[Report 1888] / Medical Officer of Health, Gloucester City & Port.

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REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

GLOUCESTER

Urban Sanitary Authority

FOR 1888

PRESENTED TO THE SANITARY COMMITTEE OF THAT BODY
AT THE MEETING HELD MAY 4TH, 1889, AND ORDERED TO BE PRINTED

JOHN BELLOWS, GLO'STER.

REPORT

Mr Mayor and Gentlemen,

I have the honour to present my Report as Medical Officer of Health to the Gloucester Urban Sanitary Authority for the year 1888. I must apologise for the lateness of the date of my doing so. As the Sanitary Committee is aware, circumstances which I could not avoid have interfered with my preparing it at an earlier date.

I regret to have to state that there is an increase in the mortality in the district as compared with that of the year 1887. The number of deaths recorded in that year was 570 —the smallest number registered in 10 years. In 1888, 637 deaths from all causes occurred in the City. This increase is due to the deaths caused by Measles, which disease was prevalent during the first 6 months of the year, and from which 57 deaths were recorded, in 51 of which the children attacked were under 5 years of age.

The following list shows the comparative mortality in some of the diseases causing death in 1887 and 1888.

	1887	1888
Bronchitis and Inflammation of the Lungs	91	74
Whooping Cough	2	10
Diarrhœa	12	10
Scarlet Fever	7	1
Measles	5	57
Enteric Fever	7	8
Diphtheria	2	2

The cases of illness from the same diseases, collated from returns sent to me weekly by the Clerks to the Union, from the books of the Medical Officers, and from returns from the Infirmary and the Children's Hospital, are as follows, compared with the previous year :—

	1887	1888
Cases of Bronchitis, and Inflammation of the Lungs	339	417
" Whooping Cough	17	118
" Diarrhœa	162	131
" Scarlet Fever	46	4
" Measles	18	170
" Enteric Fever	24	29
" Diphtheria	—	2

It is difficult in estimating the population of the City to learn with exactness the number of houses occupied during the year. I find that 365 houses were void in 1887, and 420 in 1888. But it must be remembered that there was a much larger number built in 1888 than in 1887. In 1888 there were 119 completed, compared with 69 in 1887. The number of inhabited houses in the two years may therefore be estimated as about the same.

The number of Births registered in 1888 was : Males 605, Females 592—total 1,197. The excess of Births over Deaths was 560.

Estimated Population at the end of 1887	41,593
Excess of Births over Deaths in 1888	560
Estimated Population at end of 1888	42,153

The Death rate for the district for the year was therefore 14·4 per 1,000. The death rate throughout England is given by the Registrar General as 17·79 for 1888.

In my previous Reports I have given particulars of some of the work directed by the Sanitary Authority, and carried out by Mr Read, the City Surveyor, who has been kind enough to give me the following details of the continuation of such work for the improvement of the sanitary condition of the City.

At the end of 1887 more than 32 miles of sewers had been laid down in the district. In 1888 the following additions were made :—

	12-IN. SEWERS	LINEAR YARDS
Laid down by	Mr Riddiford, Clegram Road ...	157
	9 IN. SEWERS	
"	Mr Riddiford, Clegram Road ...	156
"	Mr Slater, Jersey Road	253
"	" Hethersett Road ...	180
"	Mr Dainty, Tredworth	130
"	Mr Hanman, High Street, Tredworth	50
"	The Corporation, Heathville Road...	50
		976

The ventilation of the sewers has been improved by the erection of 18 additional shafts. The number of these is now 551. More are required.

Of the plans for buildings brought before the Improvement Committee in 1888, the following have been

	PASSED	CARRIED OUT
Houses	174 ...	119
Parish Rooms	2 ..	2
Mission Hall	1 ...	1
Vestry	1 ...	1
Schools	6 ...	5
Warehouses, &c.	5 ...	5
Streets	4 ...	4
Additions and alterations	11 ...	10

In all these buildings the City water has been laid on, and connections made with the City Sewers, in accordance with the requirements of the Bye-Laws.

In the same period there were—

Houses connected with the City water system and provided with flushing boxes	354
Houses in which flushing boxes have been fixed, in which the City water was previously laid on ...	74
Houses supplied with City water, and provided with flushing boxes at the end of 1887	5534
Number of houses with City water and flushing boxes at the end of 1888	5962

Although the number of houses connected with the City water system not provided with flushing boxes is steadily diminishing, there are still many closets in the City in which they are wanting. The number supplied in last year will be seen by comparison of the following figures :—

	1887	1888
Houses supplied with City water without flushing boxes	936	862
Houses deriving water from pumps	1174	944
Houses supplied by "Lysons" water, Hempstead...	187	187
	2297	1993

Houses provided with flushing boxes at the end of 1888 ...	5962
" not provided " " ...	1993
Number of houses in the City at the end of 1888	7955

As there were 7,831 houses in the district at the end of 1887, these figures show an increase of 124.

They also show that during the year improvement has been effected in three important branches of Sanitary work, (1) by ensuring a supply of good water to many houses; (2) by compelling the application of flushing boxes to the closets by the use of which the house drains are kept clean and accumulations in the sewers prevented; and 3rd by reducing the amount of sewer gas, and facilitating its dilution in such a manner as to prevent its being injurious to health, by the erection of additional ventilating shafts.

The Hospital in the Stroud Road has been used by three children with Scarlet Fever, sent in by the Medical Officers of the Union, and by one patient with Small Pox. This case was imported from Sheffield. He came into the Hospital immediately on the appearance of symptoms, and in consequence of the prompt isolation no other person was infected. All the cases were discharged cured.

The Lodging-houses, Slaughter-houses, and Milk Shops have been visited during the past year by the Inspector, Mr Allen and myself.

