diagnosis or prognosis, or to see if further treatment was necessary.

*Waters.*—Two hundred and sixty-nine samples were examined, and of this number 38 were done for the Stewartry, 2 for Wigtownshire, and 4 for Private Individuals. The remaining 225 consisted of the quarterly examinations of the supplies to Special Water Districts, and of other waters used as, or intended for use as, domestic

supplies. A table has been drawn up showing the results of examinations of Special Water District Supplies, so far as the presence of Coliform Bacilli is concerned.

Another table has been drawn up showing the sources of pathological material and the material submitted.

I have the honour to be, Sir,

Your obedient servant,

EDWARD ARMSTRONG.

WATER SUPPLIES TO THE SPECIAL WATER DISTRICTS.  
Smallest amount of Sample in which Coliform Bacilli were detected.

Quarters.	I.	II.	III.	IV.
Lower Annandale ...	—	—	1 c.c.	100 c.cs.
Bankshill ...	—	—	10 c.cs.	—
Blackshaw ...	—	—	—	100 c.cs.
Crawick... ...	—	—	100 c.cs.	100 c.cs.
Dumfries (Landward)	100 c.cs.	—	100 c.cs.	—
Eaglesfield ...	—	—	—	100 c.cs.
Ecclefechan ...	—	—	—	—
Glencaple ...	—	—	1 c.c.	1 c.c.
Kirkconnel ...	—	10 c.cs.	10 c.cs.	100 c.cs.
Lockerbie Burgh ...	—	Not done	100 c.cs.	Not done
Moniaive ...	—	—	100 c.cs.	100 c.cs.
Netherwood, Kelton, & Craigs ...	—	—	10 c.cs.	100 c.cs.
Penpont ...	—	—	1 c.c.	—
Ruthwell and Raffles ...	—	—	—	100 c.cs.
Rowanburn ...	—	0·1 c.cs.	1 c.c.	1 c.c.
Thornhill ...	—	—	1 c.c.	100 c.cs.

— Indicate Coliform Bacilli absent from 100 c.cs.

## B. COLL.

Microbes per c.c.	No. of Samples.	Absent from 0.1 c.c.		Present in 0.1 c.c.		Present in 0.01 c.c.		Present in 0.001 c.c.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
		Under 30,000 ... ..	97	57.81	10	7.81	8	6.25	5
Over 30,000 and under 200,000	17	4.68	1	.78	6	4.69	4	3.13	
Over 200,000 ... ..	14	1.56	3	2.34	5	3.91	4	3.13	
Total ... ..	128	64.05	14	10.93	19	14.85	13	10.17	

## NON-GRADED MILKS.

## B. COLL.

Microbes per c.c.	No of Samples.	Absent from 0.1 c.c.		Present in 0.1 c.c.		Present in 0.01 c.c.		Present in 0.001 c.c.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
		Under 30,000 ... ..	90	31.74	20	11.98	13	7.78	4
Over 30,000 and under 200,000	41	10.78	8	4.79	11	6.58	4	2.40	
Over 200,000 ... ..	36	3.59	2	1.20	7	4.19	21	12.57	
Total ... ..	167	46.11	30	17.97	31	18.55	29	17.37	

TABLE SHEWING SPECIMENS SUBMITTED AND  
SOURCE OF SUPPLY.

	Dumfries County.	V.D. Clinic.	Dumfries Burgh.	Stewartry of Kirkcud- bright.	Wigtown County.	Dumfries and Galloway Royal Infirmary.	Private.	Total.
Swabs (Diphtheria) ...	629	...	174	154	158	10	...	1125
Sputa ... ..	139	...	133	60	30	7	4	373
Widals ... ..	103	...	29	35	5	13	...	185
Blood Cultures ... ..	3	...	1	2	...	...	1	7
Blood Examinations ...	18	...	27	19	7	3	21	95
Cerebro-Spinal Fluid ...	2	...	...	19	1	17	...	39
Fæces ... ..	66	...	11	10	1	2	...	90
Urines ... ..	92	...	90	41	14	17	28	282
Pus and Pathological Fluids	32	...	5	11	4	21	1	74
Miscellaneous ... ..	122	...	4	100	1	1	1	229
Wassermann ... ..	34	79	52	11	13	19	...	208
Gonococci ... ..	27	267	26	9	7	11	...	347
Milk ... ..	727	...	82	329	96	5	...	1239
Water ... ..	225	...	...	38	2	...	4	269
Histological ... ..	7	...	4	10	6	32	2	61
Anthrax ... ..	115	...	...	...	...	...	...	115
Vaccines ... ..	...	...	...	...	...	...	25	25
<b>Total ... ..</b>	<b>2341</b>	<b>346</b>	<b>638</b>	<b>848</b>	<b>345</b>	<b>158</b>	<b>87</b>	<b>476</b>

## B. CHEMICAL LABORATORY.

Mr Hawley reports as follows :—

The Laboratory meets the administrative requirements of the Counties of Dumfries, Kirkcudbright, and Wigtown, and the Burghs therein. Work done may be grouped concisely as under :—

(i) Analyses made for County Councils in the area— which may be sub-divided—

(a) Analyses other than those made under the Food and Drugs (Adulteration) Act.

(b) Analyses made under the Food and Drugs (Adulteration) Act.

(ii) The examination of Medicines for the National Health Insurance Committee of the Counties, and of the Burgh of Dumfries.

(iii) Sundry other analyses for approved institutions and individuals in Dumfries and Galloway.

Groups (a) and (b) comprised nearly 92 per cent. of the 1116 samples received during the year.

### ANALYSES MADE FOR THE COUNTY COUNCILS.

#### (a) Dumfriesshire.

Work for the Public Health Department has continued on the usual lines. With the exception of sundry problems of diverse nature which arise from time to time and call for special treatment, it comprises mainly the examination of Milk, Water, Sewage, and Sewage Effluents.

Four hundred and seventy-nine samples were submitted, representing 43 per cent. of the total number received at the Laboratory.

#### MILK.

The Milk (Special Designations) Order (Scotland), 1923, regulates the sale of Graded Milk, and *inter alia* fixes the minimum percentage of Milk Fat at 3.5.

One Creamery is licensed to produce Pasteurised Milk, and Grade "A" milk is produced on one farm; otherwise licences are for the higher qualities, either Grade "A" (T.T.) or Certified.

One hundred and two samples were taken by the Veterinary Inspectors during their visits to the premises of licensees, and when examining herds. These, submitted at fairly regular intervals, were examined for Milk Fat, Non-fatty Solids, and for Freezing Point.

The systematic laboratory examination is also made of Graded Milk produced in the Stewartry. 106 Graded and 20 other samples were received from the Veterinary Inspector. Grade "A" and Certified Milk are now produced at two farms in Wigtownshire. During the year 7 samples were received. Samples from the other Counties afford an interesting comparison with those taken in Dumfries.

Table No. 1 shows the mean percentage of Milk Fat for the various herds. For convenience, figures from the previous years are included, together with those for Kirkcudbright.

Table No. 1.

DUMFRIESSHIRE.		Milk Fat per Cent.						Period.
Producer.	No. of Samples.	1932.	1931.	1930.	1929.	1928.		
A	9 "A" (T.T.)	4.36	3.99	4.22	4.11	4.10	4.16	
B	10 Do.	4.31	3.99	3.60	3.80	3.93	3.73	
C	7 Do.	4.10	4.03	3.91	3.90	3.90	3.97	
D	9 Do.	4.02	4.13	3.81	4.22	4.18	4.07	
E	9 Do.	4.01	4.12	3.93	4.19	4.23	4.10	
F	10 Certified	3.96	3.84	4.04	4.64	3.90	4.08	
G	7 "A" (T.T.)	3.96	3.58	3.91	3.88	3.83	3.83	
H	4 Certified	3.90	3.67	3.95	4.00	4.07	3.92	
I	4 "A" (T.T.)	3.85	3.78	...	...	...	...	
J	9 Do.	3.82	3.97	3.91	4.04	3.87	3.92	
K	5 Do.	3.77	3.67	4.09	...	...	...	
L	9 Do.	3.68	3.81	4.02	4.03	3.92	3.89	
M	6 Do.	3.58	3.59	3.61	3.93	...	2.94	
N	4 "A"	3.45	...	...	...	...	...	
Annual Average	102	3.95	3.84	3.94	4.06	3.96	3.95	

With few exceptions, the animals composing the Dumfriesshire herds are pedigreed and recorded Ayrshires.

## KIRKCUDBRIGHT.

Producer.	No. of Samples.	Milk Fat per Cent.				Period.
		1932.	1931.	1930.	1929.	
a	12 Certified	4.14	4.05	4.02	3.97	4.04
b	12 "A" (T.T.)	3.96	3.96	...	...	...
c	19 Do.	3.94	4.37	4.13	4.03	4.12
d	12 Do.	3.91	4.35	4.47	4.65	4.34
e	13 Do.	3.82	3.94	3.85	4.33	3.99
f	12 Certified	3.68	4.07	...	...	...
g	12 Do.	3.62	3.58	...	...	...
h	14 Do.	3.58	3.59	3.80	3.86	3.71
Annual 106		3.83	3.94	3.98	4.07	3.95
Average						

## Cows.

Producer.	Nature.	No. in Herd.
a	Pedigreed and Recorded A.	28
b	Do. Do.	29
c	Do. Do.	80
d	Do. Do.	70
e	Do. Do.	40
f	Do. Do.	30
g	Cross Cows.	60
h	Recorded only. A. and A./S. Cross.	65

## WIGTOWNSHIRE.

Producer.	No. of Samples.	Milk Fat per Cent.	
		1932.	1931.
A	3	4.42	
B	4	3.87	

	No. of Samples.	Milk Fat per Cent.	
		1932.	1931.
All Graded.	215	3.90	3.89

Generally, the figures show no very material changes, a slight increase in the mean Fat content for Dumfries being offset by a corresponding decrease in the Stewartry samples.

