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Contributors

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

URBAN SANITARY DISTRICT

OF CAMBORNE

For the year ending December 31st, 1919.



TO THE CHAIRMAN AND MEMBERS OF THE CAMBORNE URBAN DISTRICT COUNCIL.

GENTLEMEN,

I have the honour to present to you my Annual Report on the Health and Sanitary Administration of your district for the year 1919.

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

Population.

The population of your district at the census in 1911 was as follows:—

Ecclesiastical District.	Males.	Females.	Total.
Camborne	3,517	4,631	8,148
Tuckingmill	1,582	1,952	3,534
Treslothan	1,100	1,409	2,509
Penponds	736	902	1,638
	6,935	8,894	15,829

These give a total of 15,829, the average population for the previous fifty years being 14,153.

According to the Registrar General's returns the estimated total population for 1919 is 14,944 and excluding all non-civilian males, whether serving at home or abroad it is 14,345. The larger population has been arrived at by distributing the non-civilian element over all the districts in the country in proportion to their estimated civilian population and this latter is based mainly on the

rationing returns. The Birth Rate is calculated on the total population, viz: 14,944 and the Death Rate on the civilian population of 14,345.

Physical Features and General Character of the District.

Your district has an area of 6,932 acres and an average density of population of 2.28 per acre. A very large proportion of this area however, is rural in character, so that the density of population would vary considerably in the different localities, being much higher in the town itself and the larger villages.

Your district is chiefly situated on the side of a hill varying in elevation from about 50 to 600 feet above sea level, the fall generally being from south-east to north-west, in which latter direction it extends to the sea coast at the North Cliffs.

The town itself is mainly built on a plateau about 400 feet above sea level, is in the centre of the Tin Mining district and situated about 12 miles west of Truro.

The soil is loam and the sub-soil clay.

The prevailing winds are chiefly from the West and South West.

The temperature is mild and fairly equable, but the atmosphere is humid.

Social Conditions.

The population is mainly a working-class one, the chief occupations of the inhabitants being Tin-Mining and Tin Streaming, Rock Drill Manufacturing, Iron Engineering and Safety-fuse making, female labour being mostly engaged in this latter industry.

At the census in 1911 there were :-

						Males.	Females.
Under 1.	5 y	ears	of a	age		2,285	2,239
Between	15	and	55	years	of age	4,014	5,219
,,	55	and	65	,,	,,	364	645
,,	65	and	85	,,	,,	264	752
,,	85	and	95	;,	,,	8	37
,,	95	and	100) ,,	,,		2

Males Females
There were 9,094 Unmarried Persons, 4,327 4,767
,, ,, 5,336 Married Persons 2,469 2.867
,, ,, 1,399 Widowed 139 1,260

Of the grouped occupations of Males aged 10 years and upwards there were 4,467 engaged in occupations and 912 Retired or Unoccupied.

Of those occupied :-

248 were engaged in Agriculture.

1,643 in Tin Mines and Tin Streams.

640 in General Engineering and Machine Making.

Of the grouped occupations of Females

aged 10 years and upwards there were 2.052 engaged in occupations, 537 of these being employed on domestic service, 51 engaged in Agriculture, 382 in Safety Fuse Works, 353 in Shops and 282 as Dressmakers, Milliners and Tailoresses.

Classification of Buildings.

In 1911 there were 3,844 Buildings used as Dwellings and of these 3,634 were ordinary Dwelling Houses, 176 were Shops, 21 Hotels, Inns and Public Houses and 13 others. There were also 173 Buildings not used as Dwellings. The average number of persons per inhabited dwelling was 4·12

The number of families per house were classified as follows:

```
6 Families of 1 in 1 Room.
  1 Family of 2 ,, 1
108 Families of 1 ,, 2 Rooms.
                2 ,,
106
103
            ., 3 ., 2
 32
                4 .. 2
            ,, 6 ,, 2
                7 ,, 2
               11 ,, 2
               1 ., 3 Rooms
 44
            ,, 2 ,, 3
130
133
            ,, 3 ,, 3
```

1	01	F	amil	ies	of	4	in	3	Rooms.
-		-	CALLETI	100	~ 1			•	TOO OHID.

60	,,	,,	5	,,	3	,,	
36	,,	,,		,,		,,	
15	,,	,,	7	,,	3	,,	
11	,,	,,	8	,,	3	,,	
1	,,	,,	9	,,	3	,,	
1	,,	,,	10	,,	3	,,	

In addition to these there were :-

1,005 Families living in 4 Roomed Houses.

83	,,	,,	,, 10	,,	,, & up	vard
83	,,	,,	,, 9	,,	,,	
127	,,	,,	,, 8	,,	,,	
212	,,	,,	., 7	, ,,		
659	,,	,,	,, 6	.,	,,	
801	,,	,,	,, 5	,,	,,	

A total of 3,892 Private Families living in 3,844 Buildings used as dwellings and of these there were 78 Houses with more than two occupants to one room with a total population of 572.

The number of Dwelling Houses at the end of 1919 was 3,811, giving an average of 3.9 per inhabited house.

Vital Statistics.—Births.

The total births for the year were, 262,—144 males and 118 females, of which 16 or 6.%1 were illegitimate. These give a Birth Rate of 17.53 per 1000, as compared with a Birth Rate of

15.32 for 1918, calculated on an estimated population of 16.637, which estimate was undoubtedly too high. The Birth Rates for 1918 and 1917 calculated on the census figures for 1911 were 16.10 and 16.93 respectively.

The average Birth Rate for the ten years previous to 1919 was 22.09 and for the ten years previous to the War it was 24.20.

The Birth Rate for England and Wales for 1919 was 18.5 as compared with 17.7 for 1918 and 17.8 for 1917.

Illegitimate Births.

The total number of Illegitimate Births registered during the year was 16 (9 males and 7 females), giving an Illegitimate Birth Rate of 1.07 per 1,000 and a proportion of 61 per 1 000 Births.

Deaths.

The deaths of 101 Males and 140 Females were registered during the year, making a total of 241. These returns give a Death Rate of 16.80 per 1,000 as compared with 18.11 for 1918 and 18.04 for 1917. The average Death Rate for the ten years previous to 1919 was 16.19 and for the ten years previous to the War it was 15.67.

