[Report 1930] / Medical Officer of Health, St Andrews.

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ROYAL BURGH OF ST. ANDREWS.

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REPORTS

BY

Medical Officer

AND

Sanitary Inspector

For the Year 1930.

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Medical Officer

AND

Sanitary Inspector

For the Year 1930.

To the Department of Health for Scotland, The Provost, Magistrates and Councillors of the Royal Burgh of St. Andrews.

Gentlemen,

In submitting my Report on the Health of the Burgh of St. Andrews for the year 1930, I gladly avail myself of an opportunity of expressing my indebtedness to all those associated with me in the health activities of the Burgh. In particular do I desire to acknowledge the advice and ready support which has been given me by Dr. G. Pratt Yule, Chief Medical Officer of Health, Fife County.

I have the honour to be,

Gentlemen,

Your obedient Servant,

G. MATTHEW FYFE, M.B., Ch.B., D.P.H.,
Medical Officer.

June, 1931.

Public Health Department,
James Mackenzie Institute for Clinical Research,
St. Andrews.

INDEX.

	Page
Introductory, ...	5
Statistical Comments, ...	6
Environmental Conditions—	
Drainage, ...	8
Water Supply, ...	10
Atmospheric Conditions, ...	12
Offensive Trades, ...	13
Housing Conditions, ...	14
Building Bye-laws, ...	16
Town Planning, ...	16
Infectious Diseases—	
Diphtheria Immunisation, ...	18
Incidence and Housing Conditions, ...	19
Mother and Child Welfare Scheme—	
Infantile Mortality, ...	21
Births, ...	21
Maternal Mortality, ...	21
Report under Midwives (Scotland) Act, 1915, ..	21
Home Visitation, ...	22
Infant Feeding, ...	22
Ante-Natal Consultations, ...	23
Post-Natal Consultations, ...	23
Child Welfare Consultations, ...	24
Special Treatment Centres, ...	26
Observation Nursery, ...	26
Food and Milk Supply, ...	26
Infectious Diseases, ...	27
Provisions for Maternity Cases, ...	27
Provision for Puerperal Sepsis Cases, ...	28
Food Supply—	
Milk, ...	28
Sale of Food and Drugs Acts, ...	29
Factory and Workshops Act, ...	29
Report of Sanitary Inspector, ...	31

ANNUAL REPORT, 1930.

INTRODUCTORY.

The passing of the Local Government (Scotland) Act, 1929, heralded the dawn of a new era in public health administration. On the 16th of May 1930, when the Act came into force, there passed from the control of the Town Councils of Small Burghs the statutory powers with which they were vested in connection with the recording of vital statistics, the supervision of food supplies, the control of infectious diseases and the supervision of the welfare of mothers and children. These major public health services, along with other specified functions, became the concern of County Councils but the Town Councils of Small Burghs were still charged with duties in respect of housing, scavenging and water supply.

Sufficient time has not yet elapsed to enable one to measure in full the effects of these revolutionary changes upon the public health organisation of St. Andrews. So far, however, it cannot be claimed, from the administrative point of view, that a retrograde step has been made or that the disadvantages, which commonly attend schemes of centralisation, have supervened.

The changes have had an influence upon the status and work of the Burgh sanitary officials. The Medical Officer of Health was appointed a Deputy Medical Officer of Health of the County, and it was arranged that he should continue to advise the Town Council regarding those services which had not been transferred. The duties of the Burgh Sanitary Inspector were restricted to untransferred functions. Cordial relations have been established between the Burgh and County Officials and although there has been, as it were, a division of labour, work has proceeded as smoothly as in the past.

STATISTICAL COMMENTS.

According to the estimate of the Registrar General the population of the Royal Burgh of St. Andrews at the middle of 1930 was 8,722. It will be interesting to compare this figure with the actual figure derived from the census of 1931. Since the 1921 census there has been an increase in the school and student population and nearly 400 houses have been built. At the time of the 1921 census, however, the population was inflated by a considerable influx of visitors, so that it is possible that little or no change will be evident in the new census figure. Nevertheless, it is generally expected that the population will have increased.

The total number of births, including illegitimate, was 101 of which 55 were males and 46 females. The birth rate per 1000 of estimated population was 11·6 as compared with 12·5 in 1929. Illegitimate births numbered 5, representing a rate of 5·9 per 100 births.

Forty-one marriages were registered as compared with 52 in the previous year. The rate had therefore fallen from 6 to 4·7 per 1000 of estimated population.

Corrected for transfers, the number of deaths from all causes was 96 of which 38 were males and 58 females. The rate per 1000 being 11, a figure less by 0·6 than the birth rate.

A further decrease took place in the infantile mortality rate which fell from 55 per 1000 births in 1929 to 50 per 1000 births in 1930. The rates of the past 10 years were as follows :—

Year - - - -	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
Infantile Mortality Rate	31	80	68	76	52	43	46	76	55	50

The following is the Registrar General's Table showing the causes of deaths in St. Andrews at various age periods :—

No.	Causes of Death.	All Ages			Age											
		Both Sexes	Males	Females	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85 & over
1.	Diphtheria,	3	2	1	....	2	1	....	....	....	....	....	....	....	....	....
2.	Influenza,	1	....	1	....	....	....	....	....	....	....	....	1	....	....	....
3.	Tuberculosis of Respiratory System,	3	2	1	....	....	....	....	....	....	2	1	....	....	....	....
4.	Tuberculosis of Intestine and Peritoneum,	1	1	....	....	....	....	....	1	....	....	....	....	....	....	....
5.	Malignant Tumours,	13	6	7	....	....	....	....	....	....	....	4	3	3	3	....
6.	Apoplexy,	18	4	14	....	....	....	....	....	1	....	1	3	4	7	2
7.	Heart Disease,	16	5	11	....	....	....	....	1	....	....	1	1	5	7	1
8.	Disease of Arteries,	1	....	1	....	....	....	....	....	....	....	....	....	....	....	1
9.	Bronchitis,	2	1	1	....	....	....	....	....	....	....	....	1	....	....	1
10.	Pneumonia (all forms),	8	4	4	1	....	....	....	....	....	....	....	1	4	2	....
11.	Appendicitis,	1	1	....	....	....	....	....	....	....	....	1	....	....	....	....
12.	All Diseases of Liver (not Malignant),	1	1	....	....	....	....	....	....	....	....	1	....	....	....	....
13.	Nephritis (Acute and Chronic)	1	....	1	....	....	....	....	....	....	....	....	1	....	....	....
14.	Puerperal Sepsis,	1	....	1	....	....	....	....	....	....	1	....	....	....	....	....
15.	Other Dis. and Acc. of Preg. and Parturition,	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....
16.	Diseases of Early Infancy and Malformations,	4	2	2	4	....	....	....	....	....	....	....	....	....	....	....
17.	Suicide,	1	1	....	....	....	....	....	....	....	1	....	....	....	....	....
18.	Other Violent Deaths,	4	2	2	....	1	....	....	1	....	....	....	1	....	1	....
19.	Other Defined Diseases,	15	6	9	....	....	....	1	1	....	1	2	4	2	4	....
20.	Causes Ill-defined or Unknown,	1	....	1	....	....	....	....	....	....	....	....	1	....	....	....
	All Causes,	96	38	58	5	3	1	1	4	2	5	11	17	18	24	5

From the above table it will be evident that diseases of the heart and blood vessels were, as in previous years, the chief cause of death, no less than 36 per cent. of the total deaths being due to these diseases. The majority of cardiac deaths, however, occurred among people who were over the age of 65 years.

The decrease which occurred during 1929 in the number of persons who died from cancer was maintained, 13·5 per cent. of the total deaths being attributable to that disease. The consistency with which more women than men die of cancer each year is worthy of note. This difference in sex distribution is largely occasioned by the anatomical differences of the female sex.

Infectious diseases accounted for 4 per cent. of the total deaths, the majority being due to diphtheria.

A fall occurred in the number of deaths from tuberculosis. Four per cent. of the total deaths was due to that disease as compared with 7 per cent. in 1929.

There was a considerable increase in the number of deaths from respiratory diseases, the figure rising from 6 per cent. in 1929 to 10 per cent. in 1930. Most of the deaths occurred among old people from pneumonia.

Although the age at death was more evenly distributed throughout the various age periods during 1930, there is a general tendency in St. Andrews for the population to die at a ripe old age. During the year 49 per cent. of the deaths from all causes occurred in persons over 65 years of age ; 34 per cent. occurred in the age group 35 to 65 years ; 7 per cent. in the age group 10 to 35 years ; and 9 per cent. among children under 5 years of age. It is to be regretted that severe infection with diphtheria caused an increase in the death rate of the 1-5 years age group.

ENVIRONMENTAL CONDITIONS.

Drainage.

Since 1926, when attention was first directed to the inadequacies of the Burgh Sewage System, a steady sequence of structural improvements and extensions has taken place. A new sewer, terminating in a large screening chamber, has been laid across the Putting Green at the Bruce Embankment. A sewer, 1566 yards long, has been constructed along the south side of the Kinness Burn to a screening chamber at the Harbour. An outfall pipe, 192 yards long, has been led seaward from this screening chamber to low water mark, so that sewage now falls into deep water no matter what the state of the tide. The erection of a pumping station at Woodburn Place has been completed whereby sewage is automatically pumped at the rate of 100 gallons per minute from a sump of 700 gallons capacity into the main sewer in St. Mary's Street. So as to remedy the blockage which occasionally occurred in Dempster Terrace, the sewer at Dyer's Brae has been diverted into the new sewer along the south bank of the Kinness Burn. During the year under review work pro-

ceeded in connection with the last three items and at the end of the year the scheme at Woodburn Place alone remained incompleted. In connection with this scheme all the houses in the neighbourhood have been connected with the Pumping Station, but no great strides have been made towards linking up Woodburn Laundry with the system. Plans, however, are afoot towards this end and when the proposal has been effected, the needs of the area will have been fully met.

While these improvements have involved considerable expenditure, they have been urgently required and will prove to have been well worth while. It is a matter of the highest importance that a city like St. Andrews should possess a thoroughly efficient system of sewage disposal, such as has now been installed. It is probable that the extensions will serve the needs of the town for many years to come.

