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ST. AUSTELL RURAL DISTRICT.

Annual Report

FOR THE YEAR 1913

ON

THE HEALTH AND SANITARY CIRCUMSTANCES

OF THE DISTRICT

BY

A. T. NANKIVELL, M.D., D.P.H.

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ANNUAL REPORT

FOR THE YEAR 1913

ON THE

HEALTH AND SANITARY CIRCUMSTANCES

OF

THE RURAL DISTRICT OF ST. AUSTELL,

BY

A. T. NANKIVELL, M.D., D.P.H.,
(Lond.) (Camb.)

Member of the Royal College of Surgeons and Licentiate of the Royal College of Physicians; Bachelor of Surgery of the University of London; Medical Officer of Health to St. Austell Rural District; Fellow of the Incorporated Society of Medical Officers of Health and Member of the Royal Sanitary Institute; late Demonstrator of Public Health and Hygiene at King's College, University of London, etc.

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PREFACE.

TO THE CHAIRMAN AND MEMBERS OF THE ST. AUSTELL RURAL DISTRICT COUNCIL.

Gentlemen,

I have the honour of submitting to you my Second Annual Report on the Health and Sanitary Circumstances of your District.

As you are aware, I shall shortly be leaving this part of England to begin similar work as Medical Officer elsewhere, and for this reason it has been my endeavour in this Report to direct the attention of the Council to those Sanitary matters and to such Reforms as I think should engage their attention very seriously in the future. If the Council honour me by accepting it as such, this Report will form a valuable guide for future administrative work.

To labour without seeing the fruit of one's toil is both disappointing and discouraging, and I deeply regret that I have been able to see so little harvest as the result of all the work that I have undertaken in the last twenty months, during which I have been your Medical Officer. Schemes and recommendations which I have had at heart, and plans for the betterment of the Public Health have not matured, and, although this failure has not been due to my lack of insistance, I deplore the small amount of Sanitary work which has been carried out of late.

I should here like to state my appreciation of the kindness that I have received personally from so many Members of the Council, and to thank the Clerk and those Officers of the Council who have given me so much of their assistance.

I am, Gentlemen,

Yours faithfully,

A. T. NANKIVELL.

St. Austell,
January, 1914.

PART I.

NATURAL CONDITION OF THE DISTRICT.

SITUATION.

The St. Austell Rural District is situated in the centre and South part of the Duchy of Cornwall. The main line of the Great Western Railway from Plymouth to Penzance passes through the district, dividing it roughly into equal parts, northern and southern. The main road from London to Lands End touches the northern boundary of the district, and the main road from Lostwithiel to Truro, nearly paralleling the Railway, again divides the district into southern and northern parts.

The total area of the District up to November, 1912, was 58,316 acres, or just over 91 square miles. In this month the Parish of Fowey became a self-governing Borough, and the area of the District was reduced to 56,362 acres. The greatest length of the District from North to South is 15½ miles, and the extreme width 14 miles. About 25 miles of sea coast form the Southern Boundary : to the North are the Rural Districts of St. Columb and Bodmin ; to the East that of Liskeard and the new Borough of Fowey ; and to the West that of Truro.

There are 14 Parishes in the Rural District of St. Austell.

PHYSICAL FEATURES.

Like most of Cornwall this District is very hilly, and has many narrow valleys flanked by precipitous hills. The height of the land above the sea increases as one passes inland, and in the Northern parts of the District there is high ground over 1,000 feet above sea level.

The Goss Moor, and the district between St. Blazey and Par and the sea are the only large areas that can be called not hilly. The general ruggedness of the county makes travelling difficult, and the work of the Medical Officer of Health can therefore only adequately be performed with the help of a motor car.

CLIMATE.

The prevailing winds in this part of Cornwall blow from the South-West, and cause the climate to be warm and moist.

The Gulf Stream touching the coast raises the general temperature, and makes the winter months warm.

RAINFALL.

The following figures, kindly supplied by Mr. W. M. Coode, show the rainfall observations during 1913 at St. Austell :—

MONTH.	Total Depth.	Greatest Fall in 24 hours.		Number of days with 0·01 or more recorded.
	Inches.	Inches.	Date.	
January	7·93	1·23	10	29
February	1·47	0·55	7	8
March	4·57	0·78	22	22
April	5·26	1·04	26	20
May	4·10	1·02	7	21
June	1·71	0·33	5 & 22	15
July	0·77	0·19	8	11
August	0·60	0·19	27	9
September	3·56	1·18	13	18
October	5·09	0·94	10	18
November	5·98	0·81	9	26
December	4·37	1·03	5	21
Total	45·41			218

Compared with 1912 the past year showed less rainfall by a little more than 15 inches—60·47 to 45·41 inches. This great

difference is chiefly attributable to the very wet summer of 1912, as opposed to the dry summer of this year. Rain fell on 218 days in 1913, as compared with 234 days in 1912.

GEOLOGY.

For the following information regarding the Geology of the District thanks are due to Dr. R. T. Cann, of Fowey.

The outstanding feature of the rock surface of St. Austell District is the central plateau of granite, surrounded on all sides by a zone of much older slate rocks, highly metamorphosed. The granite extends from Lanlivery to St. Dennis and from Roche to Carthew and has numerous outliers. The St. Austell granite is surrounded by slates of lower Devonian age (containing grit and lime bands), the oldest being the red and green variegated slates of the Fowey river about Golant, the next, a series of grits and fossiliferous bands (much altered by proximity to the granite), on which St. Austell itself stands, and containing the metalliferous veins which have made this district famous ; and lastly, a series of grits much developed in the Southern part towards the Deadman.

The St. Austell granite differs in many important respects from the other granites. It cannot be too clearly apprehended that the structure of granite is largely dependent on the antecedent rock which has been melted down to form it. In our case the original Devonian beds were first softened and broken up by steam containing fluorine and boron, both eminent rock softeners, whose presence can be seen to-day in crystals of fluor and tourmaline, so universally distributed. Fragments of mica and tourmaline schists, representing roasted slates, are commonly found in the granite, and around Castle Dinas every graduation of rock from normal killas to tourmaline schist can be seen. The step from the latter to such a purely crystalline schistite as Roche Rock is not great. The granite itself is an acid rock containing much free silica, two or three varieties of felspar, a brown and a white mica, three varieties of tourmaline, yellow, brown and blue, fluor, and more rarely apatite, zircon, topaz and magnetite. These are often to be found lining cavities. These crystals may be primary or secondary, for no rock has undergone more alteration since consolidation than St. Austell granite. In some districts the felspars are primary, in others the tourmalines and zircons. But at

some period since consolidation a great fissure system was produced of great value industrially: to it is largely due the rotting of the felspars which has produced China Clay and the vein system bearing copper and tin.

An industrially important variety of granite is china stone, which is a whitish iron-free stone containing no tourmaline or black mica but much topaz and a different variety of felspar, the mica being white. Many specimens contain fluorspar, which modifies the colour.

The Devonian slate rocks, everywhere surrounding the central mass of granite and constituting the largest area of the surface, form an anticline or dome, the top of the dome being gone, so that the older rocks are nearer the granite, and it is these rocks that are so altered by the original heat of its proximity.

But the greatest interest of all attaches to the central granite mass. For scientific and industrial importance there is nothing to equal it.

TABLE I.

Vital Statistics of Whole District during 1913 and previous Years.

YEAR	Population estimated to Middle of each Year	Births			Total Deaths Registered in the District		Transferable Deaths,		Nett Deaths belonging to the District—			
		Un-corrected Number	Nett						Under 1 Year of Age		At all Ages	
			Number	Rate	Number	Rate	of Non-residents registered in the District	of Resi-dents not registered in the District	Number	Rate per 1,000 Nett Births	Number	Rate
1908	20,130	.....	774	26·1	390	13·1	.....	.....	83	113	.....	.....
1909	30,210	.....	728	24·5	445	15·0	.....	.....	68	99	.....	.....
1910	30,286	.....	731	24·6	408	13·7	.....	.....	66	90	.....	.....
1911	32,799	729	744	22·7	443	13·5	2	38	87	115	479	14·6
1912	33,115	698	710	21·4	385	11·6	5	26	55	77	406	12·2
1913	**33,440**	**714**	**723**	**21·6**	**424**	**12·7**	**5**	**31**	**64**	**88**	**453**	**13·5**
1913 County of Cornwall		.....	.....	19·6	.....	.....	.....	.....	.....	87	.....	11·6
1913 England & Wales		.....	.....	23·9	.....	.....	.....	.....	.....	109	.....	13·4

TABLE I.

Vital Statistics of Whole District during 1913 and previous Years.

YEAR	Population estimated to Middle of each Year	Births			Total Deaths Registered in the District		Transferable Deaths.		Net Deaths belonging to the District—			
		Uncorrected Number	Net				of Non-residents registered in the District	of Residents not registered in the District	Under 1 Year of Age		At all Ages	
			Number	Rate	Number	Rate			Number	Rate per 1,000 Net Births	Number	Rate
1908	20,130	.....	774	26·1	390	13·1	.....	.....	83	113	.....	.....
1909	30,218	.....	728	24·5	445	15·0	.....	.....	68	90	.....	.....
1910	30,2[illegible]	.....	731	24·6	408	13·7	.....	.....	66	90	.....	.....
1911	32,79[illegible]	[illegible]	744	22·7	443	13·5	2	38	87	115	479	14·6
1912	33,115	698	710	21·4	385	11·6	5	26	55	77	406	12·2
1913	**33,440**	**714**	**725**	**21·6**	**424**	**12·7**	**5**	**31**	**64**	**88**	**452**	**13·5**
1913 County of Cornwall		.....	.....	19·6	.....	.....	.....	.....	.....	87	.....	11·6
1913 England & Wales		.....	.....	23·9	.....	.....	.....	.....	.....	109	.....	13·4

TABLE II.

Cases of Infectious Disease notified during the Year 1913.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.								TOTAL CASES NOTIFIED IN EACH PARISH.													
	At all Ages.	At Ages—Years.							Creed.	Fowey.	Grampound.	Mevagissey.	Roche.	St. Austell Rural.	St. Blazey.	St. Dennis.	St. Ewe.	St. Goran.	St. Mewan.	St. Michael Caerhays.	St. Sampson.	St. Stephens.	Tywardreath.
		Under 1	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.															
Small Pox	**0**	...	.....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera. Plague	**0**	...	.....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	**90**	...	12	56	14	7	1	.....	...	1	...	3	...	4	...	74	...	...	1	...	...	5	2
Erysipelas	**14**	...	.....	1	2	9	1	1	...	...	...	1	...	5	...	1	...	1	...	...	...	5	1
Scarlet Fever	**86**	1	9	68	4	4	.....	.....	...	...	...	1	1	44	...	6	1	...	...	...	...	29	4
Typhus Fever	**0**	...	.....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	**2**	...	.....	.....	1	1	.....	.....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Relapsing Fever— Continued Fever	**0**	...	.....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	**0**	...	.....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	**0**	...	.....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	**1**	...	1	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Pulmonary Tuberculosis	**57**	...	.....	4	12	31	9	1	...	3	1	3	1	22	7	7	...	1	...	...	...	5	7
Other forms of Tuberculosis	**15**	1	1	4	5	3	1	.....	...	...	...	1	...	7	1	...	1	...	...	...	...	2	3
TOTALS	**265**	2	23	133	38	55	12	2	0	4	1	9	2	83	8	88	2	2	1	0	0	47	18

NOTIFIABLE DISEASE	TOTAL CASES NOTIFIED	NUMBER OF DEATHS	
		At all Ages.	Cases of Infect
			Under 1
			1 and under 5 years
			5 and under 15 years
Small Pox	.....	0	... .
Cholera. Plague	.....	0	... .
Diphtheria (including Membranous Croup)	.....	30	... 12 56
Erysipelas	.....	14	 1
Scarlet Fever	.....	86	1 9 68
Typhus Fever	.....	0	... .
Enteric Fever	.....	2	... .
Relapsing Fever—			
Continued Fever	.....	0	... .
Puerperal Fever	.....	0	... .
Cerebro-Spinal Meningitis	.....	0	... .
Poliomyelitis	.....	1	... 1 .....
Pulmonary Tuberculosis	.....	1	 4
Other forms of Tuberculosis	.....	1	1 1 4
TOTALS		265	2 23 [illegible]133

TABLE III.

Causes of, and Ages at Death during the Year 1913.

ST. AUSTELL RURAL DISTRICT.

CAUSES OF DEATH	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths in Institutions in the District
	All Ages	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years	65 and upwards	
All Causes — Certified	453	64	8	9	14	15	45	93	205	
All Causes — Uncertified										
1. Enteric Fever	0									
2. Small Pox	0									
3. Measles	1	1								
4. Scarlet Fever	0									
5. Whooping Cough	1		1							
6. Diphtheria and Croup	6		1	1	3	1				
7. Influenza	4							1	3	
8. Erysipelas	1					1				
9. Phthisis (Pulmonary Tuberculosis)	31				1	6	11	11	2	
10. Tuberculous Meningitis	2		1	1						
11. Other Tuberculous Diseases	6	1					4	1		
12. Cancer, Malignant Disease	32						4	17	11	1
13. Rheumatic Fever	2			1				1		
14. Meningitis	3	1			1			1		
15. Organic Heart Disease	42				1		4	13	24	
16. Bronchitis	24	5		2				4	13	
17. Pneumonia (all forms)	21	6	4	2		2		1	6	
18. Other diseases of respiratory organs	0									
19. Diarrhœa and Enteritis	7	6	1							
20. Appendicitis and Typhlitis	1					1				
21. Cirrhosis of Liver	2						1		1	
21a. Alcoholism	1							1		
22. Nephritis and Bright's Disease	14						3	6	5	
23. Puerperal Fever	0									
24. Other accidents and diseases of Pregnancy and Parturition	2						2			
25. Congenital Debility and Malformation, including Premature Birth	35	34				1				
26. Violent Deaths, excluding Suicide	12	1		1	1		5	4		
27. Suicide	2							1	1	
28. Other Defined Diseases	171	2		1	7	2	11	23	125	
29. Diseases ill-defined or unknown	30	7				1		8	14	
TOTALS	453	64	8	9	14	15	45	93	205	
Sub-Entries. included in above figures. 14 (a). Cerebro-spinal Meningitis	0									
28 (a) Poliomyelitis	0									
(b) Cerebral Hæmorrhage	18							3	15	
(c) Old Age	85								85	

TABLE III.

Causes of, and Ages at Death during the Year 1913.

ST. AUSTELL RURAL DISTRICT.

CAUSES OF DEATH	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths in Institutions in the District
	All Ages	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years	65 and upwards	
All Causes — Certified	453	64	8	9	14	15	45	93	205	
All Causes — Uncertified										
1. Enteric Fever	0									
2. Small Pox	0									
3. Measles	1	1								
4. Scarlet Fever	0									
5. Whooping Cough	1		1							
6. Diphtheria and Croup	6		1	1	3	1				
7. Influenza	4							1	3	
8. Erysipelas	1					1				
9. Phthisis (Pulmonary Tuberculosis)	31				1	6	11	11	2	
10. Tuberculous Meningitis	2		1	1						

TABLE IV.

INFANT MORTALITY.

1913. Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSES OF DEATH.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total Deaths under 1 year
All causes — Certified	22	4	4	1	31	15	7	6	5	64
All causes — Uncertified										
Small Pox										
Chicken Pox										
Measles									1	1
Scarlet Fever										
Whooping Cough										
Diphtheria and Croup										
Erysipelas										
Tuberculous Meningitis										
Abdominal Tuberculosis							1			1
Other Tuberculous Diseases										
Meningitis (*not Tuberculous*)						1				1
Convulsions	1	1		1	3	1			1	5
Laryngitis										
Bronchitis						1	1	2	1	5
Pneumonia (all forms)							2	2	2	6
Diarrhœa						3		1		4
Enteritis			1		1	1				2
Gastritis										
Syphilis		1			1					1
Rickets										
Suffocation, overlying										
Injury at birth										
Atelectasis	1				1					1
Congenital Malformations	2				2	1				3
Premature birth	13	2			15	2				17
Atrophy, Debility and Marasmus	2		3		5	5	3	1		14
Other Causes	3				3					3
Totals	22	4	4	1	31	15	7	6	5	64

TABLE IV.