The Death Rate for England and Wales for 1919 was 13.8 as compared with 17.6 for 1918 and 14.4 for 1917.

The principle causes of death in your district were as follows:—

	Males.	Females.	Total.
Diphtheria	4	5	9
Influenza	10	8	18
Pulmonary Tuberculosis	19	9	28
Tuberculous Meningitis	I	1	2
Other Tuberculous Disease	s 1	3	4
Cancer	4	10	14
Rheumatic Fever	1	0	1
Organic Heart Disease	15	24	39
Bronchitis	4	12	16
Pneumoniá (all forms)	2	6	8
Other Respiratory Diseases	s 2	1	3
Diarrhoea (under 2 years)	3	1	4
Nephritis & Bright's Disea	se 3	8	11
Parturition apart from			
Puerperal Fever	0	1	1
Congenital Debility	7	2	9
Violence apart from Suicide	e 4	1	5
Suicide	1	0	1
Other Defined Diseases	20	48	68

The various ages at death were as follows:

Under	1 ve	ar		 21
Betwee			5	 5
,,	5	,,	15	 13
.,	15	,,	25	 6
٠,	25	,,	35	 18
,,	35	,,	45	 1.1

Between	45	and	55	 22
,,	55	,,	65	 36
,,	65	,,	75	44
,,	75	,,	85	 53
,,	85	,,	95	11
Aged 1	00			 1

Natural Increase.

The natural increase of population is 21 as compared with a Decrease of 14 and 1 respectively for 1918 and 1917 and an Increase of 65 for 1916.

Infantile Mortality.

The deaths of 21 infants under one year of age (14 males and 7 females) occurred during the year and of these 3 were illegitimate, all males.

The various ages at death were as follows :-

	0		
Under	1	day	 1
,,	1	week	 5
,,	2	weeks	 2
,,	4	weeks	 1
Under	2	months	 2
,,	3	months	 2
,,	4	months	 1
,,	7	months	 1
,,	8	months	 1
,,	9	months	 2
,, 1	()	months	 1
., 1	1	months	 2

21

The various causes of death were as follows :-

Prematurity		5	
Broncho-Pneumonia		5	1
Pneumonia following	Influenza	1/2	5
Convulsions		(2 3	(8
Marasmus		2	-
Gastro-Enteritis		2	-
Asthenia	**	1	-
Malnutrition		1	
Intestinal Obstruction	1		
Congenital Hydrocep	1		

These returns give an Infantile Mortality Rate of 80 per 1,000 Births as compared with 121 for 1918 and 57 for 1917, this latter being the lowest of which I have any record.

The average rate for the ten years previous to 1919 was 116 per 1,000 births as set out in the following table:—

Infantile Mortality Rate
per 1,000 Births.
117
138
175
130
111
99
87
118
67
121

The carrying out of the provisions of the notification of Births Act (administered by the County Council) and the education of the Mothers as to the proper feeding and management of their infants and the prevention and treatment of infantile diseases, by means of the Health Visitors and at the Baby Welcome, held weekly in your town, cannot but be productive of good and should materially contribute towards the lowering of the Infantile Mortality Rate. The Rate for England and Wales for 1919 was 89 per 1,000 Births as compared with 97 for both 1918 and 1917.

Zymotic Death Rate.

Nine deaths from Diphtheria and four from Diarrhoea give a death rate from Zymotic Diseases of 0.90 per 1,000 as compared with a rate of 1.14 for 1918 and 0.27 for 1917.

Inquest Cases.

There were 12 Inquest Cases during the year as compared with 15 for the previous year. Of these five were due to Natural Causes, six to accidents and one was a case of Suicide. Of the deaths due to accidents, two were caused by falls of ground at Dolcoath Mine, two were due to accidental falls, one was a case of Tetanus following an injury to the thumb and one was a case of Fractured Skull through falling out of a pony trap.

Tubercular Diseases.

There were 28 cases of Tubercular Diseases notified during the year as compared with 154 for 1918.

Of these the Lungs were affected in 25 cases (17 males and 8 females), as compared with 67 cases (40 males and 27 females) in 1918. Six of these were Tin Miners, one a Gold Miner, three Mine Labourers and one employed on a Stone Crusher in a Mine. The Meninges were affected in one case as compared with five for the previous year, the Cervical Glands in one case as compared with 70 cases for the previous year and the Spine and Hip in one case.

There were 34 deaths from Tubercular Diseases, giving a Death Rate of 2:37 per 1,000 as compared with 3:70 for 1918 and 2:90 for 1917.

From Pulmonary Tuberculosis (Phthisis) alone there were 28 deaths, 19 Males and 9 Females, giving a Death Rate of 195 per 1,000 and a percentage of 116 of the total deaths, as compared with a Rate of 3.03 and a percentage of 16.72 of the total deaths for 1918.

The following table gives the Death Rates and percentages of Total Deaths from Phthisis for the ten years previous to 1919.

Date.	No. of Deaths.	Rate per 1,000.	Percentage of Total Deaths.
1918	45	3.03	16.72
1917	34	2.28	12.64
1916	45	3.11	16.54
1915	34	2.07	14.65
1914	34	2.15	11.72
1913	49	3.09	18.49
1912	32	2.21	16.36
1911	32	2.02	12.69
1910	45	3.05	18.14
1909	38	2.58	15.26

Of the deaths in 1919 there were 9 in Tin Miners, 3 in Gold Miners and 2 in Tin and Gold Miners, the average age at death being 49.

These returns are the lowest of which I have any record with the exception of 1898 when there were only 8 deaths from Phthisis in Miners.

There seems to be every reason for believing that the carrying out of the regulations introduced in 1905 for the prevention of Miners Phthisis—regulations which are more particularly directed towards the prevention of dust inhalation in rockdrill work—is having the desired effect and should encourage both mine officials and the miners themselves to adopt every precaution against the inhalation of dust in whatever way it may be produced.

Dr. Haldane who has studied the subject of Miners Phthisis very closely and whose opinion should carry great weight, has stated that "apart from the avoidable danger of dust inhalation, metalliferous mining in Cornwall appears to be a perfectly healthy occupation," and with his opinion I am in entire agreement.

Poor Law Relief.

The amount of Poor Law Relief for 1919 in money and kind was £2,862 13 6.

SANITARY CIRCUMSTANCES OF THE DISTRICT.