Under the Public Health Act, 1872, it became the duty of every Urban Sanitary Authority to appoint a Medical Officer of Health, and on May 16th, 1873, I had the honour to be appointed the first Medical Officer of Health to the City, and it has been my privilege to hold that important office until the close of the year 1888. In November, 1874, the boundary of the City was extended, taking into the City the outlying districts, previously under the control of the Barton St. Mary, Barton St. Michael, Kingsholm St. Mary and Kingsholm St. Catherine Local Boards. My first Annual Report for the year

1875, was presented to the Sanitary Committee on May 30th, 1876, and it has been my duty to prepare a Report every year, to be presented to the Sanitary Authority, copies of which are forwarded to the Local Government Board for their information.

As this is the last Report which I shall have the honour to present to the Gloucester Urban Sanitary Authority as their Medical Officer of Health, I propose briefly to recapitulate some of the work which has been done during the last 13 years.

And in doing so I think I shall show that satisfactory progress has been made in the direction of improved sanitation.

In my first, and in many later reports, I spoke of the necessity for an increased water supply. I urged that additional storage at Witcombe was necessary. This was provided, sufficient to collect all the water from the sources of supply. But it was still evident, with the enlarged area of the City, and the number of houses built every year, and the City Supply being laid on, not only to these, but also to many others, previously supplied by surface wells, that if a dry season occurred, there would be either the necessity for an intermittent supply, or possibly that a water famine might occur, a calamity which within the last few years has befallen several places.

In 1882-3, the Council applied to the Local Government Board for a Provisional Order for powers to obtain an additional supply of water, by tapping a fault in the Oolite formation on the brow of Birdlip Hill ; but the Board was advised by the Law Officers of the Crown that the desired powers could only be obtained by applying to Parliament, and before any further action was taken in this direction

the necessity for an increased quantity of water was obviated by adopting the meter waste detecting system now in use. By the introduction of this system of mechanical inspection in October, 1883, the detection and stoppage of waste or leakage was more certainly and promptly effected. The City was mapped out into 20 districts, each controlled by a meter, at a cost, including additional valves, stop-taps, and other necessary alterations, of £2,000. The money was well spent, as an immense saving of water resulted from it, without in any way curtailing the supply. Before the introduction of this system, the daily consumption, including waste, ranged from 950,000 gallons up to 1,000,000, according to the time of year. The benefit was evident in the following summer, which was a dry one, during which many towns suffered severely, while Gloucester, thanks to this provision, escaped. We have had a constant service ever since, and the consumption has ranged from 500,000 to 600,000 gallons daily, notwithstanding the vast number of additional houses, of which more than 100 yearly have been supplied from this source, and the quantity named includes every purpose except street watering.

The rainfall for 1888 was about the average, 30·41 inches, and the lowest record of water at Witcombe was on March 2nd, when that of No. 1 Reservoir was 29 ft., of No. 2 34 ft. 9 in., of No. 3 12 ft. 2 in., so that in that year there was no anxiety. In 1887 the rainfall was only 23·84 in., or about 6½ below the average. The lowest readings were on October 28th, when they were, of No. 1, 25 ft. 10 in., of No. 2, 32 ft. 3 in., and of No. 3, 9 ft. 9 in. Had it not been for the meter system, there would undoubtedly have been a scarcity of water in that year, as the figures I have given show, that nearly double the quantity which was used would have been required, if the meter system of detecting the waste had not been in use.

It is not the least important part of this improvement that the supply has been constant. The only drawback to the general use of a constant supply is its extravagance, from waste. This waste is registered by the meters, and the day and night inspectors are enabled to localize and stop the waste without troubling the consumers who have none. The disadvantages attendant on an intermittent supply are very great. In addition to the inconvenience to householders from the supply being frequently cut off, there is always a risk when the water pipes are empty (a daily occurrence in some towns) that the smallest opening in a pipe will admit impurities, which are always present in the soil of towns, to pollute the previously good water, when the pipes are re-filled. Another evil of an intermittent supply arises from the necessity for house storage of water, for drinking purposes, in cisterns, sometimes in connection with the W.C., or in other positions where it is impossible to get at, or keep them clean.

I consider that the introduction of the water meter system is the greatest improvement made during my term of office, and one for the suggestion of which, I believe, our thanks are entirely due to Mr Read.

In my first Report I spoke of the filter beds at the Reservoirs being deficient, and so allowing the water to be distributed to the City in a dirty condition. I ought to have spoken more strongly, as at that time there were none. The want has been partially, but not completely supplied. There are settling tanks, with filter beds to each of the principal streams supplying the reservoirs, and that of one, connected with the Abbotswood stream, was improved and re-constructed in 1886. Mr Read tells me that he hopes to get permission to rebuild another in September next, and one ought to be done each year, during dry weather, until they

are all completed. The work is expensive, but it is necessary, and I trust that the question of expense will not be allowed to interfere with the purification of the first necessary of life.

The saving in the waste of water effected by the use of the meters is equivalent to an additional supply, and the Authority has been enabled to act as if such supply had been procured. Whilst there was a doubt as to the sufficiency of water, it was impossible to carry out a perfect flushing of the drains and sewers, by compelling the owners of houses to fix flushing boxes to the water closets on their premises. This deficiency is being corrected. I find that at the end of 1884 there were 4,994 houses with flushing boxes fixed; at the end of 1888 the number had increased to 5,962, showing that in 4 years 968 had been added. At the end of 1888 orders had been given by the Sanitary Committee to several owners of house property to carry out this necessary improvement. The work must be speedily followed up, as there are at present 1,993 houses in the City, of which 862 have the City Water already laid on, without flushing boxes, as will be seen by reference to a table given on a previous page.