INFANT MORTALITY.

1913. Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSES OF DEATH.		Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total Deaths under 1 year
All causes	Certified	22	4	4	1	31	15	7	6	5	64
	Uncertified										
Smallpox											
Measles											
Scarlet Fever											
Whooping Cough										1	1
Diphtheria and Croup											
Erysipelas											
Tuberculous Meningitis											
Abdominal Tuberculosis								1			1
Other Tuberculous Diseases											
Meningitis (not Tuberculous)							1				1

TABLE V.

Vital Statistics 1881—1913.

YEAR	Estimated Mid-year Population	Marriage Rate per 1,000 population	Birth Rate per 1,000 population	Death Rate per 1,000 population	Infantile Mortality per 1,000 Births	Infectious Diseases notified per 1,000 population
1881	26,586		22·9	18·7		
1882	26,556		31·8	15·9		
1883	26,510		31·8	18·2		
1884	26,486		33·9	19·6		
1885	26,446		32·6	18·6		
1886	26,416	14·0	33·8	19·6		
1887	26,396	16·4	29·7	19·5		
1888	26,356	15·8	31·9	17·2		
1889	26,336	17·0	36·6	17·6		
1890	26,286	16·2	31·6	18·8		
1891	27,355	16·2	32·7	19·4		1·1
1892	27,380	18·6	30·5	15·5	95	4·4
1893	27,405	15·8	29·8	21·4	141	4·6
1894	27,423	15·8	28·7	16·7	107	6·4
1895	27,445	14·4	31·4	18·9	130	3·6
1896	27,460	16·2	31·8	14·9	105	3·1
1897	27,475	16·8	31·3	16·7	147	4·9
1898	27,495	17·8	31·1	13·8	140	1·3
1899	27,544	18·8	30·6	18·6	147	4·5
1900	27,555	15·6	29·5	15·9	139	7·0
1901	29,600	15·2	28·04	14·7	119	3·6
1902	29,698	13·6	26·5	14·2	127	4·4
1903	29,740	15·0	25·9	13·2	105	0·06
1904	29,833	16·8	26·5	14·05	129	1·3
1905	29,910	17·6	25·3	15·3	153	5·0
1906	29,970	17·2	26·1	12·3	99	14·9
1907	30,060	17·4	25·4	13·8	105	5·0
1908	30,130	17·6	26·1	13·1	113	3·9
1909	30,210	18·6	24·5	15·03	99	2·0
1910	30,286	18·6	24·6	13·7	90	4·7
1911	32,799	15·4	22·7	14·6	115	4·0
1912	33,115	16·0	21·4	12·2	77	3·7
1913	**33,440**	**15·2**	**21·6**	**13·5**	**88**	**7·9**

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TABLE V.

Vital Statistics 1881—1913.

YEAR.	Estimated Mid-year Population.	Marriage Rate per 1,000 population.	Birth Rate per 1,000 population.	Death Rate per 1,000 population.	Infantile Mortality per 1,000 Births.	Deaths registered in Public Institutions per 1,000 population.
1881	26,258	6·0	32·6	19·7	138	3·4
1882	26,549	5·8	37·6	15·9	134	3·4
1883	26,840	5·6	37·6	16·2	134	3·4
1884	27,088	5·6	36·9	18·6	134	3·4
1885	27,340	5·6	35·9	18·6	134	3·4
1886	27,610	5·6	35·9	19·6	134	3·4
1887	27,886	5·6	36·7	19·6	134	3·4
1888	28,166	5·6	34·9	17·5	134	3·4
1889	28,452	5·6	35·6	19·6	134	3·4
1890	28,742	5·6	34·5	18·8	134	3·4
1891	29,038	5·6	34·7	18·8	134	3·4
1892	29,338	5·6	34·8	19·6	134	3·4
1893	29,643	5·6	34·8	19·6	134	3·4
1894	29,953	5·6	34·8	19·6	134	3·4
1895	30,268	5·6	34·8	19·6	134	3·4
1896	30,588	5·6	34·8	19·6	134	3·4
1897	30,913	5·6	34·8	19·6	134	3·4
1898	31,243	5·6	34·8	19·6	134	3·4
1899	31,578	5·6	34·8	19·6	134	3·4
1900	31,918	5·6	34·8	19·6	134	3·4
1901	32,263	5·6	34·8	19·6	134	3·4
1902	32,613	5·6	34·8	19·6	134	3·4
1903	32,968	5·6	34·8	19·6	134	3·4
1904	33,328	5·6	34·8	19·6	134	3·4
1905	33,693	5·6	34·8	19·6	134	3·4
1906	34,063	5·6	34·8	19·6	134	3·4
1907	34,438	5·6	34·8	19·6	134	3·4
1908	34,818	5·6	34·8	19·6	134	3·4
1909	35,203	5·6	34·8	19·6	134	3·4
1910	35,593	5·6	34·8	19·6	134	3·4
1911	35,988	5·6	34·8	19·6	134	3·4
1912	36,388	5·6	34·8	19·6	134	3·4
1913	36,793	5·6	34·8	19·6	134	3·4

TABLE VI.

Population in the various Parishes.

Parish.	Population, 1911	Increase—1901-1911	Decrease—1901-1911	Excess of Females over Males in 1911	Excess of Males over Females in 1911
Creed	239	7	.....	11	.....
Fowey	2,276	18	.....	4	.....
Grampound	430	.....	61	52	.....
Mevagissey	1,849	.....	239	99	.....
Roche	1,827	203	.....	.....	27
St. Austell Rural.....	10,244	1586	.....	298	.....
St. Blazey	3,086	155	.....	154	.....
St. Dennis	2,030	398	.....	.....	6
St. Ewe	921	.....	33	21	.....
St. Gorran	729	.....	56	11	.....
St. Mewan	1,327	169	.....	3	.....
St. Michael Caerhays	147	10	.....	9	.....
St. Sampson	349	11	.....	33	.....
St. Stephens.....	4,831	685	.....	.....	77
Tywardreath	2,414	199	.....	230	.....

TABLE VII.

Infectious Diseases notified during last 10 Years.

Year.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Other Infectious Diseases.*
1904	23	2	4	9
1905	115	18	6	10
1906	415	5	3	16
1907	111	1	8	19
1908	103	2	4	10
1909	34	11	4	12
1910	50	80	3	10
1911	38	54	7	30†
1912	45	10	7	62‡
1913	**86**	**90**	**2**	**87‡‡**

* Including Small-Pox, Erysipelas, Puerperal and Continued Fevers. † Including 13 cases of Poliomyelitis.

‡ Including 43 cases of Pulmonary Tuberculosis, which previous to this year was not generally notifiable.

‡‡ Including 57 cases of Pulmonary Tuberculosis, and 15 cases of other forms of Tuberculosis.

TABLE VIII.

Deaths from "Zymotic" Diseases in St. Austell Rural District 1880—1913.

YEARS—

Disease.	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Totals 1880-1913
Diphtheria	3	0	10	15	6	3	5	13	2	6	2	13	1	12	10	2	3	1	1	3	5	4	2	2	0	5	0	1	1	3	10	8	1	6	159
Scarlet Fever	0	3	8	29	7	11	11	4	3	0	4	1	2	3	1	2	0	1	2	2	1	0	1	3	1	2	6	1	1	1	1	2	0	0	114
Typhoid or Enteric Fever	9	2	2	1	3	3	2	3	2	3	2	0	0	1	0	0	2	1	1	2	1	1	1	0	1	2	0	1	1	0	0	0	1	0	48
Measles	61	14	0	4	1	2	10	9	6	0	7	3	1	5	0	10	3	9	0	0	4	18	1	3	2	2	1	1	0	17	0	5	3	1	203
Whooping Cough	6	37	0	0	43	10	7	36	6	1	32	17	0	12	37	2	0	10	2	42	4	2	16	2	8	28	6	5	11	0	4	20	1	1	408
Diarrhœa and Enteritis	22	5	3	8	3	2	10	4	4	5	5	9	3	14	2	7	4	6	5	8	15	8	5	6	12	4	16	7	6	3	3	16	3	7	240
	101	61	23	57	63	31	45	69	23	15	52	43	7	47	50	23	12	28	11	57	30	33	26	16	24	43	29	16	20	24	18	51	9	15	1172

FOLDOUT

FOLDOUT

FOLDOUT

PART II.

VITAL STATISTICS.

PRELIMINARY NOTE.

The Statistics of this year have been slightly modified by the formation from part of the Rural District of the new Borough of Fowey. Since, however, the loss of this area containing 2,276 persons affected the District only during the last six weeks or so in 1913, allowance has not generally been made for this loss in the following figures, and the error in consequence of this is only slight. The estimated mid-year population on which the various rates are based is taken as 33,440, which is the figure which would obtain if the Borough of Fowey were still a part of the administrative Rural District of St. Austell.

At the time of going to press the Transferable Deaths for the last quarter of the year had not been received from the Registrar General. In their place have been substituted the Transferable Deaths for the last quarter of 1912, which, in their turn, were received too late for publication in the Report for 1912. The Transferable Births of the year are taken to be those of children born in the Workhouse, whose mothers entered that institution from the Rural District.

Tables I-IV are those required by the Local Government Board. The remaining Tables and Diagrams are inserted to make more clear the progress in health of the District, since it is only by comparison with the past that the present position can properly be appreciated.

POPULATION.

The population of the District is increasing, as reference to Table V will show. This increase is due not only to the excess of births over deaths, but also to immigration.

Population 1901 (Census) ...	29,597
Excess of Births over Deaths, 1901-1910	2,570
Excess of Immigration over Emigration, 1901-1910	532
Population 1911 (Census)	32,699

In other words, St. Austell Rural District has taken no part in the "Agricultural Depression" of which so much is heard. More people come into the District and less leave it, in opposition to the conditions which prevail in so many other Rural areas. There is no "rural depopulation" going on in this District, the real reason being that the District is only partly Rural and in the main devoted to the flourishing China Clay Industry, where the demand for labour largely exceeds the supply. The Parishes where there is no Clay Industry, those which are Agricultural or engaged in the Fishing Industry, seem to share the depression felt in other parts of Rural England; but these Parishes are few in number and are over-balanced by the Clay producing Parishes. Table VI shows very clearly the fluctuations in population of the different Parishes during the last intercensal period.

AGE AND SEX.

Further figures from the Census of 1911 are now obtainable and show the composition of the population of this District. As death rates vary with the ages and sexes of a given population, it is important to know how the population is formed in order to be able to correct any error in arriving at mortality rates. Where, for instance, there is an excess of old people or very young children in a district the mortality rates will necessarily be higher than in a district where there is a preponderance of persons between the ages of 15 and 45.

When corrected for the age and sex distribution of the population the true death rate of this District is 12.57 per 1,000 population, instead of 13.5.

The following Table shows the condition of the population in this Rural District in 1911.

Table IX.

	Males	Females
All Ages.	13,892	16,807
Under 5 Years	1,687	1,684
5 and under 10	1,693	1,683
10 „ 15	1,710	1,648
15 „ 20	1,693	1,469
20 „ 25	1,373	1,405
25 „ 30	1,188	1,283
30 „ 35	1,023	1,192
35 „ 40	966	1,144
40 „ 45	938	1,009
45 „ 50	911	987
50 „ 55	724	797
55 „ 60	581	683
60 „ 65	506	564
65 „ 70	397	496
70 „ 75	244	358
75 „ 80	163	211
80 „ 85	61	127
85 „ 90	26	51
90 „ 95	8	12
95 „ 100	—	4

In all the Rural Districts of Cornwall out of every 1,000 male persons living 332 are between the ages of 20 and 45. In the whole County of Cornwall 342 per 1,000 males are between these ages, and in St. Austell Rural District out of every 1,000 male persons 345 are between the ages of 20 and 45. This excess of young persons is attributable to the prosperity of the District.

CONDITION AS TO MARRIAGE.

The following Table shows the condition of the St. Austell Rural population with regard to marriage. The figures are those from the Census of 1911.

Table X.

	UNMARRIED	MARRIED	WIDOWED
Persons	18,347	12,482	1,870
Males	9,277	6,095	520
Females	9,070	6,387	1,350
Females 15-45 years	3,596	3,752	154

From the above it is seen that in this District there is an excess of unmarried males over unmarried females. The reverse holds true of England and Wales and of the County of Cornwall, in which latter there are 97,614 unmarried females to 88,503 unmarried males. Probably the excess of unmarried males over females in St. Austell District is due to the number of young men working at the clay pits, and possibly in part to the shortage of house accommodation, which prevents these young men from marrying and having a house of their own.

DEATH RATE.

(See Table V and Chart A.)

The death rate of 1913 shows an increase over that of 1912: 13·5 per 1,000 population as against 12.2. This increase is largely accounted for by the excess of the number of deaths in old persons

during 1913: 85 persons over the age of 65 died in the last year, but only 49 during 1912.

For the first time the deaths and death rates in the various Parishes have been extracted and are reproduced below in Table XI. It must be understood that when the populations are small the rates may be misleading; for instance, the Parish of St. Sampson with a population of 340 persons had only one death returned for it this year. This represents a rate of 2·8 per 1,000 persons, and, if such a rate were maintained, each inhabitant of St. Sampson would die at the age of 350 years or so, which is manifestly absurd.

Table XI.

Parishes arranged in order of Death Rates.

PARISH.	TOTAL DEATHS	Death Rate per 1,000 persons in the Parish
Tywardreath	49	20·2
St. Dennis	36	17·7
Creed	4	16·7
Gorran	12	16·4
St. Austell Rural ...	144	14·0
Mevagissey	26	14·0
Grampound	6	13·9
St. Blazey	43	13·9
Fowey	29	12·7
St. Stephens	58	12·0
St. Mewan	15	11·3
St. Ewe	10	10·8
Roche	19	10·4
Caerhays	1	6·8
St. Sampson.....	1	2·8

Grouping the Parishes into two divisions, it is found that the Parishes of Creed, Grampound, Mevagissey, St. Ewe, Gorran, Caerhays, and St. Sampson, (or the Agricultural Parishes) have a combined death rate of 12·8 per 1,000 inhabitants. The remainder (or the more industrial Parishes) show a combined rate of 14.6 per 1,000 inhabitants. This excess of the death rate in the more Urban Districts cannot be explained by age and sex distribution since the population in these places is favourable to a low rate, and the increased rate among these urban areas argues that the inhabitants of these districts live under less satisfactory conditions than do the dwellers in the purely rural parishes.

BIRTH RATE.

(See Table V and Chart A.)

The Birth rate shows a slight increase over that of 1912: 21·6 per 1,000 population as against 21·4. As Table V shows this rate has declined considerably since 1882.

Out of 723 Births registered 28 were illegitimate. This corresponds to a rate of 7·7 illegitimate births to every 1,000 unmarried women between the ages of 15 and 45 years. The same rate obtained in 1912.

The legitimate Births correspond to a rate of 182 per 1,000 married women between the above named ages.

MARRIAGE RATE.

(See Table V.)

The Marriage rate, calculated from returns kindly supplied by Mr. W. H. Bettison, shows a decrease compared with 1912. This may be in part accounted for by the clay strike, which occupied some months of the past year, and made persons of the working classes feel that the uncertainty of their income prevented them from undertaking fresh contracts.

CAUSES OF DEATH.

(See Tables III, IV and VIII and Chart B.)

Tuberculosis caused 39 deaths in the year. In 31 of these the death was due to disease of the lungs, in the remainder to disease of other organs.

Cancer caused 32 deaths—one more than did Pulmonary Tuberculosis. Cancer deaths appear to be on the increase, as is seen from the following.

Deaths from Cancer	1889-1903	averaged	21·7	per year.
do.	1904-1908	do.	25·6	do.
do.	1909-1913	do.	30·4	do.

This increase no doubt is largely explained by the better and more accurate certification of deaths which comes with increased knowledge.

Infectious Diseases. The notifiable infectious diseases (excluding Tuberculosis) caused seven deaths this year.