Water.

The town itself, including Tuckingmill, together with the villages of Beacon, Treswithian and Kehelland and part of Pengegon are supplied with water from The Camborne Water Company, there being now 3,053 customers in your District. The adjoining parishes of Illogan and Crowan are also supplied with water from this Company, which was established in 1867.

The Camborne Water Co's. supply comes from two separate sources, Cargenwyn and Boswyn and the watersheds of the whole of the former source and part of the latter are in the parish of Crowan in the Helston Rural District. The supply is derived entirely from springs and all the

water is filtered before delivery and generally the service is constant.

Owing however to the prolonged drought last year (when I am informed there was the lightest rainfall in this district for over 50 years), on the 15th October the works were sectionised into three districts, each district being supplied with water tor four hours each day. This intermittent supply which in some parts of your district was extremely scanty and prevented the proper flushing of closets, drains and sewers, was continued until December 1st, when the supply again became constant.

I am informed by the Water Company that a new scheme is now under consideration to further increase the supply and it is sincerely hoped that the measures to be taken will guarantee a constant full supply to all customers, whatever the amount of rainfall may be. There are now three reservoirs at Cargenwyn, the total storage capacity being 34 million gallons, and at Boswyn there are one reservoir and one storage tank, the total storage capacity being 7 million gallons. There is also a ferro-concrete town service reservoir of one million gallons capacity at Kitty's Lane. The two supplies are piped separately to Boteto Bridge, near the boundary of your parish and here they join into one main which carries the supply to yours and Illogan Districts. No surface or bye-wash water now finds its way into the Reservoirs and the water is frequently analysed and found to be of excellent quality and eminently suitable for drinking purposes and the results of the analyses show that there is no evidence of pollution with sewage or animal excreta. The water is liable to plumbo-solvent action, but lead pipes are forbidden to be used by the Water Company and I know of no facts pointing to contamination of the water by lead, nor have any cases of lead poisoning been brought to my notice.

It is in my opinion highly desirable that the Camborne Water Co's supply should be extended to the villages of Barripper and Penponds, which could easily be fed from this source. These villages are now supplied with water from deep wells and adits, the latter being piped for a short distance into "shoots."

The village of Troon is well supplied with excellent water from a deep adit and the supply is constant and abundant. The adjoining hamlet at Croft Common also obtains water from this source. The village of Condurrow is badly supplied with water from shallow wells, in some cases at considerable distances from the houses, and it was hoped at one time that the Water Company would extend their supply from Beacon to this village, but apparently there are engineering difficulties which cannot easily be overcome.

Croft Mitchell, Bolenowe, Roscroggan and part of Pengegon are supplied with water from

wells and the supplies are apparently sufficient for these districts.

Rivers and Streams.

Streams in your district are polluted by the discharge of sewage after passing through the settling tanks and without any preliminary filtration at Troon, Barripper and Tuckingmill.

There are no rivers in your district.

Drainage and Sewerage.

Your existing works of Sewerage and Sewage Disposal were carried out about the year 1878. The public sewers are constructed chiefly of 9 inch and 6 inch sanitary pipes, and are laid on what is known as the combined system, the same sewers receiving both sewage and storm water which are conveyed to five different outfalls at Rosewarne, College Row, Tuckingmill, Troon and Barripper. These outfalls do not receive the whole of the Sewage of your district and not only the villages of Penponds, Beacon, Condurrow, Bolenowe, Kehelland and part of Pengegon and parts of Laity Road and New Road, Troon but parts of the town itself such as Wheal Gerry, Hughville Street, Park Road, Higher Eny's Road, North Roskear Road, Mount Pleasant Road, Cadogan Terrace and parts of Roskear Row, Treswithian Terrace and College Street are excluded from the general system, and have no form of drainage or sewers.

The sewage upon its arrival at the outfalls is received into tanks through which it passes on the continual flow principle. There are no filtration beds at any of the Sewage Outfalls.

The tanks are often in a most unsatisfactory condition, frequently full of sludge and silt, thus rendering them almost useless for the purpose for which they were designed, and in the periodical cleaning of the tanks heaps of solid sewage giving rise to most offensive odours, lie adjacent thereto.

In 1908 new ditritus tanks were erected at the Rosewarne Sewage Outfall for the temporary disposal of the sewage, and after preliminary treat ment in these tanks the sewage after flowing through channels over the land, discharges into the "Red River" at Reskadinnick Mill, as also does the effluent from the College Street outfall. This arrangement however was only meant to be of a temporary nature.

At Troon and Barripper the effluent after passing through the settling tanks discharges directly into small streams near, and at Tucking-mill the effluent discharges into the Tin Stream.

For very many years past I have continually called your attention to the most unsatisfactory condition of your sewerage and methods of sewage disposal and to the urgent need of the drainage of

certain parts of your district, and your Council and various Sanitary Committees have again and again discussed the matter.

As early as 1902 a firm of Civil Engineers was called in by your Council and presented a report on the Sewerage and Sewage Disposal of your district, but no definite action was taken.

Again in 1906 Mr. John Chadwick, a civil engineer with large experience of Sewage Disposal, was instructed by your Council to advise on the matter, and in February, 1907, he presented his report.

In this report he commented on the utter inadequacy of the works of your outfalls to purify sewage, and advised that, unless engineering difficulties absolutely prevented it, the purification or disposal should take place at one point, thereby reducing the annual expense of maintenance to a minimum. He advised therefore that the Rosewarne, College Row, Tuckingmill and Troon outfalls should be abandoned and the sewage from these sites conveyed by gravitation to one point. The sewage at the Barripper outfall should be treated separately on modern lines, the position and levels at Barripper preventing its inclusion in a common scheme.

After reviewing the various systems of sewage disposal, he came to the conclusion that a

sea outfall at the North Cliffs was by far the most suitable for Camborne, pointing out that the nature of the soil and the quantity available below the level at which the whole of the sewage can be collected, precluded land treatment and further that a Bacterial system of purification though quite practicable would exceed that of sea disposal in first cost, and what is a more important item, in annual expense.

After obtaining the fullest information as to the tides and currents on the North Coast he was persuaded that with proper precautions the sea outfall system would be attended with satisfactory results.

