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REPORT

BY THE

MEDICAL OFFICER OF HEALTH

OF THE

BOROUGH OF LOWESTOFT,

FOR THE YEAR

1894.


CONTAINING ALSO THE

ANNUAL REPORT

FOR THE

LOWESTOFT

PORT SANITARY DISTRICT.



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*To the Chairman and Members of the Sanitary Committee
of the Corporation of Lowestoft.*

Gentlemen,

I have the honour to submit herewith my Report upon the Health of your Borough for the past year, and in so doing, I would venture to congratulate you upon the excellent results which have followed your endeavours to improve the sanitary condition of this important Health-resort. The statistics contained in this Report will show you that the rate of mortality during the year 1894, has been the lowest on record, while the diminution in the amount of zymotic sickness has also been most marked, and there is every reason to believe that this improvement has resulted from a genuine advancement in the sanitary condition of the town, and will therefore prove a permanent and not merely a temporary amelioration.

I have the honour to be, Gentlemen,

Your most obedient Servant,

FRANCIS W. CLARK,

Medical Officer of Health.

Health Department,

Town Hall, Lowestoft.

February, 1895.

BOROUGH OF LOWESTOFT.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the Year ending December 31st,

1894.

The area of the Borough of Lowestoft is 2,306 acres, comprising Lowestoft 1,541, Kirkley 578, and Gunton 187; its rateable value is £93,080, of which the parish of Lowestoft contributes four-fifths.

Population.

The population of the Borough at the census of 1881 was 19,696, while at the following census (1891) it had risen to 23,151.

It is estimated to the middle of 1894, for the purposes of this Report, to be 24,660.

Marriages.

The number of marriages solemnized within the Borough during the year amounts to 218. The average for the past ten years has been 185, so that the past year shows a considerable increase, which is indicative of a greater degree of prosperity among a portion at least of the population.

Births.

During the year 1894, there were registered 833 births, giving an annual rate of 33.78 per thousand; their quarterly distribution as to rate, sex and legitimacy is shown in the following table.

TABLE I.

Period.	Legitimate.		Illegitimate.		Total Births.	Rate per 1000.
	Male.	Female.	Male.	Female.		
1st Quarter	115	96	2	1	214	34.71
2nd „	105	85	4	3	197	31.63
3rd „	111	97	1	3	212	34.39
4th „	98	104	3	5	210	34.06
TOTALS	429	382	10	12	833	33.7

The total number of births registered shows a considerable increase over last year, when only 798 births were recorded, but the birth rate is still below the average for the past ten years which has been 36.73 per 1000. There is a slight increase in the number of illegitimate births, as compared with last year, but their ratio to the total births is still much below the average for all England.

The male births are in excess of the female in the proportion of 112 to 100, which is a much higher proportion than prevails generally.

The excess of births over deaths, which gives us what is known as the "natural increase" of the population, amounts to 512 as contrasted with 343 during the preceding year.

Deaths.

The total number of deaths recorded during the year amounts to 321; of these however 5 occurred at the Hospital, in patients who had been brought from the neighbouring rural districts, while other 6

occurred on the high seas, and are recorded in the Report for the Port of Lowestoft. Seven of the deaths during the third quarter of the year occurred in visitors temporarily residing in the town, and on the other hand twelve of the deaths which occurred at the Workhouse at Oulton, during the year, are debited to this Borough, thus making the total deaths for the Borough 315 and the death rate 12.7 per 1000.

In the following table however, all the registered deaths are included, and therefore the death rate appears as 12.93 per 1000.

TABLE II.

1894.	Male.	Female.	Total.	Rate per 1000.	Rate for preceding 5 years.
1st Quarter	56	51	107	17.35	18.66
2nd "	43	32	75	12.16	14.94
3rd "	40	33	73	11.84	16.03
4th "	36	30	66	10.70	16.84
TOTAL	175	146	321	12.93	16.85

It will be observed that the death rate for the past year shows a decided reduction upon the previous average, and so remarkable in fact has been this reduction, that the mortality for 1894 is lower than that of any of the preceding years of which any records have been kept: these records extend back as far as 1875, and the only year, of the past twenty, in which the mortality of this Borough has at all approximated that of last year was in 1881. Although this reduced mortality must be attributed in part to the rainy season which we experienced last year, yet I think the Sanitary Committee may fairly claim to share the credit of this improved healthiness of our Borough, for much good work has been done, by the Health Department, during the past twelve months.

Of the total deaths 27 were certified by Inquest, 293 by qualified medical men, and one only was uncertified.

Deaths as to Locality.

The distribution of the registered deaths as to locality has been as follows; North Ward 90; East 37; West 89; South 71; Hospital 24; Port 6; Sanatorium 4.

In the following table the deaths which occurred in the Hospital and Sanatorium have been allocated to the Wards to which the persons belonged, exclusive of course, of those five which belonged to the rural districts; the six deaths which occurred on the high seas are not included in this table, while also the seven deaths of visitors have been omitted, but the twelve which occurred at the Oulton Workhouse are accounted for, thus giving the total deaths of residents during the year as 315. The table gives also the estimated population of each Ward, and their respective rates of mortality.

TABLE III.

Locality.	Population (estimated).	Corrected Deaths.	Rate per 1000 per annum.
North Ward	6955	97	13.95
East ..	5039	46	9.13
West ..	7067	98	13.87
South ..	5599	74	13.22
Totals	24,660	315	12.7

It will be seen that the East Ward shows by far the lowest mortality rate, and this is due in part to the fact that much of the best residential property is situated in this Ward, and in part to the fact that what small property is situate in the Ward, is on the Beach, and as I showed last year, that district is very healthy, in spite of much insanitary property, owing to the purifying effects of the winds, which blow straight from the sea into the houses, and also to the cleansing of the subsoil water by the regular ebb and flow of the sea.

Deaths at different Ages.

The deaths grouped according to age are as follows:—

TABLE IV.

	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total.
Under 1 year	23	21	15	18	77
1 and under 5	19	5	4	3	31
5 " " 15	6	5	3	3	17
15 " " 25	5	3	6	4	18
25 " " 65	38	19	27	24	108
65 & upwards.	16	22	18	14	70
At all ages	107	75	73	66	321

Infant Mortality.

The infant mortality has been exceptionally light during the past year, and this is doubtless to be accounted for by the absence of any amount of zymotic diarrhoea, which disease bears an intimate relationship to the temperature of the soil, in the neighbourhood of the houses, as was well shown during the hot summer of 1893. The rate of infant deaths per thousand births was 92, as contrasted with 220 during the preceding year, and an average of 140 during the previous decade.