Table VIII, of which the figures are here collected for the first time, forms a very valuable record of the deaths since 1880 from certain of the common infectious diseases. Since 1880 no less than 1,172 lives have been lost in this District on account of these infectious diseases, and the yearly fluctuations are well shown on Chart C.

VENEREAL DISEASES.

Although no deaths this year were returned as due to Venereal Diseases, it is not to be supposed that no deaths are attributable to these causes. There is a natural disinclination on the part of a medical practitioner to enter on a Death Certificate that the death was due to Syphilis or Gonorrhœa: he employs some other term, less unpleasant, to denote the cause of death; or declares that death was due to one of the many sequelæ to which Venereal Diseases give rise.

At least 13 of the deaths that took place in 1913 in this district can be attributed to the effects, remote or otherwise, of Syphilis. This takes no account of the large number of deaths of young children under the age of one month from prematurity, of which some at least must have been syphilitic in origin.

The following table shows the deaths, year by year, of young children under twelve months of age from "Congenital Debility and Malformation, including Premature Birth."

Table XII.

Year.	Premature Birth, etc.
1900	20
1901	13
1902	26
1903	15
1904	14
1905	11
1906	15
1907	18
1908	17
1909	11
1910	17
1911	34
1912	28
1913	34

It is not to be supposed that all the above deaths were caused by Syphilis, but only that this is probably the chief cause in this District, where there is no such factor conducive to prematurity as exists in manufacturing towns through the employment and hard working of pregnant women.

The question of the effect of Venereal Diseases on the general health of the people was discussed in the last Annual Report, in which further information on this matter can be found.

It is of interest to note that the whole question of Venereal Disease has received much public notice of late owing to the appointment of a Royal Commission to enquire into the matter.

ALCOHOLISM.

(See Table III.)

Although only three deaths were returned as due to the effects of Alcohol and Cirrhosis of the Liver, it must not be imagined that

no other deaths were due to Alcoholism. Many diseases are caused by the excessive consumption of Alcohol, and it must be supposed that, in deference to the feeling of the relations, the doctor in attendance stated the nature of the last illness rather than the predisposing cause of death.

INFANTILE MORTALITY.

(See Tables III., IV., V., and Chart D.)

Sixty-four deaths of children under one year of age took place in the district during 1913, and this equals a rate of 88 out of every thousand births. Considering the hot summer this rate is not excessive, and only six deaths took place from Gasto-intestinal troubles. Fourteen deaths were recorded as due to "Atrophy, Debility, and Marasmus," and many of these, no doubt, were really caused by the ignorance of parents in the matter of the feeding and nourishment of their young.

The Council during the year considered the question of the adoption of the Notification of Births Act, and the Local Government Board's circular was read to the Sanitary Committee with reference to the work of Health Visitors. Some merriment was occasioned when it was suggested that a school for mothers, or instruction to mothers, was sometimes desirable. The Act was not adopted by the Council. Six deaths from Diarrhœa and Enteritis were caused from the ignorance of mothers or guardians of young children.

It would be very well for the Council later to appoint a qualified Health Visitor, to visit all newly-born infants, to visit cases of infectious disease, and to assist in the work of taking swabs from Diphtheria cases and contacts. It is generally recognised that the training of mothers in infant management is now a serious matter, and a Health Visitor is of inestimable service in carrying out this work, and in securing the abatement of infectious diseases.

BRONCHITIS AND PNEUMONIA.

Forty-five deaths were due to these lung diseases.

APOPLEXY.

Eighteen deaths were due to Cerebral Hemorrhage or Apoplexy.

HEART DISEASE.

Forty-two deaths were stated to be caused by organic Heart Disease. Such disease is often the sequel to Rheumatic Fever, by which, also, two deaths were directly caused this year.

OLD AGE.

(See Table III. and Chart B.)

The deaths of 85 persons were certified as being due to Old Age. Almost all diseases except this are infectious, and death from any other cause may justly be regarded as violent and unnatural. Preventive medicine aims at the abolition of sickness and unnatural death, and that ideal will be obtained when all deaths are certified as being due to Old Age.

PART III.

POVERTY AND PAUPERISM.

No account of the Health and Sanitary Circumstances of a District can be complete without some mention of its poverty. Ill-health and poverty often go together, and a district with a large amount of Pauperism cannot be considered satisfactory from the public health point of view, however perfectly it may be drained, and however excellent its water supply may be.

The whole question of Poverty was discussed at length in the Annual Report for 1912, and reference should be made to this for more details of Pauperism in the past.

Unfortunately, at the time of going to Press, the complete figures of Poor-Law Relief for 1912 were not available, and the following observations cannot for that reason be illustrated by statistics.

The year 1913 has seen this District pass through a strike of men employed at the Clay Works. The strike continued for many weeks, and ultimately the men went back to work without gaining the points for which they went on strike. During this unrest there did not appear to be any real distress among the workers, nor did the admission of persons to the Workhouse increase appreciably. From this it may be argued that the men who are employed at the Clay Works either have money saved against the evil days of non-employment or else are able very largely to live on the produce of their own gardens. Many such men keep pigs and fowls, and supply themselves with potatoes. Despite the warnings of the local Jeremiahs, there was very little actual destitution as the result of this strike, nor was the mortality increased during this time.

For the reason given above that the full Poor-Law Statistics are not yet available, it has not been possible this year to re-publish the Chart illustrative of Pauperism which occurred in the Report for 1912.

PART IV.

SANITARY ADMINISTRATION.

STAFF.

The present Sanitary staff consists of a whole-time Medical Officer of Health and two whole-time Sanitary Inspectors; the latter were appointed in 1913. In addition to this the Council's late Sanitary Inspector, Mr. T. Darlington, has been given the anomalous appointment of Water Superintendent (or Water Inspector) at a salary of £70 a year. This last appointment received no sanction from the Local Government Board, and the whole of Mr. Darlington's salary is paid, therefore, out of the District Rates. The duties of the Medical Officer of Health and of the Sanitary Inspectors have been sufficiently defined by the Orders of the Local Government Board. The duties of Mr. Darlington as Water Inspector (or Water Superintendent) were defined by the District Council during the year. Unfortunately the Council did not adhere to the list of duties they prescribed, and they have since directed one of the Sanitary Inspectors (Mr. Moffatt) to undertake certain of the duties apportioned to Mr. Darlington, the Water Superintendent (or Water Inspector). The result of this action of the Council has caused a certain amount of overlapping, which is to be regretted considering how small the Sanitary Staff already is.

APPOINTMENTS OF INSPECTORS.

Mr. W. H. Moffatt began his work as Sanitary Inspector and Surveyor in April, 1913. He was the only Sanitary Inspector, and, as such, had charge of the whole district. Previous to his appointment no systematic work was done in disinfecting and in the other departments of the Sanitary Inspector's work. It soon became apparent that the district was too large for one Inspector of Nuisances who was also the Surveyor. As the result of representations from the Local Government Board the Council,

therefore, advertised for an additional Inspector of Nuisances. No mention was made in this advertisement that the successful candidate would be expected to do surveying or to prepare drainage and water schemes. Three candidates for this appointment of additional inspector were interviewed by the Council, and these candidates were asked if, in the event of their appointment, they would be willing also to act as Surveyor in the district apportioned to them. One candidate properly withdrew. The Council finally appointed Mr. Harvey as additional Sanitary Inspector and Surveyor to part of their area. The opinion of the Medical Officer of Health was not asked concerning this appointment, nor was it taken regarding the sub-division of the district between his two inspectors.

Mr. Moffatt now has charge as Sanitary Inspector and Surveyor of the Parishes of St. Austell, St. Mewan, Mevagissey, Roche, St. Blazey, Tywardreath, and St. Sampson. Mr. Harvey now has charge as Sanitary Inspector and Surveyor of the Parishes of St. Dennis, St. Stephens, Grampound, Creed, St. Ewe, Gorran and Carhayes. Mr. Darlington, the Water Inspector (or Water Superintendent) holds a roving commission to supervise all old water supplies and to detect leakage throughout the district; but any work in connection with new water supplies falls on the Council's new Sanitary Inspectors.

The work of the two Inspectors is controlled by the Medical Officer of Health. Their reports as Inspectors of Nuisances and Inspectors under the Housing Acts are submitted to him before they are presented to the Council.

CONDUCT OF BUSINESS.

The Rural District Council meets every fourth Friday for the conduct of Sanitary matters. The monthly reports of the Medical Officer, of the Sanitary Inspectors, and of the Water Superintendent (or Water Inspector) are printed some days before and circulated to the Councillors previous to the meeting; so that before the meeting each Councillor knows exactly what Notices, Orders, or Prosecutions will be asked for by the Medical Officer or Surveyors, and each is in the position to institute, if he cares to do so, private enquiry into these matters. This is obviously a very undesirable proceeding. Again, it has happened on two occasions during the

past year that controversial matter was contained in the Reports, which matter would have much better been discussed in Committee.

In the majority of Councils the Reports of the Medical Officer and the Surveyors are presented direct to the Sanitary Committee and not to the whole Council, this Committee afterwards reporting to the Council in full. It is to be hoped that later this revision of business will be undertaken. Nothing but antiquity commends the present method.

ENFORCING THE PUBLIC HEALTH ACTS.

Unfortunately the Medical Officer of Health and the Inspector of Nuisances possess very little statutory authority, and are dependent upon the decisions of the Council for the abatement of nuisances and the prosecution of offenders. It is to be hoped that before long legislation will give to the Medical Officer power to serve notices and to prosecute without reference to the Local Authority; since, the more agriculturally-minded is a community, the more it objects to coercive measures, of which it appreciates only the fine, and not the improvement of the Public Health.

In February, 1913, the Medical Officer asked the Council to refuse to licence a butcher whose slaughterhouse was improperly drained. The Council granted the licence.

In the same month the Medical Officer asked for a closing order on a house, the wall of which was falling down. The closing order was not granted by the Council, and the matter was postponed.

In June the Medical Officer asked the Council to prosecute in a disgraceful case of overcrowding. The Council decided to send a letter of warning to the offender.

In July the Medical Officer asked for Notices and Orders for providing Privy accommodation for a house, and for paving the back yard of a house, and for providing a sink and drain. The Council refused to grant the necessary Notices.

In November the Medical Officer asked the Council to prosecute two persons who had broken the Council's Byelaws by

depositing solid and liquid fish-offal on the Highway. The Council ordered letters of warning to be sent to the offenders.

The Sanitary Inspector asked the Council to prosecute a person for building additions to a house without submitting the necessary plans. The Council decided to prosecute; but afterwards rescinded their decision.

It is unfortunately not generally understood that the Public Health Acts and Orders and the Byelaws made under these are intended to be obeyed, and that the Council have definite legal obligations in the administration of the various Public Health enactments. The prestige of Sanitation and of the Sanitary Staff of the Council suffers tremendously from such inactivity as instanced above. The offender against Sanitary Law thinks, "Oh, the Council won't prosecute me. They didn't prosecute so-and-so. I'm not going to pave my back yard or put in a drain. The Medical Officer of Health and the Inspector can't make me do it unless the Council order me, and so I'm all right." People who think parochially make hard cases out of all insanitary offenders, and hard cases make bad law—to the detriment of the health of the people. If the Council were to prosecute, without respect, all offenders against the law for a period of three months the District would show a marvellous improvement in cleanliness and a proper feeling would quickly become established. The District would develop a "Sanitary Conscience," of which at present it is conspicuously lacking.

ISOLATION HOSPITAL.

No Sanitary Administration can be complete or efficient without an Isolation Hospital. There is none in this District. As the result of representations of the Council's Medical Officer it seems possible that a committee of St. Austell, St. Columb and Truro Rural Districts may meet shortly to discuss the practicability of a joint Hospital for these three Authorities.

BACTERIOLOGICAL LABORATORY.

At the end of 1912 the Council gave their Medical Officer permission to start a Bacteriological Laboratory. He was allowed to spend £16 and £5 a year for up-keep. The Laboratory was at once organised, and has done during 1913 some admirable and very

useful work. Each Medical Practicioner in the district was supplied free of charge with outfits for the examination of suspected cases of Diphtheria, Pulmonary Tuberculosis and Enteric Fever. Only two doctors, Dr. Barry and Dr. Churchill, have not availed themselves of the help of this laboratory. The following table shows the work accomplished during the year in bacteriological examinations, in addition to which 615 "Outfits" were prepared and 427 blood serum tubes made.

	Positive.	Negative.	Total.
Diphtheria	100	221	321
Tuberculosis	22	25	47
Enteric Fever..	0	3	3
	122	249	371

No case is regarded as being free from Diphtheria until it has been shown to be free from the causative organism. And in doubtful cases of sore throat the diagnosis of Diphtheria is not accepted unless the B. Diphtheria has been shown to be present If the specimens above enumerated had been examined in London. they would have cost the Council about £50, so a saving not only of time but also of money has been effected by this little Laboratory at St. Austell.

The Council do not provide a Clerk or Laboratory Boy to assist in this work.

TRAVELLING.

The Medical Officer of Health has spent over £200 this year (out of a total salary of £350) on travelling.

At first, on coming to the District, the Medical Officer bought and used a motor cycle. This method of progression was found to be inconvenient, unreliable and unsafe. He next used an ordinary cycle, and walked on wet days: it was found then that only the fringe of the district's work was touched; and it became obvious

that if the work of the district was to be grappled properly, a motor car would be an essential. The following Table shows the visits of the Medical Officer during the year to some of the outlying parts of the district :—

Table XIII.

Name of Place.	Number of Visits.
Mevagissey	23
Bugle	21
Nanpean	19
Fowey	26
Grampound	16
St. Blazey	36
Pentewan	19
Tywardreath	24
St. Stephens, Churchtown ..	14
Gorran	14
Roche	25
St. Dennis	50

The above list is by no means exhaustive, and the Medical Officer has motored during the year over 4,000 miles within the District.

The Council's Sanitary Inspectors are both handicapped in their work by the lack of suitable means of progression. The total length from North to South of Mr. Harvey's District is 13½ miles, by road probably about 17 miles. Mr. Harvey cycles about his district, and out of his total salary of £95 he has to provide himself with a cycle. The same remarks apply with equal force to Mr. Moffatt.

OFFICE ACCOMMODATION.

One of the Sanitary Inspectors (Mr. Moffatt) is provided by the Council with an Office. This Office is a long, low, narrow room at the top of a house off Menacuddle Street, in St. Austell. The entrance to the Office is up a mean court, of which, on certain days in the week, the passage is obstructed by washing hanging out to dry. Only by dodging the moist and flapping garments can entrance be obtained to this Office. The room is also the Public Health Laboratory. During the year the Council gave the Medical Officer permission to extend the scope of the Laboratory, so that the Bacteriological examination of water supplies might be undertaken. This extension has however not been found practicable owing to the limited capacity of the room. It is too full already, and there is no space for additional apparatus.

The Council have agreed to consider the building of Offices for the Medical Officer and Inspectors. In the meantime it would be well if temporary Offices were provided, which would be more in keeping with the dignity of the Council and the wealth of the District.

PROGRESS IN SANITATION.

The late Dr. H. Franklin Parsons, one of the Inspectors of the Local Government Board, visited St. Austell Rural District in the year 1888 with reference to the prevalence of Diphtheria. It is discouraging to find that many of the adverse circumstances mentioned in his report of 26 years ago still obtain in this District, nor in many instances has the valuable advice that he gave been followed.

The following are extracts from Dr. Parsons Report of 1888. It is interesting to compare them with what has been said by the Council's present Medical Officer:

> "The Village of Roche, is partly drained by a sewer discharging into a brook. . . . . No means of ventilation have been provided for such gases as may be generated in the sewer. There are no means of flushing the sewer. The course and construction of the house-drains appear to be imperfectly known. . . . . Another part of the village is drained into an open ditch."

The Council's Medical Officer has reported unfavourably to the Council on more than one occasion about the drainage of Roche.

And again :—

> "Some of the houses (in Roche) were old, dilapidated and damp. The surroundings of some, especially in outlying places, were in a filthy state through want of proper paving."