In spite of the retaining wall which was erected in 1929 along part of the banks of the Kinness Burn, considerable flooding of neighbouring property occurred during the month of September. At the termination of a period of phenomenal rainfall the level of the burn rose to such an extent that a wide lake formed between Maggie Murray's Bridge and the commencement of the retaining wall, with the result that the ground floors of nine properties adjoining the burn were submerged. In Dempster Terrace flooding also occurred but not to the same extent as in previous years. An extension of the retaining wall downwards on the north side of the burn would have considerable effect in checking flooding in Dempster Terrace, but the solution of the problem below Maggie Murray's Bridge presents great difficulty.

There has been noticeable improvement during the year in the cleanliness of the streets. Fouling of the pavements by dogs has been much less evident. A further decrease took place in the number of dog licences issued, namely 494 in 1930 as compared with 502 in 1929 and 506 in 1928.

The Sanitary Inspector in his Report for 1930 calls attention to the insanitary method generally employed by householders of leaving, for collection, refuse in uncovered bins. Dust and

offensive material is carried about the street from these open receptacles and constitute a menace to the health of the populace. Particularly is this so in the shopping centres where butchers and fishmongers keep their doors and windows widely open. Every householder would be doing a great service to the community at large were he or she to secure a covered dust bin.

Water Supply.

Since 1926 the average consumption of water per head of population per day had shown a tendency to fall but during 1930 the consumpt increased to the figure of 65·75 gallons per head per day. There can be little doubt but that a considerable wastage of water took place during the year. Fortunately, however, the town's supply is practically unlimited.

At a cost of £13,360 the improvements at Pipeland, which were foreshadowed in the Report for 1929, were carried into effect. The new system of water purification has worked satisfactorily and monthly bacteriological tests have given good results. When all the Secondary Filters have been laid with Arran sand, St. Andrews will be possessed of one of the most up-to-date water works in the country and of a water supply of great purity. At present 4 filters are equipped with Arran sand and, so as to curtail expenditure, the number will be increased gradually as the years pass.

Observations at the Primary Filters have shown the great necessity which existed for the provision of these structures. The enormous amount of silt which is daily deposited on the surface serves to show the strain under which the old Secondary Filters were working, and when one thinks of the restricted surface area which was available for filtration one realises all the more fully the impossible and dangerous conditions which obtained prior to 1930.

Unfortunately, after the completion of the new work, it was found than an amount of water sufficient to meet the summer peak load of 800,000 gallons per day was not reaching Pipeland. On investigation it was discovered that the main from Cameron Reservoir, which was laid down in 1899, had become so encrusted

at its discharge capacity had fallen from 1,000,000 to 710,000 gallons per day. Plans are now under consideration for constructing a new main 4 miles long, the first third of which will have a diameter of 12 inches and the last two-thirds of which will have a diameter of 9 inches. Before embarking upon this scheme, the Town Council consulted a firm of Civil Engineers who advised that a new pipe should be laid down rather than that the existing pipe should be scraped. In connection with the report from the Civil Engineers, the following report was submitted to the Town Council by the Medical Officer of Health :—

" I am in receipt of your letter of yesterday's date enclosing a report by Messrs. J. & A. Leslie & Reid, Edinburgh, and beg to submit the following observations :—

Messrs. Leslie & Reid state that encrustation has reduced the inflow to the filters by about one-fifth and that as the deposit will steadily become thicker the volume of water available for the Town will become progressively less, whereby the past efforts of the Town Council to secure a copious supply will be vitiated. By way of remedy they discuss two proposals, scraping and the laying down of new pipes.

As a result of experience, they advise that scraping is an non-economical process in the long run, because it would require to be repeated at increasingly frequent intervals and that it would inflict a great deal of inconvenience on the town. I have before me a report by another firm of Engineers regarding a proposal to scrape a water main of another coast Burgh in Fife and can well understand the inconvenience which would arise since the Contractors state that, on the average, it takes a week to scrape 1000 yards of pipe. By increasing the gangs of men at work, the rate of scraping could be increased, but, at the best, I take it that the Town would have to do with a greatly curtailed supply for about a fortnight. In addition, Cairns Mill water would require to be made available for the Town and, as the Town Council are aware, the quality of the water in this reservoir is distinctly bad.

The Engineers favour the second proposal—to lay down new pipe lines. The undertaking would obviate the disadvantages which would attend scraping and would secure a continuous supply in the event of anything happening to the existing pipe which is now 30 years old. I am of opinion that the suggestion should be adopted for the reasons that (1) scraping would inflict upon the Town at intervals a water supply of restricted quantity and poor, if not harmful quality ; the intervals becoming more frequent as years pass (2) the new pipe would provide a margin of safety in case of accident to the existing main, (3) the new pipe will have to be laid sooner or later and since Government grants-in-aid may cease at any time, it is well to take advantage of the present favourable terms.

In the last paragraphs of their report, the Engineers seem to suggest that the number of filters should be increased. With this suggestion I entirely disagree. The figure of a million and a quarter gallons is double the average amount which is now being consumed per day and was decided upon as an arbitrary maximum figure. It is extremely doubtful that the consumption of water in St. Andrews will ever reach that figure, although it is wise that we should be prepared for unexpected developments. A greater inflow than is at present available is necessary to keep all the filters in full operation and the number of filters which have been laid down by the Town Council will not be insufficient adequately to purify a considerably increased amount of water. In making this statement I have two factors in mind, first, that the work, which has been done in cleaning up the Catchment Area, has had a great influence on the quality of the unfiltered water, and secondly, that the experiments which Mr. Watson and I are conducting at the filters are giving results which demonstrate that we will be able to improve the efficiency of the existing filters still further. It must be remembered that only four filters have been laid with Arran sand and that they are giving results which by far exceed those of the other filters. If, after all the filters have been supplied with Arran sand, it is thought that further improvements could be effected, we have in mind that adjustments can still be made at the primary filters. Since the filters are now, however, giving good results, we do not intend to rush our experiments, but make improvements slowly, in the interests of economy."

Atmospheric Conditions.

The meteorological station, which was previously situated in an unsuitable locality, was transferred to the neighbourhood of the Bruce Embankment, which is free from vitiating influences, and the recorder was placed under the instruction of the Meteorological Officer of Leuchars Aerodrome. These measures have insured the reliability and accuracy of the St. Andrews records.

The sunniest month was June when there was 231·7 hours of bright sunshine. The warmest months were June and August and the coldest month was October. The mean temperature for the whole year was 46·9 degrees F., a figure 0·2 degrees higher than that of the previous year. The driest month was February and the wettest month was August. The total amount of rainfall for the year was 31·96 ins., 5·48 ins. more than in 1929.

The instrument for recording the amount of ultra-violet light radiation is kept on the tower at Kinburn. The following are

the average monthly readings, one unit being equal to twice the amount of ultra-violet light necessary to produce sunburn :—

Month.	Jan	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Units.	0·6	0·71	1·3	1·95	4·5	4·2	2·47	2·4	2·2	1·96	1·11	0·32

The average amount of radiation for the year was 1·98.

Offensive Trades.

The transfer of functions following on the passing of the Local Government (Scotland) Act, 1929, occasioned alterations in the arrangements for the supervision of the meat supply. Previous to 16th May 1930, Mr. P. Young, M.R.C.V.S., as Meat Inspector, carried out daily inspections at the Slaughter House and paid frequent visits to the butchers shops in the Burgh. After that date supervision of the meat supply became a function of the County Council and the duties devolved upon the County District Sanitary Inspector. In view of his other work it is impossible for the Sanitary Inspector to visit the Slaughter House so regularly and so frequently as did Mr. Young, so that there can be little doubt but that this branch of the Public Health Organisation of the Town has become less efficient. On the other hand, it must be admitted that no evidence has been forthcoming that the quality of the meat supply consumed in the Town has deteriorated.

During the past five years frequent reference has been made to the inadequacies of the Burgh Slaughter House and at the beginning of the present year a detailed report was submitted to the Town Council indicating that the premises were so structurally defective that their continued use as a Public Abattoir was highly undesirable. In the meantime, the Town Council had acquired a site for the possible erection of a new Slaughter House and plans were prepared and submitted to the Department of Health in connection with an application for financial assistance from the Unemployment Grants Committee.

In these days when the tendency of public health administrative schemes is towards centralisation of facilities, it is desirable that consideration of a new Slaughter House for St. Andrews should be weighed against the possibility of the erection of a central slaughterhouse for the East of Fife at Cupar. That the erection

of a central Slaughterhouse at Cupar would be a sound administrative step is unquestionable, but there are many practical difficulties in the way, in spite of the advantages offered by modern means of transport. These difficulties need not be discussed at present but, so far as enquiries have gone, it would appear that they are as formidable in the County Areas, both landward and burghal, as they are in St. Andrews. Nevertheless, it is true that, were St. Andrews Town Council to favour the idea, a great impulse would be given the major scheme.

In the course of the year 3662 animals were slaughtered as compared with 3735 in 1929. 2266 pounds of meat were seized as compared with 2521 pounds in 1929. The Slaughterhouse, the hide factoring shed and the gut and tripe premises were kept in as clean a state as their dilapidated condition would permit.

Housing Conditions.

Since 1920 there has been provided by the Local Authority the following number of houses :—

Two-roomed houses, ...	99
Three-roomed houses, ...	112
Four-roomed houses, ...	83
Five-roomed houses, ...	12
Total, ...	306

The systematic survey of housing conditions which was commenced in 1929 was continued during the year. Two Unhealthy Areas within the meaning of Part I. of the Housing (Scotland) Act, 1930, have been defined, namely, Union Street Area, which was described in detail in the Report for 1929 and Muttoes Lane, concerning which an official representation is in course of preparation. The Union Street Area contains 40 houses, 39 of which are uninhabitable. Muttoes Lane Area contains 12 houses, all of which are uninhabitable. The two areas have a population of 226. All the uninhabitable houses are in a state of disrepair or of sanitary deficiency or are, by reason of their bad arrangement or the narrowness of the streets, injurious or dangerous to the health of the inhabitants. It appears to the Sanitary Officials that the most satisfactory method of dealing with the conditions which exist would be the demolition of all the buildings within the areas.

Preliminary surveys have been undertaken of the block of buildings at Shorehead and of the properties in the neighbourhood of Louden's Close. Sixty-six houses were inspected of which 34 were found to be in such a state as to be unfit for human habitation. Three houses were overcrowded and 15 were in need of repair. One hundred and forty-two persons resided in the uninhabitable houses.