Adult Mortality.

The adult mortality, as a whole, remains the same as in 1893, but there is a remarkable difference in the age distribution of the deaths, for whereas of late years the deaths at 65 years of age and upwards have slightly exceeded 100, during 1894 only 70 deaths at these ages were recorded; but on the hand there have been 108 deaths at ages between 25 and 65, as contrasted with 73 during the previous year. It would appear therefore that the rainy season of 1894, while very favourable to the two extremes of life, the infants and the old people, was decidedly unfavourable to those who belonged to what may be

termed the wage-earning period, and when therefore the lives are of the greatest value to the community, and the probable explanation of this is, that these latter, being compelled to work, many of them out of doors and in all weathers, have succumbed to the combined influences of wet and cold. The mortality rate at ages above 65 has been 2.8 per 1000 as contrasted with an average rate, during the past ten years, of 4.5 per 1000.

Deaths from Zymotic Diseases.

The deaths during the year from the seven principal zymotic diseases number 30, as compared with 107 during 1893; this gives a rate of 1.21 per 1000 as compared with a rate of 1.75 for all England and Wales during the same period. The deaths from Diphtheria occurred principally during the first quarter of the year, and formed part of that outbreak which occurred in connection with St John's Infant School, during the latter part of 1893; further reference to these deaths, and also to these from the other zymotic diseases, will be found in Part II. of this Report, where a detailed account is given of the origin, locality and distribution of all the cases of infectious disease that have come to our knowledge during the year.

TABLE V.

Disease.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total	Rate per 1000.	Mean rate of previous 10 years.
Small Pox ...	—	—	—	—	—	—	—
Scarlet Fever ...	—	—	—	—	—	—	0.045
Measles ...	—	—	—	—	—	—	0.350
Diphtheria ...	12	4	1	1	18	0.729	0.238
Whooping Cough	—	—	—	1	1	0.040	0.436
Enteric Fever	1	1	—	1	3	0.121	0.165
Diarrhœa ..	1	3	3	1	8	0.324	0.662
Totals ...	14	8	4	4	30	1.214	1.896

Six other deaths from infectious diseases were recorded, which are not included in the above table, namely 3 from Erysipelas, 2 from Pyaemia or Septicaemia, and one from Puerperal Fever; the latter occurred during the third quarter of the year, the patient being a young woman of 24, who had come to Lowestoft for her accouchement. The death was attributed at the time to the offensive odours arising from an open manhole, and a street gully, opposite the window of the room occupied by the patient.

The average number of deaths from these septic or blood-poisoning diseases, during the past ten years, has been 5.3 per annum, so that there is no indication of any reduction in this direction during the past year. Such cases result from the absorption, by open wounds, of the emanations from privies, old sewers or other centres of putrefaction, and we cannot therefore hope to see any marked reduction in their number, until our sewers are regularly and effectually flushed, and the privies are replaced by water-closets.

Phthisis & other Respiratory Diseases.

The deaths from chest affections have been as follows :—

TABLE VI.

Disease.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total.	Rate per 1000.
Phthisis ...	9	5	7	3	24	0.97
Bronchitis	14	6	1	2	23	0.93
Pneumonia	7	3	1	2	13	0.53
Pleurisy ...	1	—	—	—	1	0.04
Totals	31	14	9	7	61	2.47

The death-rate from these diseases is lower than during 1893, and so also is the Phthisis death-rate which is perhaps the most important item in the above table, for purposes of comparison. The mean phthisis rate for the past ten years has been 1.15 per thousand in this Borough, and this improved rate is a further indication of advancement in the sanitary condition of the houses, especially in regard to

ventilation and sub-soil drainage. The East coast moreover enjoys an enhanced immunity from Consumption, as compared with inland towns, which is doubtless the result of the dryness of the atmosphere and its invigorating effects upon the constitution. The following Table gives the sex and age distribution of the deaths from Phthisis, from which it will be seen that there were an equal number of male and female deaths and that the bulk of the deaths occur between the ages of 25 and 45.

TABLE VII.

Sex.	Ages.						Totals.
	Under 5	5--15	15--25	25--45	45--65	Over 65	
Males ...	1	1	2	7	1	...	12
Females ...	0	1	4	5	2	...	12
	1	2	6	12	3		24

Heart Diseases.

The deaths from heart-diseases number 34, as compared with 26 during the preceding year; the average for the past ten years has been 28. With these deaths might also be included two deaths from Aneurysm of the Aorta.

Injuries.

There have been 16 violent deaths during the year, four of which occurred on the North Sea; the following is a list of these deaths:—

Suffocation of Infant (overlaid)	...	...	1
Burns and Scalds	..	...	2
Drowning (at sea)	...	...	1
,, in harbour	...	...	3
,, in wells	...	...	2
Fractured skull	...	...	3
,, (at sea)	...	...	2
Struck by lightning (at sea)	...	...	2
Rupture of Liver	...	...	1

All other Deaths.

Under this heading are comprised the remaining 172 deaths, making the total 321, and it includes such diverse diseases as Cancer, Apoplexy, Old Age (if this can be called a disease), Premature Birth (to which the same remark might well apply), Convulsions and many others. The deaths from Cancer show an unfortunate tendency to increase, and it is difficult to find any explanation why this disease should have a rate of 1.17 per 1000 in Lowestoft, while the general rate for England and Wales does not exceed 0.6 per 1000. I am however engaged upon an exhaustive enquiry into the aetiology of Cancer, and hope that perhaps I may have some further information to offer upon the subject, by the time that my next Report is written.

The locality of the Cancer, in these cases, was as follows:—

Stomach	...	5.	Mediastinum	...	1.
Uterus	...	4.	Peritoneum	...	2.
Oesophagus	...	3.	Bladder	...	1.
Liver	...	8.	Optic nerve	...	1 (Sarcoma)
Breast	...	2.	Undefined	...	2

One favorable sign, in this table of all other deaths, is the marked reduction in the deaths from premature birth, as compared with last year, 13 as against 21; in towns where much female labour is employed, such deaths are very common, owing to the continuance at work of women who are pregnant, until actually forced, by physical disability, to desist. Such a practice is most prejudicial both to the health of the mother and of the child.

It will also be noted that no less than four deaths are recorded from Syphilis.