And again :—

> "Nanpean Village is unsewered. There are only a few short drains roughly built of stone which convey slop water into the water table or gutter at the side of the road. At a house in which Diphtheria existed I saw the washing water poured on the waste ground in front of the house, and standing in the gutter by the side of the public road."

Such a report might be written to-day. The circumstances have not altered greatly in the past 26 years.

And again :—

> "The district is ill provided with public means of conveyance, and, as the Inspector's salary is not sufficient to enable him to keep a horse, most of his journeys have to be made on foot. Much of his time also is occupied in the preparation of plans."

Again :—

> "Little has been attempted in the isolation of the sick, owing to the absence of facilities in the patients' homes, and of any hospital which might be used for the purpose."

And again ;—

> "The reasons which have prevented the carrying out of water-works at different places have been the cost of the works, the difficulty in attaining water-rights, and the opposition of the ratepayers, especially those in other parts of the parishes who object to contribute to the cost of works from which they receive no benefit."

The last paragraph might well have been written regarding the water supply to St. Stephens Churchtown.

Certainly since the year 1888 many improvements have been made in the District, notably around St. Austell, but progress has not been rapid during the last quarter of a century, and the Report of Dr. Franklin Parsons loses none of its force when read in the light of the conditions that prevail to-day.

A GUIDE FOR THE FUTURE.

The following matters should have the attention of the Council, and the appended classification of the needs of the District forms a guide for the direction of the work in the future.

Drainage Schemes—

1. At Watering Lane Sewage Farm.
2. At St. Dennis.
3. At Nanpean.
4. At Roche.
5. At Bugle and Stenalees.
6. At St. Blazey, Par and Tywardreath.
7. At Pentewan.
8. At Mevagissey.
9. At St. Stephens Churchtown.

Water Schemes—

1. At St. Austell—to increase the supply.
2. At Stenalees and Carthew.
3. At Roche.
4. At St. Stephens Churchtown.
5. At Bugle—to increase the supply.
6. At Pentewan.
7. At Mevagissey.
8. At St. Dennis.

Housing—

1. The provision of Working Class Houses throughout the District.
2. The strict enforcement of the Housing Acts to remedy insanitary house property.

Administrative—

1. The provision of an Isolation Hospital.
2. General revision in the conduct of business.
3. The provision of means of travelling for the Officers of the Council.
4. Suitable Office accommodation.
5. Adequate clerical assistance for the Council's Officers.
6. The appointment of a woman Health Visitor.

General—

1. The strict abatement of Nuisances by means of Statutory Notices and Prosecutions.
2. The strict enforcement of the Public Health Acts and of the Byelaws in force within the District.

PART V.

INFECTIOUS DISEASES.

PRELIMINARY.

Reference to Table VII. will show that the year 1913 has been, unfortunately, distinguished by an increased number of infectious diseases, compared with the immediately preceding years. Not since 1908 have there been so many cases of Scarlet Fever, and the number of Diphtheria cases in 1913 exceeded those in any of the last ten years. The only satisfactory figure is that of Enteric Fever—only two cases were notified, and in neither was the diagnosis confirmed by Widal's reaction.

The Parochial Distribution of Infectious Diseases is given in Table II. Reference should also be made to Table III. and Chart B.

ISOLATION HOSPITAL.

The health of the District is heavily handicapped by the absence of an isolation hospital. Isolation at home is often impossible, even if the parents of the sick child appreciated how important such separation is. In Diphtheria this lack of hospital accommodation is especially felt, since certain of the cases continue infectious over so long a period. Not only in this disease, but also with Scarlet Fever, it is by no means uncommon to find the illness passing from one member of the family to another, until all have been attacked. For such a state of things an isolation hospital is the only remedy. It is universally recognised also that the case-mortality of infectious diseases is less in hospital than when such cases are nursed at home. No woman, with the cares of a household, can be expected to nurse adequately a sick child, even if she has the necessary skill and training. The Medical Officer of Health has found in the district a marked desire on the part of the people for an isolation hospital; at St. Dennis, in particular, during a Diphtheria epidemic the people fully appreciated how valuable such a Hospital would be, and had it rested

with them the provision of proper isolation would have been no longer delayed. It has already been stated that the Council are considering the formation of a joint Isolation Hospital.

TRAINING THE PUBLIC.

The Medical Officer has had the misfortune of having to control a fairly severe epidemic of Diphtheria at St. Dennis during the year, and he has noted with interest the gradual training of the people in Sanitary matters. At the beginning of the epidemic no one dreamed of keeping a child isolated when the throat seemed well and the child showed no signs of illness. Towards the close of the epidemic, however, a marked conscience developed. The Medical Officer would receive three or four anonymous letters reporting each case that broke from isolation ; and parents began at last to appreciate the value of "swabbing," recognizing that, without the evidence of Bacteriology, no one could say if the child was infectious or not. In other words the people began to recognize that an infectious disease really *was* infectious, and that Diphtheria could only be controlled by proper isolation and systematic swabbing. Seventy-four cases of illness, and six deaths, is a high price to pay for a little knowledge, and one can only hope that the learning, thus painfully acquired, will not be easily forgotten.

SCHOOL CLOSURE.

Two schools at St. Dennis and one at Sticker were closed during the year because of Diphtheria. It is common knowledge in this district that the large school in St. Austell Urban District was closed once or twice owing to Scarlet Fever, and since many children from the Rural District attend this school the fact is worthy of note, if only to draw attention to the inconvenience that may be caused to the Medical Officer of a large district being officially ignorant of the occurrences that take place in its centre, where the control is that of another Authority with a separate Medical Officer of Health.

SMALL-POX.

No case of this disease has occurred in the District during the year. A convalescent case from Newhaven came to Pentewan on a ship in the early spring. He was kept on his ship, and contacts

were vaccinated and observed until the time that the ship sailed. As is usual in the proper control of Small-pox, the Medical Officer received a large amount of adverse criticism from the "experts" in hygiene in the district. If it is true that "every man is a physician after he is thirty," it would seem that many are Epidemiologists before they are out of their teens. Vaccination, and its effect on the prevention of Small-pox, appears especially to be a matter on which any untrained person can give an expert opinion. It suffices to say here, however, that the easiest and surest and cheapest way of controlling Small-pox is by vaccination. It has been calculated from the figures obtainable at present that only about 53 per cent. of the children born here this year were vaccinated. In the event of Small-pox again becoming epidemic in England, there will be a large unvaccinated population around St. Austell ready to receive the ravages of the disease. The gunpowder is lying about, and when the match is dropped there will come the usual explosion. There is no Small-pox hospital.

SCARLET FEVER.

(See Table II.)

During the year there were 86 cases of this disease in the District. St. Austell Rural Parish, St. Stephens and St. Dennis were chiefly affected. Of the School influence on the 44 cases at St. Austell not much can be said, as the majority of those affected attended the school in St. Austell Urban District. Several of the 44 cases, however, showed no obvious school infection. At St. Dennis again, where there were six cases, school influence was not noted in the transmission of the disease. At St. Stephens, on the other hand, a small school epidemic took place at the Churchtown. This was promptly suppressed by the exclusion of two possible "carriers" from school—one child was desquamating, and the other had Impetiginous spots on the face and hands. It is interesting here to note the possible connection between Impetigo Contagiosa and Scarlet Fever: the two are often seen together, although but little else can be said of them epidemiologically. The former is Streptococial in origin, the latter probably due to an ultramicroscopic organism (according to the latest French researches); but, since cases of Scarlet Fever are sometimes complicated with Impetiginous sores, it is reasonable to suppose that, at any rate occasionally, the infection of Scarler Fever may be superadded to

the Impetigo, causing the latter to be infective, and a cause of Scarlet Fever among school children. No cases of milk-borne Scarlet Fever were detected during the year. All the cases reported were mild in character, and there were no deaths.

DIPHTHERIA.

(See Tables II. and III.)

Since the epidemic at St. Dennis has already been the subject of a "Special Report" to the Local Government Board, the County Council and the District Council, space will not be taken here with the further discussion of the matter, except to say that the epidemic gradually died down, resolving itself into occasional sporadic cases, of which one or two are still notified every fortnight or so. The Medical Officer came to the following conclusions in the above-named Special Report :—

1. The cases of Diphtheria at St. Dennis originated in a "missed" case in February.
2. The disease was spread by personal contact due to insufficient isolation. It was nurtured by the insanitary conditions which prevail in the village.
3. There was need for an isolation hospital.
4. The accommodation at the Council Schools was insufficient. Sanitary arrangements at the Church School were defective.
5. The village was in need of a proper water supply, of public scavenging, and of sewers.

The Rural District Council are taking action regarding Sections 3 and 5. Section 4 is also having the attention of the authorities concerned. Of the cases notified, one remained infectious for a period of five months, another for a period of seven months. Both these children had enlarged tonsils. Several remained infectious for periods of from two to three months.

A very interesting "Sore Throat" outbreak occurred in November at Sticker School. For some weeks children had been absent for a few days from School because of sore throats ; and at last the schoolmaster, on account of the declining attendance,

communicated with the Medical Officer. Twenty-three swabs were taken, and six of these contained the Bacillus Diphtheriæ. The point of interest, however, is that, both in these six positive swabs, and also in the remaining seventeen, the Bacillus Hoffman was invariably present. In seven throat swabs this bacillus was present in pure culture, and it might seem reasonable to suppose that in the seventeen cases it was the causative organism of the sore throat, unless the very debatable point is allowed that the B. Diphtheriæ can undergo morphological change into Hoffman's Bacillus. Further interest attaches to this sore throat outbreak in that the cases of Diphtheria were of a very mild infectivity. None of the children were ill enough to be away from school for more than a few days, none were attended by a Doctor, and none appear to have given rise to secondary cases at home. The school, like that at St. Dennis, was overcrowded, with accommodation for 124 scholars and an average attendance of 126. The maximum attendance at any time was 150.

ENTERIC FEVER.

Only two cases were notified during the year, and this disease calls for no further comments.

ERYSIPELAS AND PUERPERAL FEVER.

No case of Puerperal Fever was notified. Fourteen cases of Erysipelas came to the notice of the Health Department. In the majority of these no action of any kind was taken, as the disease is so slightly infectious as not to be a menace to the public health.

POLIOMYELITIS.

This terrible disease, often too unkind to kill, leaves its victim with a live brain and a dead body, and is for that reason the most feared of any disease. The paralyses caused by it may be widespread and are often permanent.

One case only occurred in this district this year. It was notified at the end of October, when, unfortunately, the Medical Officer was taking his annual holiday. It was visited on his return and the following facts obtained from the parents :—

The sufferer, a little boy of two years, living at Terras, St. Stephens, was taken ill with a "cold," and complained of pains in

the back and legs. He was put to bed and kept there for a few days. On taking him out of bed again at the end of his short illness it was found he could not stand, and that he had lost all movement in his lower limbs. There were no other cases in the house or neighbourhood. When seen in November by the Medical Officer of Health, the child showed total paralysis of both lower limbs, with the exception of slight power of flexing the left foot. The reflexes were absent, and the glutei muscles wasted. The child seemed mentally unaffected, and had no paralysis of the arms nor of the trunk muscles. No marks, such as might be caused by insect bites, were found on the body. The child seemed in good general health.

The question naturally arises, how did the child contract this disease? And unfortunately in this, as in so many other cases, no accurate answer can be given. The disease can be spread in many ways. (1) From direct contact with infected persons, or with apparently healthy people who are "carriers": in times of epidemic this is probably the most general method of infection. (2) From the bite of an infected stable-fly (Stomoxys Calcitrans). (3) Possibly from inhaling infected dust. (4) Possibly from some infected animal. Reviewing each of these possibilities in turn:-- (1) There is no evidence to show that in the village there is another case of Poliomyelitis or a "carrier"; (2) although there are stables within the flight of a fly from the house where the child lives, there is nothing to show that the child was bitten; (3) the roads were not dusty, and the child, being young, did not go out into the roads; (4) no disease among animals was observed.

TUBERCULOSIS.

(See Tables II. and III.)

Seventy-two cases of Tuberculosis were notified during the year under review. Fifty-seven were cases of Pulmonary Tuberculosis and fifteen of Tuberculosis in other parts of the body. This latter group was not generally notifiable until this year. Fourteen more cases of Pulmonary Tuberculosis were reported in 1913 than in 1912.

It is possible that some of the cases of Tuberculosis are the result of occupation in dusty trades, and such are known as Miners'

Phthisis. This, however, is not the common predisposing cause, and only one death was returned as due to Miners' Phthisis last year.

Tuberculosis is an infectious disease and people become Consumptive in the following ways:—

1. From direct contact with another Tuberculous person. During this association the healthy person may be infected by the phlegm of the sick person through kissing, coughing, or using the same eating utensils.

2. From infected dust, either in a house or out of doors: the former is probably the more usual. A house where a Tuberculosis person has lived and died may contain millions of Tubercle Bacilli, and these may infect the next person who goes to live in that house. Similarly, when a Consumptive person spits about the streets the dried phlegm may be blown about with the road dust and infect healthy people.

3. From eating Tuberculous meat or drinking Tuberculous milk.

4. Tuberculosis is fostered by bad housing and overcrowding.

Knowing how Tuberculosis is spread, it is not difficult to outline the measures which should be taken for its control. Briefly they are as follows:—

1. The avoiding of personal contact with a Consumptive, and the regulation of the lives and habits of Consumptives so that their danger to the Community is minimised.

2. The cleansing of infected houses.

3. The control of the meat and milk supply, so as to eliminate Tubercle-infected meat and milk.

4. The improvement of housing conditions.

In the last Annual Report much space was occupied in considering this disease, and diagrams were appended which show the fluctuations in Consumption in this district since 1880. These

charts served as a valuable record of the disease, but it has not been thought necessary to reproduce them again this year.

It is worthy of note that no Tuberculosis Dispensary is yet established for the treatment of Consumptive persons in St. Austell Rural District.

In this, as in other infective diseases, the Local Authority undertake the disinfection of infected houses.

NON-NOTIFIABLE INFECTIOUS DISEASES.

MEASLES AND WHOOPING COUGH.

(See Table VIII.)

There has been very little measles this year in the district, and in no case has a school been closed on account of this disease. In two instances children who had not previously suffered from Measles were excluded from School for a few days when a case developed there. In both these instances an epidemic was averted. There have been very few cases of Whooping Cough, so far as can be judged from the Elementary School Returns and Reports.

MUMPS.

This unpleasant disease appeared both at Bugle Infant School and also at Whitemoor School. In neither instance was it necessary to resort to school closure.

DIARRHŒA.

Considering the dry and hot summer there were very few cases of Diarrhœa, so far as can be gathered from the Death Returns. The Notification of Births Act is not in force, and no systematic visitation of the homes of infants is made. Since, however, the epidemic diarrhœa of children is a disease with a high mortality, it is reasonable to suppose that since there were not many deaths there were not many more cases. It is the popular custom in Cornwall to breast-feed children, and this natural practice probably accounts for the low diarrhœa mortality, as it is hand-fed children who especially are liable to Enteritis, the breast-fed having a comparative immunity.

LEAD POISONING. ANTHRAX. FOOD POISONING.

No cases of any of the above were brought to the notice of the Medical Officer during 1913.

DISINFECTION.

As soon as a case of infectious disease is reported to the Medical Officer of Health the parents of the child are given directions regarding isolation, and a stamped postcard is sent to them which they return, signed by their Medical Practitioner, as soon as the illness is over and the house ready for disinfection. The schools are also warned not to admit the case or contacts, and are advised again later when the case is free from infection. On receipt of the above-mentioned postcard, the Sanitary Inspector goes, or sends a man, to spray the infected house with Formalin. This being done has, at least, the good effect of encouraging the occupiers to leave the windows open and thoroughly to ventilate the house. Persons are also advised to "Spring clean" immediately after the close of an infectious illness. A liquid disinfectant is also supplied free of charge to any person who desires it.

There is a widespread, popular belief in the efficacy of carbolic powder when scattered over road gullies to prevent infective diseases; but this waste of the public money has not been supported by the Medical Officer of Health.

PART VI.

HOUSING.

PRELIMINARY.

In the year 1901 there were 6,676 inhabited buildings in the Rural District of St. Austell. By 1911 this number had increased by nearly a thousand to 7,630. Among this number no less than 7,397 were ordinary dwelling-houses.