The Town Council having been advised regarding the problem of Union Street and Muttoes Lane areas decided to extend their building programme for the next three years. In addition to the erection of 20 two-roomed houses, 52 three-roomed houses, all of the flatted type and 12 four-roomed houses of the cottage type, they determined to build 48 houses to accommodate families dehoused by a Clearance Scheme in these areas. The first scheme, involving the erection of 84 houses, was commenced upon at the end of the year. Difficulties have arisen regarding a site for the erection of the 48 houses of the Second Scheme, so that matters in connection with Slum Clearance have not proceeded far. It is expected, however, that progress will be made during the course of the present year.

As a means of ascertaining the sufficiency of working-class dwellings in the town the Housing Register was reviewed from time to time, and early in the present year all the persons whose names appeared on the Register were asked to state whether or not they desired their applications to continue. One hundred and sixty-six persons replied in the affirmative.

The immediate housing needs of the Burgh, therefore, may be summarised as follows :—

	Houses
To meet the needs of the proposed Muttoes Lane and Union Street Areas Clearance Schemes, ..	52
To meet the needs of applicants, ...	166
Total, ...	218

To meet these needs the Town Council as indicated above have commenced upon a housing development of 132 houses. While these undertakings are on their way to completion the housing

situation of the town, including the state of affairs at Shorehead and in the neighbourhood of Louden's Close, will again be surveyed in order to ascertain the extent to which it is desirable that further housing schemes should be embarked upon. The Town Council consider that it is not desirable that the present programme should be immediately extended. There are indications that the influx of visitors to the town is declining. Building activities in connection with the University and Schools have come to an end. An unexpectedly large, and not entirely explained, diminution has taken place in the number of applicants for houses. These facts supply good reason for caution in defining the extent of future Housing Schemes.

Building Bye-laws.

Procedure with reference to the alteration and improvement of buildings is governed in small Burghs by the Burgh Police (Scotland) Act. The provisions of this Act are not sufficiently comprehensive to enable a Local Authority adequately to regulate housing conditions. In St. Andrews several undesirable situations have arisen which would have been prevented had there existed Bye-laws regulating the building, alteration and reconditioning of houses. The matter has been under consideration and a copy of the Model Building Bye-laws, prepared by a representative Committee of the Institution of Municipal and County Engineers and the Technical Offices of the Scottish Board of Health, is being considered by the Sanitary Officials with a view to the formation of Burgh Bye-laws.

Town Planning.

In the Report for 1929 it was emphasised that a Town Planning Scheme was desirable in connection with the preservation of existing amenities and with the future development of the town as a health resort. Powers to promote any such undertaking have been transferred to the County Council, but in the meantime a Committee composed of representatives of the Town Council and of the University has been formed to consider the question of future control over the planning of buildings and groups of buildings within the Burgh. The Committee has, of course, no statutory authority but will serve a very useful purpose.

INFECTIOUS DISEASES.

The total number of notifications made to the Medical Officer of Health was 108. Classified according to disease these were as follows :—

Typhoid Fever, ...	1
Scarlet Fever, ...	3
Diphtheria, ...	12
Puerperal Fever, ...	1
Puerperal Pyrexia, ...	3
Ophthalmia Neonatorum, ...	2
Chickenpox, ...	61
Polio-Encephalitis, ...	1
Encephalitis Lethargica, ...	1
Dysentery, ...	1
Acute Primary Pneumonia, ...	9
Acute Influenzal Pneumonia, ...	1
Pulmonary Tuberculosis, ...	9
Non-Pulmonary Tuberculosis, ...	3
Total, ...	108

In addition to the above the Medical Officer of Health was informed, through a system of partial notification, of the occurrence of 71 cases of measles.

Except for the number of cases of chickenpox which brought to an end the epidemic of 1929, the incidence of infectious diseases in the Burgh was low. The 12 cases of diphtheria marked the termination of the outbreak which had been present, with sporadic outbursts, since 1928. A slight increase occurred in the number of cases of pneumonia as compared with the number in 1929 and a decrease occurred in the incidence of tuberculosis.

In the month of January a minor outbreak of epidemic sore throat occurred, involving some 25 persons residing in one district of the town. The disease was characterised by sore throat with much local swelling and enlargement of the cervical glands, pyrexia and prostration. It was of a highly infectious nature. In one family a mother fell ill and about four days later her three daughters took to bed with an identical complaint. No evidence as to the cause of the outbreak was obtained. The milk supply varied in different households.

Twenty-six notified cases were removed to hospitals or other institutions. Classified according to disease these were as follows, the average stay of patients in the City Hospital being 20·8 days :—

	City Hospital.	Other Institutions.
Paratyphoid Fever, ..	1	—
Scarlet Fever, ..	2	—
Diphtheria, ...	11	—
Puerperal Fever, ..	1	—
Puerperal Pyrexia, ..	1	1
Polio-Encephalitis, ..	—	1
Acute Primary Pneumonia,	2	—
Acute Influenzal Pneumonia,	—	1
Pulmonary Tuberculosis,	—	5
	—	—
Total, ..	18	8
	—	—

In addition 6 cases were admitted to the City Hospital. Four were suffering from measles of severe type and 2, who were suffering from tonsillitis, were admitted for observation. The total number of persons treated in the Hospital was, therefore, 24. It is to be regretted that 3 cases of diphtheria and 1 of puerperal fever died while in hospital.

Diphtheria Immunisation.

Diphtheria immunisation has continued to be practised throughout the year, but in spite of the fact that, since the autumn of 1928, over 60 cases of diphtheria have occurred in the town and that 4 deaths have resulted, parents have been slow in securing protection for their children. Only 12 children were inoculated against the disease during the year. Protective inoculation is recognised to be the best modern method of preventing diphtheria and since facilities are available for all, a considerable responsibility rests upon parents if their children become infected. The process is practically painless and is followed by no harmful results. It is significant that none of the children who have been inoculated have contracted the disease, although several of them were definitely exposed to infection.

Incidence and Housing Conditions.

Disease.	*Size of House.*				
	One room.	*Two rooms.*	*Three rooms.*	*Four rooms.*	*Five and more rooms.*
Paratyphoid Fever,	—	—	—	—	1
Scarlet Fever,	—	—	—	—	3
Diphtheria,	—	4	3	2	2
Puerperal Fever,	1	—	—	—	—
Puerperal Pyrexia,	—	2	1	—	—
Ophthalmia Neonatorum,	—	—	—	1	—
Chickenpox,	1	3	9	25	24
Dysentery,	—	—	—	1	—
Anterior Poliomyelitis,	—	1	—	—	—
Encephalitis Lethargica,	—	—	—	—	1
Acute Primary Pneumonia,	—	3	1	3	2
Acute Influenzal Pneumonia,	—	—	—	—	1
Measles,	3	27	25	9	7
Total,	5	40	39	41	42

In the case of Chickenpox, house incidence was influenced by the occurrence of an outbreak in St. Leonards School for Girls.

MOTHER AND CHILD WELFARE SCHEME.

The facilities provided under the St. Andrews Maternity and Child Welfare Scheme are as follows :—

(*a*) The Child Welfare Centre at 66 North Street—a converted dwelling-house with out-buildings, vested in a private Trust and equipped with consulting rooms, babies ward, waiting and weighing rooms, nurses' bedrooms and kitchen.

(*b*) Consulting rooms and dressing rooms for children over two years of age at the Children's Department, James Mackenzie Institute for Clinical Research.

(*c*) Ultra-Violet light treatment by arrangement with the Memorial Cottage Hospital.

(*d*) Laboratory facilities and X-Ray examinations at the James Mackenzie Institute for Clinical Research.

(*e*) Ante-Natal Clinic at the James Mackenzie Institute for Clinical Research.

The Staff responsible for the working of the Scheme is comprised of Dr. A. Rowand, Medical Officer, a Health Visitor, a Maternity and Ante-Natal Nurse, a Baby-Craft Nurse for the Ailing Babies Ward and a Probationer Nurse.

The cost of the Scheme for the year ending 30th September 1930, exclusive of the amount borne by the James Mackenzie Institute was £1170. This amount was raised by the St. Andrews Nursing and Child Welfare Association, partly through public subscriptions and donations and partly through a grant from the County Council, which included the sum of £50 as salary of the Medical Officer. Previous to the passing of the Local Government (Scotland) Act, 1929, this grant was paid by the St. Andrews Town Council, but when functions relating to Maternity and Child Welfare Services were transferred to the County Council, it was agreed that payment would be continued on condition that the facilities of the St. Andrews Scheme were extended to the parishes of St. Andrews, Cameron, Dunino and Kingsbarns, and that the St. Andrews Health Visitor became one of the whole time Health Visitors employed by the County Council. Although at first the changes following the Act interfered to a certain extent with routine work, matters are now adjusting themselves, and at the end of the year it was evident that the services which had already been available for St. Andrews and its neighbourhood were in no wise restricted.

It should be emphasised that the organisation is fortunate in having the services of an experienced Medical Officer who receives a substantial grant from the Medical Research Council to enable him to conduct investigations into the health of children. But

for Dr. Rowand's energy and the support he has received from the Medical Research Council the present comprehensive development of the St. Andrews Scheme would not have been attained.

Infantile Mortality.

The number of deaths in infants under one year of age was 5, representing a rate of 50 per 1000 births. The rate in 1929 was 55 per 1000 births. Four deaths occurred among children of the 1-5 years age group. Three of these were due to diphtheria and one to accident.

Births.

The number of births registered and corrected for transfer was 101, 55 males and 46 females. Of these 80 were attended by the nursing staff of the Child Welfare Centre, 46 being attended in company with doctors and 34 by midwife alone. The total number of illegitimate births in the Burgh was 6; of these 3 were attended by the nurses. There were 5 still births, 3 occurring in the practice of doctors and 2 in the practice of midwives.

Maternal Mortality.

Two maternal deaths occurred during the year. One mother died at home of post partum hæmorrhage and the other died in the City Hospital of puerperal sepsis. The usual confidential report was submitted to the Chief Medical Officer of the Department of Health in respect of both cases.

Report under Midwives (Scotland) Act, 1915.

