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COUNTY OF ZETLAND.

MAINLAND DISTRICT.

REPORTS

BY

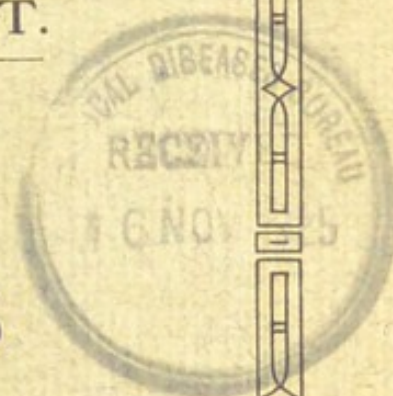
MEDICAL OFFICER OF HEALTH

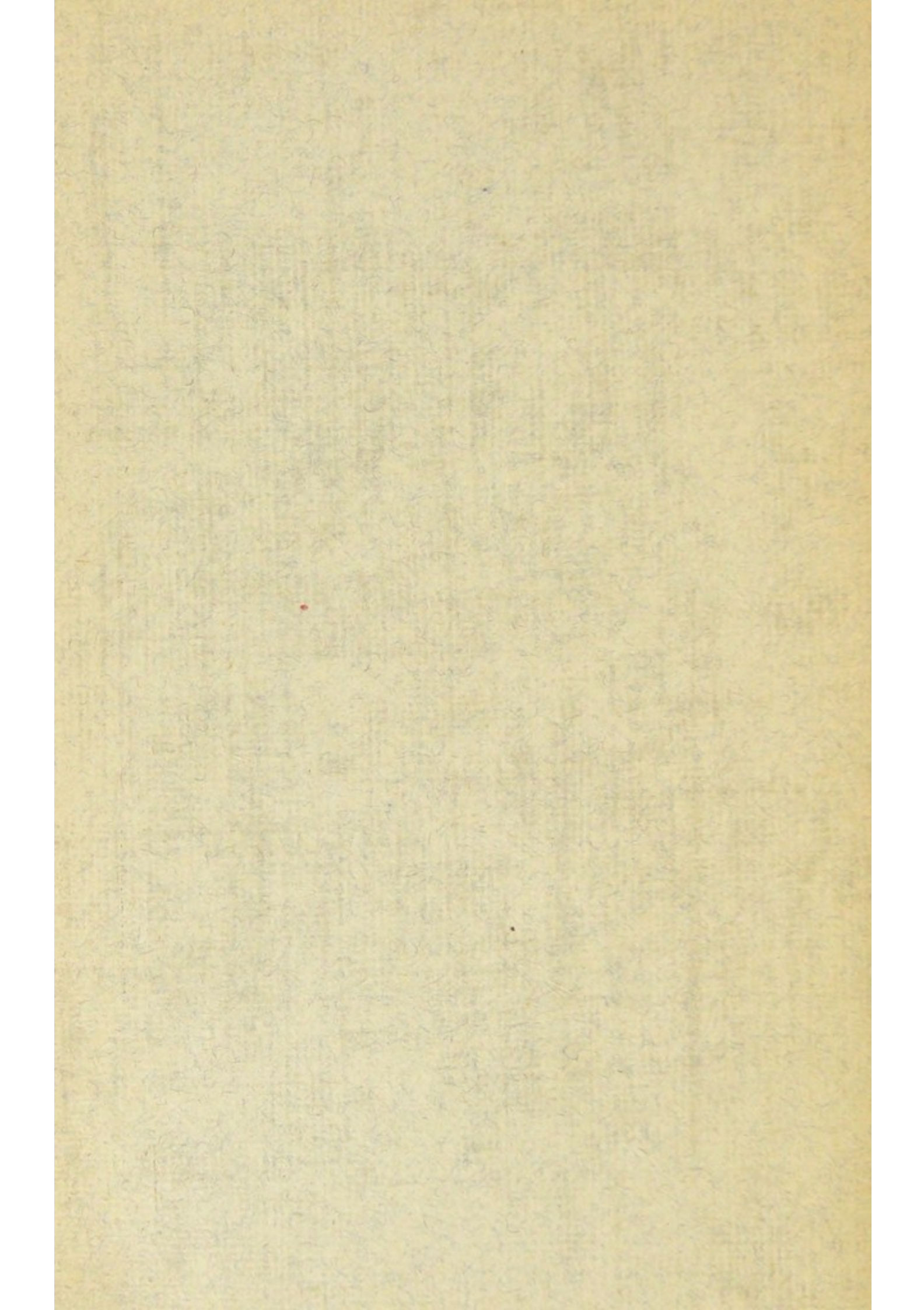
AND

SANITARY INSPECTOR.

YEAR ENDING 31st DECEMBER, 1922.

T. & J. MANSON, *Shetland News* Office, Lerwick.





COUNTY OF ZETLAND.

MAINLAND DISTRICT.

REPORTS

BY

MEDICAL OFFICER OF HEALTH

AND

SANITARY INSPECTOR.

YEAR ENDING 31st DECEMBER, 1922.

PUBLIC HEALTH OFFICE,
BRENTHAM PLACE,
LERWICK, *March, 1923.*

To


*The Scottish Board of Health,
The County Council of Zetland, and
The Mainland District Committee of same.*

GENTLEMEN,

I have the honour to submit the annual report for 1922
in the form prescribed by the Scottish Board of Health.

Yours obediently,

JOHN CRAWFORD, M.D.,
Medical Officer of Health.



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REPORT by the Medical Officer of Health of the
County of Zetland (Mainland District) for the
year ending 31st December, 1922.

A, B, and C.—General Remarks and Enquiries, and
Offensive Trades.

“ To travel hopefully,” says Stevenson, “ is better than to arrive.” That is the only consolation of the Health Department. For indeed in a review of the past year and the past three years practically no improvement has occurred. The question of the treatment of tuberculosis has been before a reluctant Council since 1912, and remains much as then. The treatment of Venereal Disease, first mooted in 1920, is not yet achieved. Nothing has yet been done to improve the conditions under which milk is produced, though it is understood that slow processes will in time evolve some definite result. No extension of the Nursing Service (which would be a benefit to all) has taken place. Only in the Department of the Sanitary Inspector, whose application and energy have now better scope, has improvement in several details in the District been quietly effected, as will be noted by him.

WEATHER OF THE YEAR.

Thanks are due for the following complete tables to Mr J. Crichton, officer-in-charge, the Observatory, Lerwick. There is a deal of interesting information contained in them which it is not possible to summarise in words. As the weather in Shetland is a topic of unfailing (and sometimes painful) interest to all, no excuses are made for printing the tables in full.