In the Census year 1911 the buildings not used as dwelling-houses were classified as follows:—

Places of Worship	97
Government and Municipal Buildings	34
Shops	73
Offices	17
Warehouses, Factories, etc.	207
Theatres and other Places of Amusement	0

Among the buildings used as dwelling-houses were 43 Inns, Hotels or Public Houses, and it is interesting to note that in this district there are 97 Places of Worship to these 43 Inns, whereas in England and Wales as a whole there are about 97 Places of Worship to 170 Inns or Public Houses. This District, therefore, shows either an excess of Places of Worship or else a deficiency in Public Houses. In England and Wales there is, roughly, one Inn to every 372 persons, whereas in St. Austell Rural District there is one to every 760 persons; and again, in England and Wales there is one Place of Worship to every 650 people, whereas in St. Austell Rural District there is one to every 336 persons. St. Austell, therefore, shows both an excess of Places of Worship and a deficiency in Inns. It is no place here to determine what influence such abnormality has upon the character of the people.

HOUSES OF VARIOUS SIZES.

In the year 1911 there were 7,732 families living in this District, and 3·5 per cent. of the total population were living in houses

which contained more than two persons to each room. The following figures show the occupation of two-roomed houses or tenements.

No. of Persons.	No. of Families.
2	116
3	94
4	46
5	21
6	10
7	2

Thus two families, each composed of seven members, lived in two rooms; ten families, each of six members, lived in two rooms; twenty-one families, each of five members, lived in two rooms; and so on. Again, it was found that four families, each of nine members, lived in three rooms; and sixteen families, each of eight members, lived in three rooms.

In regarding statistics like the above, it is reasonable to suppose that the housing and overcrowding conditions of the District are far from satisfactory.

WORK UNDER HOUSING ACTS.

Under Section 17 of the Housing, Town Planning, etc. Act, 1909, it is the duty of every Local Authority "to cause to be made from time to time inspection of their District, with a view to ascertain whether any dwelling house therein is in a state so dangerous or injurious to health as to be unfit for human habitation."

This duty of house inspection naturally falls to the Public Health Officials of the Local Authority.

Neither the Council nor the Medical Officer of Health have been able fully to do their duty under Sections 17 and 18 of the Housing, Town Planning, etc. Act, 1909, in respect to the closing and demolition of houses which are unfit for human habitation. Many such houses have been patched and repaired so as to make them less unfit to live in; but they have not been closed and pulled down as the Act requires, because already there is a house famine and nowhere to put the displaced tenants. Such patching obviously can only be a temporary expedient, and there are a score or more of houses which, despite repairs, ought not to remain inhabited. Still, it is better for people to live in bad houses than to be turned into the streets. The whole difficulty of course is one of Finance, since it is legally possible for the Council to build houses into which they could move the tenants displaced by their Closing Orders.

Apart from action taken by means of Closing Orders, some useful work has been done among inferior house property during the year, as the following table shows:—

Summary of work done under the Housing, Town Planning, etc. Act, 1909.

Houses Inspected	352
Number of Inspections	394
Houses represented to the Council as unfit for human habitation	8
Closing Orders made by the Council	7
Closing Orders became operative	2
Closing Orders determined by the Council	1
Defects remedied after the issue of Closing Order	1
Defects remedied after informal notice	52
Works not finished by end of 1912	39
Total number of houses found defective	99
Total number of houses found in good condition	253

NEED OF HOUSES FOR THE WORKING CLASSES.

As far back as July, 1912, the Medical Officer represented to the Council that there was a need in the district for working-class

houses. After prolonged discussion in Committee, the Council resolved to undertake the building of forty-four workmen's dwellings, and it was decided to advertise for suitable sites. One large landowner in the District has generously presented enough land at St. Dennis for the building of six working-class houses; but, apart from this gift, no sites have yet been finally chosen, although some eighteen months have elapsed since the Medical Officer reported to the Council on the dearth of houses.

When these houses in the course of time are built, it will be very desirable to close at once many old houses in the district, and put the displaced tenants into the new dwellings.

SUPERVISION OF NEW HOUSES.

Houses in course of construction are inspected by the Sanitary Inspectors. The house is seen during construction with reference to the damp course and to ensure that the building Bye-Laws are obeyed. The house is also inspected on completion. Either the Medical Officer or the Sanitary Inspectors attend the Plans Committee of the Council, and several plans have been referred back to those who sent them on account of irregularities.

TOWN PLANNING.

The Council have decided to prepare a Town Planning Scheme for part of their area adjacent to the Urban District of St. Austell, and the preliminary notice on the owners and occupiers has been served, and the first meeting of the persons interested has been held. No opposition was taken to the scheme, which, however, owing to more urgent matters, has not received much attention during the last few months.

HOUSING IN THE FUTURE.

Undoubtedly the attention of the Rural District Council has been occupied during the past year with many urgent matters, but it can safely be said that the "housing problem" is of all affairs the most important, although it has not received the amount of interest that it merited.

It is a generally accepted fact that in this district there is a large amount of insanitary house property, and neither the Council

nor the ratepayers deny that there is a shortage of houses for the working classes. During 1913 the Medical Officer has received 37 applications from workmen who are unable to find houses, or from young men who wished to get married and to take a house of their own. In 1912 about 50 of such applications were received. People apply to the Medical Officer because it is known that the Council are considering the building of houses.

The whole question of housing is one which should occupy the Council considerably in the future. It is not a matter for reference to a Committee which seldom meets. The matter is one of Health, and the people of the District are as anxious as the Medical Officer to see the present conditions, often intolerable, bettered or abolished.

HOUSING AND HEALTH.

A good house influences health in the following ways:

1. Rheumatic Fever and subsequent heart disease are less likely to be contracted in a dry and well-built house than in a wet house. The same is true of chronic rheumatic affections.

2. The general health is better in a well-constructed and properly drained house.

3. The character and morals improve as the domestic circumstances are bettered. Bad and insanitary houses lead to an insanitary and bad type of person. It is among the slum dwellers that alcholism is most common—rather than return to his filthy and overcrowded hovel, a man reasonably prefers the comfort of a public house.

4. Consumption is less likely to spread among the members in a well-built house that is not overcrowded. Bad house property and overcrowding favour the prevalence of Tuberculosis.

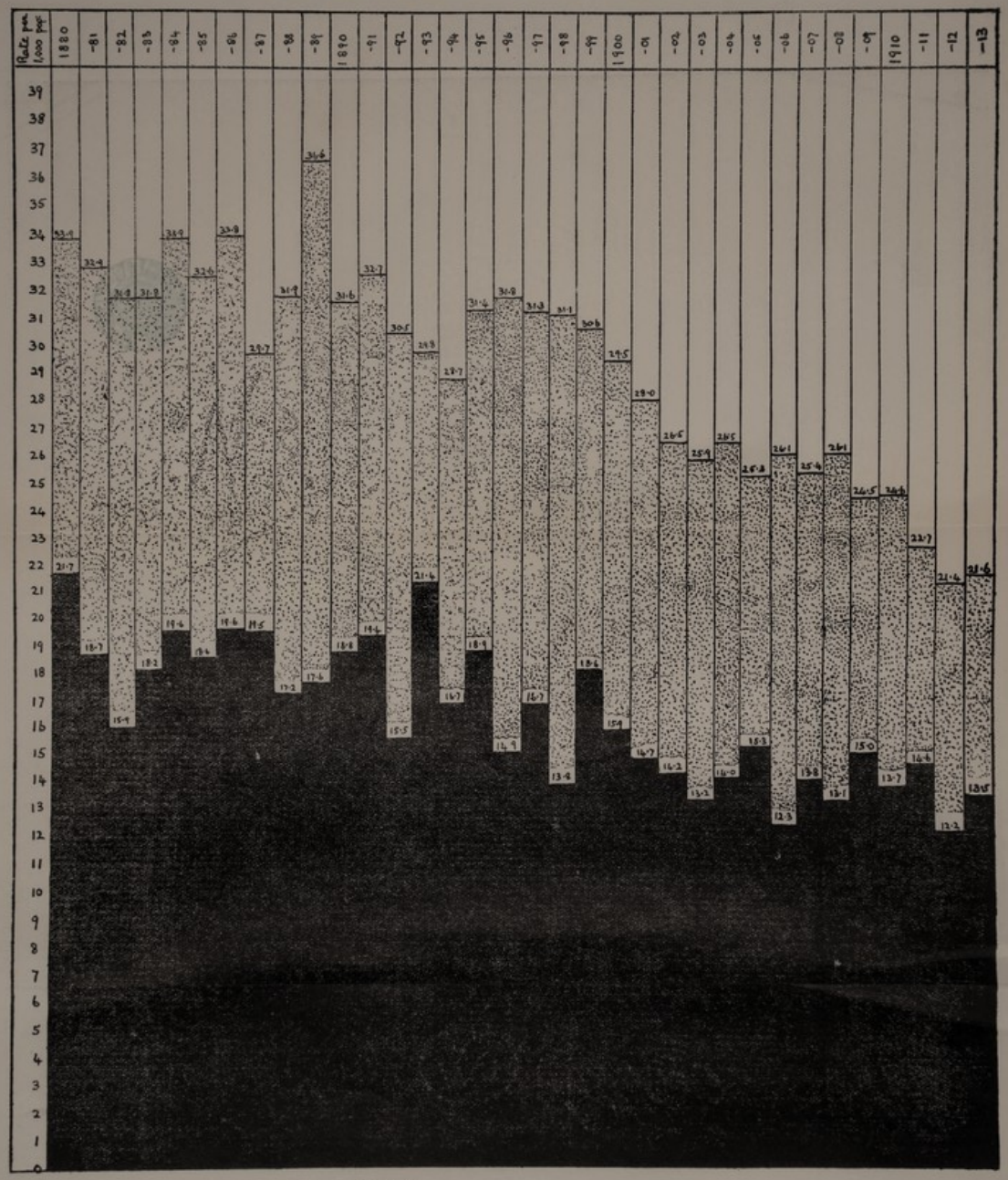
5. In a clean house with plenty of light and air space children are less likely to contract certain diseases, notably Diarrhœa.

CONCLUSION.

If the Council cared to do so they could, in the space of a few short years, abolish almost all the slum property in their area. The most practical means of setting to work would be the appointment of a very small committee—say, three members—all of whom were really keen on the housing question and desirous of seeing the bad houses disappear. Such a committee should have power to act in matters like the serving of Closing Orders and Notices. They might also prepare a scheme for the provision of new workmen's dwellings. It is generally recognised that a committee of a dozen or more members is unwieldly, and a bad method by means of which to conduct important business.

CHART A.

Birth-rate, Death-rate and Rate of Natural Increase. St. Austell Rural District 1880—1913.



The Black portion represents the DEATH RATE.

The Dotted portion represents the RATE OF NATURAL INCREASE, or the Excess of the Birth-rate over the Death-rate.

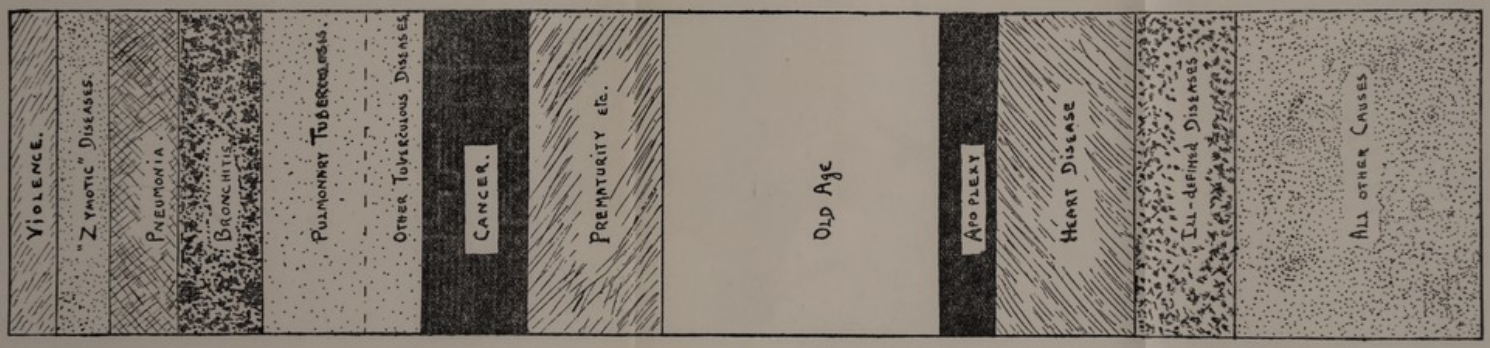
The BIRTH RATE is represented by the dotted portion PLUS this black portion.

CHART A.

Birth-rate, Death-rate and Rate of Natural Increase. St. Austell Rural District 1880—1915.

CHART B.

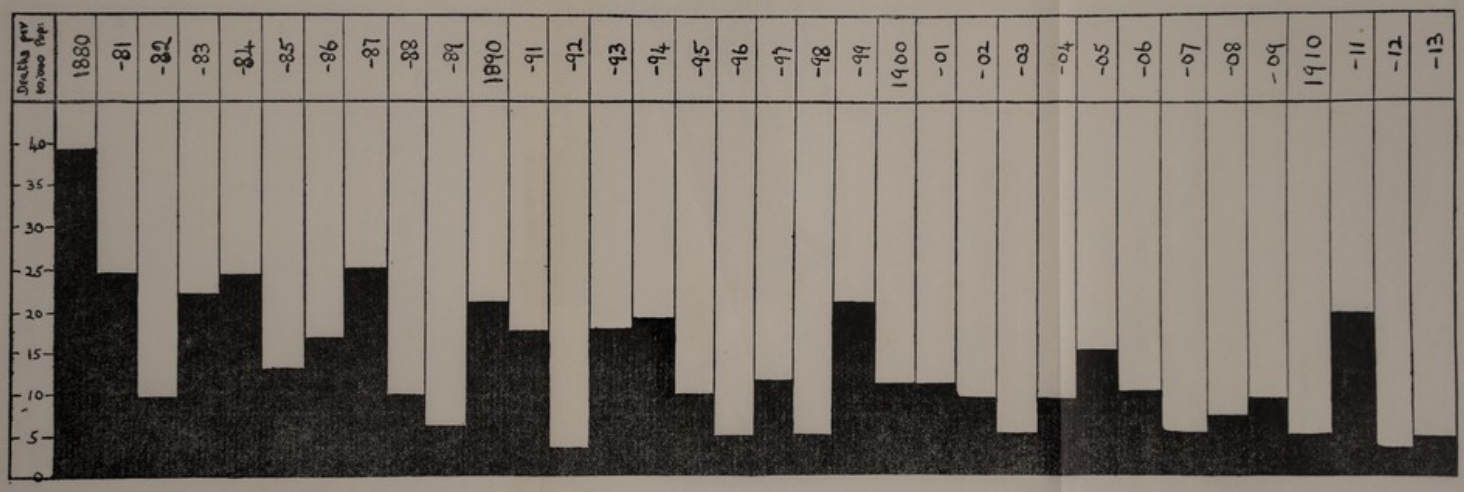
Proportions of Deaths from the principal causes to the total Deaths 1913 in St. Austell Rural District.




Cancer.

CHART C.

Chart showing "Zymotic" Death-rate per 10,000 population in St. Austell Rural District 1880—1913.



NOTE:—The diseases known as "Zymotic" include the following: Diarrhœa, Measles, Whooping Cough, Diphtheria, Scarlet Fever, Enteric Fever, Small Pox and Continued Fever.

CHART C.