I have so frequently given the reasons for the necessity of a flushing box being provided for every closet, that I shall do so now only briefly. The members of the Sanitary Committee, who are familiar with the work of Sanitation, do not need to have these reasons explained. But there are others, unacquainted with this subject, who may see this Report, and to them I would say, that no drain can be kept free from lodgments, and the excrementitious matter cannot be kept constantly moving towards the outlet, without a proportionate water force behind it, driving it onwards. I can give the following illustration of what occurs if such

provision is not made. Three years ago there was a street in Gloucester with a large number of houses, of which certainly not more than one in ten had a flushing box. The liquid contents of the drains dribbled into the sewers, but the solids remained behind, or were but imperfectly forced through them. The consequences were almost complete stagnation, and the constant formation of sewer gas, which escaped at the nearest opening, creating considerable annoyance, and a serious danger to health. Whenever the main sewer with which this street sewer communicated was opened, it was found that the large 12-in. pipe was more than half filled with offensive sewage matter, which powerful flushing could only partially remove. This state of things has been entirely abolished. Flushing boxes have been applied to, I believe, every house in the street, and the sewer relaid, and it will be impossible for such stagnation to occur again, because each time a closet empties its contents into the drain, they will be accompanied by a supply of water, sufficient to carry them properly through the drain into the sewer, without stagnation and consequent decomposition.

And now that there is no fear of a scarcity of water, I trust that the owners of house property not yet connected will lay on the City supply for domestic purposes. Analysis shows that our supply is of the first quality as regards its chemical properties. The improvements in filtration, by which suspended impurities will be removed, will render it equal to that supplied to any town in England. Even at present there is no danger to health arising from its use, which cannot be said of the well water in any part of the town. If there is one point on which Sanitarians are unanimous, it is on the danger of using water derived from surface wells, that is, from wells not more than 30 or 40 feet in depth. Dr. Wilson, a recognised authority, in his "Handbook of Hygiene," writing on small urban or rural districts,

says: "Surface wells, whether as ordinary pump wells, draw wells, or shallow dip wells, constitute the usual source of supply, and though they may naturally yield a wholesome water, the surrounding soil often becomes so saturated with impurities, that it is next to impossible to prevent their pollution. In crowded localities, therefore, they should always be regarded with suspicion, and, as far as possible, their use should be discontinued." In Gloucester there is no excuse for the continuance of their use. There is an abundant supply, carried to the door of almost every house, and there should be no difficulty in its being laid on to each and every one of them. But although, as I have said, this supply is close to every house, there are at present 944 houses in the district deriving their supply from wells.

Another important work is one which is recorded in my Report for 1884, when I stated that "the work is already commenced of changing the connection of 1,112 houses, at present emptying into old and imperfect sewers, by discharging them into new sewers of the City system." This work was carried out by the Authority, at a cost of £500, in the added districts of the City, and the object of it was to complete the connection of all house drains with the new work, which ought to have been done when the system was laid down in 1875, at the time of the city extension. The money was well laid out in improving the health and adding to the comfort of the inhabitants.

The Sanitary Authority has from time to time made alterations in the Hospital for Infectious Diseases, in the Stroud Road. This building was purchased in 1874 from the Cheltenham Sanitary Authority. It had been in use in Cheltenham for some short time, but had been superseded by the erection of the thoroughly and completely equipped "Delancey" Hospital. It was a wooden building, consisting

of two wards, and a residence for caretaker, cooking, &c. It was purchased on an emergency during an epidemic of Small Pox, and it served a temporary purpose, but it was not regarded by the Medical Profession as an efficient permanent building. It has been materially altered, the improvements not having been, in my opinion, such as meet the requirements of a Hospital for a populous district. It is now principally built of brick and contains four wards. But it is far from being what is required. Attempts have been made from time to time to secure the co-operation of the Rural with the Urban Authority in the erection of a joint Hospital, for the use of the two districts. As yet such attempts have failed, but I trust they may be renewed in the near future with better success. It is necessary that there should be Hospital accommodation provided for both districts, and the size of a building which would be sufficient for the two, would not be much larger than that required by each separately. The expense would thus be materially lessened to each Authority. I speak of the combination of districts because I consider that the present Hospital is not efficient for the Urban alone, and the amount required to render it efficient for the two Authorities, would probably be but little greater than would be necessary to be provided by each district, if separate buildings are erected.

It is not pleasant to me to speak so decidedly about the incompleteness of the present arrangements made by the Authority for the isolation and treatment of cases of Infectious Diseases. But it is my duty to state, that the Hospital in the Stroud Road does not meet the requirements of a building for the purposes for which it is intended. It is impossible to avoid the risk of infection if two kinds of Infectious Disease, such as Small Pox and Scarlet Fever, were treated simultaneously in it. And even for one disease the accommodation is insufficient. In order to

secure the support and confidence of the public and of the Medical Profession, there should be wards for observation, for treatment, and for the use of convalescents. As my suggestion of an observation ward on a previous occasion was met with ridicule, it is necessary for me to explain what I mean by the term. It not unfrequently happens, especially during the prevalence of an epidemic, that a case of illness of a suspicious or doubtful nature appears. It resembles the symptoms of the incubation or early stage of an infectious complaint. Such a case should be isolated, to prevent the spread of infection, if it proves to be a case of Infectious Disease. For the purpose of watching such a case for a day or two, wards, one for each sex, should be provided, so that the patient should not necessarily be placed at once in a ward with decided cases of illness. If it turns out to be a case of, for instance, Scarlet Fever, it would be placed in the ward appropriated to that complaint, and treated there. If it proves to have been a false alarm, although it had been a perfectly justifiable one for observation and isolation, the patient would return home without having run the risk of infection, from having been in a ward with decided cases. To show the necessity for such wards, I may mention that two years ago I received a child into the Stroud Road Hospital, sent in by a Medical Man in the town, with symptoms of the infection of Scarlet Fever. They all disappeared in two days, and the child was sent home. Fortunately, at the time, there was no patient in the building, and as each ward is thoroughly disinfected as soon as patients are discharged, there was no risk of the child being infected. But had there been a patient in the Hospital when that child was admitted, the chance of infection would have been great.