RAINFALL IN INCHES.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Total for month	2.95	3.43	2.21	2.60	3.16	1.68	4.57	4.95	3.94	1.71	5.03	3.67
Maximum in one day	0.71	0.49	0.15	0.82	0.46	0.22	0.63	0.98	0.91	0.43	0.81	0.44
Heaviest fall in one hour ...	0.08	0.11	0.09	0.10	0.17	0.10	0.25	0.52	0.26	0.10	0.14	0.11
Rainless days	12	5	6	9	4	6	9	8	6	11	4	0

It will be noted that the total rainfall was 41.9 inches and the number of rainless days but 80.

SUNSHINE DURATION IN HOURS.

Total	12.3	50.0	67.9	161.6	119.9	186.5	100.9	110.5	86.0	103.5	28.7	19.0
Maximum in one day	3.2	7.8	8.1	13.9	12.6	15.7	15.0	12.7	9.8	9.5	5.2	3.4
Sunless days or overcast ...	23	9	3	5	7	3	4	5	7	4	16	16

The total number of sunless days was 98.

TEMPERATURE IN DEGREES FAHRENHEIT.

(Mean for Month obtained from Mean of daily maxima and daily minima.)

Mean	36.6	38.0	38.3	38.6	44.6	48.0	49.8	50.7	48.2	44.8	40.9	40.2
Absolute maximum for month	44.7	50.0	48.0	52.0	55.4	56.7	58.0	58.5	57.3	54.5	52.5	50.8
Lowest maximum for month...	34.7	33.8	36.0	40.5	41.8	49.6	47.7	49.7	46.8	41.0	37.5	38.9
Absolute minimum for month	27.5	27.0	27.3	26.4	32.1	40.0	41.8	41.6	35.5	30.9	27.5	29.6
Highest minimum for month	38.7	39.8	40.8	40.2	45.6	46.1	50.0	50.1	49.6	49.0	45.6	45.6

The only special sanitary matter which cropped up during the year was the nuisance at the Olnafirth Whaling Station. After several inspections of the place little doubt could remain in the mind of any unbiased person that the futile attempts made by the Whaling Company to neutralise the noxious fumes were not seriously intended. Owing to the shortening of the chimney stalk the nuisance caused to passers-by from blown fumes was increased, and at the end of the season no improvement had occurred. The Company could reduce the nuisance at small cost, as is done elsewhere, and every help was extended last year by the Sanitary Inspector without result.

The following report was submitted on 14th July, 1922 :—

“ As instructed at last meeting we inspected the Whaling Station on the 4th instant, and submit herewith our report, viz. :—

“ No alteration has been made in the height of the brick stalk since the upper part was blown down, but as previously reported, a spraying arrangement has been fitted up inside the stalk and connected with the water supply on the station, and an iron drain laid down from the bottom of the shaft to an open ditch, outside the buildings, to carry away condensation water to the sea.

“ In addition the stalk has been plastered with cement on the internal surface to protect the brickwork from being damaged with water.

“ At the time of going to the station, the spraying arrangement was not in operation, although the manufacturing plant appeared to be fully working, and a large volume of steam was issuing from the top of the stalk. When the manager had the water turned on the supply appeared to be wholly inadequate to have any real value for condensation purposes, as there was no appreciable difference in the volume of steam emanating from the stalk, and on getting into the track of it across the public road we found that the smells were very pronounced.

“ We were informed by the manager that the spray was a Danish invention for condensation purposes, but we are of opinion that the apparatus, as we saw it working, is not efficient enough to deal with the offensive smells evolved from the process of manufacture, and that effectual condensation can only take place by closing the top of the stalk and injecting

a sufficient volume of water at a proper height in the stalk to come into contact with all waste vapours led into the shaft."

The conditions of the fishing stations remained as previously reported. No attempt at improvement was observed.

D.—Factories and Workshops.

Nothing falls to be added to previous remarks on this subject. Practically the only workshops in the district are bakehouses, generally well conducted.

E and F.—Housing.

The conditions of the extra-burghal parts of Lerwick remain as last year. The question of extension of the Burgh has not been faced.

A few insanitary premises in the vicinity of Lerwick were inspected along with the Sanitary Inspector, and measures were taken with as yet little result. Further particulars will be found in the report of the Sanitary Inspector.

G.—Rivers Pollution.

There is no problem of rivers pollution.

H and I.—Hospital Accommodation and Disinfection.

The "fever" hospital remains in exactly the same condition as previously reported. No steps have been taken to remedy the very bad state of the walls of the annexes in the older part of the building, where the distemper is constantly flaking off and signs of damp are everywhere evident. In conformity with the too usual Shetland practice no "stitch in time" has been taken, and this lack may at some time entail a heavy expense.

The disinfector remains perfectly efficient and satisfactory. The number of disinfections carried out was 34, of which 19 were chargeable to the District and 13 to the Burgh, and 2 paid privately.

The ambulance has been kept in proper repair and has quite fulfilled all needs for various purposes. No difficulties have been evident in the removal of cases of infectious disease, and no criticisms on this score have occurred. A deal of credit is due to the person appointed jointly by the Authorities and the Gilbert Bain Trustees for his unfailing cheerfulness and tact in removing patients, disinfecting when required, and making himself generally useful.

The " Smallpox Hospital " on the Knab, a wooden shed put up some ten years ago, is now fast becoming useless. It might still be used, but it is obvious that decay is invading what is after all a temporary building. It is not probable that proper repair could be effected, owing to this decay of the structure, sufficient for the health and comfort of any possible patient.

Lerwick, as the Council knows, is a port open in the summer to invasion from the Baltic. The population here is notoriously unvaccinated, and it is the duty of the Port Authority to see that proper provision is made, and the District Committee is almost equally concerned.

Shetland has the questionable distinction of being the least vaccinated County in Scotland. The Registrar General's figures for the following years are given below : —

MAINLAND DISTRICT—

(1) 1917—165 births, 18 successful vaccinations, 128 conscientious objectors.

(2) 1918—181 births, 19 successful vaccinations, 143 conscientious objectors.

Figures obtained from the local Registrars for 1922 show the same state of affairs. There were 14 successful vaccinations in 237 births, or about 6 per cent. So called conscientious objection accounts for most of the remainder.

It is obvious that the Vaccination Acts are here practically a dead letter. One ventures to regard with admiration, tempered by some scepticism, the unusual spectacle of a people so uniformly conscientious in any direction, however mistaken.