Two midwives gave notice under Section 18 of their intention to practise inside the Burgh. There were two cases of ophthalmia neonatorum, one of puerperal sepsis and 3 of puerperal pyrexia. None of these occurred in the practice of midwives.

There were 5 cases of emergency necessitating the calling in of medical practitioners, as follows :—

Ruptured perineum, ...	2
Excessive bleeding, ...	2
Retained placenta, ...	1
Still birth, ...	1

The calls for medical help were 8 less than those of the previous year and all were justifiable.

No indication of malpractice occurred in the Burgh during the year and no investigation was called for. An inspection was made of the hands, uniform, equipment and registers of the midwives and all was found to be in order.

The arrangements regarding the residence of midwives and division of work were as described in previous Reports except that the follow-up Nurse had her duties extended by appointment as one of the Health Visitors and Assistant Inspectors of Midwives under the County Council.

Home Visitations.

The total number of children under 5 years of age on the register of the Child Welfare Centre was 550 at the end of the year as compared with 540 in 1929. Twenty-seven children, residing outside the area served by the Child Welfare Centre, were not visited at home but were brought to the Centre.

	Number Visited.	Total Visits.
Infants, ...	198	1148
Children (1—5 years), ..	325	1310
Expectant Mothers, ...	72	365
Total, ...	595	2823

Infant Feeding.

The following figures are applicable to the number of infants on the register reaching the age of 6 months in each of the past 10 years.

Year.	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.
Per cent. breast fed, ..	59	64	61	62	63	59	66	62	58	50
Per cent. partially breast fed,	6	6	6	16	4	12	8	11	10	14
Per cent. bottle fed, ..	35	30	33	22	33	29	26	27	32	36

That only half the number of infants attending the Centre during 1930 should have been entirely breast fed does not reflect great credit on the Nursing Staff. The importance of breast

feeding is sufficiently well recognized to require no emphasis and in St. Andrews where so much instruction and advice is available the number of breast fed infants should yearly reach to at least between 60 and 70 per cent. Some mothers are incapable of breast feeding their babies, while the mental or bodily state of others demand that breast feeding should be discontinued. There are still others, however, who refuse to breast feed their infants for reasons which are inadequate and are invariably tainted with selfishness. It is feared that the ranks of these have increased of late. At all events, the situation in St. Andrews during 1930, viewed as a whole and in comparison with previous years, tends to indicate that insufficient instruction or persuasion has been meted out to a considerable number of mothers who have utilised the services of the Nurses. A state of affairs has arisen which calls for immediate remedy.

Ante-Natal Consultations.

Ante-natal consultations are held in a specially equipped room in the James Mackenzie Institute for Clinical Research, where expectant mothers are attended by the doctors of their choice. Patients are brought to the Clinic by their own doctors, or, in the case of patients who are unable to afford medical attention, by the midwife whose duty it is to arrange a consultation with the patients' usual medical attendants. One afternoon per month is allocated to each general practitioner in the town, thereby allowing for a possible eight sessions per month, the duration of each being in accordance with the number of cases seen. The local doctors give their services free of charge.

Thirty-two expectant mothers attended the Clinic (19 of them brought by their own doctors, and 13 of them brought by the midwife). The total attendances numbered 34. None of the patients presented any marked abnormal feature on examination.

Post-Natal Consultations.

There are no special facilities for post-natal consultations in St. Andrews. In cases of difficulty the midwife calls in the family doctor. During the year the Mother and Child Welfare Nurses paid 1343 post-natal visits.

Child Welfare Consultations.

1. Child Welfare Centre.

Clinics were held by Dr. A. Rowand twice weekly in the Child Welfare Centre, in sessions lasting 2½ hours each. One hundred and three sessions were held in 1930, during which 268 children were inspected. The following attendances were recorded :—

(*a*) Number of children attending—

(i) Under 1 year of age, ...	170
(ii) 1—2 years of age, ...	53
(iii) 2—5 years of age, ...	45
Total, ...	268

(*b*) Number of attendances—

(i) Under 1 year of age, ...	1062
(ii) 1—2 years of age, ...	155
(iii) 2—5 years of age, ...	66
Total, ...	1283

In addition the following number of visits were paid to the Nurses at the Centre for purposes of directions as to feeding and hygiene :—

(i) Under 1 year of age, ...	79
(ii) Over 1 year of age, ...	78
Total, ...	157

The services of the Centre were again extended to over 90 per cent. of all the babies born in the Burgh. This high percentage serves to indicate the extensive nature of the work which the staff of the Centre is carrying out and the high esteem in which that work is held by the citizens.

II. James Mackenzie Institute.

Seventy-three special Clinics in sessions lasting 2½ hours each, were held by Dr. Rowand in the James Mackenzie Institute, for children over two years of age.

(*a*) Number of children attending—

(i) 2—5 years of age, ...	258
(ii) Over 5 years of age, ...	85
Total, ...	343

(*b*) Number of attendances—

(i) 2—5 years of age, ...	457
(ii) Over 5 years of age, ...	188
Total, ...	645

The special clinic for older children which was inaugurated in 1929 became increasingly popular during 1930. School children who had previously attended the ordinary Child Welfare Clinics were summoned by post card to attend this special Clinic after school hours. It is worthy of note that the percentage of absentees was very small, indeed, mothers have been showing a strong desire that their children should continue to be examined by Dr. Rowand. In the course of the year 116 children attended.

As in previous years, Dr. Rowand's work was co-related with that of the School Medical Officer. Dr. Rowand's pre-school records were made available for the information of the School Medical Officer and the School Medical Officer added notes to Dr. Rowand's records from his examination of school children. In this way unbroken accounts of the health histories of the juvenile population of the town are being maintained.

Respiratory catarrhs again accounted for the highest incidence of disabilities among the children. No cases of rickets were encountered and any tendencies towards that disease were rectified by the administration of cod liver oil. Cases of dental caries among pre-school children were referred to the School Dentist. This arrangement was a highly desirable one and much benefit has resulted. Evidence is accumulating to show that mothering has a more potent effect on infant health than has environment.

Special Treatment Centres.

No special treatment centres have been organised in St. Andrews for the reason that the work of the Mother and Child Welfare organization is closely associated with that of the James Mackenzie Institute, so that specialist advice on ophthalmological X-Ray, Bacteriological and Bio-chemical diagnosis is readily available. In addition, however, infants are admitted to the Ailing Babies Ward at the Child Welfare Centre for dietetic treatment and cases requiring ultra-violet light treatment are referred to the Memorial Cottage Hospital.

Observation Nursery.

The observation nursery at the Child Welfare Centre provides facilities for infant feeding and hygienic care for both indoor and outdoor patients. Four cots are available.

	Resident.	Non-Resident.
Number of cases attending—		
(i) Under 1 year of age, ..	5	45
(ii) Over 1 year of age, ..	..	1
Total, ..	5	46
Number of attendances—		
(i) Under 1 year of age, ..	110	1023
(ii) Over 1 year of age, ..	..	75
Total, ..	110	1098

Food and Milk Supply.

Milk and food was given by the Local Authority to the following :—

1. Mothers, ...	6
2. Children, ...	9

Up to September 1st, applications were made by the midwife and the Child Welfare Nurse, thereafter by the Health Visitor only. No applications were made by parents. All the cases were necessitous and the allowance was approved of, on medical grounds, by the Medical Officer of the Centre.

Help in kind continues to be given by private individuals. A pint of milk is supplied daily by private donation and an anonymous friend continues to supply the Centre with Cod Liver Oil. All the children attending the Burgh Infant Schools are supplied with a pint of milk daily by Mrs. Younger of Mount Melville.

It is satisfactory to note that all the milk given from these various sources is certified milk.

Infectious Diseases.

An epidemic of *measles* occurred in the early months of the year. No deaths resulted from the epidemic and the incidence of complications was particularly low. Under a system of partial notification 71 cases were reported to the Medical Officer of Health. Cases of *whooping-cough* occurred from time to time but no general outbreak followed. Two cases of *ophthalmia neonatorum* were reported by doctors. Neither were of gonococcal origin and no loss of vision resulted.

Provision for Maternity Cases.

In 1927 the Town Council arranged for accommodation in the Scores Nursing Home of necessitous maternity cases living under conditions which might have an injurious influence on their well being and of necessitous cases of difficult or dangerous labour. Six beds are available, but no applications were made during the year.

The Memorial Cottage Hospital and the Scores Nursing Home are registered as Maternity Homes under the Midwives and Maternity Homes (Scotland) Act, 1927. Four beds in single wards are available in the former and six beds in the latter, three in one ward, two in another and one in a third. The arrangements in both institutions were of satisfactory nature, but the arrangement with the Scores Nursing Home will terminate during the present year.

The following information is applicable to the Memorial Cottage Hospital :—

(1) Pre-natal cases, *nil.*

(2) Abortions, *nil.*

(3) Normal Confinements—

(*a*) Total No. (1) with medical attendance, .. 18

(ii) without medical attendance, .. —

(*b*) Number of deaths, ... —

(4) Abnormal or complicated confinements—

(*a*) Total No. (i) instrumental deliveries, .. 4

(ii) other deliveries, ... —

(*b*) Conditions found. Forceps were used on four cases of delayed labour all of which were characterised by marked lack of muscle tone. One of the cases had a right occipito-posterior presentation and another a breech.

(*c*) Number of deaths, *nil.*

(5) Number of infants born—

(i) alive, 18.

(ii) still, *nil.*

(6) Number of deaths of infants under one week—*nil.*

Provision for Cases of Puerperal Sepsis.

Facilities for the treatment of cases of puerperal sepsis were provided in the City Fever Hospital. One case, which subsequently died, was admitted during the year.

In addition, 3 cases of puerperal pyrexia were notified. Two of them were admitted to the City Hospital. All made an excellent recovery.

As a result of the changes which have taken place under the Local Government (Scotland) Act, 1929, it has been considered desirable that cases of puerperal sepsis should no longer be treated in the Fever Hospital but that, in conformity with the County Scheme, they should be transferred to Kings Cross Hospital, Dundee.

FOOD SUPPLY.

Milk.

Supervision of the dairy farms and shops within the Burgh is now in the hands of the officials of the County Council. All the premises were maintained in a fit and proper state and no indications of a defective milk supply were discovered. Seventeen

samples of milk were collected for examination by the District Sanitary Inspector, and the average fat content was found to be 3·86 per cent., a figure which compares favourably with that of any other locality in the County.