The wards for treatment ought to be sufficiently numerous to receive patients of different grades in society, some for

patients who can afford to pay for the accommodation and treatment received, and others for the reception and treatment of the poor. It may be, and it has been contended, that it is not the duty of a Sanitary Authority to provide for the treatment of any except the poor. I think this is a great mistake—even from an economical point of view. Infectious Disease may be introduced into a district by a member of any class of society, and it is to the direct pecuniary interest of the residents in that district to check the spread of the disease in the place to which it has been brought. In order to do this thoroughly there should be wards in which members of what are termed the better classes would willingly place themselves, or their children, so as to avoid conveying infection to others. At present, if a child, one of a family in Gloucester, is attacked with Scarlet Fever, all the other children are compelled to remain away from school, and five or six weeks are lost to each of them in their education before the medical attendant can certify that they are safe to return to school. In Cheltenham, where an efficient Hospital has been erected, I have known a family in which one child had Scarlet Fever, and on the appearance of the early symptoms was sent to the Hospital. The other children continued their schooling without any interruption, and without risk of being themselves infected, or of carrying infection to others.

It is also advisable that there should be wards in which those recovering from disease could be placed—convalescent wards.

To make a Hospital for Infectious Diseases efficient, there should be accommodation for the treatment of at least two kinds of disease at the same time, and the building should be so arranged that there would be no risk of a convalescent from one complaint being infected by a patient suffering

with some other. And such provision is the more necessary in Gloucester because, with the exception of cases of Cholera, for which special Hospitals have been erected, all patients who come into the Port Sanitary District with Infectious Diseases must be treated at the Hospital in the Stroud Road. It will be remembered that Dr Blaxall, one of the Inspectors of the Local Government Board, made a visit of inspection, to see what provision had been made for the treatment of infectious cases in the Port of Gloucester. After careful consideration, his recommendation was, that if any such case appeared at Sharpness, the patient should be conveyed up the Canal to Hempstead Bridge, and thence by the ambulance to the Hospital in the Stroud Road. I may mention that it is compulsory on the Port Sanitary Authority to provide Hospital accommodation for the treatment of such cases occurring on board ship. At present your provision to meet this requirement is deficient. If an attempt is again made, as I hope will be, to erect a Hospital by combined Authorities, it might be possible to include the Port Sanitary Authority in such combination.

Although the Cholera Hospital is more especially connected with the Port than with the Urban District, I must mention my satisfaction that the Authority accepted the suggestion made by Dr Blaxall, when he inspected the Port, that Hospitals should be erected for the treatment of Cholera patients, one at Sharpness, and another within the City. I trust that the necessity for their use may never arise, but it is well that provision has been made should such a calamity as a visitation of Cholera happen.

The old Still Ditch was for many years a cause of complaint, but it has been so treated that it has been removed from the list of nuisances. This is not the case with the

Twyver, which still causes complaints in the neighbourhood of Dean's Walk. An important Sanitary work is being executed by the Great Western Railway Company in filling up "Tabby Pits" pool, the completion of which will remove a source of annoyance, which has long been felt by the inhabitants of houses in its proximity.

In my first Annual Report I mentioned the subject of a public slaughter-house. I then stated that it was desirable a building for that purpose should be provided by the Authority, and that the annual licenses of the private slaughter-houses should be withdrawn, and that no animals should be allowed to be slaughtered in the City except at the public abattoir. One of the objections urged against the erection of such a building was that there are many old slaughter-houses in the City, the owners of which claim a prescriptive right to kill cows, sheep, or pigs, because these places were in use before, and were registered in pursuance of, the Public Health Act, 1848, before the Town Improvement Clauses Act, 1847, which provides for the licensing of slaughter-houses, came into force within the City ; and that as they could not be compelled to abandon their rights, the nuisance arising from private slaughter-houses would not be removed but only abated. If this were true, I do not consider it to be a complete answer to the desirability of providing a public place, under the control of the Corporation, for slaughtering, because, if the number of the private places is diminished by two-thirds or more, as would be the case, the evil would be greatly diminished. I am doubtful whether the claims of the owners of the old slaughter-houses could be maintained, if a public place is provided. The necessity for such a building is increased by the extension of the City, and by the laying out of new streets near the boundaries, and by the constant applications made for

licenses for additional slaughter-houses. There is always a difficulty in acceding to these applications, because there are but few sites on which their erection would not be a nuisance to some one. If a public building is erected, I believe that every occupier of a private place, whether one of the old, or of the more modern, would willingly use it, or could be compelled to disuse the present slaughter-houses, and applications for fresh licenses would cease, and the Sanitary Committee would be relieved from a most invidious and disagreeable duty.