He remarked that no system of bacterial purification entirely disposes of the sludge, that there is in sewage a considerable amount of inorganic matter which cannot be broken up and liquified by the agency of bacteria, and although a pure effluent may be produced, the disposal of the sewage remains as an ever present source of expense. A sea outfall disposes of sewage and sludge.

He also stated that any inland system of sewage purification is much simplified when a separate system of drainage is adopted. In this district one set of sewers receives both sewage and storm water, and as these sewers are believed to be in a satisfactory condition and many of them quite

modern, it would be unadvisable to now adopt a separate system. With a sea outfall a combined system of sewerage would present no difficulty.

At the date of his report he estimated the costs of a Sea Outfall Scheme, including all new sewers, but exclusive of land and engineering expenses at £13,447, and the cost of a Bacterial System of Sewage Purification, including all new sewers, but exclusive of land and engineering expenses at £16,378, and further estimated that the cost of upkeep of the Bacterial System would be about four times that of the Sea Outfall Scheme.

This report was, as I have previously stated, presented to your Council in February, 1907, and in my Annual Report for 1911 I remarked as follows :- " I regret that I am unable to report but little actual progress towards the more satisfactory disposal of the sewage in your district. After consultation with the Ratepayers you have adopted a scheme whereby the whole of the sewage will be conveyed to the North Cliffs and then discharged into the sea. The necessary plans and specifications have been presented to the Local Government Board for their approval. They, however, before proceeding further require more detailed information as to the course of the tides, etc., at the point of discharge, and this information your Engineer is endeavouring to obtain, but the present season of the year (February) is a most unfavourable time

for the carrying out of the necessary experiments, and this fact accounts for the present delay. It seems unfortunate that these data were not obtained during the summer months, when the conditions of things was most favourable for the experiments required. When the necessary information has been furnished to the Local Government Board it is presumed a public inquiry will be held by them, and after their sanction is obtained it is to be hoped the scheme will be carried out as speedily as practicable. Many parts of your district are in urgent need of efficient drainage, but apparently nothing can be done towards remedying the evil until the sewage disposal scheme is sanc tioned and proceeded with."

A public inquiry was held, and the Sea Outfall Scheme sanctioned by the Local Government Board in April, 1912, but in my Annual Report for 1913 I remarked as follows:—

"It is unfortunate that the Sewage Disposal Scheme for the carrying of the whole of the sewage into the sea at the North Cliffs, which had been sanctioned by the Local Government Board in April, 1912, has not been proceeded with to the extent that the work has actually been commenced You have negotiated a loan with the Public Works Loan Board, and had received tenders for the carrying out of the whole of the work. None of these tenders, however, were considered satisfactory

by your Council, and after reconsidering in detail the Engineer's specification instructions have again been given for advertising for fresh tenders. It is sincerely to be hoped that there will be no further delay in the matter, and that you will proceed with the necessary steps for the carrying out of the work authorised."

This was in March, 1914, and the fresh tenders referred to were obtained and then came the Great War and nothing further has been done in the matter since.

I am sure you all realise that this question must be tackled sooner or later, and in view of the fact that the cost of carrying out the work will now be enormously increased, it seems more than unfortunate that it was not proceeded with as soon as the sanction of the Local Government Board had been obtained.

I can only urge upon you the great desirability of again seriously considering the matter, and the taking of some definite steps to place the Sewerage and Sewage Disposal of your district on a more satisfactory basis, and extending the sewerage to the parts of your district which I have previously mentioned and which are in urgent need of attention.

Closet Accommodation.

Those parts of your district mentioned under

the preceding heading (Drainage and Sewerage) where extension of existing sewers or provision of new sewers are necessary, as well as the villages of Kehelland, Menadarva, Treswithian, Penponds, Barripper, Beacon Bolenowe, Brea, Troon, and outlying groups of houses and single houses are provided with privies.

There are approximately 1,596 Water Closets, 48 pail closets and 2,200 privies in your district.

The number of privies or pail closets converted to water closets since 1916 is 96.

I am sure you must all fully realise the great disadvantages of the privy system, and that they are contrary to all sound principles of hygiene, and cannot but be detrimental to the public health.

Where systems of drainage obtain and water for flushing is available these privies should be completely done away with and Water Closets substituted in their stead and particularly in populous and closely built centres in your district, and I must again impress upon your Council the urgent necessity of systematically carrying out this important work, and of compelling owners of houses to comply with your orders. At present in all cases when the necessary facilities exist you require all new dwelling houses and also all old dwelling houses when plans for structural alterations are presented, to be provided with Water Closets, and

in other cases when the required conditions are likely to be shortly present you only sanction the erection of privies as temporary make shifts to be replaced later by Water Closets. This is an additional argument if any is needed for the urgent necessity of extending your sewers to those parts of your district which I have already specified.

Privies at their best are bound to be insanitary, and those which have to remain because there is no system of sewerage or water available for flushing, should be constructed in strict accordance with your Byelaws so that the evils arising therefrom are reduced to a minimum. Unfortunately many large privy pits, uncemented, below the level of the ground, and often uncovered, still exist in your district, and particularly among the older houses, and the consequent accumulation of large quantities of excreta and other refuse in close proximity to dwellings and the pollution of the surrounding soil cannot but prove most detrimental to the health of those living in their vicinity.

I have again and again in previous reports called your attention to these insanitary conditions often at the risk of wearisome repetition, and I sincerely hope and believe that no sentimental reasons will deter your Council from doing all you can to mitigate the evils complained of. One of the main difficulties in carrying out much needed improvements is due to the fact that so many of

the older houses are held on the life tenure system, and when, as in many instances, there is only one old life remaining on the property, the owners object to any extensive outlay on premises which at any time might revert to the ground landlord.

Scavenging.

Three men are constantly employed in the cleansing of privies, whilst two men are employed six days and one man two days per week in the removal of refuse from movable receptacles.

These movable receptables or ashbins are in the majority of cases unprovided with proper coverings, and in the interests of the public health I must strongly advise your Council to insist on this being done. These receptacles often contain decomposing animal and vegetable matter, which, if left exposed, are bound to be insanitary, and in the summer especially give off offensive odours, and infection therefrom is carried by means of flies to food exposed for sale or stored in the home.

If the inhabitants could only get into the habit of burning all combustible refuse instead of throwing it into the receptacles as at present or into their gardens or privy pits, not only would the work of the scavengers be lightened, but an improved sanitary state of things would result.