J and K.—**Infectious Diseases (other than T.B.)**

10 cases were notified, of which 7 were of paratyphoid, 2 malaria (not indigenous) and 1 erysipelas. One paratyphoid was removed to Hospital. Of the paratyphoid cases 4 were from Dunrossness and 2 from Sandwick and 1 from Hamnavoe, Burra. The latter case was fatal.

All these cases were visited, but in none could any definite reason for the outbreak be given. At Hamnavoe and Sandwick cases have constantly occurred in spite of the Sanitary Inspector's efforts to improve water supplies and procure better general conditions. These conditions have been referred to before. The Dunrossness outbreak cannot be explained. No action was taken for the control of pneumonia, etc., nor with reference to carriers of disease.

L.—Venereal Disease.

It may be remembered that in February 1922 the North Isles District Committee at length notified their willingness to join a V.D. Scheme. After some correspondence and much local talking the Scottish Board of Health made an Order, dated back to 16th May, 1922, combining the three Local Authorities of this County for this purpose, under section 83 of the Public Health (Scotland) Act.

The Order defines fully the powers and duties of the Committee. Two paragraphs are quoted in full, as of general interest :

“ 2 (10) The decisions of the Joint Committee shall not be subject to the review of any of the Combining Authorities.

“ 3 (1) The whole expenditure incurred by or under the authority of the Joint Committee in carrying out the Regulations referred to in Article 1 hereof, under deduction of the sums received by them from Government grant and other sources, shall be defrayed by the the Combining Authorities in proportion to the population of their respective districts according to the latest available census returns.”

The Joint Committee met on August 3 and on August 23; a draft scheme was submitted to the Scottish Board of Health for approval, the Committee having agreed to apply for admission to the Aberdeen and North Eastern Counties Combination, which provided for free examination of material and supplies anti-syphilitic remedies, and Hospital treatment in Aberdeen. The draft scheme included the establishment of a small local centre.

At the end of the year no further developments had occurred, owing to the County Council elections and the delays occasioned to the North Isles District Committee by bad weather. Since then, however, events have occurred which made it probable that the scheme may soon be definitely in operation.

The cost to the County of participation in the Aberdeen Combination is estimated at about £104, of which 75 per cent. is recoverable. The local centre may be about £60, the same grant being allowed. It will be possible next year to report more definitely as to the development of the Joint Committee's work, but it should be stated that the Board's approval was so far anticipated that 108 doses of salvarsan or kindred drugs had been given out up to December 31.

M.—Vital Statistics.

The population of the district, according to the Registrar General, was 16,621. There was 229 deaths, giving a corrected rate of 9.5 per 1000. There were 237 births (of which 9.3 were

illegitimate), giving a rate of 13.8. The infantile mortality rate (death under 1 per 1000 births) was 51.

Tuberculosis was the principal cause of death with 27 cases; heart disease claimed the same number, and malignant diseases 14. All respiratory disease claimed 16. Of the 222 deaths registered in the District, 52, or about 25 per cent., were uncertified. In most of these cases the cause is stated as old age, or the age admits of such a supposition, but it is not satisfactory to find that in Burra a child of 1 year died without any suggested cause, in Sandwick a child also of 1 year died from "bronchitis," and in Sandness a child of 3 days from "premature birth," all without any medical attendance. It is not impossible to obtain such attendance in these places.

N.—Tuberculosis.

(Submitted by the County Medical Officer.)

(1) Prevalence.

The figures are practically the same as for the previous year, and are shown in the following tables.

Table 1, showing the distribution of cases between the three Local Authorities with rates of mortality :—

1922.	Mainland District.	North Isles.	Burgh.	Totals.
Notifications	46	12	31	89
Deaths (including transfers) ...	29	12	9	50
Rate per 1000	1.75	—	2.25	—

Of the total deaths 23 were of males and 27 of females, and 10 of these were due to non-pulmonary causes.

Table 2, showing the distribution of cases in the County Regis-

tration districts. Transfers are included which have been referred to their proper areas.

REGISTRATION DISTRICT.	Popula- tion 1922.	Total deaths T.B. 1922	Deaths of notified persons	Average age at death	Total notifica- tions 1922
NORTH ISLES—					
Unst	1817	3	3	14	5
North Yell	1543	2	2	20	2
Mid and South Yell	590	7	6	26	5
LERWICK (Burgh)	4792	9	8	34	31
MAINLAND DISTRICT—					
Bressay	589	1	1	16	3
Burra	808	1	1	25	2
Delting	1136	1	1	19	2
Dunrossness	1234	3	2	24	3
Lerwick (Landward)	2136	3	—	40	7
Lunnasting	466	1	—	62	—
Nesting	519	—	—	—	1
Northmavine	1635	7	4	28	7
Sandsting and Aithsting	1871	5	5	33	6
Sandwick and Cunningsburgh... ..	1919	1	1	11	4
Skerries	127	—	—	—	1
Sandness	404	2	2	19	2
Tingwall	1185	3	2	44	4
Whalsay	855	—	—	—	3
Whiteness and Weisdale	581	1	1	16	1
Walls	674	—	—	—	—
		50	39	26	89
		—	—	—	—
The totals for 1921 were		55	29	33	89

Table 3, showing the distribution of cases at age periods.

Ages.	M.	F.	-1	1+	5+	10+	15+	25+	35+	45+	55+	65+	75+	85+
Pulmonary	18	22	—	1	—	1	12	11	6	5	3	—	1	—
Non-Pulmonary	5	5	1	2	—	1	3	3	—	—	—	—	—	—
Total	23	27	1	3	—	2	15	14	6	5	3	—	1	—

It will be noted that no notifications of disease or death from the disease have occurred in Foula, Fair Isle, or Fetlar, for now the third year in succession.

Of the notified cases which died during the year the average period between notification and death is 224 days, the shortest being 1, and the longest 730. Of the 50 persons who died, 39 were previously notified to the Council,

(2) Treatment.

(a)—*Institutional.* The remarks on this subject in last year's report apply with added force. Subjoined is part of a memo. on this subject addressed to the Phthisis Committee and dated December 31.

SANATORIUM TREATMENT IN SHETLAND.

" It will be remembered that the responsibility for the prevention and treatment of infectious diseases is laid by statute upon the Local Authority. By far the most destructive of these diseases is tuberculosis, and this Committee has the grave responsibility of considering means for its prevention and treatment. Hitherto no measures for either end have been properly faced in this County.