There is a slight increase in the number of samples containing less than 3.5 per cent. of Fat, *i.e.*, 14 or 14 per cent., compared with 10 per cent. last year. Similarly, for Kirkcudbright, where the figures are 12 samples involving 6 herds, against 11 involving 4 herds, and with a mean deficiency of .24 per cent.

Particulars of these are as follows :

Table No. 2.

## DUMFRIESSHIRE.

Quarter.	Producer.	Result.
(1)	G	3.40%
(1)	M	2.80%
(1)	L	3.40%
(2)	H	3.30%
(2)	M	3.25%
(2)	F	3.20%
(2)	I	3.35%
(2)	L	3.15%
(2)	N	3.10%
(3)	L	3.10%
(3)	N	3.10%
(4)	A	3.45%
(4)	G	3.40%
(4)	J	3.40%

## KIRKCUDBRIGHT.

Quarter.	Producer.	Result.
(1)	f	3.40%
(1)	b	3.40%
(1)	b	3.10%
(2)	d	3.15%
(2)	f	3.05%
(2)	f	3.45%
(2)	g	3.40%
(2)	h	3.20%
(2)	h	3.10%
(2)	c	3.20%
(2)	c	3.45%
(4)	g	3.35%

During the past five years 79 samples (8.3 per cent.) have fallen below the 3.5 per cent. limit, and of these 60 were taken during the first and second quarters of the year, compared with 9 in the third and fourth quarters. This seasonal variation in the proportion of Milk Fat, the falling to a minimum in the second quarter followed by a substantial rise towards the end of the year, is well known.

Samples of Non-graded Milk taken under the Food and Drugs Act probably afford a fair index of the composition of milk as ordinarily retailed. During the year 52 such samples were taken in Dumfries and 97 in Kirkcudbright and Wigtown.

As in former years, the averages of these fall below the Graded supplies, but it must be remembered that they include several adulterated samples.

Comparative data in the form of quarterly averages are shown in Table No. 3. For completeness, the Non-fatty Solids are also included.

Table No. 3.

Quarter.	Graded.				Non-Graded.	
	Dumfries.		Kirkeudbright.		Fat.	N.F.S.
	Fat.	N.F.S.	Fat.	N.F.S.	Fat.	N.F.S.
1 ...	3.87	8.86	3.81	8.94	3.52	8.72
2 ...	3.82	8.98	3.74	9.00	3.30	8.95
3 ...	4.10	9.00	3.85	8.94	3.53	8.78
4 ...	3.96	8.91	3.97	8.85	4.07	8.86
Year.						
1932 ...	3.95	8.85	3.84	8.93	3.66	8.85
1931 ...	3.84	8.94	3.94	8.93	3.79	8.82
1930 ...	3.94	8.92	3.98	8.83	3.78	8.84
1929 ...	4.06	8.88	4.07	...	3.68	8.74

Table No. 4 shows the samples arranged in groups, each differing from the previous one by .5 per cent. Milk Fat.

Table No. 4.

Percentage of Samples in each group—Dumfriesshire.

Group. Fat %.	Graded.			Non-Graded.		
	1930.	1931.	1932.	1930.	1931.	1932.
(1) 5% and over...	1.7	1.7	2.0	...	5.3	3.8
(2) 4.50 and over	7.0	7.6	8.8	...	10.6	7.7
(3) 4.00 and over	44.4	30.5	44.2	24.5	23.7	15.4
(4) 3.50 and over	91.2	89.8	86.3	64.5	57.9	42.3
(5) 3.49-3.00 ...	7.0	9.3	12.7	31.1	36.8	48.1
(6) Under 3.00 ...	1.7	.8	1.0	4.4	5.3	9.6

S.D. Limit, 3.5%.

#### NON-FATTY SOLIDS.

Although the Order prescribes no standard for Non-fatty Solids, these are usually determined for guidance and for use in Court. They show no material changes from the results of previous years.

The mean figures will be found beside the corresponding Fat figures in Table No. 3.

During the year 12 samples (8 Dumfries, 4 Kirkeudbright) contained less than 8·5 per cent. of Non-fatty Solids.

Table No. 5.

DUMFRIES.			Graded Milks.		
Quarter.	Producer.	Fat.	N.F.S.	Ash.	$\Delta$
(1)	C	3·55	8·27	·69	·546
(1)	B	4·05	8·36	·75	·541
(2)	N	3·60	8·28	·80	·532
(3)	B	7·40	8·46	·73	·553
(3)	C	3·85	8·22	·71	...
(4)	A	3·45	8·46	·70	·553
(4)	D	4·00	8·35	·71	·545
(4)	A	3·90	8·34	·66	·536
KIRKCUDBRIGHT.					
(1)	f	3·65	8·01	·69	·539
(3)	g	3·90	8·38	·74	·553
(4)	a	4·95	8·19	·71	·552
(4)	g	3·60	8·36	·75	·549

In each case the depression of the Freezing Point ( $\Delta$ ) indicates that the milk is in its natural condition and that the lowness in Non-fatty Solids is due, not to the presence of water, but to natural causes.

#### OTHER SAMPLES.

Fifty-one of 58 samples taken by the Veterinary Inspectors when visiting farms were submitted to the usual analysis. They contained on an average 3·5 per cent. of Milk Fat. 3 were deficient in Non-fatty Solids, but the Freezing Point indicated that in two cases they were in their natural condition. Unfortunately the state of the third sample prevented the accurate determination of the Freezing Point.

Seven acidity determinations, made in connection with complaints regarding the unsatisfactory condition of a certain milk supply, indicated that the complaints were unwarranted.

#### WATER—POTABLE.

##### (a) Special Water Districts.

Examination is made of samples drawn from the Special Water Districts every quarter, and half-yearly from the Lockerbie Burgh Supply.

The detailed analyses of these are given in Table No. 1 of the Appendix.

In no case do they call for comment.

(b) Others.

One hundred and twenty-seven samples were examined for potability—generally they had reference to proposed new supplies or to investigation of complaints regarding existing ones.

Broadly, they may be classified as follows :—Excellent, 20 ; Good, 61 ; Unsatisfactory, 46.

Twenty-seven samples were submitted to a restricted examination. 15 of these had relation to the water supply of a group of three cottages. The water was slightly acid, and showed distinct plumbo and cupro solvent action. The cottages, with a relatively small draw-off, were supplied through some 200 yards of 1" diam. copper piping, the water remaining in the pipes for considerable periods. It invariably contained copper. Some figures are given in Table No. 6.

pH.	Lead.	Copper.	Iron.	Zinc.	Remarks.	
6½	Nil.	·03	...	...	...	} Cottage a
6	·11	·08	·001	Nil.	Morning.	
6½	·10	·08	...	...	Do.	} „ b
6½	Nil.	·03	...	...	...	
6	Nil.	·60	·006	Nil.	Morning.	} „ c
6½	Nil.	·70	...	...	Do.	
6½	Nil.	·03	...	...	...	} „ c
6	Nil.	·16	·013	Nil.	Morning.	
6½	Nil.	·16	...	...	Do.	} „ c
6½	Nil.	Nil.	...	...	Supply.	

A branch pipe (not of copper) from this supply went to 5 other houses, and samples taken at each of these contained Lead in amounts varying from ·002 to ·005 part per 100,000. The usual remedy, the removal of the acid by treatment with limestone, has so far mitigated but has not entirely remedied the trouble.

One sample from a mineral spring was examined for the presence of Lead, with negative results. 4 others were also examined for heavy metals, particularly Copper and Iron.

In 7 instances a complete examination was made of the saline constituents. Two samples came from well-known mineral springs, and are referred to later (page 87). Three others were for the investigation of problems of corrosion, and one for ascertainment of suitability for steam raising; the other was intended to cast light on abnormal Chloride and Nitrate figures in an otherwise potable water.

This last mentioned was derived from an old well 13 feet deep, and which had been cleaned out. The situation and surroundings negatived almost entirely the possibility of Sewage Pollution. Bacteriologically the water was satisfactory, but chemically it was marked by abnormal figures for Free Ammonia, Chlorides, and Nitrates.

Concurrently, an examination was also made of water from a burn, which it was considered, might drain into the well. The analyses (Table 7) showed that the burn water was not draining into the well, and examination of the well itself showed that water entered only at the foot.

*Table No. 7.*

					Results as parts per 100,000.	
					Well.	Burn.
Total Solids	...	...	...	...	20.72	6.32
Saline Residue	...	...	...	...	17.45	4.69
Volatile Matter	...	...	...	...	3.27	1.63
Examination of the Saline Residue—						
Calcium Carbonate	...	...	...	...	1.30	.80
Calcium Sulphate	...	...	...	...	3.97	.90
Magnesium Sulphate	...	...	...	...	.64	.08
Magnesium Nitrate	...	...	...	...	2.03	.22
Magnesium Chloride	...	...	...	...	.52	.95
Sodium Chloride	...	...	...	...	6.02	.20
Potassium Chloride	...	...	...	...	1.79	...
Silica	...	...	...	...	1.02	1.20
Oxides of Iron and Aluminium	...	...	...	...	.16	.34

In view of the amount of Potassium compounds present and from a study of the geological map of the district, it was concluded that the water was coming from a considerably greater depth than is usual in the case of most shallow wells in the County, and it was regarded as suitable for dietetic use.

A complete sanitary and mineral analysis was made of water from the Brow Well at Ruthwell, which is valued locally for its tonic properties.

A similar examination (on behalf of Moffat Town Council) was made of water from the Moffat Mineral Spring.

The mineral analyses (Table No. 7a) indicate that the Brow Well water is of a mild chalybeate nature. It contains, in addition to Iron, compounds (principally Bicarbonate and Sulphate) of Lime and Magnesia.

The Moffat water is a mild sulphur water. The mineral constituents consist mainly of Sodium Chloride, with compounds of Lime and Magnesia. Compounds of Potassium, Lithium, Barium, Strontium, Bromine, and Iodine are also present in smaller amounts.

Table 7 (a).

Analyses of Water from

(a) BROW WELL, RUTHWELL. (b) MOFFAT SPRING.