The disease known as Convulsions is responsible for 13 of the deaths of infants, and having regard to the fact that this disease has been proved to be often occasioned by imperfect ventilation, overcrowding and foul air, we have here an indication that some of the cottage property in the town yet requires improvement in this direction. The ventilation of living and of sleeping rooms can be so readily secured by the provision of one or more perforated bricks in the outer wall of each room, near the ceiling, that it has often been a matter of wonder to me that some such stipulation is not to be found in our Bye-laws, for it is useless to rely solely upon windows, which are seldom opened, and fire-places, the registers of which are often most carefully and effectually closed, for the efficient ventilation of the small and usually sadly overcrowded bedrooms of the working classes.

TABLE VIII.

All other deaths :

DEATHS UNDER FIVE YEARS OF AGE.		DEATHS AT FIVE AND UPWARDS.	
Premature Birth	... 13	Cancer...	... 29
Congenital Debility	... 12	Apoplexy	... 19
Marasmus	... 3	Old age	... 19
Tuberculosis	... 1	Meningitis	... 2
Convulsions	... 13	Cerebral congestion	... 1
Meningitis	... 10	Abscess of Brain	... 1
Congenital Syphilis	.. 3	Brain tumour	... 3
Dentition	... 2	Ovarian tumour	... 3
Gastritis	... 1	Uterine tumour	... 1
Congenital Deformity	2	Caries of bone	... 3
Perforated Appendix	1	Strangulated Hernia	... 2
Laryngitis	... 2	Leucocythaemia	... 1
		Bright's disease	... 4
		Tuberculosis	... 2
		Cirrhosis of Liver	... 3
		Paralysis	... 2
		Syphilis (acquired)	... 1
		Gastric ulcer	... 1
		Peritonitis	... 1
		Pelvic inflammation	... 1
		Epilepsy	... 1
		Locomotor Ataxy	... 1
		Atheroma	... 1
		Acute Myelitis	... 2
		Diabetes	... 1
		Alcoholism	... 2
		Miscarriage	... 1
		Cystitis	... 1
Total	... 63		109

PART II

STATISTICS OF REPORTED CASES OF SICKNESS.

Zymotic Diseases.

During the year 171 cases of infectious disease were reported to me by the medical practitioners, under the Infectious Diseases Notification Act of 1889, as compared with 295 during the preceding year, and an average annual rate of 151 since the adoption of the Act. The bulk of these cases occurred during the first quarter of the year, and represent the remains of that outbreak of Diphtheria which occurred in connection with one of our Voluntary Schools in December 1893.

The quarterly distribution of the cases was as follows:—

1st Quarter	73
2nd „	49
3rd „	18
4th „	31
	171

The localities in which these cases occurred are shown in the following table, with also the general death-rate and the zymotic sickness rate for each Ward. Seven of the cases were obviously imported into the Borough by visitors and others, and these have been excluded from the following table, as they would only tend to obscure the point which it is designed to roughly illustrate, namely the relative sanitary condition of the various Wards.

TABLE IX.

Locality.	Estimated Population.	Total reported cases.	Corrected Totals.	Zymotic Sickness-rate per 1000.	General death rate per 1000 (including Port)
North	6955	36	34	4.88	13.95
East	5039	30	28	5.55	9.13
West	7067	83	83	11.74	13.87
South	5599	20	17	3.03	13.22
Port	2,000	2	2	1.00	3.00
Totals ...	26,660	171	164	6.15	12.04

The following table gives the nature of the infectious diseases which have occurred in each Ward, and in the Port, during the year, and of these, the cases of Typhoid Fever and of Diphtheria are the most significant, when estimating the sanitary surroundings of the patients, for it can scarcely be said that Scarlet Fever bears much relationship to home sanitation, while many of the cases of Erysipelas are admittedly due solely to inclement weather, and especially to the searching East winds for which this coast is so famous. It will be seen therefore that the West Ward has suffered most severely, especially from Diphtheria, but as the Hervey St School, by which the disease was chiefly spread, is situated practically in the centre of this Ward, we have a ready explanation of its heavy incidence upon this district.

TABLE X.

Locality.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Total.
North Ward	3	17	11	4	1	36
East „	17	4	5	4	—	30
West „	29	35	12	5	2	83
South „	7	8	2	2	1	20
Port	—	1	1	—	—	2
Totals	56	65	31	15	4	171

As regards Enteric Fever, there is apparently little to choose between the favouring conditions of the North and West Wards; in both, there have been more cases than should have been possible, and it is in these two wards especially that our attention must be given to the abolition of polluted drinking wells and leaking privies and middens. The South and East Wards have been very free from zymotic sickness during the year, the latter exceptionally so, and no doubt this has influenced the low death rate of this Ward.

Smallpox.

No cases of this disease have occurred in the Borough.

Scarlet Fever.

Fifty-six cases of this disease have been reported to me during the year, as compared with eighty-seven cases during 1893, and thirty-two during 1892. The majority of the cases occurred during the earlier part of the year, and it will be seen from Table V, that not one of these patients died, thus indicating the prevalence of a very mild type. One of the cases was an imported one in a visitor, while two of the cases occurred in patients at the General Hospital, one in June and another in July, and occasioned me some little anxiety at the time, lest an outbreak should occur among the inmates of that Institution. Every precaution was taken to disinfect the bedding, clothing etc. of the patients, and fortunately no fresh cases occurred there. One case also occurred on the reassembling of the pupils at a large private Girls' School in the Borough, and this patient was promptly removed to the Sanatorium, with the very satisfactory result that no further cases occurred in the School.

In many of the cases, the means of isolating the patient were very unsatisfactory, and as a result, in one house 4 cases occurred, in two houses 3 cases, and in five houses 2 cases, while nine of the patients were removed to the Borough Sanatorium, and it is worthy of note that in none of those instances did a further case occur.

Enteric Fever.

This is a disease from which Lowestoft has suffered much in past years, and it is therefore satisfactory to note so marked a reduction in the number of cases reported. During 1894 there were 31 cases of this disease in the Borough, while the average annual number since the adoption of the Notification Act (February 1890) has been 45.