It is not proposed, at this moment, to go into the causes of this disease, nor to consider the very important question of prevention. That would mean a very long discussion. But events have made the question of treatment most prominent.

In the imperfect state of our knowledge, no specific treatment of this disease is available. But the general consensus of medical opinion is that institutional treatment is the most satisfactory. Tuberculosis is a difficult disease even to diagnose, and the observation which can be attained in an institution is of the greatest value. If the ultimate diagnosis is tuberculosis then the stay of the patient in the institution is the best possible of treatments.

Experience of three years in this County makes safe the assertion that, unless Tuberculosis ceases this Local Authority will generally be faced with the problem of dealing with a permanent hundred or so of patients, definitely notified, and many others suspected.

Many of these will require hospital treatment. All perhaps should have it, but many require it, for two main reasons.

First.—Young folk in early stages of the disease, whose homes are overcrowded and whose food is insufficient or wrong, can be greatly benefited and often saved for a useful life by the rest, instruction, and discipline of a Sanatorium. The proper food and medicine supplied may turn the scale.

Second.—Advanced cases in crowded homes are a source of danger and infection to their families and friends, and ought to be removed for that reason. To this category falls to be added those patients who fall suddenly sick while working here during the fishing season, and who cannot be left in their crowded surroundings, hut or boat.

How can this Institutional treatment be provided?

It must be here or by arrangement with Authorities in Scotland. It is possible to arrange for the admission of many adult early cases to Sanatoria there, and this has hitherto been done. Such cases require to be carefully chosen and must be able to travel, and, for economical reasons, to travel alone. It is a considerable responsibility for the Tuberculosis Officer to state that any case is able to face the chances of a journey, say to Bridge-of-Weir, with delays and railway changes, especially in stormy weather, which may happen at any time of the year. And much extra expense is involved.

The Committee is therefore faced with the fact that many cases requiring Institutional treatment cannot be removed South, because they are too ill or too young or otherwise too unsuited for travelling to Scottish Sanatoria.

Remains then obviously the necessity of providing Hospital treatment in this County. It is quite fruitless to say that this is not a suitable climate for a sanatorium. Of course it is not suitable. But there is a community here, and it is the duty of the Committee to see that the sick of that community are properly provided. It is obvious that some sort of Institutional treatment must be supplied, for the reasons given.

What have the Committee done? As a temporary measure the new block in the Combination Hospital was opened for Tuberculosis patients in 1920. It is quite unsuited for the purpose, having decent accommodation neither for patients nor for staff. The Hospital Committee refused to have any alterations. The place as it is gives no proper chance to the patients and causes continuous irritation and changes in the staff. Members of the Council can easily satisfy themselves on this point by inspection.

Since the opening 70 patients have been treated there, and it must be noted that of these 40 could not for various reasons have left the County. Shortly the results are as follows:—Of the 70 patients there have died in Hospital or since discharge 27. Discharged improved, 23. Doing well now, 10. Unknown (foreign), 4. Remaining, 6.

A complete scheme, approved by the County Council and approved by the Board was eventually rejected, at a low ebb of the Council's finances, as too expensive. Another scheme is now before the Committee, which may or may not come to fruition, but the Council can be assured of the help and interest of the Scottish Board of Health in this matter.

In conclusion the gravity of the question must be emphasized. Members may be returned to the Council pledged to economy, but they bear a grave responsibility as well. These patients should be properly treated and they are not properly treated. It avails little

to wag the head and say, 'This will cost a lot of money.' What is required of members is some interest in the subject and some constructive ideas. Upon these the lives of many and the happiness of more will depend."

There were in the Sanatorium Wards at January 1st 6 patients. During the year 25 were admitted. The results are shown below :

Died in Hospital	7
Died since	1
Discharged improved	11
Discharged unimproved	5
Remaining at December 31st	7

At Sanatoria in Scotland there were at January 1st 6. During the year 6 were added. Of these 12, two died, four were returned and six remain at December 31st. Of these 1 a Noranside, 1 at Liberton, 1 at Bridge-of-Weir, 1 at Kingussie, and 2 at Kirkcaldy. Thanks are due to the Medical Officer of Kirkcaldy Burgh for his interest and assistance. The difficulty of obtaining beds must be emphasized.

To the Gilbert Bain Hospital 8 patients were admitted during the year (notified cases). Of these 1 died, 3 were discharged improved, 3 unimproved, and 1 remained at December 31st.

At any given time the County would seem to have had about 18 patients in various institutions at an average charge of about 50/- per head per week, or about £45 in all, making a rough annual charge of over £2000. Of this sum 50 per cent. is obtainable as grant and the expense of ex-service approved patients is repaid by Ministry of Pensions.

(b) *Domiciliary*. The Council has been advised to extend the provision of medicines and food in necessitous cases, and there does seem evidence that many young persons have benefited thereby. The number of patients in receipt of various articles was at January 1—13. Nineteen cases were added during the year. Of these 32, seven have died and seven taken off treatment, leaving at December 31—18 patients in receipt of medicines or (and) food. The cost of this to the County may be roughly estimated at about 7/6 per head per week, or say £7 per week or £365 annually.

In accordance with the arrangements made with the various Nursing Associations the following visits were made to Tubercular patients :—

	Patients.	Visits.
Nurse Scollay, Sandsting and Aithsting	4	56
Nurse Plumbly, Nurse McClelland, Bressay ...	5	204
Nurse Bath, Scalloway	4	202
Nurse Rasmussen, Sandwick	10	165
Nurse Cooper, Nurse Weir, Dunrossness	9	60
	<hr/> 32	<hr/> 687

The Lerwick District Tuberculosis Nurse (Nurse Shearer) made during the year 280 visits to tubercular patients.

In conclusion one is forced to state that though there is everywhere in Shetland a great terror of this disease, in some cases so great as to be ludicrous, yet there is very little popular interest in the study of the subject or improving local condition of life. Until the people themselves insist it is probably vain to expect their representatives (in general) to study the subject and show any constructive advance in policy.

***O and P.*—Child Welfare and Notification of Births.**

Nothing further can be added to what was said last year. The Town Council of Lerwick have steadfastly refused to co-operate with the District Council as regards the parts of the town immediately outside the Burgh boundary, and have instituted a scheme of their own. It can only be hoped that in time some agreement may be reached between the bodies concerned. Schemes of child welfare for the country districts are not at present practicable. There is a possible exception in favour of Scalloway, but success would depend on the co-operation of local practitioners, who are usually too busy.

Notifications of births is not being practised, and as was stated last year it seems useless to insist on this unless action of some sort can follow.