Mineral constituents are expressed as parts per million, *i.e.*, mgms. per Litre.

		Brow Well.	Moffat.
Ammonium ...	... NH <sub>4</sub>	·61	·012
Lithium ...	... Li·	·08	·5
Sodium ...	... Na·	10·8	392·0
Potassium ...	... K·	1·2	4·0
Calcium ...	... Ca·	61·7	61·6
Strontium ...	... Sr·	...	9·1
Barium ...	... Ba·	...	14·5
Magnesium ...	... Mg·	23·6	24·6
Iron ...	... Fe·	21·4	{ 1·0
Iron ...	... Fe·	9·4	
Aluminium ...	... Al·	3·3	...
Manganese ...	... Mn·	·5	...
Chloride ...	... Cl·	21·3	720·9
Bromide ...	... Br·	...	6·5
Iodide ...	... I·	...	·22
Nitrate ...	... NO <sub>3</sub> ·	·36	2·5
Sulphate ...	... SO <sub>4</sub> ·	146·6	14·1
Hydrosulphide ...	... HS·	...	6·8
Hydrocarbonate ...	... HCO <sub>3</sub> ·	190·5	114·0
Boric Acid ...	... HBO <sub>2</sub>	Absent.	Trace.
Silicic Acid ...	... H <sub>2</sub> SiO <sub>3</sub>	27·5	18·9
		518·85	1391·2

Ions sought but not found :—

Bromide.	Manganese.
Iodide.	Arsenic.
Arsenic.	Antimony.
Antimony.	Fluoride.

## WATER—RIVER.

The work of collecting information regarding the condition of the principal rivers in the County started in 1929 was continued, and a systematic examination was made of the river Nith and its various tributaries.

A series of 8 samples taken from the Nith in May, when the river was moderately low, confirmed the experience of last year that the discharge of effluent has now practically no effect on the condition of the river water. 31 samples taken from the various tributaries, beginning at the Crawick Water and ending with the river Cluden, consisted of "very clean" water as defined by the Royal Commission. The burn which received the effluent from Heathhall, and which discharges into the Nith about one mile above the Burgh boundary, gave high figures for Ammonia and for Oxygen Absorbed, but according to the Dissolved Oxygen Absorbed test must be considered "clean."

Fifteen samples were taken from the Annan and the Turnmuir Burn. They indicated that the condition of the Turnmuir Burn can be regarded as satisfactory during the winter months, when there is a considerable volume of water and the temperature is low. During the summer months, however, the Turnmuir Burn was heavily polluted by an unsatisfactory effluent from Lockerbie Sewage Disposal Works. On one occasion the effect of this was noticeable on the Annan itself for well over a mile. The problem of sewage purification at Lockerbie is complicated by two factors, the age of the works, and intermittent discharges from the Creamery of large volumes of waste liquors heavily charged with decomposed and decomposing organic matter—milk, sugar, casein, etc.

It is satisfactory to note that the Local Authority is making strenuous efforts to improve the quality of the effluent and to operate the works with the maximum possible efficiency.

Two samples from the burn at Notwen, when it was very low, were not only deficient in Dissolved Oxygen,

but according to the Dissolved Oxygen Absorbed test must be considered "bad."

#### SEWAGE AND SEWAGE EFFLUENT.

Of 31 samples examined, 6 came from Thornhill Sewage Disposal Works. 4 of these consisted of Effluents, fully nitrated, and having an average Dissolved Oxygen Absorbed figure of 1.55, with a minimum of .48 and a maximum of 3.6 part. On one occasion during flooding when the river was very high it was necessary to bye-pass sewage after partial purification. The Liquor so bye-passed had a Biological Oxygen Demand of 11 parts per 100,000. Another sample of Tank Liquor was of medium concentration.

Four samples of Kirkconnel Effluent had a mean Dissolved Oxygen Absorbed figure of 3.4, but were well nitrified Effluents. A sample of Tank Liquor was of medium concentration.

Four samples of Effluent taken from Sanquhar Works had a mean Dissolved Oxygen Absorbed figure of 2 parts per 100,000, and were well nitrified. The problem at Sanquhar is complicated by the presence of large volumes of Burn Water which is diverted into the sewers. These works have now been in operation for some 18 months, and are producing a well nitrified Effluent, conforming, for the most part, to the proposed standard of the Royal Commission on Sewage Disposal.

Three samples from Moniaive Sewage Works had a mean Dissolved Oxygen Absorbed figure of .74, and contained abundant Nitrates. These Works are now producing a very good effluent and must be regarded as operating efficiently, particularly when regard is had to the general situation at Moniaive.

One sample from Moffat Works complied with the requirements of the Royal Commission, and was well nitrified.

Four samples of Tank Liquor taken from Lockerbie had a foul and disgusting odour, and contained large

quantities of decomposed and decomposing organic matter, due largely to the presence of considerable volumes of Creamery Waste. In the circumstances these Works could hardly be expected to produce, and do not produce, anything like a standard effluent.

Another sample of Sewage submitted in connection with a proposed small Works in the County was of medium concentration.

Generally, the Sewage Works in the County have been free from ponding and similar troubles. The Achorutes Viaticus, with which the Thornhill Works were inoculated during the summer of 1929, are still thriving, and generally have maintained these beds in a clean and open condition. Towards the end of the year beds at Kirkconnel and Sanquhar were also inoculated with Achorutes, and considerable improvement, particularly in the appearance of the former beds, may be anticipated.

Towards the end of last year a quantity of sludge was incubated in the Laboratory with a view to attempting sludge digestion as an aid to odour prevention, particularly at Thornhill Works. During the summer this "digested" sludge was used to inoculate one of the sludge trenches, but at the moment the results are inconclusive. Meantime, however, several gallons of sludge are being digested in the Laboratory, and it is hoped to repeat the inoculation during the spring.

#### FERTILISERS AND FEEDING STUFFS ACT.

Four Fertilisers and no Feeding Stuffs were received. In each case the composition of the Fertiliser was in accordance with the statement on the invoice account, being taken from the appropriate Limits of Variation.

#### MISCELLANEOUS.

Soil from the banks of the Wanlock, about 100 yards before it enters the Crawick Water, contained Lead as follows:—Soil at Surface, 4.75 per cent.; about 2 inches below Surface, 2.36 per cent.

Stones collected from the banks of the Crawick Water, half-a-mile below the entry of the Spango Water, contained Lead .20 per cent.; and two miles further down, opposite the Cog Burn, .005 per cent. In these cases the Lead compounds formed a characteristic white deposit on the surface of the stones.

A deposit on the outer surface of a lead tail-pipe in one Well consisted mainly of Lead Sulphate and Carbonate, with less than 1 per cent. of Silica. The composition is interesting, as it has been suggested within the last few years that the protective layer inside lead pipes consists largely of Silicate of Lead. The low proportion of the Silica is, in the circumstances, noteworthy.

Work done for the Public Health Department is summarised as follows :—

Table No. 8.

PUBLIC HEALTH DEPARTMENT.

Milk (Certified Grade A.T.T. and Grade A)	...	102	
(Sundry Others)	... ..	58	
		—	160
Water (1) Potable.			
(a) Special Water District Supplies	...	63	
(b) Others.			
Excellent	... ..	20	
Good	... ..	61	
Unsatisfactory	... ..	46	
(c) Examination of Saline Residue	...	6	
		—	133
(d) Partial Examination only, <i>e.g.</i> , S.M. Lead, Copper, Zinc pH., etc.	... ..	27	
(2) River	... ..	57	
Sewage and Sewage Effluent	... ..	31	
Fertilisers	... ..	4	
Miscellaneous	... ..	4	
		—	479

Under the Food and Drugs (Adulteration) Act, 1928, 108 samples of articles of Food and Drugs were submitted on behalf of the Joint Committee. These are considered later (pages 93 and 101).

KIRKCUDBRIGHT COUNTY COUNCIL.

The County Veterinary Inspector submitted 126 samples of Milk. These were taken in connection with

the Milk (Special Designations) Order (Scotland), and for comparative purposes have been considered with similar samples taken in Dumfriesshire. It appears from the composition of these samples that producers in the Stewartry, like those in Dumfries, have no great difficulty in complying with the 3·5 per cent. Butter Fat requirements of the Department of Health. Cream received from the County Veterinary Inspector contained 50·7 per cent. of Milk Fat.

Of 43 samples of Water, 39 were examined for potability. 5 were regarded as unsuitable for dietetic use, and 3 of doubtful purity. 2 others showed the presence of abundant Uroglena, which had been the cause of complaints by consumers. A remedy was suggested, but at the time of writing the question of improving this water supply is still under consideration.

Two samples from the river Fleet showed evidence of the presence of Sewage, but the Dissolved Oxygen Absorbed figure indicated that the river was in a "Clean" condition.

Another sample, from the Nith, was examined for fitness for certain industrial processes.

Burn water was examined for the presence of substances deleterious to fish life, but with entirely negative results.

Mud, alleged to affect injuriously certain fishings, was found to contain Sewage Solids. Following the reconditioning and cleaning of the Sewage Works, which consist of screening and grit chambers preceding sedimentation tanks, the nuisance has ceased.

One hundred and fifty-two samples of Food and Drugs, also submitted, are considered later (page 93).

#### WIGTOWNSHIRE COUNTY COUNCIL.

During the year 7 samples of Milk taken under the Milk (Special Designations) Order (Scotland) were received

from the County Veterinary Inspector. These are referred to with the other Graded Milk samples. 2 other samples of Milk were also received, but they do not call for comment.

Of 8 samples of Water, 6 were returned as suitable for dietetic use, one as definitely unsuitable, while another was viewed with suspicion. In two instances Lead was present, equivalent to  $\cdot 045$  and  $\cdot 025$  parts per 100,000 respectively.

A small water supply derived from a well, and stored in two open tanks of approximately 35,000 gallons capacity, suffered from the presence of green Algæ, which caused a bad colour, taste, and smell in the water. Various methods had been tried by keeping the tanks only partly full and using one in lieu of two, but without effect. The water in the Well was clear and sparkling. The remedy suggested—the application of minimal quantities of Copper Sulphate to the water prior to pumping—has proved entirely satisfactory, giving no trouble and requiring little attention.