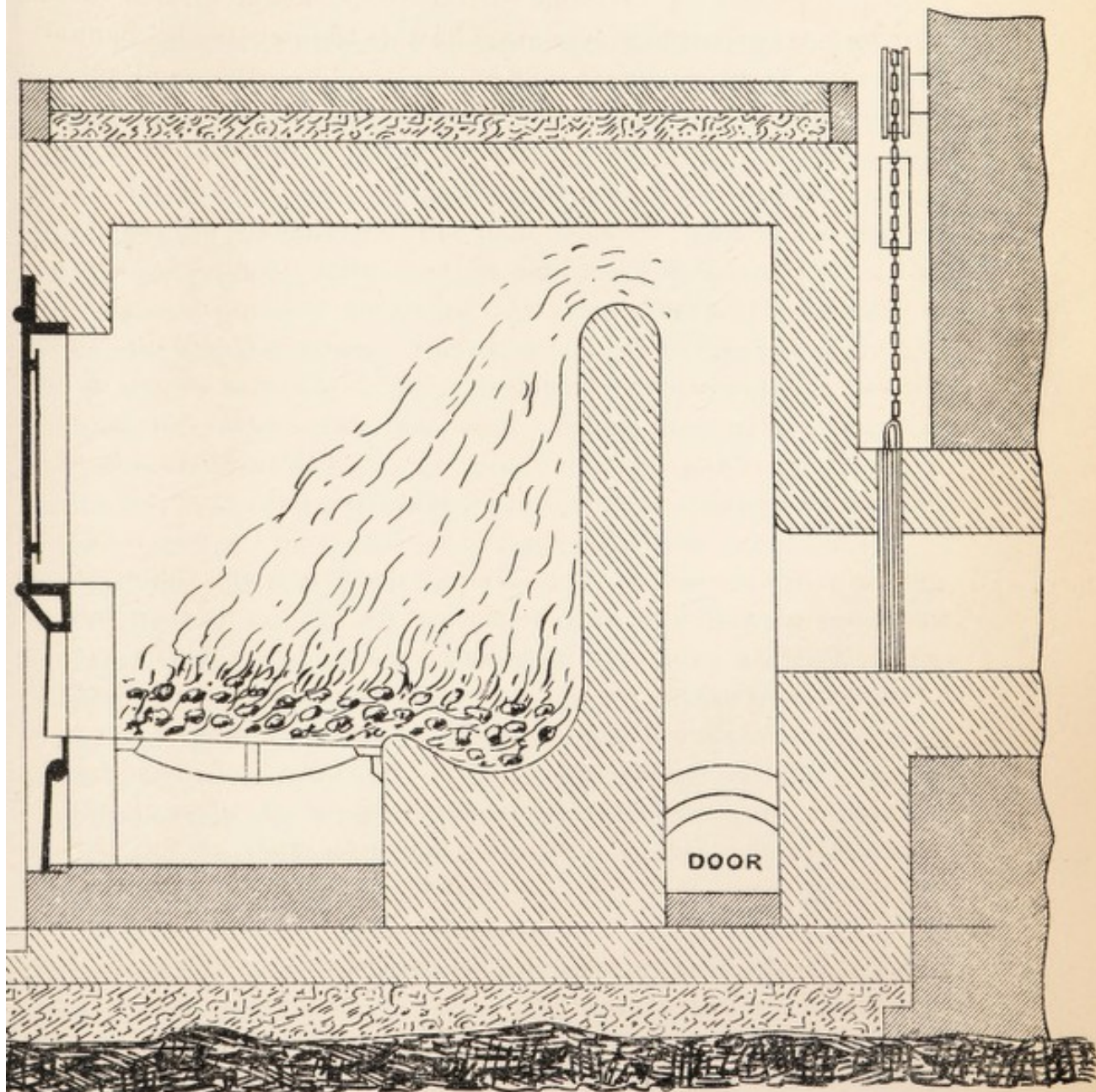
The two means by which this disease is usually disseminated are by emanations from privies, middens, or the so called depôts of waste-land, upon which the midden contents are deposited, (as illustrated by the case mentioned in my Report of last year), and by a contaminated water supply, and when there exist, as in this Borough, nearly a thousand houses drawing their water supply from wells, which are mostly shallow, and in the immediate vicinity of middens or cesspools, you have a combination of the two conditions which are most favourable to the dissemination of this disease. In my last annual Report I urged upon the Sanitary Authority the desirability of providing covered pails, painted a distinctive colour,

and half filled with a dry absorbent packing, such as compressed peat, or pine saw-dust, which should be delivered daily at those houses where cases of this disease were known to exist, and should receive all the discharges from such patients. The soiled pails would be removed at the time that the clean ones were delivered, and the contents of the former should then be burned, as this is the only sure method by which the infective material can be destroyed. I find that a small Crematory, suitable for burning such matter, could be erected in the Sanatorium grounds at a very small cost, (£78) and as the Sanitary Authority cannot hope to abolish entirely the three thousand privies we have in this town, for some years to come, I feel that this matter of the destruction of the discharges from such cases, which are constantly occurring in the town, is one that demands their most serious and urgent consideration. In my Report for the fourth quarter of this year I pointed out to the Sanitary Authority that, out of 13 cases of Enteric Fever occurring during that quarter, one was imported, and of the remaining twelve, eleven occurred in houses possessing either privies or middens. One case also occurred, in one of such houses, in which there had been cases during the autumn of 1893, thus showing that the virus of this disease is capable of living, in sewage polluted soil, for at least twelve months.

It has been abundantly proved that it is useless to rely upon the general public, to disinfect all infectious discharges and rubbish from cases treated at home, and therefore there are but two alternative methods left to the Sanitary Authority to prevent the spread of infection; one of these is the compulsory removal of all infectious cases to an Isolation Hospital, which is certainly neither desirable nor attainable, and the other is the destruction of all infectious discharges and rubbish, collected daily, from all those houses in which cases of infectious disease are known to exist. I feel that in urging the adoption of this plan upon the Sanitary Authority, I am putting before them an inexpensive and at the same time a most efficient means of stamping out those two diseases, which are most prejudicial to a Health-resort, namely:—Diphtheria and Enteric Fever, and I am sure that if they can see their way to adopt this plan, the result will be a marked diminution in the number of cases and of deaths of these two most fatal of the zymotic diseases.