The report forwarded to the Central Midwives Board for Scotland is here reproduced.

1. List of Midwives.—Jessie Bath, 3892, Scalloway. Edith M. Bridges, 4727, Burra Isle. Annie Scollay, 3895, Sandsting. Margaret Hawick, 3566, Lerwick. Mary R. Manson, 3570, Lerwick. Jeannie McLelland, 5140, Bressay. Olga Rasmussen, 4877, Sandwick. Annie E. Roberts, 4749, Cunningsburgh. Margaret L. Shearer, 4198, Lerwick. Amelia J. Weir, 5142, Boddam. Ella Munro, 4009, Fair Isle. A. E. Goodyear, 5252, Foula.

2. Births in Area—(a) Total, 237. (b) Number of deaths under 10 days, 9. (c), (d), (e), unknown.

3. Cases of Ophthalmia Neonatorum, nil.

4. Cases of puerperal sepsis, none notified.

5. Cases of still birth, none notified.

6. Cases of emergency, 2. Impacted lip of cervix, and adherent placenta.

7. No addition need be made to previous remarks.

Q.—Milk and Dairies.

The conditions are unchanged. Water supply is a great difficulty, as before stated, in most country dairies.

During the year a set of proposed bye-laws was drawn up by the Medical Officer of Health and Sanitary Inspector for submission to the District Committee. These were remitted to a sub-Committee for consideration, and it is understood that alterations in the original draft were made. The Medical Officer of Health was not directed to be present at any meeting of this sub-Committee and cannot therefore vouch for the soundness of these alterations, nor indeed for their exact nature.

R.—Food.

The greater portion of meat used in the District comes through Lerwick, where careful inspection is ensured. Arrangements have been made for inspection of meat at Scalloway and Sandwick, and these seem to be satisfactory and can now be supervised by the Sanitary Inspector with more success than formerly. Most of the animals killed in Lerwick come from the district, and the following figures of parts condemned has been obtained from the Burgh Sanitary Inspector.

During the year 1922 about 480 cattle were killed. Of these

Tuberculosis caused the condemnation of 2 carcasses and parts of 10 others, and of 9 livers.

Hydatids caused the condemnation of no less than 334 livers.

It is obvious, therefore, that 334 of the 480, or about 65 per cent. were infected with this disease. The actual risk to the consumer from the meat is negligible, but the figure points to a very wide distribution of the parasite in the County, and the wonder is that infection of the human subject is not more common.

Mr Emslie remarks that the animals condemned for tuberculosis were not Shetland animals, but those infected with hydatid and fluke were nearly all so.

No further remarks need be made as to foods. The Country shops were generally found in a satisfactory state.

S and T.—Food and Drugs and Rag Flock Acts.

No remark need be made under these headings. The Medical Officer of Health has no duties under the Food and Drugs or Rag Flock Acts.

U.—Tabular Statement.

The tabular statements may be summed up as follows :—

(1) RETURN OF INFECTIOUS DISEASE.

There were 56 cases notified of which 46 were tuberculosis. Of these 46, 17 were removed to Hospital. Of the 10 remaining notified (non-tubercular) cases, 7 were paratyphoid, 1 erysipelas, and 2 malaria (non indigenous). One case of paratyphoid being removed to Hospital. There were at December 31, 95 persons in the District known to be suffering from Tuberculosis.

(2) INFANT MORTALITY.

There were 237 births, of which 22 were illegitimate. There were 12 deaths of children under 1 year of age, three of these being illegitimate. As to the causes of death, 5 were from premature birth, 1 marasmus, 1 meningitis, 1 influenza, and 4 other causes. Of the 12 deaths, 1 was uncertified.

COUNTY SANITARY OFFICE,

LERWICK, *March, 1923.*

To

The Honourable the Scottish Board of Health,

The County Council of Zetland, and

The Local Authority of the Mainland District of the County

Gentlemen,

In terms of Section 15 of the Public Health (Scotland) Act, 1897, I beg to submit the following Report on the general Sanitary Conditions of the County for the year ended 31st December, 1922:—

WATER SUPPLIES.

The water supply in the Lerwick Special District continues to be abundant for all purposes. The Parkfield Road supply remains as previously reported on, but no complaints were received regarding any actual scarcity of water by the occupants of the houses there.

In the Scalloway district the collecting wells in the gathering ground above the reservoir were improved and additional collecting pipes laid down to augment the existing supply.

With the extension of the sewerage system to Ladysmith, Wester Houll and along New Street, and the consequent introduction of sinks and W.C.'s. in these areas, a greater demand is being made on the water supply, but it is hoped that the increased amount of water now available will be sufficient for all requirements, including what may be necessary for fishing or other boats working or calling at the port.

As in previous years systematic inspections were carried out for protection of open wells throughout the Mainland District, and twenty-five of these have been covered in. The gravitation water supply at Weisdale Public School has now been completed, a concrete reservoir having been constructed at a spring on the hillside above the school and the water carried down by means of a lead pipe. One draw-off tap has been provided over a sink inside the schoolhouse, while another has been fixed outside for the use of the scholars. The water appears to be plentiful and of excellent quality.

DRAINAGE.

The Special Drainage Districts are Lerwick (Landward) and Scalloway.

The drainage arrangements in Lerwick District remain in the same condition as previously reported, and call for no special comment apart from what has already been stated, regarding the inadequacy, and the primitive methods of drainage disposal which obtain in this area, and the danger inseparable from outbreaks of enteric fever and other infectious diseases.

The extension of the sewerage system in the Scalloway District, which was carried out during the year, will provide for proper drainage arrangements to about thirty additional houses and will also admit of W.C. accommodation and sinks being fitted up. Already 10 W.C.'s. and 10 sinks, with water supply laid on, have been completed without the necessity of issuing notices for provision of such, and it is to be hoped that statutory action will not be required in dealing with cases where as yet nothing has been done by those who are in a position to avail themselves of the facilities provided.

Nothing further has been done with regard to the provision of a proper drainage system at Hamnavoe, Burra Isle, the chief difficulty being the absence of a sufficient water supply for flushing purposes, were a drainage system to be laid down. Fortunately the wet weather which prevailed during the last two years has probably prevented any serious outbreak of illness in the district. As it is six cases of Typhoid Fever have been notified during the last three years, three of which were fatal, and although only two of the cases occurred in Hamnavoe, there is a probability that the others may have arisen from the same source.