It only remains to me, Mr Mayor and Gentlemen, to take leave of you, in my official capacity, as your Medical Officer of Health. You have honoured me with your confidence, you have constantly treated me with kindness and consideration, and the points on which we have ever differed have been but few, and I do not remember any occasion on which I have had cause to complain of any harshness or injustice. It is, of course, true, that we have not always seen every matter with the same eyes ; we have differed, especially on the subject of the Stroud Road Hospital. Our ideas on economy have not been identical. But in spite of these slight differences, I must repeat the expressions to which year by year I have given utterance in my Reports, that I have received nothing but kindness from you. I need, therefore, hardly say that the resignation of my appointment was a great pain to me. Reasons of a purely personal nature induced me to take a step which necessitated my placing it in your hands. This pain is lessened by your kindness, and that of all my colleagues and fellow workers. To Mr Blakeway, your Clerk, to Mr Read, your Surveyor, and to all the other officers, my thanks are due for constant assistance, willingly and cordially given, and it is a source of

gratification to me, whilst I wish you all Farewell, to remember that we have all, Committee and Officers, worked together harmoniously and satisfactorily.

I have the honour to remain,

Mr Mayor and Gentlemen,

Your obedient Servant,

JOHN PLEYDELL WILTON,

Late Medical Officer of Health to the Gloucester Urban Sanitary Authority.

TABLE OF BIRTHS

REGISTERED IN THE GLOUCESTER URBAN SANITARY DISTRICT IN 1888

	Males	Females	
From January 1st to March 31st ...	160	160	
" April 1st to June 30th ...	158	171	
" July 1st to Sept. 30th ...	128	118	
" October 1st to Dec. 31st ...	159	143	
	605	592	Total **1197**

TABLE OF SICKNESS

Amongst Paupers belonging to the Urban District treated by the Medical Officers of the Union; and of other persons belonging to the District treated as In or Out-Patients, at the Gloucester General Infirmary, the Children's Hospital, and at the Hospital for Infectious Diseases.

	Paupers		In-patients		Out-patients	
	Under 5 years of age	Over 5 years of age	Under 5 years of age	Over 5 years of age	Under 5 years of age	Over 5 years of age
All cases of Sickness & Disease	294	1120	84	672	852	3017
Chicken Pox	4	—	—	—	—	—
Small Pox	—	—	—	1	—	—
Measles	131	26	—	—	9	4
Scarlet Fever	2	2	—	—	—	—
Croup	1	—	—	—	—	—
Whooping Cough	17	6	2	—	63	30
Enteric Fever	—	—	3	8	9	9
Other Fevers (continued) ...	5	8	—	1	20	6
Diarrhœa	9	19	—	7	74	22
Diphtheria	2	2	—	—	—	—
Rheumatic Fever	—	8	1	21	—	—
Erysipelas	—	9	—	—	3	9
Phthisis	—	13	—	18	1	50
Bronchitis, Pneumonia, and Pleurisy	51	158	8	53	81	66
Heart Disease	—	20	—	20	—	17
Injuries	3	14	28	171	137	887
Other Diseases not named ...	69	835	42	372	455	1917

TABLE OF DEATHS

WITHIN THE GLOUCESTER URBAN SANITARY DISTRICT IN 1888

CAUSE OF DEATH	Ages at Death							Sexes		
	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and under 80	Over 80	Males	Females	Total
Class 1.										
Order 1.—Miasmatic ...	21	53	13	3	8	2	—	50	50	100
Measles	9	42	5	1	—	—	—	27	30	57
Rubeola	—	—	1	—	—	—	—	1	—	1
Scarlet Fever	—	—	1	—	—	—	—	—	1	1
Whooping Cough	4	5	1	—	—	—	—	6	4	10
Croup	—	3	—	—	—	—	—	1	2	3
Enteric Fever	—	1	2	2	2	1	—	4	4	8
Other, or doubtful forms	—	1	—	—	—	—	—	1	—	1
Diarrhœa	8	1	—	—	1	—	—	5	5	10
Acute Rheumatism	—	—	1	—	2	—	—	1	2	3
Gout	—	—	—	—	—	1	—	1	—	1
Erysipelas	—	—	—	—	1	—	—	1	—	1
Pyœmia	—	—	1	—	1	—	—	2	—	2
Diphtheria	—	—	1	—	1	—	—	—	2	2
Order 2.—Dietetic ...	—	—	—	—	1	—	—	1	—	1
Delirium Tremens	—	—	—	—	1	—	—	1	—	1
Order 3.—Enthetic	3	1	—	—	—	—	—	1	3	4
Syphilis	3	1	—	—	—	—	—	1	3	4
Class 2.—Constitutional Diseases.										
Order 1.—Diathetic ...	—	—	—	—	12	9	1	4	18	22
Dropsy	—	—	—	—	—	—	1	—	1	1
Amyloid Disease	—	—	—	—	1	—	—	1	—	1
Carcinoma	—	—	—	—	2	1	—	1	2	3
Cancer	—	—	—	—	—	1	—	—	1	1
" of Superior Maxillary bone	—	—	—	—	1	—	—	1	—	1
" of Tongue	—	—	—	—	—	1	—	—	1	1
" of Larynx	—	—	—	—	1	—	—	—	1	1
" of Liver	—	—	—	—	2	—	—	—	2	2
" of Breast	—	—	—	—	2	2	—	—	4	4
" of Intestines	—	—	—	—	—	3	—	1	2	3
" of Bladder	—	—	—	—	1	—	—	—	1	1
" of Uterus	—	—	—	—	2	—	—	—	2	2
Malignant disease of Glands ...	—	—	—	—	—	1	—	—	1	1
Order 2.—Tubercular ...	17	10	5	8	33	1	—	39	35	74
Tuberculosis	1	1	1	—	—	—	—	2	1	3
Marasmus	14	2	1	—	—	—	—	9	8	17
Tubercular Ulceration of Intestines	—	—	1	—	—	—	—	1	—	1
Phthisis	—	—	2	8	32	1	—	21	22	43
Struma	—	—	—	—	1	—	—	1	—	1
Tubercular Meningitis	—	5	—	—	—	—	—	2	3	5
Hydrocephalus	—	2	—	—	—	—	—	1	1	2
Tubercular Peritonitis	1	—	—	—	—	—	—	1	—	1
Rachitis	1	—	—	—	—	—	—	1	—	1
Carried forward ...	41	64	18	11	54	12	1	95	106	201