One hundred and five samples of Food and Drugs submitted by the County Sanitary Inspector are considered with the other Food and Drugs samples.

#### FOOD AND DRUGS ACT.

Samples are received from Dumfriesshire, Kirkcudbrightshire, and Wigtownshire.

Particulars of the number and nature of these samples are shown in Appendix 2.

Twenty samples (5·5 per cent.) were certified as not genuine. Particulars of these are given overleaf.

Table No. 9.

## Milk.

DUMFRIESSHIRE.			Depression			Remarks.
Fat.	N.F.S.	T.S.	Ash.	of F.P.		
2.69%	8.77%	11.46%	.72	.546° C.	10%	Deficient in Milk Fat.
2.67%	8.50%	11.17%	.80	.542° C.	11%	Do.
2.90%	8.76%	11.66%	.72	.544° C.	3%	Do.
2.90%	8.72%	11.62%	.75	.543° C.	3%	Do.
2.70%	8.53%	11.23%	.76	.542° C.	10%	Do.
KIRKCUDBRIGHTSHIRE.						
2.82%	8.45%	11.27%	.73	.542° C.	6%	Deficient in Milk Fat.
2.72%	9.15%	11.87%	.73	.548° C.	9%	Do.
3.40%	8.32%	11.72%	.72	.533° C.		Deficient in N.F.S. -18%
2.70%	9.17%	11.87%	.75	.540° C.	10%	Deficient in Milk Fat.
3.35%	8.37%	11.72%	.79	.530° C.		Deficient in N.F.S. -13%
2.82%	8.77%	11.59%	.79	.546° C.	6%	Deficient in Milk Fat.
2.64%	8.51%	11.15%	.75	.545° C.	12%	Do.
WIGTOWNSHIRE.						
3.25%	8.12%	11.37%	.69	.541° C.		Deficient in N.F.S. -38%
3.05%	8.15%	11.20%	.73	.520° C.		Do. Do. -35%
3.45%	8.29%	11.74%	.72	.553° C.		Do. Do. -21%
3.50%	8.32%	11.82%	.70	.562° C.		Do. Do. -18%
*3.42%	8.30%	11.72%	.64	(Sour)	2%	Deficient in Milk Fat.
KIRKCUDBRIGHTSHIRE.			Alcohol	F.P.S.	Deg. U.P.	
			by Volume.			
Brandy	...	...	39.62%	64.60%	35.40	
DUMFRIESSHIRE.			Loss on			
			Ignition.			
Calcined Magnesia			17.42%			
WIGTOWNSHIRE.			SO <sub>2</sub> .			
Sausages	...	...	950 parts per million.		Limit 450 parts	
			* Grade "A."			

Eleven samples of Milk contained less than 3 per cent. of Milk Fat. In 5 instances the deficiency was not serious, but in the other cases was approximately 10 per cent. Three of the latter occurred in Dumfriesshire, and in each case a conviction was obtained.

Seven samples of Milk contained less than 8.5 per cent. of Non-fatty Solids, the mean deficiency being .24 per cent. In 6 instances the Cryoscope indicated that the deficiency was in all probability due to natural causes, and not to the addition of Water,

One sample of Calcined Magnesia was certified adulterated, on account of an excessive loss in heating, amounting to rather more than one-sixth of the total weight. A probable explanation is that the sample had been in stock for some time and had been exposed to air. In these circumstances, Magnesia absorbs both water vapour and Carbon Dioxide, with a corresponding gain in weight. On heating, these components are expelled with a corresponding loss in weight.

One sample of Sausages in a total of 9 contained an excessive amount of preservative. Subsequent samples from the same source were invariably satisfactory.

#### CRYOSCOPY OF MILK.

In my report for 1931 reference was made to the use of the Freezing Point in connection with the examination of Milk, particularly when the Non-fatty Solids fall below the 8.5 per cent. presumptive limit of the Sale of Milk Regulations.

The experimental apparatus mentioned has since been considerably modified, mainly by the addition of a motor-driven stirrer and two measuring gauges. These, coupled with efficient pre-cooling of samples, materially reduce the time required for making determinations.

Broadly speaking, the results are in close agreement with those obtained by the Hortvet apparatus.

A few figures are given in Tables 10 and 11.

*Table No. 10.*

(1) Received from the County Veterinary Inspectors.

(a) Graded.	No.	Mean.	90% Range.
Dumfriesshire ...	99	.548	.537-58
Kirkeudbrightshire ...	106	.548	.539-56
Wigtownshire ...	7	.547	...
(b) Others.			
Dumfriesshire ...	46	.546	.538-61
Kirkeudbrightshire ...	18	.549	...

(2) Received under Food and

Drugs Act ...	132	.548	.537-561
		(.5478)	
<b>Total ...</b>	<b>408</b>		<b>.538-559</b>

Table No. 11.

Samples containing less than 8.5 per cent. of Non-Fatty Solids, and which according to the Sale of Milk Regulations, 1901, are presumed to contain added Water.

## (1) Received from the County Veterinary Inspectors.

	Fat.	N.F.S.	Ash.	$\Delta$
DUMFRIESSHIRE ...	3.55	8.27	.69	.546
	3.90	8.28	.82	.552
	3.60	8.28	.80	.532
	3.90	8.34	.66	.536
	4.00	8.35	.71	.545
	4.05	8.36	.75	.541
	7.40	8.46	.73	.553
	3.45	8.46	.70	.553
	3.25	8.49	.73	.537
KIRKCUDBRIGHT and WIGTOWNSHIRE ...	3.65	8.01	.69	.539
	3.08	8.10	.77	.550
	4.95	8.19	.71	.552
	3.60	8.36	.75	.549
	3.90	8.38	.74	.553
	2.35	8.39	.74	.542
	3.35	8.49	.71	.549

## (2) Received under Food and Drugs Act.

3.25	8.12	.69	.541
3.05	8.15	.73	.520
3.45	8.29	.72	.553
3.40	8.32	.72	.533
3.50	8.32	.70	.562
3.35	8.37	.79	.530
2.82	8.45	.73	.542

Taking .530 as the minimum  $\Delta$  for genuine Milk, it is seen that with two exceptions the lowness of the Non-fatty Solids is due to natural causes, and not to the addition of water.

The sample of  $\Delta$  .520 was reported as containing 4 per cent. or thereby of Water, that of  $\Delta$  .530 N.F.S. 8.37 per cent. is probably in its natural condition but represents a border-line case.

This determination now forms part of the regular routine examination of milk, and is proving of great value, as one can decide whether a deficiency in Non-fatty Solids is due to natural causes or to watering.

Judging by the samples examined it would appear, however, that the watering of Milk is practically unknown in Dumfries and Galloway.

## MEDICINES.

Under the National Health Insurance Act the Department of Health has adopted a scheme for the chemical examination of the quality of Drugs and Medicines supplied to insured persons. During the year 16 Medicines were received from the Insurance Committees of Dumfriesshire, Kirkcudbrightshire, Wigtownshire, and Dumfries and Maxwelltown Burgh. These consisted of 11 liquid and 5 solid medicaments. With two exceptions the amounts of the components found agreed very closely with those prescribed. In one case an apparent excess of a drug was due to the presence of a considerable quantity of Undissolved Drug. In the other the amount of one component found was in excess of that prescribed, but the other two drugs had, however, been accurately dispensed.

Sampling under this scheme has been suspended meantime on account of the introduction of the new edition of the *British Pharmacopeia*. This suspension is intended to give dispensers an opportunity of clearing stocks standardised, in accordance with the conditions obtaining under the former regulations.

## SUNDRY.

Other analyses are made for local authorities and for approved institutions and individuals in Dumfries and Galloway. These comprise 35 samples taken in connection with the operation of the steam-raising plant at Lochmaben Sanatorium, and the alleged pollution of a trough by "oily" water.

The Lochmaben Water Supply, untreated, is unsuitable for steam raising, and for nearly three years has been treated by means of Lime and Soda. Periodical examinations of the boiler and Feed Water, but particularly the former, is necessary to ensure that treatment, while adequate, is not excessive. In addition, tests for alkalinity are made on the Feed Water by the boiler-house staff at three-hourly intervals. Since the commencement of this Lime-Soda treatment, scaling of the heating surface has been reduced

to a minimum, the Insoluble Solids separating out either in the form of a fine sludge or as a deposit on the shell of the boilers. Leaky steam pipes and joints, frequent in past years and due to corrosive steam, have now been reduced to a minimum.

Other miscellaneous samples number 32. 8 of these consisted of Water examined for potability. Another sample of Water from the Mineral Spring at Moffat was subjected to a very exhaustive examination (p. 87).

The remaining 23 may be summarised thus:—

Fertilisers	.....	.....	.....	.....	14
Milk (including 1 Human)	....	....	....	....	5
Peas	.....	.....	.....	.....	1
Turpentine	.....	.....	.....	.....	1
Margarine	.....	.....	.....	....	2

With the exception of the sample of Peas, which had been taken from the crops of dead pigeons, and which contained Strychnine, thereby confirming the suspicion that the birds had been poisoned, they do not call for comment.

A table showing the total number of analyses made during the year is given in Appendix 3, together with the corresponding figures for the previous year.

JOHN W. HAWLEY.