The waste water disposal at the various crofts throughout the Mainland District was, in a fair number of cases, satisfactory, but in others there is considerable room for improvement. The custom of throwing waste water on to the ground or into earthen or rough stone built channels in close proximity to the dwelling houses, is quite a common method of disposal and causes more or less of a nuisance. In such cases the occupiers were warned to have the waste water carried away a sufficient distance from the dwelling houses, and these warnings have, on the whole, been fairly well attended to.

SCAVENGING.

The Special Scavenging Districts consist of Lerwick (Landward) and Scalloway.

The scavenging arrangements in the Lerwick District have

been carried out in a satisfactory manner, and since the new scavenger was appointed the district in this respect is probably in a cleaner condition than it has been for some time past.

The matter of removing mussel shells still gives some little trouble, the tendency being to throw them out on to the ground adjoining the dwelling houses where they lie about and cause a nuisance, not so much from the shells, but from other refuse which is frequently mixed up with the shells.

Warnings have been given with respect to this practice, and in two cases intimations were served for removal of such deposits, and it is to be hoped that further measures will be unnecessary.

The Scalloway District has been kept in a fairly good state of cleanliness, most of the refuse being dumped into the sea. Complaint was made regarding the condition of the foreshores due to accumulations of rubbish which had gathered there, and this was attended to by the Local Committee.

NUISANCES.

During the year twenty-nine complaints were received and dealt with. These had reference to dirty and insanitary houses, structural nuisances, choked drains, accumulations of offensive matter, verminous houses, etc.

One hundred and eighty-nine intimations under Section 19 and three notices under Section 20 of the Public Health (Scotland) Act, 1897, were served and a considerable proportion of nuisances have been abated. The weather conditions, however, were unfavourable in some cases for carrying out remedial works, and these cases have been left over for a season.

The principal nuisances dealt with and abated were as follows :

Water supplies protected	25
Floor of apartment relaid or repaired	10
Inside passages relaid or repaired	5
Roof coverings repaired	4
Windows made to open	4
Accumulations of rubbish and offensive matter removed	25

GENERAL INSPECTIONS.

The work of inspection throughout the district includes as formerly dwelling houses, unprotected water supplies, drainage, offensive trades, factories and workshops, schools, dairies and cowsheds,

SPECIAL INSPECTIONS OR INQUIRIES.

Special inspections were made in connection with complaints received and all cases of infectious diseases notified. Fifty-one cases of infectious disease were visited, including Tuberculosis, and seven cases were removed to hospital.

In all cases where nuisances were found to exist in premises where infectious disease occurred, intimation was served for abatement of same, and also provision of sanitary conveniences where not provided.

SLAUGHTER HOUSES AND OFFENSIVE TRADES.

During the year an additional license was granted for a slaughter house at Scalloway, so that there are now five of these registered in the Mainland District.

Forty-four inspections were made and the premises generally were found in a satisfactory condition. Most of the slaughtering for the Mainland District, outside the Burgh of Lerwick, is carried on at Scalloway, Boddam, and Sandwick, the slaughter house at Voe being used at very rare intervals only.

The Fish Manure Factories at Heogan and Aithsvoe, Bressay, were both in operation during the herring season, and on inspection were found to be clean and in good structural condition. The process of manufacture was carried on without any nuisance being complained of, and, although at times smells from the factories could be detected some distance away, there was nothing to which any serious objections could be taken.

The nuisance on the foreshore near the factory at Heogan, which was reported last year, was abated, and although there is still an occasional recurrence, in a modified degree, it can hardly be expected that, in the disposal of the drainage from the premises, some deposits of fish oil and grease will not accumulate on the beach.

The Whaling Station at Olnafirth was the only one in operation during the whaling season. The premises were repaired and limewashed when whaling commenced, but the brick chimney stalk, for carrying off offensive smells from the plant, which was blown down during the off season 1920/21, was not rebuilt until some weeks after the fishing had started. The stalk, however, was only built up to the point where it had collapsed, and measured 5 ft. 6 in. in height from the ground level of the station, whereas on the original plan, which was drawn to a scale of 1/32 in. equal to 1 ft., the height measured 80 ft. The manager stated that the stalk was never built to the height shown on the plan, and in fact had not

originally been built to any particular height, but he could give no information as to how high it was before it blew down. The stalk, however, must have been between 15ft and 20ft higher at least than it is at present, because the top of it originally stood a considerable distance above the level of the public road which passes the station, whereas the top of it is now practically level with the height of the road, which is at a much higher level than the ground level on which the manufacturing plant is situated.

A so-called spraying apparatus was fitted up inside the stalk in order to condense the smalls, but its effect was practically useless.

The following reports on the matter were submitted during the season :—

“ Lerwick, 16th August, 1922.

“ OLNA WHALING STATION.

“ Since last meeting the Medical Officer of Health and myself have each visited the station. On the occasion of the Medical Officer's inspection, the so-called condensing apparatus was not in operation, the Manager admitting that it was useless for the purpose of dealing with offensive smells.

“ I inspected the station on the 12th instant, and found, owing to a breakdown in the boilerhouse, that the plant responsible for the smells was not working.

“ I spoke to the Manager and explained that, since my last visit, I had inspected the methods adopted for treating offensive effluvia in a similar manufactory in the South, and that all the waste gases, likely to cause a nuisance, were disposed of by passing them through closed condensation pipes fitted with adequate sprays of cold salt water, and in certain cases by further treatment in a furnace connected with a high brick chimney stalk to carry the smoke and burnt gases well away into the upper air.

“ The Manager inquired about details of the particular methods in use, but I informed him that, being a practical engineer himself, he would be better to visit one or other of the places where proper plant is installed, and study what system would be most suitable for the business.

“ I also informed him that the onus of dealing with the offensive smells lay with his firm, and while all along I was satisfied that no serious attempt was being made to deal with the question, my object in making investigations elsewhere was simply to confirm my previous experience of what I knew used to be, and is still being done, in other cases, and that the

Whaling Coy. in some form or another could introduce sufficient and adequate plant to suit the particular requirements of their business.

"The Manager admitted that there was no proper apparatus on the station for dealing with offensive smells, but that he was going south at an early date, and would make enquiries regarding suitable plant for the work."

"Lerwick, 20th September, 1922.

"During the month an anonymous complaint was received regarding alleged deposits of whale by-products on the foreshores at Voe, and, along with the Medical Officer of Health, the alleged nuisance was inspected and found to consist of accumulations of whale grease similar to what was found on a previous occasion at the same place, and at Collafirth during the season of 1920. The extent of the deposits at this time, however, were small compared with others mentioned, the principal accumulation being near the outlet at the Burn of Voe, and at this point the stones on the foreshore, over a distance of about 20 feet by 2 feet, were more or less covered with a coating of grease. At intervals, too, along the foreshore smaller balls of grease were also found between the stones.