Unfortunately, on account of the extensive administrative changes which took place during the year, no opportunity was found for renewing the Clean Milk Competition which was held in 1929. It is hoped, however, to arrange another competition in the near future.

The consumption of Certified Milk continues to increase. All the public institutions within the Burgh are supplied with this pure milk and St. Leonards School for Girls obtains its milk supply partly from a dairy farm licensed to produce certified milk and partly from a farm, which although not so licensed, produces milk which fully conforms with the statutory requirements of certified milk. It is of interest to note that the incidence of sore throats in the School has been greatly reduced since this milk was introduced. In this connection, however, it should be stated that the highly commendable action of the School Authority has, to a certain extent been vitiated by the fact that a totally inadequate amount of certified cream is available, so that risk of infection is still as great as previously to those who consume cream in whatever shape or form.

Sale of Food and Drugs Acts.

Thirty-two samples of food stuffs, including tea, flour, rice, sugar and butter were secured by the District County Sanitary Inspector for analysis. All were found to be genuine.

Factory and Workshops Act.

Eighteen visits of inspection were paid to factories and workshops within the Burgh. Three notices in respect of want of cleanliness were issued. The defects were remedied.

Sanitary Inspector's Office,
Town Hall Buildings,
St. Andrews, 30th April 1931.

To the Honourable The Department of Health for Scotland, and the Provost, Magistrates and Councillors of the Royal Burgh of St. Andrews.

Ladies and Gentlemen,

I have the honour of submitting to you my First Annual Report upon the general sanitary condition of the Burgh, and the work done by the Department during the year 1930.

As I only took up duties here at the middle of October, the Report, will of necessity, be somewhat abridged, as I have to depend on the records left by my Predecessor.

I would, however, like to acknowledge the great assistance I have received from the full time officials of the Town Council, and from the Medical Officer of Health and Mr. Just, the District Sanitary Inspector of the Fife County Council.

The Report has been prepared in accordance with the requirements of the Department of Health for Scotland.

I have the honour to remain,

Ladies and Gentlemen,

Your obedient Servant,

ALEXANDER H. STEELE, M.R.San. Assoc. Scot.,
Sanitary Inspector.

SANITARY INSPECTOR'S REPORT, 1930.

The passing of the Local Government (Scotland) Act, 1929, and the transfer of functions thereunder has made an alteration in the form of Reports of Officers of small burghs, and these are now required to report upon the services that have not been transferred by the Act.

The Department call upon each Sanitary Inspector to include in his report :—

(*a*) A general account of the sanitary state of the Burgh. This account should deal specifically with water supply, drainage (including sewage disposal), and scavenging, and with any suggestions for the improvement of these services. It should also deal with nuisances and other matters affecting the public health. The report should show the number (if any) of closets on the conservancy system that have been converted to the water-carriage system during recent years, and the number of privies, earth-closets, and privy middens remaining at the end of the year. Attention is particularly directed to the Scottish Board of Health's circular of 1st September 1925 ; and the Department request Sanitary Inspectors again to deal specially with this subject in their report for the current year, and also to give the additional information therein requested, viz. :—particulars as to (1) the number of common water closets in use in the Burgh, shewing separately the number serving, 2, 3, 4 and 5 or more tenants respectively ; (2) the number of houses without water supply and sink inside the house ; and (3) the number of (*a*) dry closets, (*b*) privy-middens, and (*c*) ashpits, shewing for each separately the number serving 2, 3, 4 and 5 or more tenants respectively.

(*b*) An account of his general inspections, and of any special inspections or enquiries, including the supervision of slaughterhouses and other offensive trades, and the sanitary condition of factories and workshops.

(*c*) An account of the condition of the common lodging houses.

(*d*) An account of the condition of the burial grounds.

(*e*) An account of his proceedings under the Burgh Police Act.

Table showing the number of Hours of Bright Sunshine during 1930 at Five Stations in Scotland.

Month.	Aberdeen.	Arbroath.	Carnoustie.	Leuchars.	St. Andrews.
January ..	67·2	59·8	52·0	66·5	36·5
February, ..	82·4	95·8	85·0	88·5	83·6
March, ..	140·8	129·9	127·7	121·5	109·6
April, ..	99·7	128·5	124·7	118·8	98·1
May, ...	175·8	179·1	169·6	197·6	173·8
June, ...	243·8	268·7	252·9	242·8	231·7
July, ...	157·1	160·9	155·3	148·8	140·6
August, ..	153·9	186·0	179·0	176·5	169·7
September, ..	72·8	89·5	99·5	93·3	90·0
October, ..	117·1	120·6	113·1	109·6	117·2
November, ..	75·5	88·5	80·9	96·2	98·5
December, ..	38·1	48·2	46·3	52·4	49·0
Total for year, ..	1428·2	1555·5	1486·0	1259·3	1398·3

Daily Hours of Bright Sunshine at St. Andrews, 1930 (Monthly Mean).

Jan.	Feb.	March	April	May	June	Jnly	Aug.	Sept.	Oct.	Nov.	Dec.
1·18	2·99	3·54	3·27	5·61	7·72	4·54	5·47	3·00	3·78	3·28	—

Per cent. of Possible.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	32	30	23	34	44	27	36	24	36	40	—

WATER SUPPLY.

The water supply to the Burgh is obtained from reservoirs outwith the burgh boundary. There are three reservoirs, the largest of which is Cameron Loch, which is situated about 5 miles from the Burgh. The next in size is Lambieletham, which is about 3 miles distant from the Burgh, while the smallest reservoir, Cairnsmill, is situated 1½ miles distant from the Burgh.

The main supply is obtained from Cameron Reservoir which has a holding capacity of 222,000,000 gallons. Lambieletham Reservoir has a holding capacity of 13,000,000 gallons, and Cairnsmill (which is now only used for the irrigation of the Links) has a storage capacity of 3,750,000 gallons.

The water from Cameron Reservoir is obtained from a catchment area, or gathering ground, extending to 1456 acres, and the catchment area of Lambieletham and Cairnsmill together extend to the same acreage.

In these reservoirs precipitation of the matter in suspension takes place, before the water is conducted to the filters.

The Burgh of St. Andrews may feel justly proud of their Filter Works, situated at Upper Pipeland, which are of a first class order.

The whole of the water supply is treated at the Filter Works on a system which has proved eminently satisfactory.

The unfiltered water from the reservoirs is conducted to the works through cast-iron pipes, and enters the works by a 10 inch main at the Control House.

In this Control House there is erected a Copper-Wire Cloth Screen (16 wires to 1 lineal inch) through which the water first passes. This screen intercepts any solid matter which may have been carried through the main from the reservoir. The water is then distributed by 4 separate 6 inch pipes to the 4 Primary Filters.

Each Primary Filter is divided into 3 compartments. The water passes downwards through each compartment in turn, to a small collecting chamber, where it is drawn off over a telescopic outlet. A ball-valve on the inlet maintains a constant depth of water in the filter, and the filtering head is regulated by the telescopic outlet.

The 3 compartments contain different sizes of filtering media as follows :—

Compartment No. 1. *Area* 200 *square feet.*

18 inch of $\frac{3}{4}$ inch to $\frac{1}{2}$ inch whin chips.
2 inches thick perforated tiles.
6 inches of $\frac{3}{4}$ inch to $\frac{1}{2}$ inch gravel.

Compartment No. 2. *Area* 300 *square feet.*

4 inches of $\frac{3}{4}$ inch to $\frac{1}{2}$ inch whin chips.
24 inches of $\frac{1}{2}$ inch to $\frac{3}{8}$ inch gravel.

Compartment No. 3. *Area* 500 *square feet.*

4 inches of $\frac{3}{4}$ inch to $\frac{1}{2}$ inch whin chips.
6 inches of $\frac{3}{8}$ inch to $\frac{1}{2}$ inch gravel.
24 inches of $\frac{3}{8}$ inch to $\frac{1}{8}$ inch Arran sand.

As the size of the material in each compartment is decreased, it will be noted that the area of the compartment is increased, so

that the free downward flow of the water is not impeded. The floor drainage of the compartments is by terra-cotta stool tiles. Each compartment had an independent scour.

On passing the Primary Filters the water is collected in an open " balance-tank " of 60,000 gallons capacity, placed between the Primary and Secondary Filters. This tank ensures a regular head and supply to the filter. It is constructed throughout of reinforced concrete, 8 inches thick on the floor, and from 9 to 6 inches thick in the walls. To allow for cleaning and repair the tank is in two compartments.

The water is drawn off the balance tank to two small control wells, and from there it is distributed to the 12 Secondary Filters. On the inlet of each control well there is a 10 inch ball valve which regulates the supply and maintains a constant depth of water in the Secondary Filters.

The water enters each Secondary Filter over a trumpet bend, and after passing downwards through the filtering media is collected in a small chamber and drawn off over a telescopic outlet. As in the case of the Primary Filters the filtering head is controlled by this telescopic outlet. The floor drainage of the Secondary Filters is by herring-boned fireclay pipes, with a 6 inch main drain and 4 inch branch drains, and the filtering media from the floor upwards is as follows :—

14 inches of 2 inch to $1\frac{1}{2}$ inch whin metal.
6 inches of $1\frac{1}{2}$ inches to $\frac{1}{2}$ inch whin metal.
4 inches of $\frac{3}{8}$ inch to $\frac{1}{8}$ inch gravel.
2 inches thick perforated tiles.
24 inches of Arran sand.

4 ft. 2 ins. Total Depth.

The water after Secondary filtration is collected into a 12 inch main and delivered into the clear-water wells.

The old underground well is of mass concrete and has a capacity of 160,000 gallons, the depth of water at Top Water Level being 10 feet. The new well recently completed, alongside the old one, is of 150,000 gallons capacity, giving a total storage at Upper Pipeland of 310,000 gallons. To this has to be added a storage of 175,000 gallons, stored in the wells at Lower Pipeland, making the

total storage of filtered water 480,000 gallons. The new clear-water well at Upper Pipeland is constructed of reinforced concrete, 6 inches thick on the floor, and the walls are from 8 to 4 inches thick, and the roof is of concrete 4 inches thick, strengthened by wall and roof beams.