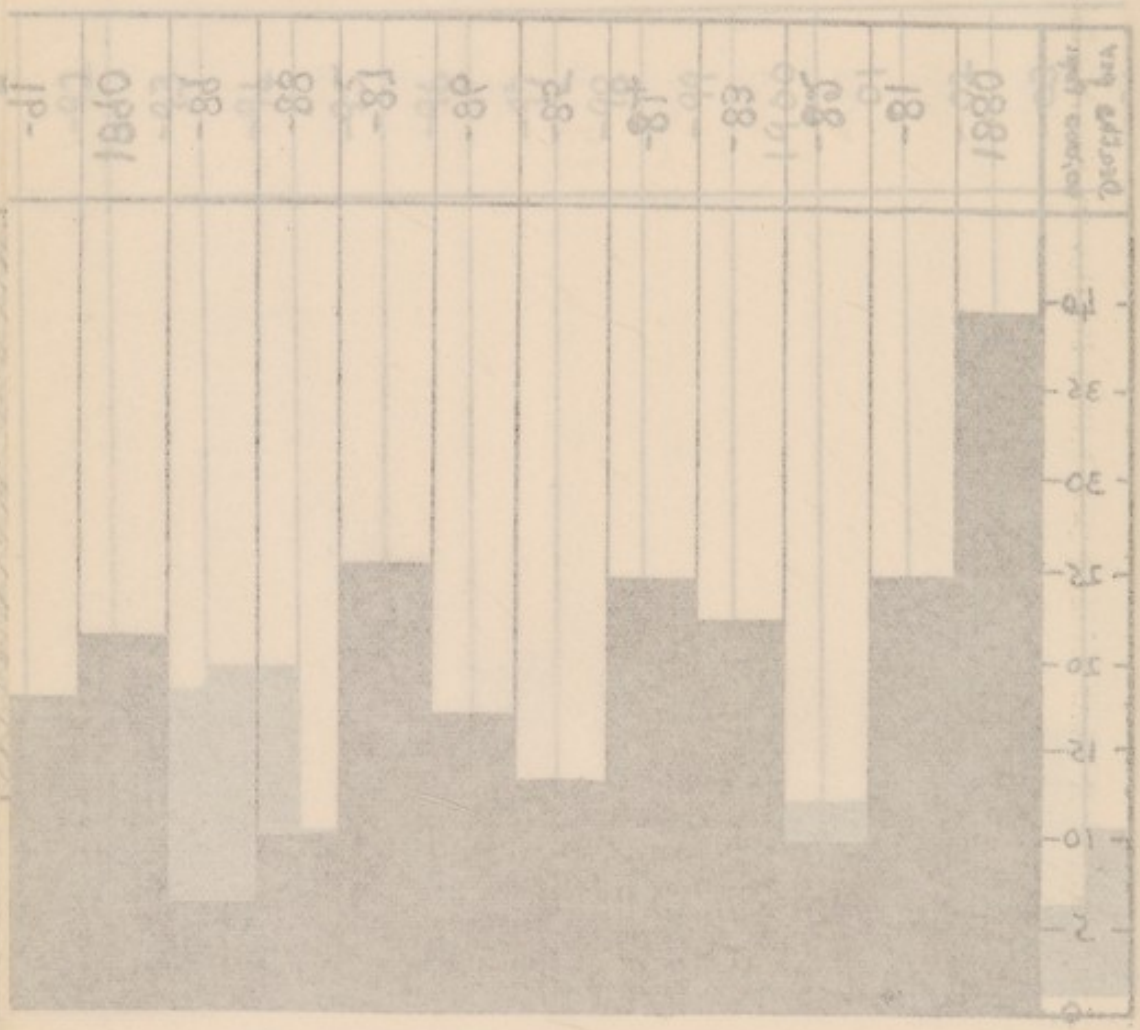


CHART D.

Deaths of Infants under 1 year of age per 1,000 Births in St. Austell Rural District.

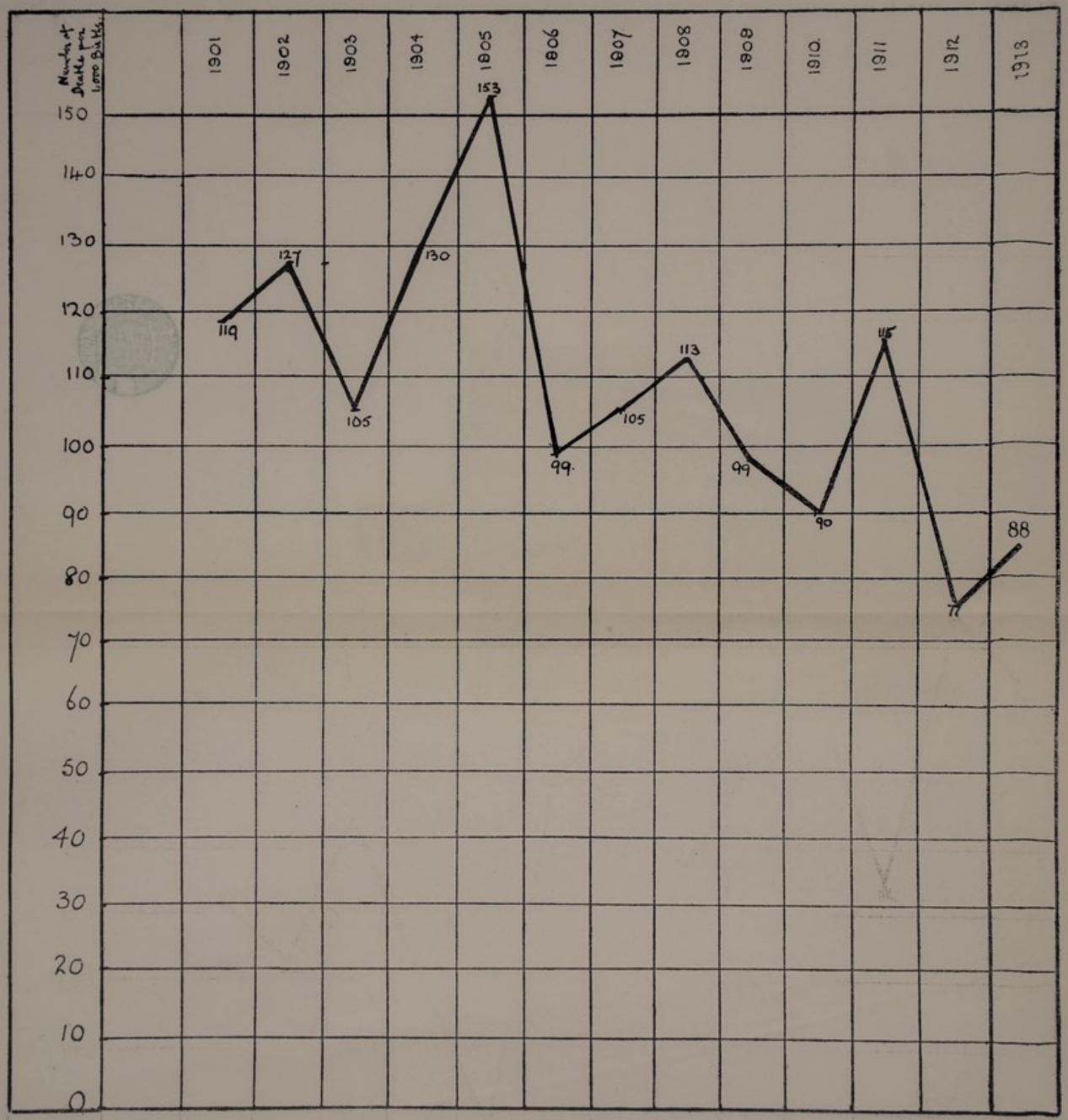


CHART D.

Deaths of Infants under 1 year of age per 1,000 Births in St. Austell Rural District.

PART VII.

FOOD.

GENERAL.

Premises on which food is prepared or stored are not required to be registered unless they are Dairies or Slaughterhouses, or come under the influence of the Factory and Workshops Act. The result of this is, that while the Medical Officer of Health has power to condemn food that is unfit for human consumption, he has no authority to prevent unsuitable premises from being occupied in the storage or preparation of food stuffs. In practice, however, it is found that such legislative control is unnecessary. Retailers and manufacturers of food are not anxious for their premises to obtain an unpleasant notoriety, and consequently they conform readily to any suggestions of improved sanitation which may be made to them.

MILK.

The majority of the dealers in milk throughout the District are now registered by the Local Authority. Legislation on the subject of such registration is unsatisfactory, as the Authority are forced to register a person as a milk seller, although the premises where the milk is kept may be insanitary.

Thirty-eight visits to Dairies, Cowsheds, or Milkshops were made during the year. Many of the premises, especially of the smaller dealers, are unsatisfactory from the sanitary point of view. Milk is kept in propinquity to meat or to groceries, and is often insuffiently protected from outside contamination.

MEAT.

Ninety-nine visits were paid to Slaughterhouses during 1913. In the majority the conditions are tolerable. Some of the older Slaughterhouses are imperfectly paved and deficient in drainage.

In a few the water supply is inadequate in the summer. Certain Slaughterhouses are placed too near to other buildings, and one is situated at the entrance to a school.

The quality of the meat killed is good. No tuberculous carcase or offal was discovered during the year, and no diseased meat was found exposed in shops. From a butcher the Medical Officer received information that a rival was importing and selling tuberculous meat. Despite many surprise visits this statement was not substantiated in fact.

It is not reasonably possible for the Sanitary staff of the Council to inspect all the meat killed in the District. The substitution of suitably-placed Public Abattoirs, instead of private Slaughterhouses, would be of financial benefit to the butchers and to the farmers who supply the cattle, and would add to the well-being of the public who eat the meat.

THE SALE OF FOOD AND DRUGS ACTS.

These Acts are administered by the County Council through an Inspector, who has his headquarters at Bodmin.

The following Table shows the number of Samples of Foods, etc., taken during the year.

Table XIV.

FOOD AND DRUGS ACTS.

Return showing the number of Samples taken under the Food and Drugs Acts, in the Rural District of St. Austell, during the year ending 31st December, 1913:—

No. of Samples taken and description.	No. found adulterated or below standard.		Prosecutions (if any).
	Below Standard.	Genuine.	Convicted
14 New Milk	2	12	1 To be prosecuted 1
1 Scald Milk		1	
1 Skimmed Milk	1		To be prosecuted 1
3 Butter	1	2	1 Convicted
1 Lard		1	
1 Saffron		1	
1 Brandy		1	
2 Gin		2	
2 Whisky		2	

SUMMARY.

No. of Samples taken.	Genuine.	Below standard.	Prosecuted.
26	22	4	2
	To be prosecuted.		
	2		

PART VIII.

FACTORIES AND WORKSHOPS.

Section 132 of the Factory and Workshop Act, 1901, provides:

> "The Medical Officer of Health of every District Council, "shall in his Annual Report to them, report specifically on "the administration of this Act in Workshops and Work- "places, and he shall send a copy of his Annual Report, or "so much of it as deals with this subject, to the Secretary of "State."

Table XV gives a Summary of the various kinds of Factories and Workshops in this District, and of the visits made to such places and the defects found. All these defects were remedied during the year under review. It was not found necessary either to serve notices or to prosecute under the Act.

There are no "Out Workers" in this District.

TABLE XV.

Nature of Factory or Workshop	No. in District	Visits	Number of Defects	
			Found	Remedied
Bakehouses	23	56	7*	7
Builders and Carpenters	24	3	0	0
Coopering	14	0	0	0
Coachbuilding, etc.	4	0	0	0
Fish Curing	10	18	5†	5
Machine and Engineers	6	1	0	0
Net and Basket Making	5	2	0	0
Saw Mill	7	1	0	0
Ship Smith	8	3	0	0
Smith and Wheelwright	18	5	0	0
Tailoring & Dressmaking	33	12	3‡	3
Various others	28	6	0	0
Totals	180	107	15	15

*Lack of Cleanliness (4). Defective Drain (1). Not sufficiently ventilated (2).
†Lack of sufficient privy accommodation.
‡Abstract of Act not affixed. Want of ventilation (2).

Of the above 107 inspections 94 were made by the Medical Officer of Health and the remainder by the Sanitary Inspectors. Generally the Factories and Workshops in the District are well kept and the managers are very willing to follow advice.

PART IX.

REVIEW OF YEAR'S WORK.

The following Table shows shortly some of the work done during the year by the Council's Sanitary Inspectors and Medical Officer. A short Summary of Mr. Moffatt's work as Surveyor has been written by him and will be found in the Appendix.

TABLE XVI.

Record of Work done during 1913.

Nature of Work	Medical Officer	Sanitary Inspectors	Total
Nuisances abated	47	35	82
†Notices served			25
†Notices obeyed			17
Houses inspected under Housing Acts	264	88	352
Number of Visits to these houses	284	110	394
Other houses visited	59	35	94
Visits to Infectious Diseases	354	8	362
do. Slaughterhouses	79	20	99
do. Dairies, &c.	25	13	38
do. Bakehouses	43	13	56
do. Other Factories and Workshops	51	1	52
Interviews	92	135	227
Letters written	1068	297	1365
Post Cards written	468	255	723
Inspection of houses during building		226	226
Water Certificates issued		46	46
Feet of Sewer laid		1678	1678
Drains tested		15	15
Houses disinfected		120	120

†Under various Sections of the Public Health Acts.

Reference has already been made in general terms of the work and duties of the Medical Officer of Health and of the Inspectors.

In addition to the above the Medical Officer reported during the year to the Council on the following subjects:

Diphtheria at St. Dennis.
Small-pox convalescent at Pentewan.
The prevalence of Scarlet Fever.
The need for an Isolation Hospital.
The Sanitary condition of Pentewan.
Overcrowding at St. Blazey.
Lack of suitable Office Accommodation.
Quarterly Vital Statistics of the District.
And various other Sanitary matters.

Each week returns are sent to the Local Government Board and the County Council stating the number of infectious diseases notified during the past week, and also a form giving full particulars of each case of Tuberculosis notified is sent to the County Medical Officer. In addition to keeping the books and records prescribed, the Medical Officer makes a complete record of the results of Bacteriological work in the Council's Laboratory.

Every month the County Council is provided with a detailed Report of the deaths and infectious diseases in the District.

Thus it will be seen that a large amount of time (both of the Medical Officer and of the Sanitary Inspectors) is occupied by undertaking clerical work; and, since these Officials of the Council are paid more in salary than it is usual to pay to junior clerks, it would seem economical to set them free from the clerical work, so that their time might be more properly employed on the matters in which they have received special training.

PART X.

THE VARIOUS PARISHES.

Preliminary Note.

A short description of each Parish is given in the following pages. It has been thought desirable to include figures under the various headings, showing the Assessable Value and the amount of money produced by a penny rate under Sec. 211 of the Public Health Act, 1875, in each parish. It is interesting to observe how widely such sums vary—in one Parish a rate at one penny produces only £2, in another as much as £180. The Assessable Value of the whole District is about £160,000; and a general rate of 1d. produces, for Sanitary purposes, £662.

Other details of the Parishes which are not given in this section, are to be found in other parts of this Report: the reader is referred, for example, to Table II. for the local incidence of Infectious Diseases, to Part VI. for additional observations on Housing, and to Table XI. for the various Parochial Death-rates.

CREED.

Area in Acres, 2,666.

Population, 1901, 232.

1911, 239. Males 114. Females 125.

Assessable Value, £1,194.

Rate of 1d. in the £ produces £5.

This Parish is devoted entirely to Agriculture. The population is scattered, and there are no villages. The water supply of the farms is from wells and springs. The health of the parish is good and the housing conditions are satisfactory.

GRAMPOUND.

Area in Acres, 198.

Population, 1901, 491.
1911, 430. Males 189. Females 241.

Assessable Value £708.
Rate of 1d. in the £ produces £3.

Grampound, an ancient Borough, consists essentially of one broad street of well built houses. There are a few outlying cottages. The inhabitants work chiefly at the tan yards. The health of the parish is good.

MEVAGISSEY.

Area in Acres, 1,318.

Population, 1901, 2,088.
1911, 1,849. Males 875. Females 974.

Assessable Value £4,231.
Rate of 1d. in the £ produces £17.

Mevagissey parish, apart from the town itself, is Agricultural. The majority of the population is concentrated at the town, the countryside having only a few farms and hamlets. The following remarks apply to the town of Mevagissey and not to the Parish as a whole.

Mevagissey faces towards the South-East, looking out to sea, and on the landward sides is surrounded by hills rising to a height of 300 feet. The houses cluster in the valley and the town sends up arms to the hills. There was no town planning while Mevagissey was building. The town grew without order, and the result is that there are more houses built on each acre than is considered desirable by modernists.