Cesspools are emptied by the employees of your Council at the request of the owners, generally into the gardens and covered over.

The refuse is removed to two depôts one at North Roskear, about 100 yards away from the nearest house, where the refuse is covered with earth, and one at College Street about 200 yards away from the nearest house, where the refuse is roughly sorted and the combustible part burnt. Farmers purchase the refuse manure.

The number of houses where movable ashbins have been substituted for fixed receptacles since 1916 is approximately 126. The majority of these have not been provided with proper coverings owing largely to the present high cost of galvanised ash bins.

Sanitary Inspection of District.

Number of premises visited, 700.

Defects or nuisances discovered,

Most of the defects found were due either to faulty construction or the want of proper means of disposal of the foul water and the want of water closets.

Special attention has been given to the abolition of privies in the Town Area with the result that 57 Water Closets have been provided during the year. Owing to the shortage of material and the high price of same, and the shortage of labour, the necessary renovating and repairing of premises have been neglected during the war, and there is much that requires to be done in this

connection, and it is hoped that the defects and nuisances that have been discovered will speedily and systematically receive attention.

Action taken:

Preliminary notices served				226	
Letters written				85	
Notices complied with				64	
Notices partly carried out at 30th Dec., 1919					
Work in hand				13	
Statutory notices served				11	
" complied	with			3	
Work in hand				4	
,, not started				4	
Result of action:					
Rooms cleansed				11	
Roofs repaired		9.1. Va		7	
Floors repaired				13	
Walls—external repaired				2	
" internal repaired				3	
Eavesgutters cleared				8	
" provided or re	paired			21	
Setting to yard gullies repair				9	
Bell traps, &c., removed				4	
Defective Water Closets rep	paired			6	
Obstructed drains cleared				9	
Drains repaired after testing	g			9	
Drainage for rainwater prov	ided			9	
" " foul water "				10	
Workshops cleansed				4	

Water supply improved		8
Foul accumulations removed	 	11
Water closets provided	 	57
Pail closet provided	 	1
Loads of Refuse removed	 	8903
Rooms disinfected	 	189
Bedding removed for disinfection	 	49

Premises and Occupations which can be controlled by Bye-laws or Regulations.

Common Lodging House.

The Common Lodging House in Vyvyan's Row is now again in use. This house was built in 1914 and has accommodation for 44 men. It has been frequently inspected and found satisfactory, and your Bye-laws relating to the same are complied with. No case of infectious disease has been notified to me from this house during the year.

The two old Lodging Houses in Trelowarren Street are not now in use and will be eventually pulled down.

There are no underground sleeping rooms in your district.

Offensive Trades.

There are two Offensive Trades carried on in your district, viz.:—

- 1. Tallow melting at Stray Park.
- The Hide and Skin Market at North Road Quarry.

There have been no complaints as regards the former, but in the latter complaints were received as to nuisances arising from the storage of raw bones. This was partly due to the difficulty of transport, whereby a larger amount than usual was allowed to accumulate.

Your Sanitary Committee visited the premises, and as a result of such visit your Council ordered certain alterations to be carried out to abate the nuisance as far as possible.

These alterations have now been completed, and should tend to prevent any further complaint from this cause.

Other Sanitary Conditions requiring Notice. Accommodation Lanes.

The condition of several of the Accommodation Lanes at the backs of houses in the town itself are far from satisfactory, due to accumulation of mud and refuse, and stagnant pools. These conditions are mostly due to want of drainage and repairs, and the owners should be called upon to carry out the necessary improvements.

Public Urinals and Lavatories.

There are only two Public Urinals in your district, both fairly near one another, and it is in my

opinion highly necessary that more accommodation should be provided, particularly at the North-Eastern end of the town and at Tuckingmill, and provision should also be made for Public Water Closets.

There is no Public Lavatory accommodation for the Female Sex, and this also is urgently needed.

At present the Water Closets at the Railway Station are the only ones available for the public, and complaints have been received as to the dirty conditions of these, particularly at the week ends.

Schools.

There are eight Elementary Schools and one Secondary School in your district.

The Elementary Schools have been frequently inspected during the year, particularly as regards the sanitary conveniences, and on the whole their sanitary condition has been found satisfactory.

The Water Supply at the Elementary School at Beacon has been improved, and new lavatory basins and a "Bubble jet" drinking fountain have been provided in the Infants' Department at Basset Road. This latter has been found most satisfactory in use, and others should be provided in the other schools where a water supply is laid

on, thus doing away with the insanitary common drinking cups which are now in use in many of the schools and which are more than likely to convey infection from one scholar to another.

There is no proper Water Supply at Penponds, and the attention of the School Authorities has been called to this matter.

The Elementary Schools at College Street and Troon were closed during March on account of an epidemic of influenza, and the Roskear Schools in July and December for Diphtheria.

Owing to the prevalence of Infectious Diseases, particularly Diphtheria, I have frequently inspected the Elementary Schools affected and given orders for all suspicious cases to be excluded. All children from infected houses have also been excluded from school.

The duties of the Medical Inspection of Children attending the Public Elementary Schools are carried out by a Medical Officer appointed by the County Council, who acts under the direction of the Medical Officer of Health for the County.

FOOD.

Milk Supply.

The arrangements for the supply and distribution of milk in your district are adequate. I have received no complaints as to the wholesomness of the milk produced within or imported into the district, nor as to any difficulty in obtaining milk beyond the high prices now ruling and which prevent in many cases the poorer inhabitants obtaining the quantity which they had previously been accustomed to.

There are 51 Registered Cowkeepers in the district, and of these 22 are also Dairymen and 9 are Purveyors.

There are also 4 Registered Dairymen and Purveyors and 7 Purveyors.

I have again to report that the Sanitary condition of many of the Cowsheds in your district is far from satisfactory, little attention is seemingly paid by the owners either to cleanliness or sufficient ventilation. Very little improvement has been made in their condition during the year, possibly owing to the shortage and high price of material and to the shortage of labour.

Many of the Sheds require impervious paving and proper drainage, as well as additional light and ventilation, and these much-needed improvements should be enforced by your Council in the immediate future, for I am sure you are all alive to the paramount importance of ensuring a pure milk supply. There is no article of food in common use more exposed to contamination in its progress from the producer to the consumer than milk, and a product which is originally pure is often contaminated by the dirty udders of the cows, the unclean hands

of the milkers, and the dirty surroundings of the places where the animals are milked. The regulations under the Dairies, Cowsheds and Milkshops Orders should be enforced by your Council.