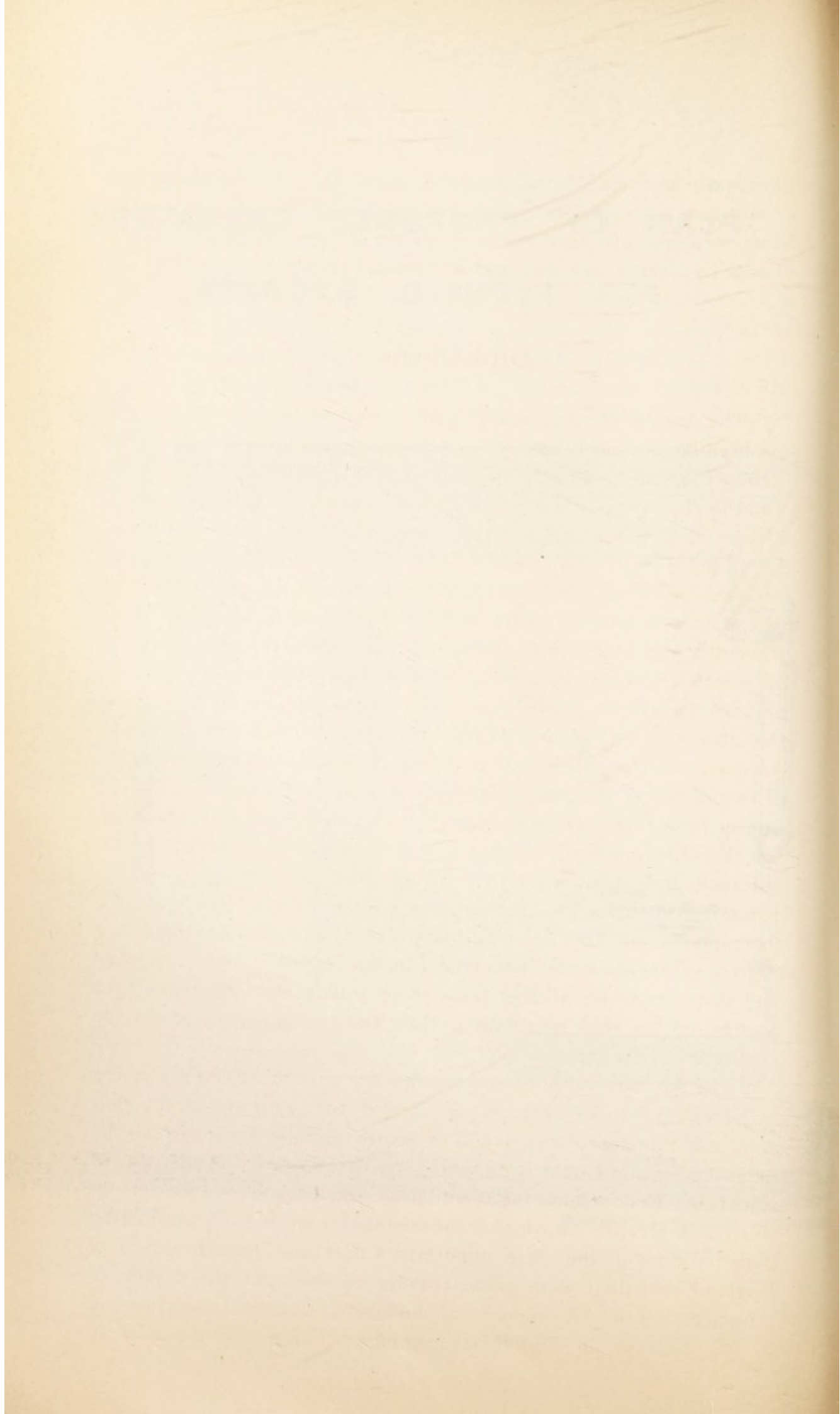
I am pleased to be able to record that in May last the Sanitary Authority ordered "that all houses in the Borough where night soil is now carried through the house be required to be provided with water-closets," but as this order only affects some 125 houses out of

PLAN OF PROPOSED CREMATORY
FOR TYPHOID EXCRETA.



DARD MASSEY & WARNER.

PATENTEES.



the 3,000 possessing privies, it will be readily seen that although it is certainly a move in the right direction, yet it barely touches the fringe of that important question of the dissemination of zymotic disease by leaking and imperfect middens or privies.

Diphtheria.

The number of cases of Diphtheria reported during the past year has been large, namely 64, but as already pointed out, the great bulk of these cases were directly traceable to that outbreak, in connection with the Hervey St Infant School, which occurred in December 1893. Thus while 30 cases were reported during the First quarter, and 21 during the Second quarter of the year, only 13 cases were reported during the remaining half year, although it is a well known fact that the seasonal curve of mortality, for this disease, is highest in November and December. The deaths during the year numbered 18, of which 16 occurred during the first half of the year. I may, perhaps, here repeat what was stated in my Report for 1893, that the above-named School was closed by order of the Sanitary Authority, on December 5th of that year; it remained closed for a period of two months. In consequence however of the occurrence of 12 deaths from this disease during the first quarter of the year, the Local Government Board requested a further Report upon the outbreak, and enquired what measures had been adopted by the Sanitary Authority, for checking the spread of the disease, and I thereupon again urged the Sanitary Authority "to take immediate steps to secure the more systematic Flushing of all the main sewers, and also to consider whether some more satisfactory way could not be devised for their ventilation, than the existing plan of surface ventilators at the street level."

The Sanitary Authority then ordered a system of sewer-flushing by water-carts to be immediately carried out, with the result that both the number of cases and of deaths rapidly declined. In the following month (June) I presented to the Sanitary Authority an elaborate "Report upon the Ventilation and Flushing of Sewers in relation to Health," in which I endeavoured to show, from information gathered from all the more important Cities and Health-resorts of England, that there were grave reasons to fear that the system of sewer-ventilation by open manholes bore a causal relationship to the increase in Diphtheria throughout the country, and in

consequence of this Report the Sanitary Authority unanimously passed the following resolutions :—

1. That every surface ventilator within fifty yards of a ventilating shaft be immediately closed.

2. That every surface ventilator that may be within 50 yards of any public, or large private school entrance or exit, be immediately closed.

3. That the remaining surface ventilators be closed according to the following arrangement, viz :—as soon as a ventilating shaft or shafts have been erected within fifty yards of any such surface ventilator, the same shall be closed.

I regret that the provisions of clause 3 have not been carried out, up to the close of the year, owing no doubt to the false sense of security, inspired by the very rainy Autumn, which relieved us of any anxiety as to accumulations or deposits in our sewers, by the thorough flushing which they thus secured. Should the coming summer, however, prove a hot and rainless one, it would then be too late to secure positions for the erection of shafts, in sufficient numbers, ere the mischief was done, and I would therefore urge most strongly upon the Sanitary Authority the absolute necessity of obtaining the closure of all manholes, and the substitution of shafts, before the summer of 1895 is upon us.

This however is not all that is needed, for all sewers, and especially all such as we have in Lowestoft, require regular and systematic flushing, if they are to be kept clean and reasonably wholesome, and no better fluid can be used for this purpose than sea-water, and if only the Sanitary Authority will carry out the excellent scheme of the Borough Surveyor for the flushing of the sewers with sea-water, which may be had for the pumping, they will find that the bills of mortality can be kept down as low during a dry season, as during the wet one of 1894, and that the experience of last year, in this respect, namely,—"lowest death-rate on record," can be repeated without difficulty.