There is a 10 inch equalising pipe connecting the two wells, and either well can be emptied for repair or cleaning. The draw off to the town from the wells is by a 10 inch main, and a 6 inch main to maintain the wells at Lower Pipeland. Immediately on leaving the wells, the flow of water is measured by a " Venturi " Recorder.

There is in use a 10 inch and a 6 inch " Venturi " Tube and Recorder, measuring the water passed to the town and the wells at Lower Pipeland.

These " Venturi " Recorders give the total consumpt by dial readings, and at the same time mark on a weekly chart the flow in gallons per hour at all times of the day and night.

The whole filtering systems from the clear-water wells to the Control House has been made practically self-regulating, by the use of ball and float valves.

The materials in the filter is washed when necessary, the sand being washed by two " Peebles " sand-washers. Each washer is capable of washing 4 tons of sand per hour, working with a pressure of 5 lbs. per square inch.

The whole scheme is capable of dealing with 1,200,000 gallons of water per day. The present daily consumpt during the busy summer season, averages 800,000 gallons, so that the provisions made should be ample to meet the needs of St. Andrews for many years to come, and the system of water purification, is one of the most up-to-date systems in Scotland.

The supply is excellent in quality, as the analysis will show. A sample of water was procured for analysis with the following results :—

One Million Parts of the Water Yield.

Free Amonia, ...	·004
Albuminoid Ammonia, ...	·114
Carbonate of Lime, etc., ...	125.00
Chlorine, ...	14·00
Nitrogen as Nitrates, ...	0·80
Nitrates, ...	None
Hardness, in Clarke's Degrees, ...	$8\frac{3}{4}°$
Lead, or other poisonous Metals, ..	None

Remarks.

This water has a yellowish tinge in colour (Red, ·2 Yellow, 1·8 Lovibon's Standard Scale) and contains a small amount of sedimentary matter. On incubation of the water at blood heat there was only a slight odour. A Sedgwich Rafter Plankton did not reveal any objectionable organisms.

The yield of Free Amonia is low that for Albuminoid being moderate in proportion. Saline material is moderately high rendering the water slightly hard. The soap destroying power is, however, not excessive. Nitrates are only present in traces and therefore raise no suspicion of Previous Sewage Contamination.

The general analysis is satisfactory, and in the opinion of the Analyst, the water is fit for drinking and general domestic purposes.

The distribution of the water supply to the inhabitants is by cast-iron mains, and including the mains from the reservoirs to the filter works the total length of mains is 17·6 miles.

There are 5·6 miles of trunk mains, and 12 miles of distribution mains, and these range from 10 inch to 2 inch in diameter.

The total population supplied from the mains is estimated at 10,075 persons, 75 of these being outwith the Burgh.

The area supplied is approximately 930 acres ; 920 within the Burgh, and 10 acres outwith the boundary.

The following tables give the abstract of the water filtered, together with an abstract of the water passing through the filter during each month of the year 1930, and from this abstract it will be noticed that the average daily consumpt per head of the population was 65·75 gallons.

ST. ANDREWS WATER.

Abstract of Monthly Consumpt of Water Filtered at Pipeland 1930.

Month.	Upper Filters.	Lower Filters.	Total Consumpt Gallons.	Rainfall Pipeland. inches.	Rainfall Cameron inches.
January, ..	13,852,000	4,770,000	18,622,900	1·93	2·47
February, ..	12,975,000	4,332,690	17,307,690	0·60	1·22
March, ..	13,906,000	5,138,910	19,044,910	1·59	2·21
April ..	14,454,000	5,086,800	19,549,800	1·63	2·17
May, ..	13,515,000	5,371,470	17,886,470	1·29	1·60
June, ..	12,765,000	6,464,430	19,229,430	1·55	1·92
July, ..	15,688,000	6,924,780	22,612,780	2·45	2·84
August, ..	15,267,000	6,010,020	21,277,020	5·76	6·20
September, ..	17,368,000	2,781,000	20,149,000	5·32	4·93
October, ..	15,419,000	2,833,700	18,292,700	2·93	3·30
November, ..	20,798,000	2,023,380	22,821,380	4·37	3·77
December, ..	22,058,000	1,159,200	23,217,200	3·01	2·82
	187,065,000	52,937,280	240,002,280	32·43	35·45

Average consumpt per day, .. $\frac{240,002,280}{365}$ = 657,544·9 gallons.

„ „ per month, .. $\frac{240,002,280}{12}$ = 20,000·190 „

„ „ per head, .. $\frac{240,002,280}{365 \times 10,000}$ = 65·75 „

ST. ANDREWS WATER.

Abstract of Consumpt of Water Filtered at Pipeland Filters. Years 1921-1930.

Year.	Totai Consumpt.	Average per day.	Average per month.	Average per head.	Rainfall Cameron. Inches.	Rainfall Pipeland. Inches.	Rain Days.
1921,	157,227,000	429,581·96	13,100,200	47·73	24·42	22·00	156
1922,	161,520,900	441,040·71	13,460,075	47·42	24·40	27·23	181
1923,	181,272,700	496,637·53	15,106,058	52·83	28·96	27·23	203
1924,	178,209,800	486,912·02	14,850,816	51·25	34·10	31·85	185
1925,	216,163,400	592,228·49	18,013,616	62·33	30·34	27·05	154
1926,	253,879,300	695,556·98	21,156,608	69·55	37·13	34·76	190
1927,	229,988,500	630,106·43	19,165,700	63·00	33·58	31·61	188
1928,	220,094,900	601,352·18	18,341,200	60·13	37·76	35·36	203
1929,	229,477,830	628,706·38	19,123,152	62·87	28·97	24.64	150
1930,	240,002,280	657,544·09	20,000,190	65·75	35·45	32·43	177

I am indebted to Mr. Watson, Burgh Water Engineer, for the foregoing Tables.

DRAINAGE.

The system of sewerage in operation within the Burgh is that known as the "Combined" system, whereby the whole waste water from dwellings, surface water from streets, and all surface water drains enter the one sewer.

The drainage area of the Burgh extends to a little over 500 acres, and is divided into two areas, known as the Northern and Southern Areas.

To serve these areas, a separate outfall sewer is provided, the sewage from the Northern Area being discharged into the sea, through a 20 inch diameter pipe, at the Bruce Embankment, and the sewage from the Southern Area discharging into the sea, through a 21 inch diameter pipe, at the Harbour. The construction of the latter outfall was only completed towards the end of the year.

In previous years numerous complaints were made as to the fouling of the foreshore at the West Sands, with faecal matter, and in order to combat this nuisance two screens have been erected at both the outfalls.

One screen has a basket arrangement which intercepts all the faecal matter and paper, the other screen is erected on the up side of this and is known as a lock screen.

Before the basket screen is raised, the lock screen is dropped into position to prevent the solids, etc., from passing to the outfall. The application of two strong jets of water under pressure, breaks up and liquifies all faecal matter caught in the basket screen, and this has had the desired effect, as no complaints have been made recently.

The drainage from the properties at Woodburn have now been connected to the Low Level Sewer and a Pumping Station erected.

The plant was erected to take the drainage from the Woodburn Laundry and the dwellinghouses which are situated below the level of the main sewer in St. Mary's Street.

The sewage is now conveyed in a 9 inch fireclay pipe to a sump of 700 gallons capacity at the Pumping Station, and pumped through a 4 inch cast iron main to a manhole on the main sewer.

The sewage is raised by two Verticle Spindle Sewage Pumps directly coupled to two 2 B.H.P. Vertical Spindle Electric Motors.

Each pump has a rated capacity of 100 gallons per minute, and is capable of passing any solids which can enter the suction pipe, also any rags, cotton waste and fibrous material.

The action of starting and stopping the pumps is automatic and depends on the rise and fall of the level of the sewage in the sump. As a general rule, one pump only is required to deal with the sewage, but in the event of excessive flow, or chockage, the second pump comes into action.

Throughout the year the sewerage system of the Burgh has functioned satisfactorily, and there has been no complaints lodged regarding any matter connected therewith. The estimated Dry Weather Flow of sewage from the outfalls is 1,000,000 gallons.

REFUSE DISPOSAL AND CLEANSING.

The removal of refuse and the disposal of same is a costly item to any community, and it devolves upon the inhabitants to assist the Local Authority as far as possible to economise in this direction. All combustible material should be disposed off in the kitchen fire, and thus reduce the bulk.

The system for the collection of house refuse aims at the emptying of all ash-buckets set out on the foot-pavements daily all over the city before 11 a.m.

In St. Andrews the refuse is removed on the " daily " system with some of the outlying districts on the " bi-weekly " principle, and the system works very smoothly.

One flaw, however, on the system is the bins used. The refuse is placed in all sorts of receptacles, which are mostly uncovered, and with the occurrence of winds the lighter particles of refuse are blown all over the streets, but it would be rather a tall order to ask the inhabitants to provide properly covered bins.

The daily amount of " domestic " and " trade " refuse collected is approximately 10 tons, and in addition, a collection of waste paper is made twice weekly.

The present day methods of refuse disposal are by :—

(1) Mass Dumping.
(2) Dumping under prescribed conditions.
(3) Land Reclamation,
(4) Pulverisation.
(5) Seperation, and
(6) Incineration.

The refuse collection is now entirely done with motor haulage. Until the end of the year the refuse was collected by a 7 cubic yard S.D. Freighter, and 2 horses, but towards the end of the year a 10 cubic yard S.D. Freighter was purchased, and was put into commission at the beginning of the present year. The hours of collection are from 7 a.m. to 11 a.m. daily.

The refuse is disposed of by Controlled Tipping, at a tip on the West Sands, and throughout the year has been carried out in an efficient manner, and has given no cause for complaint. The layers of refuse are restricted to a certain depth, and each day's deposit is top dressed with soil. As is to be expected, vermin show signs of activity from time to time, and active measures are taken to prevent infestation by rats or other vermin. This is accomplished by the periodic visits of a professional rat-catcher, and his work has met with good results.

For the purposes of scavenging, the Burgh is divided into districts, and upon each district one scavenger is constantly employed.

In addition to the cleaning of all streets, water channels and gutters in his district, he also assists with the work of refuse collection.