Despite the fact that the houses in the town are deficient in air space, Mevagissey is the most cleanly town in the District. The inhabitants seem to take a pride in the place and in their houses, and do their best to keep their surroundings sanitary and clean. Certainly, Mevagissey often smells of fish, but this is unavoidable, and the odour is apparently harmless.

There is much real poverty in the place, especially after an indifferent fishing season: but house rent is low and the people live very simply. There has been considerable intermarriage in the past and most people are related, so there has grown to be a feeling more than clannish, almost a family feeling, in the town, and in the hard winter months the more fortunate help their relations who are poor.

The children who attend the Elementary School are well nourished and look very healthy. They are more clean and better clothed than school children in other parts of the District.

Water Supply. The water supply of the town is from wells. The water supply is of good quality, but not sufficiently protected from contamination. The wells do not run dry even in the hottest summer.

Drainage. Many houses are not supplied with sanitary conveniences, and owing to their situation—built near the cliff with no back yard or garden, and limited in the accommodation—it is not practicable to supply many of the houses with closets. To obviate this difficulty, public sanitary conveniences are provided on the quays. Where possible, houses have slop or water closets connected with sewers, and these sewers discharge into the stream which flows into the inner harbour. This is not the best arrangement. It would be better to disconnect the sewers from this leat and lead the undiluted sewage to below low water mark. The question of expense arises, and, of two necessities, the sewage is actually the less important.

Scavenging and street cleaning is well performed by the public scavenger. The refuse collected is taken inland to farms.

Housing. The housing of the working classes is on the whole good. There are a few back-to-back houses, and some buildings have insufficient light and air space; but the cleanliness of the inhabitants largely neutralises these defects. The houses are kept in a good state of repair, and there is no overcrowding.

Health. Until December, 1913, the health of Mevagissey was very good. The inhabitants generally die of old age. In December, however, two cases of Diphtheria were brought to the notice of the Medical Officer of Health, who, on subsequent

enquiry, discovered a school child with marked Diphtheritic (Palatal) Paralysis. It remains to be seen whether the disease will spread in the manner evidenced at St. Dennis.

Chief Sanitary Requirements. (1) A Water Supply free from possibilities of contamination, and a service of water pipes throughout the town.

(2) Extension of the main sewer to below low water mark.

ROCHE.

Area in Acres, 6,471.
Population, 1901, 1,624.
1911, 1,827. Males 927. Females 900.
Assessable Value £8,021.
Rate of 1d. in the £ produces £33.

Roche is the most northerly parish in the District, and its population is scattered and variously employed. Tin Streaming on the Goss Moor, Agriculture and the Clay Industry occupy the wage earners. There has been a large increase in population during the last intercensal period, and it is to be noticed that among the people there is an excess of males over females—a sure sign of prosperity.

The Churchtown is the largest centre of population, and part of Bugle is in Roche parish; otherwise, the population is scattered in outlying hamlets and farms.

The Water Supply is from wells and springs which are safe, except in one or two instances where there is a possibility of surface contamination.

Drainage. The excrement of the Parish is disposed chiefly in pit or pail closets. Only in Roche Churchtown are there water closets and sewers. The sewage of this place discharges unpurified into a stream, but a system of purification is under consideration at present by the Council.

Housing. There are many old houses which would be condemned if the Housing Acts were strictly enforced, and if there were empty houses into which the people could be moved. Many cottages in Roche parish have been made habitable; but generally

much yet remains to be done before the housing conditions can be called satisfactory.

Health. The health of this Parish is good.

Chief Sanitary Requirements—

1. A Sewerage system for Roche Churchtown.
2. Improvement of housing conditions.
3. Increase of the water supply.

ST. AUSTELL RURAL PARISH.

Area in Acres, 12,028.
Population, 1901, 8,658.
1911, 10,244. Males 4,973.
Females 5,271.
Assessable Value £43,197.
Rate of 1d. in the £ produces £180.

This parish is the largest and most populous in the District. During the last intercensal period the number of its inhabitants increased by 1,586. The people are aggregated at Mount Charles, Slades and Tregonissey, Charlestown, Pentewan, Stenalees and Bugle ; and there are as well many hamlets and groups of cottages. Parts of this Parish have assumed Urban characteristics, others are rapidly losing their Rural nature. The chief industry is the production of China Clay and the traffic associated with this. From both Charlestown and Pentewan the clay is shipped to various home and foreign ports.

Water Supply. Tregonissey, Slades and the neighbourhood of Mount Charles and Charlestown are supplied by water from Carclaze and Penwithick. The water is of good quality, but the supply is not sufficient during the driest summers. During 1913 the Local Government Board held a Local Enquiry regarding the sanction of a Loan to pay for the water works at Penwithick. The Board's Inspector was of the opinion that there must be leakage from the water mains, and this opinion has been partially confirmed by the Council's Surveyor, who, in a few observations taken with Deacon's meters, has detected a considerable water waste. At the time of writing further records are being taken, and the matter is therefore at present *sub judice.*

The quality of the water drunk by the inhabitants of Mount Charles, Slades, Tregonissey and Charlestown appears to be variable—sometimes the water is good, at other times it shows evidence of organic pollution. On one occasion the Analyst reported that he found lead in the water; but six analyses taken subsequent to that finding do not show that lead is present. An abstract of the nine analyses taken during the year is found in Appendix No. 1. Five of the nine samples gave good analyses, the remaining four samples showed the water was indifferent or bad. It seems possible that the pollution enters the Penwithick pumping well from an adjacent shaft, which is timbered over and can allow the entrance of surface water. Another possibility is that since the Penwithick reservoir is not covered, pollution may enter there. It is well-known that sea gulls may carry fæcal matter on their feet and travel many miles inland in search of fresh water, which they often defile. At Penwithick, however, no sea gulls have been observed.

Water is needed at Pentewan, Carthew, Stenalees; and the water supply to Bugle needs increasing.

Drainage. Slades, Mount Charles, Polkyth and Charlestown have a modern system of sewage disposal. They are connected to a main sewer which discharges into the sea at Charlestown. Part of the sewage of Mount Charles flows into the Council's Sewage Farm at Watering Lane. As the lease of this farm expires in 1914 the Council are considering other methods of treating this part of their sewage. Stenalees and Bugle have no drainage system; but the Council have decided to sewer the lower part of Bugle, and Mr. Moffatt, the Surveyor, is now preparing a scheme for this. Of course the whole, rather than the lower part, of Bugle ought to be sewered, and the pipes ought to be extended to Stenalees. However, a little improvement is better than none. Pentewan has no sewers, and the Medical Officer of Health reported twice during the year on the matter, but no action was taken by the Council, except to refer the matter to a Committee, which, up to the time of writing this Report, has not met.

Housing. For the most part the housing in this parish is very satisfactory in its quality. There are here and there a few decadent cottages and also a few built back-to-back. Many more houses are needed, however, especially in the higher parts of the

district where the clay workers are employed. In order to prevent the irregularity of growth of the parish the Council have in hand the consideration of a Town Planning Scheme for two of their rapidly growing districts.

Scavenging in the neighbourhood of Mount Charles is undertaken by the Council.

Health. There have been several scattered cases of Scarlet Fever and Diphtheria during the year. Generally, however, the health of this Parish is good.

General Sanitary Requirements—

1. Further protection of the Penwithick water-supply; and the increase of the supply by preventing the present waste.
2. Water for Carthew and Stenalees; and additional water for Bugle.
3. A water and drainage scheme for Pentewan.
4. A drainage scheme for Stenalees and Bugle.
5. The treatment of the Watering Lane Sewage Farm.
6. Houses for the working classes.

ST. BLAZEY.

Area in Acres, 1,792.

Population, 1901, 2,931.

1911, 3,086. Males 1,466. Females 1,620.

Assessable Value, £8,690.

Rate of 1d. in the £ produces £36.

Many of the inhabitants of St. Blazey parish are employed in the Railway Yard or at Par Harbour. A few work inland as clay labourers, some are market gardeners or work on farms, others travel into Fowey daily to work on the G.W.R. jetties, loading clay. The majority of the inhabitants of the parish are congregated at St. Blazey, Par or St. Blazey Gate, the others are scattered among outlying cottages.

Water Supply. The supply of water at St. Blazey is sufficient and of good quality, and comes from the high ground above the town.

Drainage. The drainage of St. Blazey passes unpurified into streams which discharge on to Par Sands, a mile and a half away. Since there is only about two feet of fall in this mile and a half, the incoming tide washes the sewage back into the town at regular intervals. That which is discharged on to Par Beach decomposes, and sometimes smells abominably. The Council are well aware of this insanitary condition, but nothing has been done to remedy it. Of necessity any sewage scheme for so flat a district as St. Blazey will involve the expenditure of much money, and probably require the installation of Shone's Pneumatic system. If ever Par and Par Sands are to become popular with holiday makers, the present grave offence caused by the sewage from these places must first be remedied. Most of the houses in St. Blazey and Par are on the conservancy system, and many of the privies are badly kept.

A public mortuary, and public sanitary conveniences are wanted in the town.

Housing. St. Blazey in the past grew rapidly in order to meet the demand for labour in the tin mines. This quick growth, without adequate supervision, resulted in many indifferent houses being built. Many of these houses have fallen into decay and their owners' time and money is spent in keeping them habitable. Before many years are past this patching will be no more possible. These houses are let at low rentals.

Health. On the whole the health of the parish is good and the incidence of Infectious Disease is not heavy.

Scavening is done by the Council.

Chief Sanitary Requirements—

1. The provision of sewers.
2. The abolition of privies.
3. Houses for the working classes.
4. The provision of a Public Mortuary and Sanitary Conveniences.

ST. DENNIS.

Area in Acres, 3,240.
Population, 1901, 1,632.
1911, 2,030. Males 1,018. Females 1,012.
Assessable Value, £11,457.
Rate of 1d. in the £ produces £48.

The population of this parish is gathered together at St. Dennis Churchtown, only a few people living outside this. Chiefly the wage earners work as clay labourers, a few on farms, or at the Goss Moor tin streaming works. The parish is on the north-west boundary of the District.

Water Supply. The water supply of the town is from private wells. Some houses are inadequately supplied with drinking water during the summer months. Some of the wells and springs are liable to surface contamination.

Drainage. The Medical Officer of Health made, in August, a Special Report to the Local Government Board, to the Cornwall County Council, and to the St. Austell Rural District Council on the prevalence of Diphtheria at St. Dennis; and in this Report stress was laid on the lack of drainage in St. Dennis Churchtown.

It is satisfactory to see that the Council recognize their responsibility, and have decided to sewer St. Dennis. The Sanitary Inspector for this district (Mr. Harvey) will prepare the necessary plans and specifications for the work. It is to be hoped that the work will not be delayed, as the matter has already been under the consideration of the Council since 1883.

Scavenging. The town is unclean, and domestic offal and refuse is dumped wherever most convenient. The Council have decided to employ a public scavenger; but, up to the present, no one has been found willing to undertake this work.

Housing. Much old house property exists in the parish, but gradually such as is repairable is being put in order. As in other clay districts there is a dearth of houses. It is not practicable to close the worst houses as there would be no shelter for the displaced tenants.

Chief Sanitary Requirements—

1. A Water supply.
2. Sewering of the town.
3. Public scavenging.
4. Houses for Working Classes.

ST. EWE.

Area in Acres, 5,953.
Population, 1901, 954.
1911, 921. Males 450. Females 471.
Assessable Value, £2,842.
Rate of 1d. in the £ produces £11.

This is the largest of the agricultural parishes in the district, and, in common with many other farming areas, the population has declined in the last intercensal period. There are no large villages in the parish—St. Ewe Churchtown, and the parts of Sticker and Polgooth that are within the parish, containing the largest number of aggregated inhabitants. Chiefly the people live in and around farms and work on the land.

The water supply is from wells and springs. The excrement is disposed in pit closets and pails in a manner satisfactory, having regard to such a scattered population.

Housing. The housing is for the most part fair.

Health. The health of the parish is good.

ST. GORAN.

Area in Acres, 4,961.
Population, 1901, 785.
1911, 729. Males 359. Females 370.
Assessable Value, £2,274.
Rate of 1d. in the £ produces £9.

St. Goran parish is, like Mevagissey, partly given to Agriculture and partly to Fisheries. Gorran Churchtown and Gorran Haven are the two centres of population, the rest of the inhabitants being scattered over the parish. The population has decreased during the last intercensal period.

Generally the conditions prevailing in St. Ewe also obtain in Gorran.

ST. MEWAN.

Area in Acres, 2,652.
Population, 1901, 1,158.
1911, 1,327. Males 662. Females 665.
Assessable Value, £9,808.
Rate of 1d. in the £ produces £41.

The population of St. Mewan parish work partly at clay labouring, partly in quarries or at coopering. The people are concentrated at Trewoon, Polgooth and Sticker, besides which villages there are no collections of houses.

Water Supply. The water supply of this parish is from wells and springs, and is sufficient for the needs of the population.

Drainage. Excrement is disposed of in pails and pits. A few houses have water carriage systems and drain into cesspits. There is no sewerage in the villages, and for the present the prevailing system of excrement disposal is sufficient.

Housing. The housing conditions are fair, but there is a need for more working-class dwellings.

Health. The health of the parish has been good with the exception of the sore throat epidemic at Sticker in December, to which reference has already been made.

Chief Sanitary Requirement. Houses for the Working Classes.

ST. MICHAEL CAERHAYS.

Area in Acres, 861.
Population, 1901, 137.
1911, 147. Males 69. Females 78.
Assessable Value, £634.
Rate of 1d. in the £ produces £2.

The people of this little parish work mainly on farms and at Caerhays Castle. The health of the people is good.

ST. SAMPSON.

Area in Acres, 1,483.
Population, 1901, 288.
1911, 349. Males 158. Females 191.
Assessable Value, £1,102.
Rate of 1d. in the £ produces £4.

The population of St. Sampson work chiefly on farms. Some go into Fowey every day from Golant to labour on the jetties. The increase of the population is due chiefly to the influx of these clay labourers during the last few years.

Health. The health of the parish is good.

ST. STEPHEN-IN-BRANNEL.

Area in Acres, 9,292.
Population, 1901, 4,146.
1911, 4,831. Males 2,454. Females 2,377.
Assessable Value, £38,598.
Rate of 1d. in the £ produces £160.

This is the second largest parish in the District, and has the second largest population. It will be seen there is here an excess of males over females as in the case of Roche and St. Dennis. The district is prosperous and is rapidly growing. Nanpean, Foxhole, Churchtown and Treviscoe are the chief villages. The industry of this district is chiefly in china clay and farming. The rates in this parish are low, being only 4s. in the £ per annum.

Water Supply. Nanpean and Foxhole are supplied with good drinking water by private enterprise: the inhabitants pay a yearly sum for this water. Treviscoe is supplied by wells and Middle Treviscoe from an old mine level: there the inhabitants have never paid for their water. The supply at Middle Treviscoe is subject to intermittent contamination from surface water. The hamlets of High Street and Lanjeth have sufficient water, and St. Stephens Churchtown is supplied by wells, of which all but one run dry in the summer time; in addition to this, almost all the wells are liable to contamination. As there are about 800 people in St. Stephens Churchtown this lack of good water is a serious defect.

The matter has been under discussion for the last quarter of a century, and in 1912 the Council took the advice of an Engineer on the provision of a water supply to the Churchtown. An adequate scheme was prepared, but the owners of the water refused to sell or lease it to the Council. The only advance made in the matter is that the Council have acknowledged their responsibility to provide one of the necessities of life for eight hundred of the people under their care.

There was, as usual, a shortage of water in the Churchtown during the summer of 1913. Several springs were considered, but none were found sufficient or satisfactory for the supply of this village. It seems likely that the Council will have to undertake an expensive scheme and bring in water from some miles away. The parish can very well afford this. The rates are very low, and the rate of one penny in the pound brings in about £160 for sanitary purposes.

Drainage. Nanpean and St. Stephens Churchtown are in need of a drainage system. They have no means at present of disposing adequately of their domestic excrement. There are very few houses on the water carriage system of drainage, and the people appear content with the insanitary conditions which satisfied their grandfathers.