Four of the cases of Diphtheria, occurring in the latter half of the year, were imported, one being a patient admitted to the Convalescent Home from Beccles, and this case, with six others, were admitted to the Borough Sanatorium during the year, and two of these died there.

At the latter part of the year, the Sanitary Authority entered into an agreement with the Clinical Research Association, whereby bacteriological examinations should be made, on the payment of a

small fee, of all specimens of membrane from the throat etc. of doubtful cases of Diphtheria, sent to the Association by me. At the same time I obtained a supply of Antitoxin for the treatment of such cases of Diphtheria as might be admitted to the Borough Sanatorium, but owing to the absence of this disease from the Borough at the latter end of the year, I had no occasion to make use of the remedy.

Measles.

Only a few cases of this disease have come to our knowledge during the past year, and no deaths are recorded. As pointed out last year, however, owing to the absence of this disease from the town for the past five or six years, the bulk of the school children are susceptible, and we may therefore anticipate an outbreak at any time and should be prepared in some way to meet it. For this reason I advocated the inclusion of Measles in the list of notifiable diseases, as without early information, it is impossible to adequately deal with such outbreaks, but the Sanitary Authority did not see fit to adopt that suggestion. An alternative scheme was however approved, namely that the School Attendance Officer should be paid a small fee for notifying me as to the occurrence of any such cases among school children, and I am thus enabled to obtain the earliest information of any threatened outbreak in connection with any of our Board or Voluntary Schools, and moreover this plan also brings to my knowledge all such cases as are not usually attended by a medical man. As the Schools are the usual medium by which this disease is disseminated, I have every reason to hope that we shall be able to cope with any outbreak that may occur, but have fortunately perhaps had no opportunity as yet of testing the working of this method of notification.

I append a copy of the form which has been supplied to the School Attendance Officer for the purpose :

To the Medical Officer of Health for the Lowestoft Urban Sanitary Authority.

Sir,

I have reason to believe that _____
residing at _____
is absent from _____ School
in consequence of an attack of Measles.

I understand that (a) (no) medical practitioner is in attendance upon the said child.

Dated this _____ day of _____ 189

School Attendance Officer.

Whooping Cough.

A few cases of this disease are known to have occurred in the Borough during the year, and one death was recorded, of an infant 3 months old, from this disease, associated with convulsions. During the preceding year 44 deaths from Whooping Cough occurred, and as this would probably represent the mortality rate of some thousand cases, we may reasonably anticipate a respite from this disease for a year or two. Whooping Cough is a disease which tends to occur epidemically, at intervals of some two or three years, and as some 75 per cent of the deaths occur in children under two years of age, and 95 per cent or more are children under 5, it would rather appear as if the Schools were not so largely responsible for the spread of this disease, as they undoubtedly are of Measles or Scarlet Fever, and personally I am inclined to think that this disease is not infrequently air-borne, in a manner somewhat similar to the infection of Influenza, though presumably the specific organism of the former disease is less robust than that of the latter, since we often find outbreaks of Whooping cough limited to certain quarters of a town, whereas the pandemic nature of Influenzal outbreaks is now unhappily notorious. It was for this reason that I stated, in my last Annual Report, that Whooping Cough could not, to my mind, be placed in the same category with Measles, when considering the advantages of an early knowledge of a threatened epidemic, and I am not inclined to anticipate any great results from a notification of cases of Whooping Cough.

Diarrhoea.

The deaths from Diarrhoea during the year number 8, as compared with 38 during 1893, but this reduction is solely attributable, no doubt, to the climate, for as I pointed out in last year's Report, this disease bears an intimate relationship to the temperature of the soil at 4ft. from the surface, and although that temperature rose above 56° F. during the greater part of the third quarter of the year, yet the humidity of the atmosphere and the greater amount of moisture in the superficial layers of the soil, prevented those germs rising into the atmosphere, in the form of dust, and in that way kept down the mortality from this disease. In June the Local Government Board issued a circular advising Sanitary Authorities to temporarily add this disease to the list of Notifiable Diseases, but that suggestion was not carried out in this town.

Disinfections.

During the year 102 houses have been disinfected, and the bedding, carpets, blinds etc. removed to the Disinfecting apparatus to be steamed, and in no instance has the slightest damage been done to the articles, nor have any instances of loss come to my notice. I think that this is good evidence of the care exercised by the official, whose special duty it is to carry out this work.

The following is a complete list of the articles which have been passed through the steam disinfecting apparatus during the year:—

152 Beds, 89 Mattresses, 78 Palliasses, 107 Bolsters, 131 Sheets, 31 Towels, 9 Suits, 301 Pillows, 55 Curtains, 313 Blankets, 150 Counterpanes, 16 Rugs, 24 Dresses, 26 Jackets, 23 Shawls, 88 Carpets, 15 Cushions, 26 Shirts. Total No. of articles 1,634, and also 6 Boxes of miscellaneous personal Clothing.

Housing of Working Classes Act.

A block of three houses in St. Peter's St. was condemned by the Sanitary Authority, on my advice, as unfit for human habitation, but although the order of the Authority was made in May, it was not till the end of the year, nor until an order of the Court had been obtained, that these premises were evacuated, and I am now informed that they will shortly be demolished, and more habitable houses erected on their site.

Water Supply.

It is somewhat surprising that in a town so well supplied with a water service as is Lowestoft, there should be nearly a thousand houses drawing their drinking water from wells, many of which, as mentioned under the heading of Enteric Fever, are shallow surface wells, receiving the soakage from neighbouring privies and middens, and it is not perhaps surprising therefore that of the 26 samples of well water which have been sent to the Analyst for examination during the year, not one was a potable water; in 24 of the cases the Sanitary Authority made orders for the immediate closure of the wells, and in one case an order was made that the well should be cleansed, while in the remaining case no order was made, as it was considered that the source of pollution of the well had been removed. Several analyses of the Company's water have been made during the year, and the results have indicated that the water was suitable for drinking purposes, but it was evident that, during the latter part of the year, the filtering tanks had been severely taxed by the floods and heavy rains which occurred at that time.

Inspector's Report of Sanitary Work completed during the year 1894.