"The smell was fairly distinct, but not so pronounced as the smells felt on previous occasions.

"I drew the attention of the Local Manager to the matter, and men were sent from the station to clear away the nuisance.

"The foreshore was again inspected this week and found practically clean."

In addition to above, a joint report on the Whaling Station by the Medical Officer of Health and Sanitary Inspector appears in the M.O.H.'s report for the year.

UNSOUND FOOD.

Three hundred and ninety-one inspections were made under Section 43 of the Public Health (Scotland) Act, 1897, and 141 articles of food were condemned.

Of the total inspections one hundred and ninety-eight were made to slaughter houses, one hundred and thirty three to butchers shops, and sixty two to grocers shops.

The seizures consisted of the carcasses and offal of a cow, one side of veal, four whole and one part beef offals, eighty-nine beef

livers, two beef kidneys, three sheep lungs, seven pounds of minced meat, seven tins of preserved fruit, five tins of preserved vegetables and one tin of preserved salmon.

With the exception of the minced meat and preserved foods, which were found in grocers' shops, the remaining articles were found in the slaughter houses, and all the seizures were destroyed with owner's consent.

Hydatid disease (*E. Veterinorum*) is still the predominating cause of so many beef livers being condemned. Out of the total seizures 88 beef livers were affected with this disease, the other being a case of liver fluke, while one whole beef offal was seized for this reason. In some cases the whole of the viscera becomes so much grown together by the invasion of this parasite that it is impossible to separate the various organs, and the offal has to be cut away from the carcase in one solid mass. At this stage of the disease the cysts assume a multiple form, and in the organs affected the original normal healthy tissue is almost entirely absorbed by the disease.

Cases of the long necked hydatid (*C. Tenuicollis*) are also discovered from time to time, but, as it is only in the abdominal and pelvic cavities they are found, usually adhering to the omentum or fatty tissue, they are easily removed and destroyed without rendering the carcase, or as the case may be, the liver, unfit for human food.

It is now well known that dogs are responsible for causing and spreading this disease, and with all due regard to the necessity of dogs being indispensable to an agricultural community, there appears to be far too many of them in this County.

This matter was taken up by the Local Authority, and investigations are being made by the Chief Constable's Department as to the licenses and exemptions held by owners with respect to the number of dogs they are legally entitled to keep.

The safeguarding of domestic water supplies from infection of this nature is being carried out, but, as a dog suffering from this disease can transmit it direct to its owner or the members of the household to which it belongs, and is in daily association with, by licking hands and faces, and in other ways, the danger of an animal of this kind will be readily understood.

On the whole all the food premises inspected were clean and in good order. One grocer was notified as to the dirty condition of his shop and want of repair to the premises, and these matters were attended to without further action being necessary.

In most of the shops visited no precautions appeared to be taken to protect butter and margarine in bulk, cheese, ham, and bacon, etc., from dust and flies. In some of the shops an en-

closure with a sliding glass door is fitted up for this purpose, and in the interests of a clean food supply no shop dealing in such necessities should be without this accommodation.

SCHOOLS.

The inspection of schools has been carried out as formerly and 26 visits were made.

The Education Authority are making steady progress in improving school premises throughout the district, but the weather conditions have been unfavourable for getting alterations carried out which otherwise would have been done. As stated the gravitation water supply to Weisdale school has been completed. The drainage system has also been overhauled and a new sink with water laid on has been fitted up in the school teacher's house.

The drainage from the urinal and the schoolhouse at Bressay has also been practically renewed, and the outfall drain (which was originally intended to discharge into a cesspool) is to be carried direct to the sea, a distance of about 200 yards.

The pail privies at one or two of the schools have been improved so as to prevent as far as possible any nuisance arising when the privies are in use.

The water supply at Gott School, Tingwall, has been in a somewhat unsatisfactory condition for some time back, the supply being derived partly from a hill burn flowing through pasture land, and partly from rain water off the school premises. The Education Authority was notified under the Housing, Town Planning, etc. (Scotland) Act, 1919, to provide a proper supply, and work is in hand with a view to this end.

A gravitation supply could be laid down from a spring on the hill at the east side of the school, but as the cost meantime is prohibitive, an endeavour is being made to sink a well in the vicinity of the school.

A new house has been built for the teacher at Hamnavoe, Burra Isle, under the Government Housing (Private) Subsidy, and as there was no accommodation of this kind before, the house is a very necessary adjunct to the school premises.

WORKSHOPS.

The number of workshops, including bakehouses, on the register is 52, and 4 were removed during the year. Seventy-one inspections were carried out and 32 notices were served for lime-washing, and various nuisances and the notices were duly complied

with. The workshops generally are kept clean and in a fair sanitary condition.

There is still a number of herring yards where there is no proper system of drainage disposal from the herring workers' bothies, and while in the present uncertain state of the industry any extra expenditure in sanitary improvements would appear to be a hardship, it is only right to point out that should any epidemic of infectious disease break out amongst the employees during the season, owing to insanitary conditions, the loss to the trade through illness of the workers would probably be much more serious than what would be necessary to put the various premises into an efficient sanitary state.

Six notices for provision of sanitary accommodation were issued, all of which were provided, except in one case where the occupier, whose premises were put up for sale, is negotiating for purchasing the property, and if successful intends to carry out alterations with a view to making modern improvements on existing buildings.

COMMON LODGING HOUSES.

There are no common lodging houses in the County.

DAIRIES, COWSHEDS AND MILKSHOPS.

As in previous years the dairies, cowsheds and milkshops have been regularly visited, and altogether 157 inspections were made.

Attention was given to limewashing, cleanliness and the structural state of the premises in so far as the present condition and arrangement of these places would admit, and within these limitations the matters mentioned were attended to.

The draft Bye-Laws prepared by the Medical Officer of Health and myself, which were afterwards considered by a sub-Committee of the Local Authority, and it is understood altered at a meeting where neither the Medical Officer or myself were called in attendance, are at present in the hands of the Board of Health, and it is to be hoped that a satisfactory code of Regulations, which will not be too oppressive on the milk trade, and at the same time provide sufficient safeguards to the consumer in the matter of a clean and wholesome milk supply, will be in operation at the earliest possible date.

BURIAL GROUNDS.