No action has been taken during the year as to tuberculous milk, and there is no veterinary inspection of the cows.

Milk (Mothers & Children) Order 1918.

This Order is administered by the County Council.

Other Foods.

Unsound Food & Food Inspection.

128 Inspections have been made of premises where food is manufactured, prepared, stored or exposed for sale. No seizures of food have been made, but 210 lbs. of food, chiefly fruit, was surrendered. The premises generally are kept clean.

Bakehouses.

There are 9 Bakehouses registered in your district. These have been frequently inspected and found satisfactory.

Meat Inspection.

Although your Sanitary Inspector is a certified Meat Inspector it is impossible for him to

inspect all the animals slaughtered in the district, or to inspect all the meat sold, as a large proportion is sold from vans, which go from door to door.

Disease in Meat.

No Tuberculous carcase has been found during the year, and the quality of the meat sold has much improved during the past year or two.

Slaughter Houses.

There are nine Slaughter Houses registered in your district under a yearly licence from your Council. They have been kept clean and their sanitary condition is fairly satisfactory. 64 inspections were made during the year, as many as possible during the time of slaughter.

No public abattoir has been established in your district, and I would again advise your Council to consider the question of the provision of one.

You must all realise how important it is that all meat intended for human consumption should be free from disease, but with the existing condition of things the public is not sufficiently protected against unwholesome meat, and no trust-worthy guarantee of its soundness can be ensured.

This can only be done when all animals intended for slaughter and all carcases are inspected by a qualified Inspector, and such inspection can only be adequately carried out in a public slaughter house and efficient meat inspection thereby obtained.

Many of the animals intended for human consumption are slaughtered outside your district, and over these slaughter houses you have no control. The inspection of all meat and of all animals at the time of slaughtering should be made compulsory, and until this is done the present condition of things will continue.

No action has been taken during the year under Section 117 of the Public Health Act 1875.

Sale of Food and Drugs Acts.

Your Council is not a local authority under the Sale of Food and Drugs Acts, which are ad ministered by the County Council.

I am indebted to the Superintendent of Police for the East Penwith Division for the following information:

Thirty-four samples of food were taken and analysed in your district during the year, and of these fourteen were samples of milk. One sample of milk was found to contain 19.5 parts of added

water, and the offender was fined £1:1:0. All the other samples taken were found to be genuine.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.

Infectious Diseases Generally.

Diphtheria was endemic in your district during the whole of the year and became epidemic in character towards the end of October and in November and December. The cases were notified as follows:—

January	 	9	cases
February		14	,,
March	 =	5	,,
April	 	3	,,
May	 	7	,,
June	 	13	,,
July	 	13	,,
August		1	,,
September	 	11	,,
October	 1	18	,,
November	 	22	,,
December	 	38	,,

These give a total of 154 cases, and a Disease Rate of 10.7 per 1000.

These are by far the largest number of cases of Diphtheria of which I have any record, the average number notified for the previous ten years being 21.

There were nine deaths from this disease, giving a Death Rate of 0.62 per 1000.

Most of the cases were mild in type some particularly so and the diagnosis was confirmed in every case by bacteriological examination of a throat swab, and practically all the cases were treated with Diphtheria Antitoxin, which is supplied free by your Authority. The very mild form of the disease has, no doubt, contributed to its spread, and probably many unrecognised cases have been allowed to attend school perhaps after one or two days' of slight malaise at home, and so infected others attending the same school. 79 of the cases were in the town itself in different streets, 18 in Tuckingmill, 15 in Troon, 9 at Croft Mitchell, 3 at Croft Common, 4 at Bolenowe, 5 at Beacon, 5 at Barripper, 3 at Brea, 2 at Penponds, 3 at Pengegon and 3 at Condurrow.

Nearly all the cases were in children attending the Elementary Schools, particularly at Roskear, and to a lesser extent at Troon. The Girls and Infants Schools at Roskear were closed from July 25th to 31st, and remained closed during the summer holidays, and again the whole school at Roskear from December 5th to 19th and during the Xmas Holidays, and both these schools and those at Troon were disinfected and sprayed with Formalin during these latter holidays.

It will be noted that there was only one case notified throughout August, during the whole of which month all the Elementary Schools were closed, but the cases began to reappear shortly after the schools were re-opened.

The prospects of putting an end to an epidemic by school closure are not promising, and rarely have a permanent effect. They often result in diminishing the number of cases for a time, but they generally recur on re-opening.

Infection is very often spread by what are known as "carriers," and although such cases may be quite well in themselves and their throats on inspection apparently healthy, yet they are able to infect others because the bacillus of the disease (in the case of Diphtheria the Klebs-Loeffler Bacillus) is present in some part of the Naso-Pharynx, and it is only by swabbing the throats of all children attending school and examining such swabs bacteriologically that such "carriers" can be discovered.

In all the houses where Diphtheria cases have been notified the other children have been excluded from attendance at school, and the infected rooms has been disinfected by spraying with Formalin, and in many cases the bedding also disinfected at the Disinfector.

The infected children have also been excluded from school for some time after convalescence.

Scarlet Fever.

46 cases of Scarlet Fever were notified during the year as follows:—

January	 	10	cases
February	 	9	,,
March	 	3	,,
April	 	2	,,
June	 	1	,,
July	 	3	,,
August	 	5	12
September	 	2	,,
October	 	1	,,
November	 	7	,,
December	 	3	,,

There was no death registered from this disease, and all the cases were very mild in type. There were six at Tuckingmill, five at Troon, two at Crott Mitchell, two at Wheal Gerry, and one each at Ramsgate, Beacon, Penponds and Crane, and the rest were in different streets in the town itself.

The source of infection could not be definitely traced in either case.

The infected rooms and bedding were disinfected in every case, and all children from the infected houses excluded from school during the period of infection.

As far as I can ascertain there were no "return" cases.

Measles and German Measles.

Measles were notified during the year, and there were no deaths from either of these diseases.

The cases were scattered over most of your district, generally a single case here and there, and the diseases were not prevalent in any particular locality. These diseases are not now notifiable.