The total mileage of roads and streets within the Burgh is as follows :—

	Miles.
Macadam Roads, ...	7·678
Asphalte Roads, etc., ...	2·020
Private Streets, ...	0·900
Public Lanes and Walks, ...	4·459
Total, ...	15·057

and the approximate length of foot-pavements is 20 miles.

The cleaning of the streets and roads is done with hand brooms, except on special occasions when the horse sweeping machine is used.

There are at present a total of 30 litter baskets fitted to lamp columns, fences, etc., throughout the Burgh, and although these are made use of to a large extent, there is room for considerable improvement in this direction. All things considered, however, the cleansing of the town is very efficient.

PLACES OF PUBLIC ENTERTAINMENT.

The centres of public entertainment are the " Cinema House," and the " New Picture House," both of which are " talkies." The latter centre was completed and opened during the course of the year.

The " Cinema House."

This hall has a seating capacity for 863 persons, 630 persons in the area, and 233 in the balcony.

The hall measures 105 feet in length, and 42 feet in breadth, and has Cloak Room and Ladies and Gent.'s Toilet Rooms.

The ventilation of the building is well arranged, the ascension of vitiated air being accelerated in the outlet tubes by means of a suction fan, capable of completely changing the air five times in one hour. There are also 8 wall ventilators.

The heating is by means of gas fires and radiators.

The " New Picture House."

This hall has a seating capacity for 933 persons, 680 in the area and 243 in the balcony.

The hall measures 87 feet in length, and 51 feet in breadth, and has Ladies and Gent.'s Toilet Rooms.

The ventilation of the building is on a balanced system which eliminates draughts. The vitiated air is drawn out by a Suction fan, and the pure air is blown in. The incoming air is purified and warmed before being distributed.

The heating is by means of radiators, and ample provision of windows has been made. These windows are fitted with " Vita Glass " which admits to the fullest extent the germ-destroying rays of the sun.

There is also an up-to-date installation in the form of an electric Vacuum Cleaning plant, whereby all seats and carpets can be thoroughly cleaned.

Both these places are well conducted and call for no comment.

General Nuisances.

Work in connection with the detection and abatement of nuisances continues to occupy a considerable portion of time.

The majority of the nuisances are in connection with the drainage and sanitary fittings of properties, and are mostly encountered where one or two houses are connected to the same drain, and in many cases the trouble could readily be avoided with the exercise of a little more care on the part of the tenants. A large number of the complaints are of a trivial nature, and when investigated the reason for complaint is usually found to be some neighbours' quarrel.

Thirty complaints were received during the year, 12 of these being written and 18 verbal.

Twenty-six intimations were issued in terms of Section 19 of the Public Health (Scotland) Act, 1897, but it was not found necessary to take action under Section 20. Numerous verbal intimations were also given with the desired effect.

Altogether 106 visits and inspections were made in this direction.

HOUSING.

A fit house should be (1) free from serious dampness (2) satisfactorily lighted and ventilated, (3) properly drained and provided with adequate sanitary convenience and with a sink and satisfactory water supply, suitable arrangements being made for disposal of waste water ; (4) in good general repair ; and (5) should have a well ventilated store for food ; (6) adequate facilities for preparing and cooking food ; (7) adequate washing accommodation, and (8) provision made for the storing of refuse bins in tenemental properties.

The factors which determine the uninhabitability should be :— (1) serious dampness of walls ; (2) serious dilapidation of wall surfaces or internal fittings ; (3) marked defect in lighting ; (4)

marked defect in ventilation ; (5) insufficient height of ceilings ; (6) lack of proper W.C. accommodation ; (7) lack of proper sink with water supply ; and (8) defective drainage.

A house containing one or more of the above defects, whether these be taken singly or in combination with other defects, is thereby rendered uninhabitable.

The examination of dwellinghouses is made in relation to the following matters, namely :—

(1) The general structural condition of the walls, roof, floors, joisting and woodwork generally, and the condition of the water and drainage fittings, rhones and rain-water conductors.

(2) The extent to which any dampness prevails in the walls or elsewhere.

(3) The sufficiency of the lighting and ventilation of the house, including the adequacy of the windows and the height of the ceilings, regard being had to whether such lighting and ventilation are deficient because of adjoining houses or buildings.

(4) The adequacy of under-floor ventilation openings.

(5) The cleanliness of the house.

(6) The number of apartments in the house and the adequacy of these for the number, age and sex of the persons occupying it.

(7) The adequacy of the W.C., etc., or privy accommodation, and whether such accommodation is common to two or more families.

(8) The provision of scullery, sink, larder, coal-store, press accommodation, and facilities for washing and drying clothes.

(9) The nature and adequacy of the water supply to the house, whether water has been introduced to the house ; if the supply is not from a public supply, the arrangements for preventing the contamination of the supply.

(10) The nature and adequacy of the arrangements for the disposal of the drainage, etc., from the house, in the absence of a public sewerage system.

(11) The paving, drainage, and sanitary condition of any yard or outhouses belonging to or occupied with the dwelling-house.

(12) The arrangements for the deposit of refuse and ashes.

(13) The existence of any room which would, in pursuance of Section 12 of the Housing (Scotland) Act, 1925, be a dwellinghouse so dangerous or injurious to health as to be unfit for human habitation.

(14) Any other defects or conditions that may tend to render the dwellinghouse dangerous or injurious to health of the inhabitant.

Records of all inspections of dwellinghouses are kept in a register.

Report for the year ending 31st December 1930, on proceedings taken as regards the Inspection, Improvement and Demolition and Closure of Dwellinghouses.

Housing (Inspection of District) Regulations (Scotland), 1928.

1. Number of dwellinghouses inspected, ...	121
2. Number of dwellinghouses which on inspection were considered to be in such a state so dangerous or injurious to health as to be unfit for human habitation, ..	91

Housing (Scotland) Act, 1925.

3. Number of representations made to the Local Authority with a view to the making of closing orders under Section 8, ...	39
4. Number of dwellinghouses in respect of which closing orders were made under Section 8, ...	*Nil*
5. Number of dwellinghouses the defects in which were remedied without either the making of closing orders or the service of notices under Section 3 (1), ...	10
6. Number of dwellinghouses which after the making of closing orders were put into a fit state for human habitation, ..	*Nil*
7. Number of dwellinghouses in respect of which notices were served under Section 3 (1), ...	*Nil*
8. Number of dwellinghouses rendered fit for human habitation under Section 3 (1), ...	*Nil*
9. Number of dwellinghouses in respect of which closing orders were deemed to have become operative under Section 3 (1), ...	*Nil*

10. Number of dwellinghouses rendered fit for human habitation by the Local Authority under Section 3 (2), .. *Nil*

11. Number of cases where intimations were given under Section 20 (1) as to insufficient water closet accommodation :—
    (*a*) cases where requirements complied with by owners, *Nil*
    (*b*) cases where work carried out by Local Authority after failure of owners to do so, ... *Nil*
    (*c*) cases still pending, ... *Nil*

12. Number of houses of (*a*) one apartment, and (*b*) two apartments for the erection of which the consent of the Local Authority has been given in terms of Section III. (*a*) *Nil* (*b*) *Nil*

Housing, Town Planning, etc. (Scotland) Act, 1919.

13. Number of cases where notices served under Section 40 (1) to provide dwellinghouses with water supply—
    (*a*) cases where requirements complied with by owners.
    (*b*) cases where works carried out by Local Authority after failure of owners to do so.
    (*c*) cases still pending. .. ..

These provision do not apply in Burghs.

Housing (Scotland) Act, 1930.

14. Number of dwellinghouses in respect of which notices were served under Section 14 (1), ... *Nil*

15. Number of dwellinghouses rendered fit for human habitation following on notices under Section 14 (1), .. *Nil*

16. Number of dwellinghouses in respect of which work has been done by the Local Authority under Section 15 (1), .. *Nil*

17. Number of dwellinghouses 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*

18. Number of dwellinghouses in respect of which notices were served in terms of Section 16 (1), ... *Nil*

19. Number of dwellinghouses referred to in 18 :—
    (*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*

20. Number of dwellinghouses 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*

21. Number of houses in respect of which advances have been made in terms of Section 34 towards the cost of repairs and amount so advanced, ... *Nil*

The general character of the defects usually found to exist were as follows :—

Closeness and bad arrangement of the buildings.
Inadequate lighting and ventilation.
Lack of adequate water supply and sinks.
Defective floors and roofs.
Defective condition of plaster on internal walls and ceilings.
Defective woodwork.
Dampness in walls due to defective roofing, pointing, and lack of damp-proof courses.

In the Medical Officer's Report for last year the details of the Improvement of the Union Street Improvement Scheme were given. This scheme is still under consideration, and a commencement will be made in the near future.

At the end of 1930, the number of houses erected by the Town Council (including 15 houses at Abbey Court and South Street) was as follows :—

Development.	*Houses occupied at the end of year.*				*Totals.*
	2 rms.	3 rms.	4 rms.	5 rms.	
Abbey Court, ...	2	0	3	0	5
South Court, ...	2	2	1	0	5
42 South Street, ...	3	2	0	0	5
First Development, ..	0	20	36	12	68
Second Development, ..	0	32	18	0	50
Third Development, ..	0	36	15	0	51
Fourth Development, ..	24	0	0	0	24
Fifth Development, ..	20	20	10	0	50
Sixth Development, ..	48	0	0	0	48
	99	112	83	12	306

In the month of May, the Register of Applicants was revised, and at the end of the year the number of applicants was as follows :

Two-roomed houses, ...	168
Three-roomed houses, ...	66
Four-roomed houses, ...	17
Five-roomed houses, ...	8
Two, Three or Four-roomed houses, ...	27
Four or Five-roomed houses, ...	12
	298

Local Applicants.

Two-roomed houses, ...	131
Three-roomed houses, ...	49
Four-roomed houses, ...	12
Five-roomed houses, ...	4
Two, Three or Four-roomed houses, ...	18
Four or Five-roomed houses, ...	5
	219

Applicants from other Areas.

Two-roomed houses, ...	37
Three-roomed houses, ...	17
Four-roomed houses, ...	5
Five-roomed houses, ...	4
Two, Three or Four-roomed houses, ...	9
Four or Five-roomed houses, ...	7
	79

Of the above 79 applicants a few of these for purposes of their occupation are resident in furnished rooms in the town.