Scavenging. None.

Housing. The housing conditions are generally satisfactory, and the number of houses has kept abreast with the increasing population. Many new houses have been built by the clay proprietors for their workmen.

Health. The health of the parish is good and the incidence of Infectious Disease is not heavy.

Chief Sanitary Requirements—

1. Water for St. Stephens Churchtown, High Street and Lanjeth.
2. Sewers for the Churchtown and Nanpean.
3. Public Scavenging.

TYWARDREATH.

Area in Acres, 3,387.
Population, 1901, 2,215.
1911, 2,414. Males 1,092. Females 1,332.
Assessable Value, £7,107.
Rate of 1d. in the £ produces £29.

Tywardreath, Tywardreath Highway and Par are the chief collections of houses in this parish. The occupations of the inhabitants are like those of the dwellers of St. Blazey.

The Water Supply is from the Council's main and is sufficient and satisfactory. The cottages outside the villages are supplied chiefly by wells.

Drainage. The drainage of Tywardreath passes into an open drain which empties into a stream at Par Station. This stream, like those in St. Blazey Parish, passes sluggishly to the sea at Par Sands, and, in its passage, receives some drainage from Par Green. Cows are sometimes watered at it. The observations made regarding the drainage of St. Blazey apply with equal force to this sewer from Tywardreath. The Council, again, are well aware of the insanitary conditions that prevail.

Housing. Tywardreath village is pleasantly situated on the hillside, and many better class houses are to be found there. At Par Green also the dwellings are superior to those usually occupied by the working man. At the Highway, on the other hand, there are some old and decaying houses. But on the whole throughout the parish the housing conditions are satisfactory.

Health. There were a few cases of Infectious Disease in 1913, but generally the health of the district is good.

Chief Sanitary Requirement—

The proper disposal of the Tywardreath sewage.

APPENDIX No. I.

NOTES ON ANALYSES OF PENWITHICK WATER.

No. 1. May 16th. Public Tap in Mount Charles. A very fair water, and quite fit for drinking purposes.

No. 2. June 12th. Water from Menear Pit, which is used to supplement the ordinary supply in times of drought. The pool in question is sometimes covered with a loathsome slime. It is reported that the people in the neighbourhood have drowned cats in this pool. The Medical Officer of Health reported adversely to the Council on this water, and stated it ought not to be used. The Analysis shows evidence of organic contamination. The Analyst reported that this water was "brownish and slightly turbid," and further, "The microscope shows a little vegetable debris and some diatoms. These should be filtered or settled out before the water is used for drinking."

No. 3. Nov. 8th. Water from Penwithick Reservoir. This water was taken for analysis on account of the complaints of a few consumers as to the quality of the water. The sample contains lead equivalent to 0·1246 grains per gallon, which utterly condemns it for drinking purposes. It seems highly probable, however, that the water does *not* contain lead. No previous samples and no subsequent samples show a trace of this metal. Apart from the lead, the water gives a bad analysis and shows that there has been previous organic contamination. This is not of recent date, for no B. Coli were found in the water.

APPENDIX No. I.

Results of Nine Analyses of Penwithick, etc. Waters, taken during 1913.

Reference Number	1	2	3	4	5	6	7	8	9
Total Solids	5·5	7·6	10·3	11·1	10·3	12·4	5·2	4·8	5·1
Chlorine	2·7	2·5	2·0	2·1	2·3	2·3	2·2	2·5	1·7
Nitrogen as Nitrates	0·2	—	0·25	0·25	0·25	0·27	0·2	0·3	0·2
Hardness	5·0	2·0	2·5	2·25	2·7	2·7	3·0	3·5	3·0
Poisonous Metals: Lead	Nil	—	0·178	Nil	Nil	Nil	Nil	Nil	Nil
Free Ammonia	0·002	0·002	0·004	0·005	0·001	0·006	0·001	0·001	0·002
Albuminoid Ammonia	0·005	0·0067	0·0118	0·008	0·003	0·0134	0·003	0·0035	0·0045
Bacillus Coli per 100 c.c.	—	Nil	Nil	—	—	—	Nil	Nil	Nil

In all the above the Analyses are expressed in parts per 100,000.

APPENDIX II.

SURVEYOR'S DEPARTMENT.

Work carried out during the Year 1913.

1. **New Buildings.** The following figures give particulars of the work of this Department relating to new buildings:

Number of plans of new buildings passed	....	68
,, of new buildings certified for occupation	....	78
,, of visits to building work in progress	...	220
,, of certificates issued under the Public Health (Water) Act, 1878	....	46

2. **Sewerage.** During the year I prepared plans, sections and specifications for the sewering of the Poltair Estate. The scheme was prepared with the idea of providing for future extensions on the Western side of the estate. The cost, in the opinion of the Committee being excessive, and the question of future extension being remote, I subsequently prepared amended plans and specifications at a considerable reduction in cost. This scheme is now in course of completion.

Two sewer extensions were carried out in the course of the year—Cemetery Hill, Fowey, and Newquay Road, Roche.

Sewage Farm, Mount Charles District. The present sewage farm being at the present time inadequate for the needs of the district, and in the opinion of the Medical Officer of Health a nuisance, I was instructed by the Sanitary Committee to prepare plans and estimates for three suggested schemes for dealing with the sewage of this district:—

(*a*) A new system of disposal on the present site.
(*b*) Pumping to a high-level sewer.
(*c*) Tunnelling beneath the Polmear Hill, and constructing a sewer to connect with the main sea outfall at Charlestown.

After making the necessary surveys, I prepared estimates of schemes (*a*) and (*c*). Scheme (*b*) was found not to be practicable. These schemes are now under the consideration of the Committee.

During the past year the work of supervising the cleansing of the leats or watercourses in the St. Blazey and Par districts has been undertaken by my Department. The work was formerly under the direction of the Highways Department.

Water. In the latter part of the year I prepared plans and specifications of a water scheme for the village of Tregrehan and part of Holmbush. This scheme—with the exception of the provision of a reservoir—was in progress at the end of the year.

In accordance with the instructions of the Committee, I carried out the survey required by the Local Government Board before they would sanction the loan for the Penwithick Water Scheme. All the required data, together with plan, has now been submitted to the Board.

Public Mortuary. I prepared plans and specifications for a mortuary at Par. Only one tender was received for the work, and the Committee was of opinion that the cost was excessive, and instructed me to prepare amended plans and specifications.

Schemes Contemplated. The following schemes will receive my early attention during the coming year:--

(*a*) Sewerage scheme for the village of Bugle.
(*b*) Sewage disposal scheme for the village of Roche.
(*c*) Sewerage scheme for the village of Pentewan.
(*d*) Water Supply scheme for the village of Pentewan.
(*e*) Sewerage scheme for the combined districts of St. Blazey, Par and Tywardreath.

Some time must necessarily elapse before these schemes mature, as much of my time is taken up with other Sanitary work pertaining to the Health Department. Also a vast amount of time is occupied with clerical work—the greater part of which could be undertaken by a boy clerk of average intelligence.

W. H. MOFFATT,
Surveyor.

APPENDIX III.

List of Adopted Acts and of Bye Laws.

The Council has adopted the following Acts:—

The Public Health (Buildings in Streets) Act, 1880.

The Public Health Acts (Amendment) Act 1907, in part.

The Council has made Bye Laws under the following matters:—

1. New Streets and Buildings.
2. Nuisances.
3. Common Lodging Houses.
4. Slaughterhouses.
5. Regulations respecting Dairies, Cowsheds and Milkshops.

St. Austell Rural District Council.

PUBLIC HEALTH DEPARTMENT.

SCARLET FEVER.

Children from this house must not attend Day or Sunday School or Meetings, nor mix with other children until permission is given by the Medical Officer of Health.

All cases of "sore throat," "lumps in the neck," or "peeling skin" must be reported to the Medical Attendant, as they are probably due to Scaalet Fever.

The patient must be kept in one room until the end of the illness, *and none except the person in charge allowed to enter the room.* All spare furniture should be removed from this room, and the floor and remaining furniture should be wiped once a day with a damp cloth. The window should be kept open.

The attendant on the sick person should wear a washable overall, and should take this off and wash hands and face before mixing with other people.

No domestic animal should be allowed to enter the sick room.

No visitors may be allowed in the house and no person from the house may visit other houses.

A patient suffering from **Scarlet Fever** is usually **dangerous to others** for six or eight weeks. There is great danger of infection from any discharge from ears or nose.

Disinfection.

1. All soiled linen from the sick room must be boiled.
2. Special cups, saucers, spoons, etc. must be used for the patient and boiled after use. Any spare food or drink from the sick room must be destroyed.
3. All discharges from the nose, ears or throat of the patient must be received into a rag and be burnt at once.
4. *At the end of the illness* the patient should leave the sick room, have a hot bath, and put on clean clothes. All infected clothes and bedding must be boiled. The sick room must be scrubbed out thoroughly with soap and water and the walls and furniture wiped down with a damp cloth.

A. T. NANKIVELL, M.D., D.P.H.,
Medical Officer of Health.

St. Austell.

CAUTION.—There is a penalty of **Five Pounds** for exposing infected persons or material.

St. Austell Rural District Council.

PUBLIC HEALTH DEPARTMENT.

DIPHTHERIA.

Children from this house must not attend Day or Sunday School or meetings, nor mix with other children until permission is given by the Medical Officer of Health.

All cases of "sore throat," or "lumps in the neck," or "croup," must be reported to your Medical Attendant, as they are probably due to Diphtheria.

The patient must be kept in one room until the end of the illness, *and no one except the person in charge allowed to enter the room.* All spare furniture should be removed from this room, and the floor and remaining furniture should be wiped over once a day with a damp cloth. The window should be kept open.

The attendant on the sick person should wear a washable overall, and should take this off and wash hands and face before mixing with other people.

No domestic animal should enter the sick room. Cats may suffer from Diphtheria and may give it to people.

No Visitors may be allowed in the house, and no person from the house may visit other houses.

A patient suffering with **Diphtheria** is usually **Dangerous to others** for six or eight weeks. There is great danger of infection from any discharge from the nose.

Disinfection.

1. All soiled linen from the sick room must be boiled.
2. Special cups, saucers, plates, spoons, etc. must be used for the patient and boiled after use. Any spare food or drink from the sick room must be destroyed.
3. All discharges from the throat or nose of the patient must be received on to a rag and be burnt at once.
4. *At the end of the illness* the patient should leave the sick room, have a hot bath, and put on clean clothes. All infected clothes and bedding must be boiled or destroyed. The sick room must be scrubbed out with soap and water, and the walls and furniture wiped down with a damp cloth.

A. T. NANKIVELL, M.D. D.P.H.
Medical Officer of Health.

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St. Austell Rural District Council.

PUBLIC HEALTH DEPARTMENT.

TYPHOID (Enteric) FEVER.

All cases of "Diarrhœa," "severe headache" or "feverishness" occurring in the household should be immediately reported to your Medical Attendant, as they are probably due to Enteric Fever.

The patient must be kept in one room until the end of the illness, *and no one except the person in charge allowed to enter the room.* All spare furniture should be removed from this room, and the floor and remaining furniture should be wiped once a day with a damp cloth. The window should be kept open.

The attendant on the sick person should wear a washable overall, and be very careful to scrub hands before mixing with other people or eating any food. Nurses should keep their nails short, so that no infectious materials can lodge under the nails.

A patient suffering from this disease is **Dangerous to others** for at least a fortnight after return to ordinary food.

Disinfection.

1. All soiled linen from the sick room must be boiled.
2. Special cups, plates, spoons, etc. must be used for the patient and boiled after use. Any spare food or drink from the sick room must be destroyed.
3. Everything passing from the patient must be received into a mixture of water and disinfectant, sufficient being used completely to cover it, and be allowed to stand for half an hour. Such matter must then be buried in the garden or washed down the water closet. *On no account must anything passing from the patient be emptied into a pail closet or privy.*
4. *At the end of the illness* the patient should leave the sick room, have a hot bath, and put on clean clothes. All infected clothes and bedding must be boiled or destroyed. The sick room must be scrubbed out with soap and water, and the walls and furniture wiped down with a damp cloth.

A. T. NANKIVELL, M.D. D.P.H.,
Medical Officer of Health.

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St. Austell Rural District Council.
PUBLIC HEALTH DEPARTMENT.

The Prevention of Consumption.

Consumption is an Infectious Disease, and one person can catch the disease from another. The infection of Consumption is present in the expectoration of a Consumptive person.

DIRECTIONS TO THOSE SUFFERING FROM CONSUMPTION.

Early cases of Consumption can be cured, and all cases may be improved by taking the following advise:

1. **Fresh Air.** *Windows should be kept wide open night and day. Avoid stuffy rooms.*

2. **The Diet.** Eat as much as you can, and drink as much milk as you can.

3. **Clothing** should be very warm. Wear an overcoat indoors if you feel cold from the open windows.

4. **The Phlegm** coughed up by a Consumptive person is infectious both to the sufferer and others. Never swallow phlegm and never spit it about the room. Consumptives should spit upon a rag or paper which should be at once burned, or into a mug containing disinfectant.

5. **A Consumptive Person** must sleep alone, and must not kiss or be kissed on the mouth.

6. **The House** must be kept very clean, all dust should be wiped up with a damp duster.

ADVICE TO THOSE WISHING TO AVOID CONSUMPTION.

1. **Consumption** is infectious. Avoid anyone who is suffering from Consumption.

2. **Fresh Air and Good Food** will prevent you from getting Consumption.

3. **Avoid** stuffy rooms, dirty houses, and people who cough and spit.

4. **Don't** go to live in a house where there has been Consumption until the rooms have been thoroughly scrubbed out and cleaned.

5. **Never neglect** a cough. If it continues, have medical advice; for it may be early Consumption. Slight cases of Consumption are very easy to cure.

A. T. NANKIVELL, M.D, D.P.H.,
Medical Officer of Health.

St. Austell.

St. Austell Rural District Council.
PUBLIC HEALTH DEPARTMENT.

MEASLES.

Measles is a very dangerous disease—often because people think it too slight to worry about. It causes more deaths than Scarlet Fever, Diphtheria, and Typhoid Fever, and it is especially fatal to children under four years of age.

Measles starts with watering of the eyes, flushing of the face, running of the nose, headache and cough. Avoid anyone with these symptoms, for they are infectious.

Measles kills by causing Inflammation of the Lungs. It may damage the Eyes and Ears and may prepare the way for Consumption.

PRECAUTIONS.

Mothers should not allow their children to go into houses where there is **Measles.**

Every child ill with **Measles** should be put to bed and kept warm; and must be isolated from other children for at least a fortnight.

Children from an infected house must not attend Day School or Sunday School or Meetings.

A. T. NANKIVELL, M.D., D.P.H.,
Medical Officer of Health.

St. Austell.

St. Austell Rural District Council.
PUBLIC HEALTH DEPARTMENT.

THE PREVENTION OF DISEASE.

The following instructions are meant for those who are living in **a House where someone has recently died** of an infectious or contagious Disease.

1. The room in which the death took place ought to be thoroughly cleaned. The walls should be stripped and the paint-work washed. All old bedding should be destroyed or burned, and all furniture wiped over with a damp cloth. The floor of the room should be scrubbed.

2. All infected clothing or property of the deceased person should be boiled or destroyed.

3. The living room of the house should be thoroughly cleaned.

No one should occupy a room where there has been a death from an infectious or contagious disease until the above precautions have been taken.

These remarks apply to houses where there has recently been a death from any of the following diseases:—

Consumption, Pneumonia, Rheumatic Fever, Diphtheria, Cancer, "Fever" of any sort, Measles, Whooping Cough, Diarrhœa, or "Blood Poisoning."

A. T. NANKIVELL, M.D., D.P.H.,
Medical Officer of Health.

St. Austell.

NOTE—These Leaflets are printed on papers of Distinctive Colours—Scarlet Fever on a Red paper; Diphtheria on Green; Enteric Fever on Yellow; Consumption on White; Measles on Pink; and the House Cleansing Leaflet on a Blue paper.