Typhoid Fever.

Five cases of Typhoid Fever were notified during the year, giving a disease rate of 0.34 per 1000. There was no death registered from this disease.

The first case was notified in January at Beacon Hill, the next in July at Basset Road, the next in August at Wesley Street, the next in October at Atlantic Terrace, and the last in December in South Terrace.

In all the cases, with the exception of the one in Basset Road, where the origin of the disease could not be discovered, the disease was contracted outside the district and county.

Erysipelas.

Eleven cases of Erysipelas were notified during the year, viz: Four in January, one in February, one in March, two in May, one in August, and two in December.

These cases were all in adults, the majority elderly, and nine were in females.

Malaria.

Eleven cases of Malaria were notified during the year as follows:—One in February, one in March, one in April, three in May, one in July and four in August.

These cases were all in returned soldiers, and the disease was contracted in the East, in the majority of cases in Salonica, and all had been previously treated for the disease whilst in the Army.

Influenzal Pneumonia.

Thirty-six cases of Influenzal Pneumonia were notified during the year, thirty-four of these in February, March and April, when Influenza was epidemic over the whole of the district. The other two cases were notified in October.

Dysentery and Trench Fever.

No case of either of these diseases was notified to me during the year.

Chicken Pox.

Five cases of this disease were notified. One in June and four in August.

Influenza.

This disease was epidemic over practically the whole of your district during the months of

February, March and April, and there were 18 deaths registered from this disease, 10 in Males and 8 in Females.

Four of the deaths occurred in February, twelve in March and two in April, and in 16 the immediate cause of death was Pneumonia.

Of the other two fatal cases one was previously suffering from Pulmonary Tuberculosis, and the other died from Cardiac Failure.

The epidemic started in February and spread with amazing rapidity over practically the whole of your district, reaching its height in March, and by the end of April or beginning of May had practically disappeared again. The cases as they occurred were isolated as far as possible in their own homes, but in many of the houses two or more of the inmates, and in some cases the whole family, were ill at the same time.

As regards the Elementary Schools, it was particularly prevalent amongst the children attending the schools at College Street and Troon, and these schools were closed for this epidemic in March, the former from the 17th to 23rd and the latter from the 17th to the 31st.

Encephalitis Lethargica.

No case of this disease occurred during the year.

Notification of Tuberculosis.

As far as I can ascertain the requirements

as to notification of cases of Tuberculosis are faithfully observed by Medical Practitioners, and no special action has had to be taken to enforce the regulations or to secure prompt notification.

Small-pox.

No case of Small-pox has occurred in your district for many years past, and I have not performed any primary vaccinations or re-vaccinations under the Public Health (Small Pox Prevention) Regulations of 1917.

Vaccination.

During the year 1918, the latest period for which I can obtain complete returns, of 249 children born in your district, only 85 were successfully vaccinated.

Twelve died unvaccinated, 14 were postponed or had removed to other districts, and there were 138 exemptions.

These figures show that only 34 per cent, of the children born in 1918 were vaccinated, as compared with 38 per cent. in 1917, and 50 per cent. in 1916.

The percentage of successful vaccinations in your district is unfortunately becoming lower every year, and this is a most disquieting feature to those who believe in the efficacy of vaccination as an important factor in the maintenance of the general public health.

Locally contracted Anthrax, or Rabies.

No case of either of these diseases has been brought to my notice during the year.

MATERNITY AND CHILD WELFARE.

The County Council is the supervising authority under the Midwives Acts 1902 and 1918, and also the local authority carrying out Maternity and Child Welfare Schemes.

There is, however, a voluntary Infant Welfare Centre in your town, with which, however, I have no official connection. The following particulars have been furnished me by the Hon. Secretary, Mrs. Hooper:—

"The Centre is open every week on Wednesday afternoons from 2 to 4 o'clock. There is a room for weighing and registering weights and consultations with the Medical Officer, and a larger room which has seating accommodation for the Mothers, and a carpeted playing square for the babies with toys and books provided. A health lecture or demonstration is given fortnightly by a Health Visitor from Truro, and a dressmaking class is held the alternate weeks. Once a month a Dental Surgeon attends to any dental cases requiring attention. There is also a Thrift Club in connection with the Centre.

There are now over 70 names on the books, and the regular weekly attendance averages 20, which means about 25 babies.

The Centre is affiliated to the Camborne Nursing Association, and one of its nurses is Superintendent."

It seems to me unfortunate that your Council have no jurisdiction over or official connection with this Infant Welfare Centre.

Puerperal Fever.

No case of Puerperal Fever or other infectious diseases of parturient women have been notified to me during the year.

Ophthalmia Neonatorum.

Two cases of Ophthalmia Neonatorum were notified during the year, one at West Seton in May and the other at Croft Common in September. In the first case the baby was two days old when notified, and three days old in the latter, and both cases recovered without any permanent injury to either eye.

Epidemic Diarrhœa.

The district was free from epidemic Diarrhœa during the year.

Poliomyelitis.

One case of Acute Poliomyelitis was notified at Market Place in August in a girl five years of age, and permanent paralysis has resulted. There was also one other case which presented suspicious

symptoms of this disease but was not definitely diagnosed or notified. The case recovered without any permanent paralysis or disability.

SANITARY ADMINISTRATION.

1.—Staff.

You have one Sanitary Inspector who is also Inspector of Nuisances. He holds the certificate of the Royal Sanitary Institute as Inspector of Nuisances and Inspector of Meat and other Foods, as well as Certificates in Building Construction, &c. In addition to his general inspecting duties he has to superintend the Scavenging and Disposal of Refuse, and has charge of the Sewers and Outfalls, and is responsible for the removal of patients to the Isolation Hospital and for the disinfection of infected houses.

To allow him more time for inspecting and his other duties it would be of great advantage if a Clerk could be appointed in his office to assist him in his clerical work.

2.—Hospital Accommodation.

Your Isolation Hospital is situated in College Street, a detached private house standing in its own grounds. It has eight beds in three wards, but only one infectious disease can be treated at one and the same time. The rooms are not adapted for fever wards, and the accommodation is inadequate and unsatisfactory for a district of the size of Camborne.