Houses, premises, &c., inspected	...	...	...	1,700
Re-inspections of houses and premises	...	...	...	1,200
Orders issued for Sanitary Amendments of houses & premises				160
House drains repaired, cleansed and trapped	...	..		56
„ „ Ventilated	...	...	...	110
New closets constructed	...	...	...	45
Waste pipes connecting direct into drain abolished	..			20
Defective house drains	...	...	...	85
„ Dust Bins	...	...	...	5
Schools drained and ventilated	...	...	...	2
Privies ventilated	...	...	...	31
„ under bedrooms, condemned	...	...	...	7
„ converted into water closets	...	...		19
Blocked drains	...	...	...	24
Defective Water Closets	...	...	...	13
Water closets blocked	...	...	...	5
Dead wells abolished	...	...	...	61
Common lodging houses registered under 35 section, Sanitary Act, 1866, or 90th section, Public Health Act, 1875	...			4
Dust removals &c., number of communications received and attended to	...	...	...	800
Bake Houses and Cow-sheds regularly inspected	...			
No. of Licensed slaughter houses inspected	...	...		16

Food and Drugs Acts.

No. OF SAMPLES TAKEN.

20 Butters—17 genuine, 3 adulterated.
27 New Milks.
3 Whiskeys
1 Brandy
3 Ice Creams
2 Teas
3 Lardis

Your obedient Servant,

P. KETT,

Sanitary Inspector.

PART III.

GENERAL REPORT.

Sanatorium.

During the year 33 cases were admitted into the Fever Hospital, while 5 remained from 1893, thus making a total of 38 patients, as against 39 during the previous year.

The following were the diseases treated:—

Enteric Fever	...	...	17
Scarlet Fever	...	...	9
Diphtheria	...	...	7
			<hr/>
			33
Remaining from 1893 :			
Scarlet Fever	...	...	3
Enteric Fever	...	...	1
Diphtheria	...	...	1
			<hr/>
			38

Three cases of Diphtheria, and one case of Enteric Fever, died during the year, and it is somewhat significant that three of these four were what may be called "repeat" cases, that is, cases occurring as the result of infection from a previous case, treated at home. From my own experience of such cases, I am inclined to think that the treatment of the infectious fevers in dark and ill-ventilated cottages, has the effect of intensifying the virulence of the poison, and as a consequence such "repeat" cases are almost invariably fatal, and this is a most powerful argument in favour of the more extended use of Isolation Hospitals, as it is only in such institutions that a sufficient amount of light and fresh air (Nature's best antiseptics), can be obtained, to destroy the virulence of these infective germs.

During the greater part of the year use was made of the Iron Hospital for cases of Typhoid Fever and of Diphtheria, and cases of Scarlet Fever continued to be treated in the old wooden Hospital, but on November 1st the new Pavilions were opened for the reception of patients and they are now in full working order. During

the year a hot water service was laid on to the baths and scullery sinks of each block, while fixed baths were also provided, the bath rooms being furnished by some large store-cupboards which were converted from their original purpose. All the ward floors have also been waxed and polished, and they now present a most cheerful appearance, and the permanent staff of four Nurses, engaged in January, have worked well during the year, while the benefit to the patients, resulting from the substitution of trained for untrained attendants, is incalculable.

The old wooden Hospital has been abandoned, and is about to be demolished, while the Iron Hospital has been converted into a small Nurses' Home for the four nurses, as the Iron cottage was only capable of accomodating two, and it was felt that it would be better for the Nursing staff to live under one roof, while off duty.

All the Laundry work of the establishment is now done by a resident Laundress, in the new building which has been erected during the year, by order of the Local Government Board, and which replaces the old wooden and brick shed formerly dignified by the name of Laundry; this latter has been demolished, and so also have the old Ambulance shed and Disinfecting house and new ones erected in a more safe and suitable position.

The land however which is enclosed by the Hospital boundary yet remains in a barren and desolate condition, and little attempt has been made, up to the present, to render it suitable as a recreation ground for convalescent patients. It is advisable that shrubs and trees should be planted, and a portion of the land laid out in grass, and garden seats provided for the use of the patients, for the period of convalescence is often a tedious one, especially in cases of Scarlet Fever, and it is one of the chief advantages of an Isolation Hospital, that such patients are able to go out of doors, in fine weather, without the risk of conveying infection to others.

I regret to say that, during the year, two of the staff contracted diseases from the patients. The first was that of Nurse Thurston, who developed Diphtheria, and was extremely ill for several weeks, in the early part of the year, while, somewhat later in the year, the Cook contracted Enteric Fever, and was ill more than three months. These cases illustrate the great risks which the staff must necessarily run in attending upon infectious disease, and the Authority must therefore expect to pay them somewhat higher wages than are usually earned in non-infectious Hospitals.

TABLES OF DEATHS

AND OF

NEW CASES OF INFECTIOUS SICKNESS,

OCCURRING

During the Year 1894,

IN THE

URBAN SANITARY DISTRICT

OF THE

BOROUGH OF LOWESTOFT.

TABLE OF
During the Year 1894, in the Urban Sanitary District
DISEASES, AGES

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.						
	At all ages	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.
	(b)	(c)	(d)	(e)	(f)	(g)	(h)
North Ward	89	25	10	3	5	22	24
East Ward	37	8	2		3	13	11
West Ward	90	30	12	6	2	25	15
South Ward	71	15	1	4	3	30	18
Hospital	24		3	1	4	15	1
Port	6				2	3	1
Sanatorium	4		2	1		1	
TOTALS	321	78	30	15	19	109	70
The subjoined numbers have also to be taken into account							
Deaths occurring outside the District among persons belonging thereto.	12						
Deaths occurring within the district among persons not belonging thereto.	18		1	2	3	9	3

DEATHS

of the Borough of Lowestoft, classified according to
AND LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																						
	1	2	3	4	FEVER.				10	11	12	13	14	15	16	17	18	19	20	21	22	
	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneu- monia & Pleurisy	Heart Disease.	Injuries.	All other Diseases.	TOTAL.
Under 5			3								1			2			7		1	21	35	
5 upwds																9	7	10	1	27	54	
Under 5														2			4			4	10	
5 upwds.			2			1										2	4	3	3	12	27	
Under 5			6								1		1	3			5			26	42	
5 upwds.			3			1										6	2	9	1	26	48	
Under 5			1											1			2		2	9	16	
5 upwds.									1							5	4	12	1	32	55	
Under 5																			1	2	3	
5 upwds.										1						1	1		2	16	21	
Under 5																						
5 upwds																	1		4	1	6	
Under 5			2																		2	
5 upwds.			1			1															2	
Under 5			12								2		1	8			1	18		4	62	108
5 upwds.			6			3			1	1						23	19	34	12	114	213	
in judging of the above records of mortality.																						
Under 5																						
5 upwds																						
Under 5														1								1
5 upwds.									1							1	2	1	5	7	17	