It does not, however, follow that 219 citizens are without a house, as quite a number of the applicants are tenants of houses, which for various reasons are now unsuitable for the parties. Quite a number are, unfortunately, in houses which are unfit for human habitation, but the number of applicants is no index of the housing needs of the Burgh. To ascertain this a complete survey of the town would require to be carried out, and this would occupy a considerable time.

Five sections of the Burgh have already been surveyed and these are classified as under :—

Section A.—Union Street Clearance Area. Section B.—Rose Lane Improvement Area. Section C.—Muttoes Lane Clearance Area. Section D.—Shorehead Clearance Area, and Section I.—Isolated Houses.

The following table gives the particulars as to demolition, repair, and the number of houses overcrowded in the said areas :—

	Total.	I.	A.	B.	C.	D.
Houses Inspected, ...	121	5	40	38	10	28
Number to be demolished, ..	75	0	40	6	6	23
Number overcrowded, ..	16	0	7	3	3	3
Number to be repaired, ..	22	0	0	15	2	5

In addition to the above there is another area marked out for inspection in the near future.

Smoke Testing of Drainage and Sanitary Fittings.

During the year the smoke-test was applied to the drainage of the following properties :—

Tudor Cafe. Section of new drain from Urinal and W.C.'S.

B.L. Bank. Drainage of new building.

In both cases the drainage was found to be well laid and gas-tight, and the work done in a tradesmanlike manner, and the interception, disconnection, ventilation and inspection were satisfactory.

Provision of Water Closets and Sinks in Properties.

This was fully reported upon in the Report of the Sanitary Inspector for 1929, and no alteration in the figures fall to be recorded. With regard to the dry-closets at the factory, the circumstances are still the same, but the matter is receiving attention.

Public Conveniences.

The public conveniences within the Burgh are well kept. These are washed daily and no direct complaint has been lodged regarding their condition.

The conveniences in the Burgh are as under :—

Ladies Waiting Room, Market Street. Four W.C.'s and 3 wash-hand basins.

Ladies Waiting Room, Links. Two W.C.'s and 1 wash-hand basin.

Gentlemen's Lavatories, Links. Five W.C.'s, 2 Three stalled urinals, and 1 wash-hand basin.

Gentlemen's Lavatories, Harbour. Three W.C.'s and two-stalled urinal.

Gentlemen's Lavatories, Kirkhill. Two W.C.'s and two-stalled urinal.

Gentlemen's Lavatories, Church Square. Two W.C.'s and four-stalled urinal.

The above W.C.'s and wash-hand basins are all in cubicles, with automatic slot-locks, with the exception of one W.C. at the Convenience in Church Square, which is open.

It is to be regretted that the public appear to take little care of these conveniences, and a great deal of wanton damage is done in the course of the year, the detection of which is difficult.

Inspection of Factories and Workshops.

Periodic visits to the Factories and Workshops within the Burgh were carried out during the year, and the investigation into the cleanliness and sanitary arrangements were made. The conditions, on the whole, are satisfactory, but it was found necessary to issue two notices calling for the removal of minor defects.

FOOD AND DRUGS ACTS.

During the year the following samples of foods were procured for analysis :—

Milk, ...	17
Fresh Butter, ...	1
Ground Rice, ...	2
Salt Butter, ...	2
Corn Flour, ...	1
Whole Rice, ...	2
Sugar, ...	2
Cream of Tartar, ...	1
Cocoa, ...	1
Cinnamon, ...	1
Tea, ...	2
	32

All the samples procured were reported upon as being "genuine."

The following table gives the results of the examinations of the milk samples procured :—

Sample No.	*Water.*	*Total Solids.*	*Fat.*	*Non-Fatty Solids.*
256A.	86·34	13·66	4·90	8·76
257A.	88·08	11·92	3·20	8·72
258A.	87·05	12·95	4·01	8·94
259A.	87·58	12·42	3·80	8·62
260A.	87·24	12·76	3·95	8·81
261A.	87·48	12·52	3·98	8·54
262A.	87·94	12·06	3·32	8·74
263A.	86·72	13·28	4·30	8·98
264A.	85·76	14·24	4·92	9·32
5.	87·68	12·32	3·55	8·77
6.	87·72	12·28	3·48	8·80
8.	87·84	12·16	3·40	8·76
9.	87·24	12·76	3·83	8·93
10.	86·91	13·09	4·00	9·09
11.	87·60	12·40	3·40	9·00
12.	86·68	13·32	4·31	9·01
13.	87·88	12·12	3·22	8·90

SLAUGHTERHOUSE.

Periodic visits of inspection were made to the slaughterhouse, and it was found that the premises are kept in excellent order by the Superintendent, and are efficiently cleansed.

The question of the erection of a new Slaughterhouse is still under review, and there is no necessity for any comments to be made on the present premises, as the circumstances are well known to all concerned. A new site has been purchased with a view to a new Sluaghterhouse being erected, and the plans, etc., are at present in the hands of the Government Departments concerned.

The slaughterhouse was made use of by 6 butchers and 4 other persons, and the number of animals slaughtered were as follows :

Cattle, ...	772
Sheep, ...	2550
Calves, ...	58
Pigs, ...	246
	3626

All Cattle, Sheep and Calves were stunned with the " Humane Killer."

The following tables give the seizures of all diseased meat and offal :—

Cattle.		Sheep.		Pigs.	
Wholly.	Partially.	Wholly.	Partially.	Wholly.	Partially.
3	15	1	4	—	2
Weight in lbs., 2554		96		12	

Cattle.

Disease.	*Number of Seizures.*	*Weight in lbs.*
Tuberculosis, ...	10	2407
Antinomycosis, ...	1	34
Abscess, ...	3	94
Bruised, ...	3	16
Chill, ...	1	3
Totals, ...	18	2554

Sheep.

Inflamation, ...	2	84
Abscess, ...	2	3
Fever, ...	1	9
Totals, ...	5	96

Pigs.

Pneumonia, ...	2	12

The following tables give the seizures of all diseased organs :—

Cattle.

Disease.	*Weight in lbs.*
Piped Livers, ...	929
Cirrhosis and Fluke, ...	15
Abscess, ...	135
Cirrhosis, ...	109
Piped and Fluke, ...	91
Fluke, ...	3
Cirrhosis and Piped, ...	41
Total seizures, 216	1323

Sheep.

Liver Fluke, ...	19
Abscess, ...	4
Congestion (Lungs), ...	1
Abscess (Lungs), ...	2
Total seizures, 15, ...	26

Pigs.

Abscess, ...	11
Bruised, ...	16
Total seizures, 4, ...	27

The business of Hide Factor and Tripe and Gut Cleaning is carried on within the Slaughterhouse. The premises are always well kept, and the business properly conducted.

COMMON LODGING HOUSES.

There are no Common Lodging Houses within the Burgh.

BURIAL GROUNDS.

There are two Burial Grounds within the Burgh, and one a little beyond the boundary. The two within the Burgh are the Cathedral Burial Ground and the Eastern Cemetery, while that outwith the Burgh is known as the Western Cemetery. The acreage of the Cathedral Burial ground is 1·78 acres, and that of the Eastern Cemetery is 1·75 acres, and the Western Cemetery extends to 2·020 acres. The grounds are well kept, and no complaint has been received regarding their condition.

BURGH POLICE ACTS.

During the year 50 warrants were granted by the Dean of Guild Court, 19 of these were for the erection and alteration of dwellinghouses and 31 for business premises. One of the warrants granted was for the erection of 84 dwellinghouses by the Town Council.

Nine notices were issued in terms of Section 164 of the Act of 1892, and six under Section 117 of the same Act.

INFECTIOUS DISEASES.

One hundred and eight notifications of Infectious Disease were made during the year, and the following table gives the ages of the patients suffering from, and the number treated in Hospital :—

Disease.	All Ages	Und'r 1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-45 yrs.	45-65 yrs.	65 & up.	Rem. Hos.
Typhoid Fever, ...	1	..	..	..	..	1	..	..	1
Scarlet Fever, ...	3	..	..	1	2	..	..	..	2
Diphtheria, ...	12	..	2	6	3	1	..	..	10
Puerperal Fever, ...	1	..	..	..	..	1	..	..	1
Ophthalmia Neonatorum, ..	2	2	..	..	9	..	..	..	..
Chickenpox, ...	61	3	13	34	11	..	..	..	..
Encephalitis Lethargica, ..	1	..	..	..	1	..	..	..	..
Polio Encephalitis, ..	1	..	1	..	..	..	..	..	1
Dysentery, ...	1	..	1	..	..	..	..	..	..
Acute Primary Pneumonia,	9	1	2	2	1	1	2	..	2
Acute Influenzal Pneu-Pneumonia, ...	1	..	..	..	1	..	..	..	1
Pulmonary Tuberculosis,	9	..	..	2	2	2	3	..	5
Non-Pulmonary Tuberculosis,	3	..	2	..	1	..	..	..	..
Puerperal Pyrexia, ..	3	..	..	..	1	2	..	..	2
Totals, ...	108	6	21	46	22	8	5	..	25

PUBLIC PARKS AND OPEN SPACES.

The area of land set aside for Public Parks, Recreation Grounds, and Playing Fields in the Burgh extends to 1280·429 acres, and is made up as follows :—

	Acres.
The Links, ...	134·86
Cockshaugh Park, ...	5·353
Kinburn Park, ...	6·682
Bassaguard (Children), ...	1·0
Bruce Embankment, ...	5·4
Woodburn (Children), ...	2·834
East Bents, ...	2·0
*East and West Sands, ...	942·2
	1280·429

*Above High Water Mark.

On the Links there are four Golf Courses, namely, Jubilee, New, Old and Eden Courses.

At Kinburn Public Park there is a Putting Green and 9 Tennis Courts.

At the Bruce Embankment there are 3 Putting Greens.

At East Bents there is one Putting Green.

In addition to the above, there is provision made for swimming, at the Step Rock Bathing Station, and the Castle Bathing Station where bathing pools have been constructed, with stripping accommodation. In addition there is a Station on the West Sands, with a Shelter for Ladies and Gent.'s, also 12 Bathing Coaches, and on the East Sands there are from 4 to 6 Bathing Coaches during the season.

There is also a privately owned Bathing Pool for Ladies, and Hot and Cold Sea Water Baths for both sexes.