TABLE OF DEATHS

WITHIN THE GLOUCESTER URBAN SANITARY DISTRICT IN 1888
CONTINUED

CAUSE OF DEATH	Ages at Death							Sexes		
	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and under 80	Over 80	Males	Females	Total
Brought forward	41	64	18	11	54	12	1	95	106	201
Class 3.—Local Diseases										
Order 1.—Nervous System ...	24	7	1	2	25	29	—	49	39	88
Convulsions	23	7	—	—	—	—	—	20	10	30
Meningitis	—	—	—	1	2	—	—	1	2	3
Apoplexy	—	—	—	1	6	2	—	4	5	9
Laryngismus Stridulus	1	—	—	—	—	—	—	—	1	1
Paralysis	—	—	—	—	3	4	—	4	3	7
Hemiplegia	—	—	—	—	2	11	—	7	6	13
Paraplegia	—	—	—	—	1	2	—	3	—	3
General Paralysis	—	—	—	—	2	—	—	—	2	2
Cerebral Hæmorrhage...	—	—	—	—	—	3	—	2	1	3
Cerebral Embolism	—	—	—	—	—	1	—	—	1	1
Cerebral Thrombosis	—	—	—	—	—	1	—	1	—	1
Tumour of Brain	—	—	—	—	1	—	—	1	—	1
Brain Disease	—	—	—	—	—	3	—	1	2	3
Softening of Brain	—	—	—	—	1	—	—	1	—	1
Epilepsy...	—	—	1	—	4	1	—	2	4	6
Selerosis of Spinal Cord	—	—	—	—	2	—	—	2	—	2
Mania	—	—	—	—	1	1	—	—	2	2
Order 2.—Organs of Circulation	—	—	3	3	19	17	2	18	26	44
Pericarditis	—	—	—	—	1	—	—	1	—	1
Aortic Regurgitation	—	—	—	—	1	1	—	1	1	2
Heart Disease	—	—	2	2	13	14	2	13	20	33
Fatty Degeneration of Heart ...	—	—	—	—	3	2	—	2	3	5
Endocarditis	—	—	—	1	—	—	—	—	1	1
"Clot in one of the Valves of Heart" (Inquest)	—	—	1	—	—	—	—	—	1	1
Aneurism	—	—	—	—	1	—	—	1	—	1
Order 3.—Respiratory Organs ..	23	16	2	3	21	22	2	36	53	89
Asthma	—	—	—	—	3	1	—	2	2	4
Laryngitis	—	1	—	—	1	—	—	1	1	2
Bronchitis	19	9	2	—	8	14	2	18	36	54
Pneumonia	2	3	—	2	7	3	—	11	6	17
Pleuro Pneumonia	—	1	—	—	1	1	—	1	2	3
Congestion of Lungs	2	1	—	—	—	3	—	2	4	6
Pulmonary Hœmorrhage	—	—	—	1	—	—	—	—	1	1
" Embolism	—	—	—	—	1	—	—	—	1	1
Empyema	1	—	—	—	—	—	—	1	—	1
Carried forward	88	87	24	19	119	80	5	198	224	422

TABLE OF DEATHS

WITHIN THE GLOUCESTER URBAN SANITARY DISTRICT IN 1888 CONTINUED

CAUSE OF DEATH	Ages at Death							Sexes		
	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and under 80	Over 80	Males	Females	Total
Brought forward	88	87	24	19	119	80	5	198	224	422
Class 3.—Local Diseases (cont.)										
Order 4.—Digestive Organs ...	6	1	—	4	6	14	—	16	15	31
Stomatitis	1	1	—	—	—	—	—	1	1	2
Stricture of Œsophagus	—	—	—	—	—	1	—	1	—	1
Disease of Stomach	—	—	—	—	—	1	—	—	1	1
Ulceration of Stomach	—	—	—	1	2	1	—	1	3	4
Gastro Enteritis	—	—	—	—	1	—	—	—	1	1
Enteritis...	4	—	—	—	—	—	—	2	2	4
Colic	1	—	—	—	—	—	—	1	—	1
Obstruction of Bowels	—	—	—	—	2	—	—	2	—	2
Strangulated Hernia	—	—	—	—	—	3	—	2	1	3
Inflammation of Bowels	—	—	—	—	—	1	—	—	1	1
Ulceration of Vermiform Appendix	—	—	—	1	—	—	—	—	1	1
Peritonitis	—	—	—	1	—	1	—	1	1	2
Disease of Liver	—	—	—	—	—	2	—	1	1	2
Congestion of Liver	—	—	—	—	—	2	—	1	1	2
Cirrhosis of Liver	—	—	—	—	1	2	—	2	1	3
Hepatic Suppuration	—	—	—	1	—	—	—	1	—	1
Order 5.—Diseases of Urinary Organs	—	1	—	2	13	17	1	24	10	34
Diabetes	—	—	—	—	3	1	—	2	2	4
Bright's Disease	—	—	—	1	4	6	—	5	6	11
Disease of Kidney	—	—	—	—	1	1	—	2	—	2
Nephritis	—	—	—	—	—	1	—	1	—	1
Urœmic Convulsions	—	—	—	—	—	1	—	1	—	1
Albuminuria	—	—	—	—	4	5	—	7	2	9
Cystitis	—	—	—	1	—	1	—	2	—	2
Disease of Bladder	—	—	—	—	—	1	—	1	—	1
Calculus Vesicœ	—	1	—	—	—	—	—	1	—	1
Prostatic Disease	—	—	—	—	—	—	1	1	—	1
Stricture of Urethra	—	—	—	—	1	—	—	1	—	1
Order 6.—Diseases connected with Parturition	—	—	—	2	4	—	—	—	6	6
Child Birth	—	—	—	—	1	—	—	—	1	1
Abortion	—	—	—	—	1	—	—	—	1	1
Hœmorrhage in Confinement ...	—	—	—	—	1	—	—	—	1	1
Puerperal Fever	—	—	—	1	—	—	—	—	1	1
" Septicœmia...	—	—	—	1	1	—	—	—	2	2
Order 7.—Diseases peculiar to Women	—	—	—	—	2	1	—	—	3	3
Ovarian Tumour	—	—	—	—	1	—	—	—	1	1
Uterine Tumour	—	—	—	—	—	1	—	—	1	1
Dysmenorrhœa	—	—	—	—	1	—	—	—	1	1
Carried forward	94	89	24	27	144	112	6	238	258	496