It has a public mortuary and post mortem room in a separate building away from the hospital. There is also a horse ambulance, which is only used for infectious diseases, and jointly with the Redruth Urban and Rural Districts you possess a Steam Disinfector at West Tolgus in the parish of Illogan.

A permanent Caretaker and his wife reside on the premises, and the latter helps in the nursing of the patients, a trained nurse being obtained from one of the Nursing Institutions in the neighbourhood when required.

The Hospital is always in readiness in cases of emergency, and was used during the year as follows:—

January 1st to 22nd, for a case of diphtheria.

February 21st to March 3rd, for a case of Tetanus, which proved fatal.

May 26th to June 17th, for a case of diphtheria. Dec. 9th to Dec. 29th, for a case of diphtheria.

3.--Adoptive Acts.

The following Acts have been adopted by your Council:—

The Infectious Diseases Prevention Act of 1890.

The Public Health Acts Amendment Act of 1890. The Private Streets Works Act of 1892.

No action has been taken under these Acts during the year.

Bye Laws.

The following Bye Laws are in existence for the whole of your district:—

New Streets and Buildings.
Common Lodging Houses.
Public Wash Houses.
Slaughter Houses.
Nuisances.
Hackney Carriages.

These were adopted in 1886, and were revised by a joint Sanitary and General Purposes Committee in 1910, but no further action was taken. This important matter should be again taken in hand by your Council and the Bye Laws brought up to date and their provisions rigidly enforced.

4.—Chemical and Bacteriological Work

Beyond the systematic examination of throat swabs in suspicious cases for Diphtheria Bacilli and two Widal tests for Typhoid Fever, no chemical or bacteriological work has been carried out during the year.

Factory and Workshops Act 1901.

There are 60 Workshops in your district registered under this Act, and these have been frequently inspected.

During the year the Factory Inspector reported on the want of Sanitary Conveniences at three Factories, and the want of cleanliness at four Workshops.

Sanitary Conveniences have been provided at two of the Factories, and the other will be provided shortly.

The Workshops complained of have been cleaned.

HOUSING.

I.—General Housing Conditions in the District.

- (1) Total Number of Houses ... 3811

 Number for the Working Classes 3600 (approximately)

 New Houses in course of erection 2

 (One of these is for working class).
- (2) Population (census 1911) ... 15829 Estimated to middle of 1919 (total) 14944 (civilian) 14345

The population in this district owing to constant emigration and immigration is a very varying one and difficult to estimate correctly. If the tin mining industry does not materially improve the population is more than likely to still further decrease.

- (3) (a) Extent of shortage of houses (about) 100
 - (b) Measures contemplated to meet such shortage ... Housing Scheme.

II—Overcrowding.

(1) Extent. - There is no doubt that overcrowding

exists, but not to the extent that obtained in former years. Overcrowding of the sexes in bedrooms is one of the evils of which complaint must be made.

- (2) Causes.—The existing type of 2 bedroom house and inability of the poorer classes to pay a higher rent. Practically no speculative building by private builders has taken place during the years of the war.
- (3) Measures taken or contemplated to deal with overcrowding.
 - (a) The Council's Housing Scheme.
 - (b) Considerable emigration has taken place recently and is likely to continue, and this will tend to diminish the amount of overcrowding. If the tin mining industry still further declines emigration will take place on a much larger scale.
- (4) Complaints.—Two complaints were received as to alleged overcrowding during the year. One proved false and the other case was a question of sex, which was adjusted by using a spare room on the ground floor as a bedroom.

III.—Fitness.

(1) General Standard of Housing.—The general standard of housing in the district is poor as regards sanitary conditions.

- (2) GENERAL CHARACTER OF THE DEFECTS FOUND:
 - (a) Defective condition of the drains and want of water closets.
 - (b) Dampness of the walls, chiefly due to want of proper spouting for the conveyance of water from the roofs of houses, and of the foundations owing to want of proper damp-proof courses.
 - (c) Back yards insufficiently paved.
- (3) Action Taken.—Chief action has been taken under the Public Health Acts to remedy the insanitary conditions above noted.
- (4) DIFFICULTIES IN REMEDYING UNFITNESS. The difficulties in remedying unfitness is due to the life system of tenure, and to the shortage and high price of material and labour.
- (5) Conditions.—The conditions so far as they affect housing as regards water supply, closet accommodation and refuse disposal have been dealt with previously in this report.

IV.—Unhealthy Areas.

No action has been taken during the year.

V.—Bye Laws relating to Houses, &c.

The following Bye Laws dealing with these matters are in existence in your district:

New Streets and Buildings. Common Lodgings Houses.

These are in urgent need of revision.

VI.—General and Miscellaneous.

It is most difficult for your Council to effectually deal with overcrowding and insanitary property under present conditions. There are, without doubt, many cases of overcrowding existing and several insanitary houses which should be demolished, but in the absence of other suitable houses little can be done at present. The re moval of overcrowding in one part of your district would only accentuate it in another part, and the only remedy, presuming the population remains at the present level or increases, is the erection of new houses either by your Council or private builders. Owing, however, to the present exorbitant cost of materials and the difficulty of procuring same, and to the high cost of labour, it appears to me useless to expect private builders to materially help unless they are content to face the possibility of a financial loss.

VII.

- (1) Number of Dwellinghouses in respect of which complaints were made that they were unfit for human habitation by householders .. Nil.
- (2) Action taken under Section 17 of the Housing Act of 1909 ... Nil.
- (3) Action taken under Section 28 of the Housing Act of 1919 ... Nil.
- (4) Closing Orders ... Nil.

- (5) Demolition Orders ... Nil.
- (6) Number of dwellinghouses demolished voluntarily ... Four at Troon.
- (7) Obstructive Buildings .. No action taken.
- (8) Staff engaged in housing work. There is no staff exclusively engaged in housing work. These duties are carried out by your Sanitary Inspector with his other work.

In conclusion, I wish to again impress upon you the fact that as the local Health Authority you are largely responsible for the public health of your district, and during the coming year you should give immediate and earnest attention to the remedying of the defects in the sanitary condition of your Area to which I have called particular attention in this report. By so doing you will materially help in the prevention of disease, the diminution of sickness and the improvement in the general physical welfare of the inhabitants of this town and district.

I am, Gentlemen,

Your obedient servant,

J. TELFER THOMAS,

Medical Officer of Health.

Camborne, April 9th, 1920.