At one or two of the graveyards inspected some attention

appeared to be given to the cutting down of weeds and keeping the grounds in such a way that it was possible to locate where the different graves were. In other cases, however, the burial grounds seemed to be the dumping place for all the weeds grown in the districts, the only indication as to what the premises really were being a few gravestones high enough to show above the weeds.

There can be little doubt that some of the older graveyards in use are overcrowded, but no complaints were received regarding this nor any other condition which would warrant any action being taken.

BURIALS.

No burials were undertaken by the department during the year.

BYE - LAWS.

Plans and specifications were submitted for erection of a shop and alterations to premises for fishworkers at North Roadside, and these were approved and passed subject to the conditions relating to drainage and sanitary accommodation being provided. The work in both cases was carried out as approved except for the erection of a drain shaft at the fishcuring premises which has yet to be fitted up.

During the year a sanitary convenience was provided at the Fisher Girls' Recreation Hut, plans of which were approved in 1921.

PIG - STYS.

Inspections were made to six pig-stys in Lerwick Landward and these were found to be in a fair sanitary condition. There were no pigs being reared at any of the places when visited.

HOUSING AND TOWN PLANNING.

During the year one hundred and thirty-eight dwelling houses were inspected in the following districts :—

Boddam, Bigton, Channerwick, Aith, Cunningsburgh, Sandwick, Bressay, Gulberwick, Tingwall, Whiteness, Ayres of Sellivoe, West Burrafirth, Aith, Aithsting, Sandness, Dale of Walls, North Roe, Ollaberry, South Delting and Nesting.

Generally the structural condition of the houses was fairly good. Of the total 88 were roofed with tarred felt, 28 were

thatched, 19 were slated and 3 were roofed with part felt and part thatch.

Seven of the houses were directly connected with the barn and byre, and in one case the only access to the house was either through the byre or the barn. Two houses had the open fireplaces in the kitchen but no chimneys, the smoke finding an outlet through one or two openings in the ridge of the houses. Eight apartments were found to have earth floors, and six apartments had floors of part each of wood, stone and earth.

Intimations of nuisance were served on parties responsible for removal of such, and in a number of cases these have been abated and are already indicated under the heading of nuisances. For reasons given in previous reports, however, the work of remedying structural nuisances makes slow progress, and there are some of the older types of houses where the houses would be better to be closed up as they are past being worth repairing. These last are houses occupied by old people who at their time of life feel the old houses sufficient for their needs, or occupiers who are not able financially to carry out improvements.

The worst cases are those in which consumptives are living, or have died, in damp, old thatched houses with earth floors in one or more of the rooms, and where the crofters are too poor to provide themselves with better houses or even to effect improvements, if such were practicable, on the existing premises. The Medical Officer of Health removes all patients who are able to bear removal to hospital, but as the accommodation for these cases is very limited in the islands most cases have to be left at home. Disinfectants and instructions for using such are supplied, but in view of the conditions mentioned any preventive measures are pretty much nullified.

In some districts there are signs of the old thatched houses being replaced or reconstructed and roofed with felt, but owing to the fact that some proprietors are beginning to sell their estates, crofters and others affected will probably defer doing anything further until they know how they are going to be situated should the land change hands.

A few crofters have bought their holdings and have commenced structural alterations to their dwelling houses and steadings. One crofter's house was vacated and closed up, as the premises were in a very dilapidated condition.

As reported in the return already sent in *re* proceedings under the Housing Acts, 104 sanitary conveniences were fitted up, and although at the outset the demand for their erection was commented on adversely, it is gratifying to record that a sense of appreciation is becoming manifest, even amongst old crofting people, as to the benefit and necessity of such accommodation, which is char-

acterised as a right and proper thing to have in connection with any dwelling house.

In illustration of this one old crofter who was asked to fit one up, much against his will, had the misfortune to have the small wooden house he had erected blown to pieces during a gale of wind. On inspecting his premises some time after he exhibited the ruins which he had carefully gathered up, and declared that he would build "him" up and would anchor "him" to the ground in such a way that "he" should not be blown away any more, as "he" had truly found "him" very handy.

It may be of interest to state that the first account of a sanitary convenience being erected in this County is recorded in a book written by Dr. Clarke on "Christian Missions in Shetland," early in last century. Dr. Clarke took a great interest in the Wesleyan Churches here, and practically devoted his life to promote their advancement amongst the inhabitants, who were cut off from getting the religious instruction they so much desired. He made a few journeys to the islands at a time when there was no regular sailings and sea travel was a long and tedious ordeal, and in the course of his travels through the length and breadth of the County, he was struck by the fact that there appeared to be no sanitary accommodation attached to the houses. On one of his visits he was staying with a missionary on the west side of Shetland whose house lacked this convenience, and in order to provide this omission he erected one himself out of the remains of an old boat which he found derelict on the shore of the voe near the house. On a subsequent visit to the islands along with a friend, he was residing at this same missionary's house, and with great pride he showed the result of his handiwork to his friend and remarked that he did not think there was another one in the whole of the islands.

Periodical inspections were made to dwelling houses including herring-workers bothies *re* cleanliness, etc., and on the whole few cases of default in this respect were discovered. Under Section 40 of the Public Health Act, as amended, six notices were served for cleaning of dirty premises, etc., and in each case a sufficient improvement was effected without further action being required.

GOVERNMENT HOUSING (PRIVATE SUBSIDY).

The number of applications granted for erection of houses under the subsidy in the Mainland District was 25, of which only 13 have been completed. In addition 6 houses were built under the scheme in the North Isles District.

These houses are greatly appreciated by those who were fortunately in a position to avail themselves of the subsidy, and as

previously reported, it is to be regretted that so few houses have been provided considering the large number of cases where new houses are so urgently required.

NORTH ISLES DISTRICT.

Towards the end of the year the island of Yell was visited and a few inspections with regard to the general sanitary conditions of the islands were carried out.

From the partial inspection and enquiries made, the housing conditions appeared to compare favourably with the districts of the Mainland where housing improvements have been carried out. The usual open well, however, is fairly evident, and sanitary conveniences attached to the houses are exceptional.

The food shops where inspected were found clean and in good order and with the exception of one tin of preserved meat, all the food on sale, preserved and otherwise, was found to be sound and fit for human consumption.

Various nuisances discovered, or reported, were intimated to the North Isles District Committee with a view to their abatement.

The usual Tabular Statement has been forwarded to the Board of Health and the Local Authority.

I have the honour to be,

Gentlemen,

Your obedient Servant,

WILLIAM ALEXR. WATT,

County Sanitary Inspector.

*Chief District Sanitary Inspector
for the Mainland District.*