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine. (Cl).	Nitrates (N <sub>2</sub> O <sub>5</sub> ).	Nitrites (N).	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours.	Iron (Fe).	PH Value.
Lower Annandale	1	8.56	5.76	2.80	1.10	.152	Faint reac.	.0014	.0094	.388	.003	7½
	2	10.00	7.28	2.72	1.20	.092	Nil.	.0006	.0074	.263	trace	7½
	3	11.52	8.08	3.44	1.10	.092	Nil.	.0008	.0094	.301	.010	7½
	4	8.96	4.72	4.24	1.00	.092	Nil.	.0014	.0122	.408	.008	7½
Bankshill	1	20.72	18.32	2.40	1.00	.216	Nil.	trace	.0016	Nil.	Nil.	8
	2	20.32	18.40	1.92	1.20	.220	Nil.	trace	trace	Nil.	trace	8
	3	19.36	14.48	4.88	1.10	.123	Nil.	trace	.0046	.043	.004	8
	4	19.84	17.60	2.24	1.10	.278	Nil.	.0008	.0036	.004	.005	8
Blackshaw	1	9.92	5.60	4.32	1.70	1.62	Nil.	Nil.	.0016	Nil.	.008	6½
	2	9.60	5.84	3.76	1.60	.771	Nil.	.0006	.0006	Nil.	.003	6
	3	11.52	8.80	2.72	1.60	.918	Nil.	Nil.	.0010	Nil.	.003	6
	4	10.00	7.68	2.32	1.60	1.072	Nil.	trace	trace	Nil.	.003	5½
Crawick	1	6.32	4.80	1.52	.90	.093	Nil.	Nil.	.0024	.059	.003	8½
	2	6.80	5.44	1.36	.90	.031	Nil.	trace	.0058	.218	.005	8½
	3	6.56	4.08	2.48	.90	.031	Nil.	.0012	.0048	.068	.003	7½
	4	6.24	4.32	1.92	1.10	.031	Nil.	.0006	.0026	.155	.003	8
Dumfries Landward	1	12.08	7.52	4.56	1.40	.463	Nil.	.0010	.0094	.313	.005	8
	2	12.16	8.24	3.92	1.30	.246	Nil.	.0012	.0116	.209	Nil.	8½
	3	12.24	6.00	6.24	1.40	.216	Nil.	.0016	.0108	.333	.005	8
	4	12.72	9.60	3.12	1.20	.709	Nil.	.0012	.0108	.424	Nil.	8
Eaglesfield	1	19.12	15.68	3.44	1.20	.247	Present	Nil.	Nil.	Nil.	.001	8
	2	17.20	12.48	4.72	1.10	.339	Nil.	Nil.	trace	Nil.	trace	8½
	3	16.48	10.64	5.84	1.20	.432	Nil.	Nil.	trace	Nil.	trace	8
	4	16.16	11.36	4.80	1.30	.463	Nil.	Nil.	trace	Nil.	trace	7½
Ecclefechan	1	19.84	14.96	4.88	1.30	.85	Present	Nil.	.0006	Nil.	.004	8½
	2	20.08	13.60	6.48	1.30	.771	Nil.	trace	trace	Nil.	.009	8
	3	18.96	11.68	7.28	1.40	.678	Nil.	.0008	.0010	Nil.	.009	8
	4	18.40	12.16	6.24	1.30	.841	Nil.	trace	.0006	Nil.	trace	8
Glencaple	1	13.92	7.36	6.56	2.00	1.27	Faint reaction	.0010	.0078	.053	.003	8
	2	13.36	8.40	4.96	2.00	.555	Nil.	.0006	.0102	.090	.003	7½
	3	12.72	9.84	2.88	1.80	.432	Nil.	.0012	.0138	.171	.003	8½
	4	11.76	8.24	3.52	1.70	.964	Present	.0012	.0050	.053	.008	7½

## Appendix No. 1—continued.

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine (Cl).	Nitrates (N <sub>2</sub> O <sub>5</sub> ).	Nitrites (N).	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours.	Iron (Fe).	pH Value.
Kirkconnel	1	20.64	18.00	2.64	1.10	.124	Nil.	trace	.0018	.033	Nil.	9½
Do.	2	20.08	15.52	4.56	1.10	.092	Nil.	.0010	.0078	.127	Nil.	8½
Do.	3	21.44	15.12	6.32	1.20	.092	Nil.	.0006	.0028	.055	trace	8½
Do.	4	12.40	10.00	2.40	1.10	.123	Nil.	.0016	.0072	.330	Nil.	8½
Do.	4	13.52	10.24	3.28	1.10	.123	Nil.	trace	.0036	.256	Nil.	8
Lockerbie Burgh	1	11.12	8.88	2.24	1.20	.185	Nil.	.0020	.0038	.196	Nil.	8
Do.	3	13.76	12.88	.88	1.10	.185	Nil.	.0008	.0096	.213	Nil.	8½
Moniaive	1	7.68	4.96	2.72	1.00	.093	Present	.0114	.0032	.072	.005	8
Do.	2	8.40	5.44	2.96	1.10	.062	Nil.	.0006	.0066	.082	.005	8
Do.	3	10.32	7.28	3.04	1.10	.031	Nil.	trace	.0070	.098	.003	8
Do.	4	6.00	4.00	2.00	1.10	.062	Nil.	.0014	.0050	.080	trace	7½
Netherwood, Kelton, and Craigs	1	15.60	14.24	1.36	1.30	.093	Nil.	trace	.0060	.022	trace	8½
Do.	2	15.60	10.64	4.96	1.30	.123	Nil.	.0012	.0082	.067	trace	8½
Do.	3	14.80	13.12	1.68	1.40	.092	Nil.	Nil.	.0078	.077	trace	8
Do.	4	15.68	11.68	4.00	1.30	.216	Nil.	.0012	.0038	Nil.	.003	8½
Penpont	1	8.16	5.84	2.32	1.00	.124	Nil.	trace	.0016	Nil.	trace	6½
Do.	2	7.60	5.76	1.84	1.00	.124	Nil.	Nil.	.0024	Nil.	trace	6½
Do.	3	10.24	6.56	3.68	1.30	.092	Nil.	.0014	.0012	Nil.	.004	7
Do.	4	9.52	6.08	3.44	.90	.123	Nil.	trace	Nil.	Nil.	Nil.	6½
Ruthwell and Raffles	1	8.40	5.44	2.96	1.60	.062	Nil.	.0030	.0046	.083	.008	9
Do.	2	9.52	5.76	3.76	1.80	.062	Distinct react.	.0054	.0054	.097	.013	7
Do.	3	10.08	8.88	1.20	1.70	.015	Nil.	trace	.0068	.104	Nil.	8
Do.	4	13.60	8.48	5.12	1.50	.709	Nil.	.0024	.0030	Nil.	trace	8
Rowanburn	1	9.12	5.28	3.84	1.00	.709	Nil.	.0010	.0028	.072	.001	6½
Do.	2	9.12	4.16	4.96	1.00	.964	Nil.	Nil.	.0016	.035	trace	6½
Do.	3	11.44	6.40	5.04	1.00	1.068	Nil.	Nil.	.0038	.072	.010	6½
Do.	4	11.68	7.68	4.00	1.00	.964	Nil.	.0008	.0076	.178	.008	6½
Thornhill	1	9.60	5.52	4.08	1.10	.308	Nil.	Nil.	.0014	Nil.	.003	7
Do.	2	9.12	6.08	3.04	1.20	.308	Nil.	Nil.	.0026	.008	trace	7½
Do.	3	11.92	8.24	3.68	1.20	.216	Nil.	Nil.	.0008	.020	.010	7½
Do.	4	8.16	6.32	1.84	1.10	.216	Nil.	trace	.0018	.007	.005	7½

## Appendix 2.

Table showing the number and nature of Samples received under the Food and Drugs Act.

Article.	County Councils of			Total	Adulterated.
	Dfs.	Kbt.	Wig.		
Milk ... ..	52(5)	65(7)	32(5)	149	17
Milk (Condensed) ...	...	...	1	1	...
Cream ... ..	...	1	1	2	...
Butter ... ..	16	11	11	38	...
Margarine ... ..	...	8	2	10	..
Lard ... ..	7	1	6	14	...
Cheese ... ..	...	...	3	3	...
Tea ... ..	...	13	1	14	...
Coffee ... ..	4	2	1	7	...
Coffee and Chicory ...	1	...	...	1	...
Cocoa ... ..	1	4	2	7	...
Sugar ... ..	...	5	...	5	...
Fruit Salad ... ..	...	...	1	1	...
Trifona ... ..	...	...	1	1	...
Sweets ... ..	1	...	...	1	...
Jam ... ..	...	4	1	5	...
Marmalade ... ..	...	...	1	1	...
Honey ... ..	...	...	1	1	...
Whisky ... ..	...	18	3	21	...
Rum ... ..	...	1	...	1	..
Beer ... ..	...	...	1	1	...
Brandy ... ..	...	1(1)	...	1	1
Cream of Tartar ... ..	7	3	6	16	...
Baking Soda ... ..	...	3	1	4	...
Baking Powder ... ..	...	...	1	1	...
Egg Substitute ... ..	...	...	1	1	...
Butter Shortbread ...	1	...	...	1	...
Dripping ... ..	...	...	1	1	...
Mustard ... ..	1	...	...	1	...
Pepper ... ..	4	5	5	14	...
Ground Ginger ... ..	3	3	...	6	...
Cinnamon ... ..	1	3	...	4	...
Barley ... ..	...	...	1	1	...
Tapioca ... ..	...	...	1	1	...
Sago ... ..	...	...	1	1	...
Rice ... ..	...	1	...	1	..
Sausages ... ..	...	...	9(1)	9	1
Canned Beef ... ..	...	...	1	1	...
Chicken and Ham Paste ...	...	...	1	1	...
Ham and Tongue Paste...	...	...	1	1	..
Green Peas ... ..	...	...	3	3	...
Camphorated Oil... ..	...	...	1	1	...
Olive Oil ... ..	1	...	...	1	...
Gregory Powder ... ..	3	...	...	3	...
Calcined Magnesia ... ..	1(1)	...	...	1	1
Seidlitz Powder ... ..	1	...	...	1	...
Cascara Sagrada ... ..	...	...	1	1	...
Epsom Salts ... ..	1	...	...	1	...
Tincture of Quinine ...	...	...	1	1	...
Liquorice Powder ... ..	1	...	...	1	...
Linseed Meal ... ..	1	...	...	1	...
<b>Total ... ..</b>	<b>108(6)</b>	<b>152(8)</b>	<b>105(6)</b>	<b>365</b>	<b>20</b>

## Appendix 3.

	County Council of Dfs. Kbt. Wig.		Insurance Committee of Dfs.Co. Dfs. Kbt. Wig.				Dfs. and Gall. Joint Sana. Board.	Other Auth. and Private.	Total.
Water ... ..	280	43	8	...	...	...	35	9	375 (405)
Sewage and Sewage Effluent...	31	...	...	...	...	...	...	...	31 (18)
Food and Drugs ... ..	*108	152	105	...	...	...	...	...	365 (363)
Milk (S.D. Order, and others)	160	126	9	...	...	...	...	...	295 (285)
Fertilisers and Feeding Stuffs	4	...	...	...	...	...	...	...	4 (6)
Medicines under N.H. Scheme	...	...	...	4	4	4	...	...	16 (21)
Miscellaneous ... ..	4	3	...	...	...	...	...	23	30 (15)
Total ... ..	587	324	122	4	4	4	4	32	1116 (1113)
	(631)	(227)	(119)	(6)	(4)	(6)	(5)	(32)	

\* For Joint Committee.