TABLE OF DEATHS

WITHIN THE GLOUCESTER URBAN SANITARY DISTRICT IN 1888
CONTINUED

CAUSE OF DEATH	Ages at Death							Sexes		
	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and under 80	Over 80	Males	Females	Total
Brought forward	94	89	24	27	144	112	6	238	258	496
Class 8.—Local Diseases, (cont.)										
Order 8.—Other Local Diseases	1	—	1	—	3	4	—	4	5	9
Chronic Rheumatic Disease of Knee Joint	—	—	—	—	—	2	—	1	1	2
Abscess	1	—	—	—	—	—	—	1	—	1
Abscess of Neck	—	—	—	—	1	—	—	1	—	1
Lupus	—	—	—	—	—	1	—	—	1	1
Purpura	—	—	—	—	1	—	—	—	1	1
Ozœna	—	—	—	—	1	—	—	1	—	1
Caries of Spine	—	—	1	—	—	—	—	—	1	1
Tumour in Abdomen	—	—	—	—	—	1	—	—	1	1
Class 4.—Developmental Diseases										
Order 1.—Diseases of Children	36	2	—	—	—	—	—	27	11	38
Premature Birth	20	—	—	—	—	—	—	13	7	20
Debility from Birth	13	—	—	—	—	—	—	10	3	13
Teething	3	2	—	—	—	—	—	4	1	5
Order 2.—Diseases of Nutrition	4	—	—	—	—	—	—	3	1	4
Atrophy	4	—	—	—	—	—	—	3	1	4
Order 3.—Diseases of Aged ...	—	—	—	—	—	36	36	23	49	72
*Old Age—Senile Decay	—	—	—	—	—	36	36	23	49	72
Class 5.—Violent Deaths ...	5	5	3	2	4	3	—	16	6	22
Accident—(*not specified*)	—	2	1	1	—	2	—	5	1	6
Accidentally Burnt	1	1	—	—	1	1	—	2	2	4
" Scalded	1	—	—	—	—	—	—	—	1	1
" Drowned	—	1	1	—	1	—	—	3	—	3
" Suffocated	3	—	—	—	—	—	—	1	2	3
Found Dead	—	1	—	—	1	—	—	2	—	2
Killed—Crushed by Wagon Wheel, (manslaughter)	—	—	—	1	—	—	—	1	—	1
Suicide	—	—	—	—	1	—	—	1	—	1
Not Classified—Ill defined ...	—	—	1	—	—	—	—	1	—	1
Total	136	96	28	29	151	155	42	308	329	637

* Of the 42 aged over 80 there were eight exceeded 90 years; of these five were 90, (3 M. 2 F.) One 91 M. One 93 M. and One 94 M.

TABLE OF INQUESTS

HELD IN THE

CITY OF GLOUCESTER DURING THE YEAR 1888

(I am indebted to the courtesy of the City Coroner, H. Morton-York, Esq., for this List.)

Date	Initals	Sex	Age	Verdict
January 2	J. S.	F.	51 years	Epilepsy
" 5	M. A. H.	F.	60 "	Valvular disease of heart (P.M.)
" 10	G. M.	M.	23 "	Accidentally crushed between railway trucks
" 10	T. R.	M.	30 "	Delirium Tremens, accelerated by cutting throat while of unsound mind
" 13	L. B.	F.	6 months	Accidentally burnt, explosion of lamp
" 23	W. J. H.	M.	4 years	Found dead in Ham Ditch. No evidence how he came in the water
February 14	E. J.	F.	55 "	Syncope (fatty degeneration of heart)
March 2	J. K.	M.	20 months	Accidentally burnt [birth
April 14	J. S. H.	M.	11 days	Weakness from premature
" 16	M. A. M.	F.	68 years	Acute inflammation of left lung
May 3	S. M.	F.	56 "	Accidentally burnt. (Benzoline lamp)
" 8	J. T. D.	M.	9 "	Found dead in Gloucester & Berkeley Canal. No evidence how he came into the water
" 12	J. B.	M.	65 "	Uræmic convulsions (P.M.)
" 17	T. S.	M.	53 "	Syncope, due to fatty degeneration of heart (P.M.)
" 23	T. P.	M.	58 "	Suicide—hanging—unsound mind
June 2	E. F. A.	M.	23 "	Apoplexy (P.M.)
" 4	J. W. O.	M.	3 "	Accidentally drowned in Severn
" 13	F. P.	F.	38 "	Fatty degeneration of heart (P.M.)
July 13	M. A. D.	F.	14 "	Embolism. Clot in valve of heart
" 14	F. B.	M.	2 "	Accidentally scalded (boiling milk)
" 17	T. D.	M.	45 "	Fracture of spinal column from falling accidentally from a wagon
August 10	J. L. B.	M.	3 "	Convulsions caused by accidental fall on Aug. 6th
" 12	S. S.	M.	55 "	Syncope (due to fatty degeneration of heart)

TABLE OF INQUESTS

HELD IN THE

CITY OF GLOUCESTER DURING THE YEAR 1888

CONTINUED

(I am indebted to the courtesy of the City Coroner, H. Morton-York, Esq., for this List.)