TABLE OF POPULATION, BIRTHS AND OF
Coming to the knowledge of the Medical Officer of Health, during
classified according to DISEASES,

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	New Cases of Sickness in each knowledge in the Medical									
	Census 1891. (b)	Estimated to middle of 1894. (c)			1	2	3	4	FEVERS.					9
									5	6	7	8	0	
					Snallpox. 1	Scarlatina. 2	Diphtheria. 3	Membranous Group. 4	Typhus. 5	Enteric or Typhoid. 6	Continued 7	Relapsing. 8	Puerperal 9	
North Ward	6796	6955		Under 5 5 upwds		1 1	5 10			1 10			1	
East Ward	4848	5039		Under 5 5 upwds		3 13				1 4				
West Ward(H)	6423	7067		Under 5 5 upwds.		6 23	10 25			1 11			2	
South Ward	5084	5599		Under 5 5 upwds.		5 2	1 7			2			1	
Hospital				Under 5 5 upwds.		1 1								
Convalescent Home				Under 5 5 upwds.			2							
Port	196	2000		Under 5 5 upwds.			1			1				
TOTALS	23347	26660	833	Under 5 5 upwds.		16 40	16 49			3 28			4	

“ Notification of Infectious Disease ” has been
(H) indicates the Locality in which the Isolation Hospital

NEW CASES OF INFECTIOUS SICKNESS,
the year 1894, in the Lowestoft Urban Sanitary District;
AGES, and LOCALITIES.

Locality coming to the Office of Health.				Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.											
10	11	12	13	1	2	3	4	FEVERS.					10	11	12
Cholera.	Erysipelas.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	
	1					1									
	3				1	1									
	4				3				1	6					
	2								2						
	3				2	1			6						
						1									
	2				1				1						
					1										
					1										
						1									
									1						
	3				1	2			3						
	12				8	4			14						

compulsory in this District since February 1890.
is situated; it is known as the Borough Sanatorium.

PORT SANITARY DISTRICT OF LOWESTOFT.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the year ending December 31st,

1894.

At the census of 1891 there were 196 persons on board vessels in the Port, as enumerated by the officers of H. M. Customs. Such figures however convey no idea whatever as to the normal floating population, for at the time of the census, at least 180 drifters would be away fishing on the South and West Coasts of England, and each of these would carry six men and a boy, while there would be also at least 50 trawlers out in the North Sea each containing 4 men and a boy, so that we may roughly estimate the floating population at the time of the census in 1891 to have been 1,700, and having regard to the increase in the fleet, since that date, our floating population cannot be less than 2,000 souls of whom no record would be obtained at the taking of the census.

The following figures give some idea of the number of craft belonging to, and trading to and from this port :

No. of Fishing Boats on the Register at end of 1894	...	458
Total No. of Registered Vessels belonging to this Port	...	520
<hr/>		
No. of Vessels entering the Port during 1894, from Foreign ; (exclusive of Fishing Vessels)	...322	
No. of Coasting Vessels entering the Port during 1894	...577	
<hr/>		
		899
<hr/>		

Two cases of zymotic disease were reported to me during the year, both of which were on board H.M.S. "Hearty;" the former was a case of Diphtheria, occurring in April and apparently contracted on shore; the latter was a case of Enteric Fever, which was clearly contracted at North Shields, as the man had not been allowed ashore at Lowestoft, previous to the development of his illness. Both cases were admitted to the Borough Sanatorium and both made good recoveries.

One case of zymotic sickness, although not actually occurring in the Port, yet is worthy of mention here as indicating the condition of some of the basins. A lad of sixteen fell accidentally into the Herring basin, and as one of the results of his immersion, he swallowed a good mouthful of the water. He was taken home and put to bed, and there remained for a fortnight suffering from the ordinary effects of a chill and shock, but at the end of that time he commenced to develop the typical symptoms of Enteric Fever, and a week later was admitted to the Borough Sanatorium for this disease. He there passed through a most severe attack of the disease, and was not discharged until two months after his admission. In this case I think that the evidence is very clear that the disease was contracted by swallowing some of the water in the Herring basin, and the presence of the specific poison there is accounted for by the fact that the closets on the Herring market discharge into the basin, which is practically landlocked.

I have been called frequently during the year to visit men on board vessels in the Port, who were suspected of suffering from an infectious disease, but in no case were these suspicions verified on examination, and there has therefore been no necessity to disinfect or otherwise deal with any of these craft, but they have been inspected, at intervals, by myself and the Sanitary Inspector, and I have reason to believe that our suggestions for their Sanitary improvement have always been faithfully carried out.

TABLE OF
 During the year 1894, in the Lowestoft Port
DISEASES, AGES

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. <i>(a)</i>	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.						
	At all ages <i>(b)</i>	Under 1 year. <i>(c)</i>	1 and under 5 <i>(d)</i>	5 and under 15 <i>(e)</i>	15 and under 25 <i>(f)</i>	25 and under 65 <i>(g)</i>	65 and upwards. <i>(h)</i>
PORT	6				2	3	1
TOTALS							
The subjoined numbers have also to be taken into account							
Deaths occurring outside the District among persons belonging thereto							
Deaths occurring within the District among persons not belonging thereto.							

TABLE OF POPULATION, BIRTHS AND OF
Coming to the knowledge of the Medical Officer of Health, during
classified according to DISEASES,

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	New Cases of Sickness in each knowledge in the Medical														
	Census 1891. (b)	Estimated to middle of 1894. (c)			1	2	3	4	FEVERS.										
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal						
PORT ..	196	2000		Under 5 5 upwds.															
				Under 5 5 upwds.															
				Under 5 5 upwds.															
				Under 5 5 upwds.															
				Under 5 5 upwds.															
				Under 5 5 upwds.															
TOTALS				Under 5 5 upwds.															

“ Notification of Infectious Disease ” has been
(H) indicates the Locality in which the Isolation Hospital

NEW CASES OF INFECTIOUS SICKNESS,
the year 1894, in the Lowestoft Port Sanitary District ;
AGES, and LOCALITIES.

Locality coming to the Office of Health.				Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.											
10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12
Cholera.	Erysipelas.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Cholera.	Erysipelas.	
								Typhus.	Enteric or Typhoid.	Continued	Relapsing	Puerperal			
						1			1						

compulsory in this District since February 1890.
is situated ; it is known as the Borough Sanatorium.