Report on Medical Inspection

# REPORT

ON

# MEDICAL INSPECTION

# Report on Medical Inspection

For the Year ending 31st July, 1933.

## I.—List of Staff.

### *Chief School Medical Officer.*

JOHN RITCHIE, M.B., Ch.B., M.R.C.P.E., D.P.H.

### *Assistant School Medical Officers.*

E. B. MUNRO, M.B., Ch.B., D.P.H., Lieut.-Col. I.M.S. (Retd.)

AGNES F. TURNER, M.B., Ch.B., D.P.H.

### *School Dentist.*

AGNES J. DALZIEL, L.D.S.

### *Consulting Oculist.*

JAMES A. ROSS, M.A., M.B., Ch.B., Carlisle.

The Medical Officer of Health for the Burgh of Dumfries acts as Deputy Chief School Medical Officer within the Burghal Area, to ensure co-operation with the Public Health Department of the Burgh.

## II. (a).—Number of Schools.

The number of schools under Medical Inspection is 100.

## (b).—Number of Children.

The average number of children on the roll was 13,950.

## III.—Number of Routine Visits to Schools.

The number of routine visits for systematic examination was 296.

## IV.—Number of Special Visits.

(A whole day comprises two visits.)

Examination for Errors of Refraction .....	15
Examination for Infectious Diseases .....	6
Examination for Physical or Mental Defect .....	95
Examination of Verminous Children, for Absence from School, etc. ....	22
	—
	138
	—

## V.—Sanitary Conditions of Schools.

## A. LIGHTING.

Gas lighting in one Burgh school is reported this year to be bad. The senior room of one Country school is insufficiently lit during the daytime.

Several schools have now electric light from the county supply.

## B. VENTILATION.

Floor ventilators have been removed from one school, and cookery room windows have been made to open in another school.

## C. HEATING.

Central heating has improved in two schools; it is unsatisfactory in one 2-roomed school, one room being too warm and the other too cold. Several schools are very cold, some of which are heated by open fires, others by hot pipes. It is possible that in some cases sufficient attention is not being paid to the stoking of the stoves.

## D. CLEANSING AND DISINFECTION.

Colour-washing and inside painting has been carried out in 17 schools; outside painting in 9 schools; and lime-washing of offices in several cases.

Several schoolhouses have been redecorated.

**E. WATER SUPPLY.**

In two schools the supply is said to run scarce in dry weather. There is complaint of sediment in one water.

**F. SANITARY CONVENIENCES.**

In two academies there is no toilet paper in the boys' latrines.

Disposal of refuse is still unsatisfactory at one school. New wash-hand basins have been supplied to 3 schools.

A bathroom, hot water supply, and indoor water-closet has been put into 2 schoolhouses.

**G. PLAYGROUNDS.**

Tarmacadam or asphalt has been put on 3 playgrounds, and loads of gravel on several. There are still many playgrounds which are unsatisfactory as regards position, size, or surface.

Covered sheds have been renewed or renovated in 2 schools, and supplied to 1 school. There are no benches in the sheds of 2 schools.

**H. DESKS.**

Desks in 2 schools are noted as being old and shaky.

**I. MISCELLANEOUS.**

The gallery has been removed from one infant room. This could be done with benefit in the infant room of another school.

Floors in 2 schools are worn out.

The woodwork shed of one school is unserviceable, as it is in disrepair and the stoves worn out.

**VI.—Organisation and Administration.****A. SYSTEM OF MEDICAL EXAMINATION.**

The Department of Health requires the examination of each pupil at least three times during school life :—

- (1) As soon as possible after admission to school —  
“Entrants.”
- (2) During the intermediate stages (ages 9, 10, 11) —  
“Intermediates.”

(3) Towards the end of the elementary school period —  
“Leavers.”

The instruction by the Department of Health, “That every school be examined twice yearly at reasonable intervals,” has been carried out.

#### B. SCHOOL NURSES.

The District Nurse or Health Visitors are present, as far as possible, at medical inspections.

#### C. ARRANGEMENTS FOR “FOLLOWING UP.”

The table opposite gives details.

Nursing Association.	Cases notified.	Cases visited.	Reports.
Annan .....	81	80	169
Lower Annandale .....	124	121	267
Canonbie .....	17	17	26
Carrutherstown .....	8	2	5
Cumberland .....	8	8	11
Dumfries Landward* .....	72	78*	161
Dunscore .....	25	25	51
Eskdalemuir* .....	20	21*	31
Kirkconnel* .....	130	131*	254
Kirkmahoe .....	13	13	40
Kirkmichael .....	7	7	45
Lochmaben* .....	53	56*	94
Lockerbie .....	80	78	82
Moffat .....	31	28	33
Moniaive .....	7	7	15
Penpont .....	8	8	9
Ruthwell* .....	2	4*	8
Sanquhar .....	46	43	78
Stewartry .....	7	7	17
Thornhill .....	76	75	89
<hr/>	<hr/>	<hr/>	<hr/>
Total .....	815	809	1485
Health Visitors .....	541	614*	1634
<hr/>	<hr/>	<hr/>	<hr/>
Grand Total .....	1356	1423	3119
<hr/>	<hr/>	<hr/>	<hr/>

\* Includes cases referred by teachers or parents to Nurses or Health Visitors.

## D. SUPERVISION OF INFECTIOUS DISEASE.

## E. CO-ORDINATION WITH THE PUBLIC HEALTH SERVICE.

The arrangements for those are described in former reports.

## VII.—Physical Condition of School Children.

## A. TOTAL NUMBER EXAMINED.

## (a) At Systematic Examinations.

Age.	Boys.	Girls.	Total.
Under 5 years	59	75	134
Age 5 „	470	484	954
„ 6 „	112	94	206
„ 7 „	40	40	80
„ 8 „	22	32	54
„ 9 „	682	628	1310
„ 10 „	41	37	78
„ 11 „	25	24	49
„ 12 „	31	20	51
„ 13 „	652	639	1291
„ 14 „	14	10	24
„ 15 „	4	4	8
„ 16 and over	44	46	90
Total	2196	2133	4329

Grouping the total number as Entrants, Intermediates, and Leavers, the figures are :—

	Boys.	Girls.	Total.
Entrants	703	725	1428
Intermediates	748	689	1437
Leavers	745	719	1464
Total	2196	2133	4329

## (b) Special Cases.

There were 6390 children examined as special cases as follows :—

Re-examination of Notified Defects	.....	.....	.....	2434
Vision Testing at age of 7 years	.....	.....	.....	1295
Re-examined Pediculosis Cases	.....	.....	.....	1821
At the request of Parent or Teacher	.....	.....	.....	188
At the request of the School Medical Officer	.....	.....	.....	37
Examination for Infectious Disease	.....	.....	.....	273
Examination for Mental and Physical Defect	.....	.....	.....	342
				-----
Total	.....	.....	.....	6390
				-----

B. NUMBER OF CHILDREN NOTIFIED TO PARENTS AS SUFFERING FROM DEFECTS AND PEDICULOSIS.

Total number examined, 10,719.

Number Notified.	Defects—%	Pediculosis—%
(a) At Systematic examinations	..... 308	284
(b) Special cases.....	..... 341	506
	} 6.05	} 7.37

Number showing no defects at Systematic examinations, 243 (5.61 per cent.).

N.B.—A defective tooth, weight below the average, etc., counts as defects.

C. NUMBER OF CHILDREN WITH NOTIFIED DEFECTS  
RECEIVING ATTENTION.

			No. Improved.	Per cent.
Number Re-examined ...	...	2744	1984	} 72.30
(a) At Systematic Examinations	...	310	172	
(b) As Special Cases ...	...	2434	1812	
Pediculosis Cases ...	...	2018	1449	71.80

D. AND E. CLOTHING AND FOOTGEAR.

Number Examined.	Underclad.		Overclad.		Clothing Dirty.		Unsatis- factory Footgear.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	3	0.13	...	...	2	0.09	1	0.04
Girls 2133	1	0.04	2	0.09	15	0.70	1	0.04
Total 4329	4	0.09	2	0.04	17	0.40	2	0.04
Specials ...	7		...		33		8	

F. AVERAGE HEIGHTS AND WEIGHTS.

Before weighing children, boots, shoes, and heavy outer garments are removed.

The following tables show the average heights and weights of boys and girls of all ages from 3 to 16 years :

## BOYS.

Age.	Number Examined	Average Heights in Inches.		Average Weights in Lbs.	
		Dumfries-shire.	Anthropometric Standard.	Dumfries-shire.	Anthropometric Standard.
Under 5	59	41.41	...	40.78	...
5- 6	470	42.32	41.03	42.00	39.90
6- 7	112	45.17	44.00	46.73	44.40
7- 8	40	47.29	45.95	51.46	49.70
8- 9	22	49.03	47.05	57.75	54.90
9-10	682	50.95	49.70	60.89	60.40
10-11	41	52.38	51.84	67.98	67.50
11-12	25	55.75	53.50	76.25	72.00
12-13	31	56.32	54.99	79.38	76.70
13-14	652	56.40	56.91	82.99	82.60
14-15	14	59.91	...	94.64	...
15-16	4	65.62	...	127.00	...
over 16	44	65.35	...	121.67	...