Date	Initials	Sex	Age	Verdict
August 27	A. V. L.	M.	7 years	Accidentally run over by a van
Sept. 28	T. J. H.	M.	50 "	No evidence as to cause of death
October 2	W. L.	M.	60 "	Heart disease
" 3	J. C.	M.	28 "	Suffocated during epileptic fit
" 12	A. R.	M.	31 "	Accidentally drowned in Canal
" 12	E. B.	F.	58 "	Fatty degeneration of heart
" 23	C. W.	F.	73 "	Accidentally burned (paraffin lamp)
" 24	E. B. H.	F.	2 "	Accidentally scalded
November 3	E. R. L.	M.	17 "	Manslaughter against Fred. Pickthorne
" 6	M. H.	M.	63 "	Accidentally fell down
" 19	W. G. M.	M.	9 weeks	Accidentally suffocated
" 20	—	M.	5 "	Asphyxia (P.M.)
" 20	C. H.	F.	6 months	Accidentally suffocated in bed
" 24	E. B.	F.	24 years	Puerporal Fever—death accelerated by drinking turpentine (unsound mind)
December 1	E. B.	M.	60 "	Syncope (fatty degeneration of heart)
" 5	J. P.	M.	37 "	Pyœmia
" 28	W. T. R.	M.	32 "	Inflammation of Pericardium

TABLE OF DEATHS

From some Forms of Disease in the District for the last ten years;

Also the Number of Births, and Deaths from all Diseases for the same period.

	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Small Pox	—	—	—	—	—	—	—	1	—	—
Scarlet Fever ...	1	1	22	178	36	5	3	1	7	1
Whooping Cough ...	27	10	15	3	7	13	23	8	2	10
Measles	—	41	1	11	5	22	6	—	5	57
Enteric Fever ...	6	12	6	6	9	8	2	8	7	8
Erysipelas	2	2	6	1	2	4	1	—	3	1
Puerperal Fever ...	—	4	—	—	3	3	3	—	4	1
Diarrhœa	12	49	10	23	26	22	11	24	12	10
Diphtheria	5	5	1	1	1	—	4	—	2	2
Pycemia	—	2	—	2	2	—	—	—	—	2
Croup	1	4	2	3	2	10	12	4	3	3
Bronchitis	136	89	75	63	84	72	95	61	64	54
Pneumonia	24	33	12	11	24	16	38	18	27	17
Births	1364	1264	1256	1279	1262	1231	1231	1304	1171	1197
Deaths from all causes	746	754	635	810	668	675	699	605	568	637

PORT SANITARY AUTHORITY

Mr Mayor and Gentlemen,

I am happy to report that during the year 1888 there has been no case of Infectious Disease in the Port. I visited Sharpness twice and inspected several vessels in the Canal. I have no report to make on this subject.

My retrospect with reference to Sanitary work in the Port will be very brief. Efforts have been made at different periods, both by the Sanitary Committee and by the Canal Company to find a site at Sharpness for the erection of a Hospital for Infectious Diseases, but no suitable spot could be found—one was selected near the Docks, but the owner would not consent to the placing of such a building on it. It was afterwards suggested by Dr Blaxall, as I have mentioned in my Report to the Urban Sanitary Authority, that Patients at Sharpness with Infectious Diseases should be conveyed on the Canal to Hempstead Bridge, and thence to the Hospital in the Stroud Road in the City Ambulance. There has been no case in which this has been necessary. The inspection of crews of vessels coming up the river is carried out at King-road, and it is not very likely that an Infectious case will reach Sharpness without detection and detention. But it is more than possible that these cases may appear at Sharpness, and it was necessary that arrangements should be made for their removal and reception in some proper place. Under a Clause in the Sanitary Act it is compulsory on a Port Sanitary Authority to remove a Patient with an Infectious Disease from a vessel for treatment.

A Hospital has been erected at Sharpness on ground belonging to the Canal Company for the treatment of Cholera cases, as it is not possible to remove Patients with that disease to a place so distant as Gloucester. The fatigue and exhaustion attendant on such removal would be too great, and it is absolutely necessary that no time should be lost in their treatment.

Seventeen Sailors have been treated at the Infirmary in the year 1888, for the following diseases: —

1	Englishman	Enlarged glands ...	Cured
1	"	Synovitis	Cured
1	"	Colic	Cured
1	"	Retention of Urine ...	Cured
1	"	Phthisis	Died
1	Canadian ...	Abscess	Cured
1	Dane ...	Hysteria	Cured
1	Dutch ...	Gonorrheal Rheumatism	Cured
1	Italian ...	Fractured bone of arm	Cured
1	" ...	Necrosis of jaw ...	Cured
1	Norwegian ...	Acute Rheumatism ...	Died
1	" ...	Lumbar pain	Cured
1	" ...	Pleurisy	Cured
1	" ...	Dyspepsia	Cured
1	Swede ...	Bronchitis	Cured
1	" ...	Malingering	Cured
1	" ...	Injury to ankle ...	Cured

I have the honour to remain,

Mr Mayor and Gentlemen,

Your obedient Servant,

JOHN PLEYDELL WILTON,

Late Medical Officer of Health to the Gloucester Port Sanitary Authority.