## GIRLS.

Age.	Number Examined	Average Heights in Inches.		Average Weights in Lbs.	
		Dumfries-shire.	Anthropometric Standard.	Dumfries-shire.	Anthropometric Standard.
Under 5	75	39.45	...	35.44	...
5- 6	484	43.06	40.55	40.45	39.20
6- 7	94	43.54	42.58	43.57	41.72
7- 8	40	46.24	44.45	47.98	47.50
8- 9	32	49.29	46.60	54.83	52.10
9-10	628	50.46	48.72	58.49	55.50
10-11	37	52.01	51.66	64.35	62.00
11-12	24	55.36	53.10	75.57	68.10
12-13	20	57.44	55.66	81.08	76.40
13-14	639	58.86	57.77	87.54	87.20
14-15	10	65.82	...	96.82	...
15-16	4	64.06	...	109.31	...
over 16	46	62.97	...	112.98	...

## G. CLEANLINESS.

Pediculosis may be taken as a measure of this.

Number Examined.	Head.				Body.		Specials.
	Notified Cases.		Slight.				No.
	No.	%	No.	%	No.	%	No.
Boys 2196	58	2.64	48	2.18	5	0.22	416
Girls 2133	226	10.59	277	12.98	4	0.18	1405
Total 4329	284	6.57	325	7.50	9	0.20	1821

## H. CONDITION OF THE SKIN.

## (a) Head.

Number Examined.	Ringworm.		Impetigo.		Other Diseases.	
	No.	%	No.	%	No.	%
Boys ... 2196	...	...	11	0.50	14	0.63
Girls ... 2133	...	...	11	0.51	7	0.32
Total ... 4329	...	...	22	0.50	21	0.48
Specials ...	1		59		9	

## (b) BODY.

Number Examined.	Ringworm.		Impetigo.		Scabies.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	...	...	...	...	12	0.54	55	2.50
Girls 2133	...	...	1	0.04	3	0.14	14	0.65
Total 4329	...	...	1	0.02	15	0.34	69	1.59
Specials	3		3		46		18	

## I. NUTRITION.

Number Examined.	Above Average.		Average.		Below Average.		Very Bad.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	798	36.33	685	31.19	710	32.33	3	0.13
Girls 2133	781	36.61	726	34.03	624	29.05	2	0.09
Total 4329	1579	36.47	1411	32.59	1334	30.81	5	0.11
Specials ...	...		...		...		3	

## J. TEETH.

Number Examined.	All Sound.		1 to 4 Decayed.		5 or more Decayed.		Oral Sepsis	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	498	22.67	1289	58.69	409	18.62	1	0.04
Girls 2133	481	22.55	1265	59.30	387	18.14	1	0.04
Total 4329	979	22.61	2554	58.99	796	18.38	2	0.04
Specials ...	...		...		...		3	

## K. NOSE, THROAT, AND GLANDS.

## (a) NOSE.

Number Examined.				Catarrh.		Obstruction.		Other Diseases.	
				No.	%	No.	%	No.	%
Boys	...	...	2196	155	7.05	4	0.18	...	
Girls	...	...	2133	98	4.59	7	0.32	...	
Total	...	...	4329	253	5.82	11	0.25	...	
Specials	...	...	...	11		26		2	

## (b) THROAT.

Number Examined.	Tonsils.				Adenoids.				Other Diseases	
	Slightly Enlarged.		Markedly Enlarged.		Probably Present.		Present.			
	No.	%	No.	%	No.	%	No.	%	No.	%
Boys 2196	350	15.93	47	2.14	16	0.72	2	0.09	...	
Girls 2133	368	17.25	51	2.39	16	0.75	...		...	
Total 4329	718	16.58	98	2.26	32	0.73	2	0.04	...	
Specials	3		639		75		7		4	

## (c) LYMPHATIC GLANDS.

Number Examined.	Palpably Enlarged.		Markedly Enlarged.		Suppurating.		Cicatrices.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	826	37.61	8	0.36	...		16	0.72
Girls 2133	564	26.44	5	0.23	...		24	1.12
Total 4329	1390	32.10	13	0.30	...		40	0.92
Specials ...	10		55		...		...	

## L. EXTERNAL EYE DISEASES.

Number Examined.	Blepharitis.		Conjunctivitis.		Corneal Opacity.		Strabismus.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%	No.	%
Boys 2196	26	1.18	4	0.18	3	0.13	26	1.18	8	0.36
Girls 2133	23	1.07	3	0.14	3	0.14	24	1.12	1	0.04
Total 4329	49	1.13	7	0.16	6	0.13	50	1.15	9	0.20
Specials	57		7		13		240		32	

## M. VISUAL ACUITY.

Tested in children of 7 years and over.

Number Examined.	Good, 6/6.		Fair, 6/9-6/12.		6/18 or Worse.		Bad in one Eye only.	
	No.	%	No.	%	No.	%	No.	%
Boys 2207	1020	46.21	965	43.72	90	4.07	132	5.98
Girls 2047	825	40.30	980	47.87	142	6.93	100	4.88
Total 4254	1845	43.60	1945	45.95	232	5.45	232	5.45
Specials ...	2		64		778		274	

The number of children examined by Retinoscopy was 254, of whom 45 were examined by Dr Ross, Carlisle, and 209 by the School Medical Officers.

When necessary the usual notification was sent to parents.

One hundred and seventy-six (176) parents were notified that their children required glasses. Of these :—

79 declared themselves necessitous.

71 paid for the glasses.

2 prescriptions were sent to parents.

24 did not reply.

Of the remaining 78 pupils about whom no letters were sent :—

71 did not require or were not improved by glasses.

7 did not require their glasses to be changed.

## N. EARS.

Number Examined.	Otorrhœa.		Wax.		Other Diseases.	
	No.	%	No.	%	No.	%
Boys ... 2196	11	0.50	6	0.27	1	0.04
Girls ... 2133	9	0.42	6	0.28	...	
Total ... 4329	20	0.46	12	0.27	1	0.02
Specials ... ..	71		3		...	

## O. HEARING.

Number Examined.	Slightly Deaf.		Markedly Deaf.	
	No.	%	No.	%
Boy ... .. 2196	5	0.22	2	0.09
Girls ... .. 2133	4	0.18	5	0.23
Total ... .. 4329	9	0.20	7	0.16
Specials ... ..	4		29	

## P. SPEECH.

Number Examined.	Defective Articulation.		Stammering.	
	No.	%	No.	%
Boys ... 2196	17	0.77	9	0.41
Girls ... 2133	13	0.60	1	0.04
Total ... 4329	30	0.69	10	0.23
Specials ... ..	1		...	

## Q. MENTAL CONDITION.

Number Examined.	Dull or Backward.		Mentally Defective.	
	No.	%	No.	%
Boys ... .. 2196	29	1.32	16	0.72
Girls ... .. 2133	17	0.79	14	0.65
Total ... 4329	46	1.06	30	0.69
Specials ... ..	107		42	

## R. HEART AND CIRCULATION.

Number Examined.	Organic Disease.				Functional Diseases.		Anæmia	
	Congenital.		Acquired.		No.	%	No.	%
	No.	%	No.	%				
Boys 2196	2	0.09	47	2.14	21	0.95	24	1.09
Girls 2133	2	0.09	30	1.40	44	2.06	11	0.51
Total 4329	4	0.09	77	1.77	65	1.50	35	0.80
Specials ...	6		160		33		49	

## S. LUNGS.

Number Examined.	Bronchitis and Catarrh.		Tuber- culosis.		Suspected Tuberculosis.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	62	2.82	1	0.04	5	0.22	5	0.22
Girls 2133	38	1.77	...		1	0.04	4	0.18
Total 4329	100	2.31	1	0.02	6	0.13	9	0.20
Specials ...	26		13		51		16	

## T. NERVOUS SYSTEM.

Number Examined.	Epilepsy.		Chorea.		Infantile Paralysis.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	1	0·04	...		3	0·13	3	0·13
Girls 2133	...		1	0·04	4	0·18	2	0·09
Total 4329	1	0·02	1	0·02	7	0·16	5	0·11
Specials ...	...		2		6		7	

## U. TUBERCULOSIS (NON-PULMONARY).

Number Examined.	Glandular.		Bones and Joints.		Skin.		Other Forms.	
	No.	%	No.	%	No.	%	No.	%
Boys 2196	2	0·09	4	0·18	...		4	0·18
Girls 2133	2	0·09	2	0·09	...		3	0·14
Total 4329	4	0·09	6	0·13	...		7	0·16
Specials ...	8		20		2		12	

## V. RICKETS.

Number Examined.	Slight.		Marked.	
	No.	%	No.	%
Boys ... 2196	24	1·09	3	0·13
Girls ... 2133	4	0·18	1	0·04
Total ... 4329	28	0·64	4	0·09
Specials ...	...		2	

## W. DEFORMITIES.

Number Examined.	Congenital.		Acquired (non-Rachitic).	
	No.	%	No.	%
Boys ... .. 2196	8	0.36	10	0.45
Girls ... .. 2133	7	0.32	27	1.26
Total ... .. 4329	15	0.34	37	0.85
Specials ... ..	2		7	

## X. INFECTIOUS AND CONTAGIOUS DISEASES.

Number Examined.	Whooping-cough.		Chicken-pox.		Mumps.	
	No.	%	No.	%	No.	%
Boys 2196	3	0.13	4	0.18	...	...
Girls 2133	2	0.09	...	...	1	0.04
Total 4329	5	0.11	4	0.09	1	0.02
Specials	5		4		...	

## Y. OTHER DISEASES OR DEFECTS.

Number Examined.	Number.	Per cent.
Boys ... .. 2196	57	2.59
Girls ... .. 2133	30	1.40
Total ... .. 4329	87	2.00
Specials ... ..	95	...

## Z. VACCINATION.

Number Examined.				No Marks.	Per cent.
Boys	...	...	2196	603	27·45
Girls	...	...	2133	510	23·90
Total	...	...	4329	1113	25·71

## VIII. —Mental Defectives.

The School Medical Officers have paid 17 visits during the year to the Dumfries special class, and 10 visits to the Annan Class.

During the year 170 children (105 boys and 65 girls) were mentally tested, 28 being special class children who were re-tested. Of the remaining 142, 32 (21 boys and 11 girls) were certified mentally defective, 31 were classed as borderland, 67 as dull and backward, 9 as merely backward, 1 as emotionally unstable, 1 as a physical defective, and 1 as a case of partial word deafness; 14 of the borderland children are to be reviewed at a later date.

Several of the children who have been educated in the special classes have left or are due to leave school. Their chances of getting regular employment at present are somewhat meagre, but if they are left to shift for themselves, without training or supervision, they will have little chance of obtaining or retaining employment. Whether they are employed or not, voluntary supervision, if efficiently carried out, can be of the greatest service, particularly to the young adult defective, and it seems only reasonable, considering the cost of their special education, that steps might be taken to ensure their adequate supervision after they leave school.

The problem of the borderland and retarded child is being increasingly brought to the notice of the School Medical Officers. The findings of the Scottish Council for Research in Education in their recent mental survey shew that a greater number of children than was hitherto

believed come into the groups which range themselves on either side of the average, usually termed superior, and retarded. Their figure for the retarded group (*e.g.*, under 90) is over 25 per cent. These children present a serious problem to the teacher, more particularly after the age of about 10 years. In order to concur with the administrative ideal of education, these pupils require to be promoted from class to class along with the average and brighter pupils in order that they may cover the ground necessary for presentation for the control examination at the age of 12. This means that a child—for example, aged 10—with an intelligence quotient of 75 and therefore a mental age of  $7\frac{1}{2}$ , is expected to do the work of a child aged 10 with a mental age of 10. Not all schools in the county promote according to chronological age. Up to the age of 10 or so a retarded child can be made to fit into the ordinary elementary school by placing him in a class with younger pupils for all or certain subjects; but it is unsuitable, generally speaking, for older children to be kept with the younger ones. Several schools in the county have retarded classes, but these are mainly for older children who have either failed to pass the control examination or whose capacities are more suited for practical work.

The Committee responsible for the mental survey of Scottish children report that “this finding in regard to the wide variation of intelligence among children of the same age supports the modern tendency to adjust subjects and methods of instruction to the mental age of the child. It should heighten expectation of what may be attained by a selected few, but should also damp the ardour of those who believe, without reliable evidence, that many of group (more than 25 per cent.) with Intelligence Quotients below 90 are able to do the work which comes readily within the grasp of the average child.”



Report by the School Dentist

# REPORT

ON

# DENTAL TREATMENT

## Report by the School Dentist.

1st Quarter :—August, September, and October, 1932

*Inspection* :—Children between 5 and 10 years.

St. Andrew's.	Davington.	Hoddam.
Applegarth.	Eskdalemuir.	Middlebie.
Sibbaldbie.	Wanlockhead.	Glenzier.
Goodhope.	Mennock.	Half-Morton
Eaglesfield.	Gair.	Hottsbridge.
Tynron Public.	Tynron Endowed.	Crossford.
Kirk.-Fleming.	Moniaive.	Garrel.
Penpont.	Craigmuie.	Gretna Public.
Keir.		

*Treatment* :—

St. Andrew's	Davington	St. Michael Stree
Applegarth.	Eskdalemuir.	Hoddam.
Sibbaldbie.	Wanlockhead.	Middlebie.
Goodhope.	Mennock.	Glenzier.
Eaglesfield.	Gair.	Half-Morton.
Tynron Public.	Tynron Endowed.	Hottsbridge.

2nd Quarter :—November and December, 1932, and  
January, 1933.

*Inspection* :—Children between 5 and 10 years.

Hutton Hall.	Glencaple.	Barndennoch.
Glenesslin.	Speddoch.	Dunscore.
Hollywood.	Steilston.	Collin.
Torthorwald.	Nethermill.	Dalswinton.
Duncow.	Breconbeds.	Brydekirk.
Burnhead.	Eastriggs.	Mount Pleasant.
Dornock.	Cummertrees.	Woodside.
Amisfield.	Carronbridge.	Birleyhill.
Ruthwell.	Enterkinfoot.	Catherinefield.
Mouswald.	Trailtrow.	Morton.
Wallacehall Acad.	Lochmaben.	Dalton.
Auldgirth.	Brownhall.	Durisdeer.

*Treatment :—*

Hutton Hall.	Speddoch.	Dunscore.
Glenesslin.	Steilston.	Collin.
Hollywood.	Nethermill.	Dalswinton.
Torthorwald.	Breconbeds.	Brydekirk.
Duncow.	Eastriggs.	Mount Pleasant.
Dornock.	Cummertrees.	Woodside.
Amisfield.	Carronbridge.	Birleyhill.
Ruthwell.	Enterkinfoot.	Catherinefield.
Mouswald.	Trailtrow.	Morton.
Kirk.-Fleming.	Keir.	Penpont.
Crossford.	Moniaive.	Craigmuie.
Garrel.	Gretná Public.	
Glencaple.	Barndennoch.	

**3rd Quarter :—February, March, and April, 1933.***Inspection :—*Children between 5 and 10 years.

Lockerbie Acad.	Gatelawbridge.	Templand.
Annan Academy.	Kelloholm.	St. Mungo.
St. Columba's.	Cairn.	Hightae.
Sanquhar.	Kirkconnel.	

*Treatment :—*

Lockerbie Acad.	Gatelawbridge.	Templand.
Annan Academy.	Kelloholm.	St. Mungo.
St. Columba's.	Cairn.	Hightae.
Durisdeer.	Wallacehall Acad.	Lochmaben.
Brownhall.	Auldgirth.	Dalton.

**4th Quarter :—May, June, and July, 1933.***Inspection :—*Children between 5 and 10 years.

Shieldhill.	Johnstonebridge.	Cogrieburn.
Canonbie.	Harlaw.	Gilnockie.
Megdale.	Westerkirk.	Ewes.
Moffat Academy	Evan Water.	Wamphray.
Gubhill.	Dumgree.	Beattock.
Langholm Acad.	Wauchope.	Hutton.
Corrie.	Tundergarth.	

*Treatment :—*

Sanquhar.	Kirkconnel.	Shieldhill.
Johnstonebridge.	Cogieburn.	Canonbie.
Harlaw.	Gilnockie.	Megdale.
Westerkirk.	Ewes.	Moffat Academy.
Evan Water.	Wamphray.	Gubhill.
Dumgree.	Beattock.	Langholm Acad.
Wauchope.	Hutton.	Corrie.
Tundergarth.		

**Summary of Work Done.**

Number of schools visited for inspection	.....	92
Number of schools visited for treatment	.....	92
Number of children inspected	.....	5034
Number of children requiring treatment	.....	2529 (50.24%)
Number of children requiring no treatment	.....	2505 (49.76%)

Of those requiring treatment ..... 1542 (62.91%)  
 accepted the Dentist's services. In 909 cases treatment was refused, and 78 forms were not returned. Of those accepting treatment, 62 were absent from school on the day of the Dentist's visit and did not receive treatment. In addition to the routine cases, 206 other children were treated—168 special cases and 38 acceptances of the previous year who had not received treatment before the holidays. This makes a total of 1686 children receiving treatment.

The operative procedures undertaken were :

Number of Fillings	.....	45
Number of Extractions	.....	318
Number of Scalings	.....	1

**Percentage of Acceptance of Dental Service.**

100 per cent.—Davington, Middlebie, Craigmuir  
 Birleyhill, Dumgree.

90-100 per cent.—Crossford (91.6).

80-90 per cent.—Harlaw (88.8), Goddhope, Barr  
 dennoch (87.5), Mennock (86.92), Carronbridge (86.36)

Cairn, Wauchope, Enterkinfoot (83·3), Sanquhar (82·52), Holywood (81·81), Durisdeer (81·25), Wallaceball Academy (80·08), Eskdalemuir, Sibbaldie, Mount Pleasant, Hutton (80).

70-80 per cent.—Eastriggs (78·125), Beattock (76·6), Mouswald (76·47), Kelloholm (75·83), Kirkconnel (75·19), Breconbeds, Cummertrees, Woodside, Gatelawbridge, Corrie (75), Moniaive (72·72), Wanlockhead, Applegarth (71·43).

60-70 per cent.—Nethermill (69·57), Lockerbie Academy (69·53), Evan Water (69·23), Wamphray, St. Mungo (68·75), Hightae (68), Hoddam (67·5), Westerkirk, Trailtrow (66·6), Penpont (65·52), Duncow (65·22), Dunscore (65), Annan Academy (Special Class) (64·7), Auldgirth (63·63), Glencaple (61·54), Ewes, Tundergarth, Glenesslin, Tynron Public, Tynron Endowed (60).

50-60 per cent.—Dalswinton (58·82), Brydekirk (58·62), St. Andrew's (58·125), Johnstonebridge, Speddoch (57·14), Annan Academy (54·19), Dornock (53·9), Dalton (53·85), Lochmaben (50·70), Templand, Half-Morton, Canonbie, Megdale, Moffat Academy (50).

40-50 per cent.—Hutton Hall, Steilston (46·6), Torthorwald (45·45), Morton (44·68), Gilnockie, Gubhill (44·4), Glenzier (43·75), Langholm Academy (43·66), Gair (42·86), Cogrieburn (41·6), Hottsbridge, Catherinefield, Collin, St. Columba's (40).

30-40 per cent.—Gretna Public (39·29), Amisfield (38·8), Ruthwell (38·46), Brownhall (37·04), Eaglesfield (35), Keir, Lockerbie Academy (Special Class) (33·3).

20-30 per cent.—Garrel (28·57), Kirkpatrick-Fleming (28).

10-20 per cent.—Shieldhill (15·38).

0 per cent.—Burnhead.

