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Borough of Cheltenham.

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ANNUAL REPORT

OF THE

Sanitary Condition, &c.

OF THE

**Borough of Cheltenham,**

FOR THE YEAR 1895.

BY

**J. H. GARRETT, M.D.**

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Diplomate in Public Health University of Cambridge.

MEDICAL OFFICER OF HEALTH.

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*"Salus Populi Suprema Lex."*

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CHELTHENHAM:  
GEORGE F. POOLE, 15, BENNINGTON STREET.

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# Borough of Cheltenham.

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## Public Health Committee.

MR. COUNCILLOR J. C. GRIFFITH, (CHAIRMAN).

MR. ALDERMAN G. NORMAN.

MR. ALDERMAN E. B. WETHERED.

MR. COUNCILLOR M. DAVIS.

MR. COUNCILLOR F. FEENEY.

MR. COUNCILLOR S. LENTHALL.

MR. COUNCILLOR J. V. MOLES.

MR. COUNCILLOR E. PARSONAGE.

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TOWN CLERK—MR. E. T. BRYDGES.

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BOROUGH SURVEYOR—MR. JOSEPH HALL.

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## Medical Officers' Department.

CHIEF INSPECTOR OF NUISANCES: A. E. HUDSON.

ASSISTANT INSPECTOR: J. H. LONG.

2ND ASSISTANT INSPECTOR: E. JONES.

MEDICAL OFFICER OF HEALTH: J. H. GARRETT, M.D.



*To the Chairman and Members of the Public Health  
Committee.*

GENTLEMEN,

I have the honour to present to you my Annual Report for the year 1895.

Whether the condition of any town from a sanitary point of view is to be satisfactory or not must depend upon the ready adoption of modern appliances, and largely upon the energy displayed in the rectification of those defects which the lapse of time will always bring about, and which if neglected accumulate to an extent that renders their after removal more difficult. It cannot be said that in Cheltenham there has latterly been any tardiness in the adoption of such appliances as modern science has to recommend, nor any want of activity in the carrying out of reforms, and the rectification of sanitary defects.

The Health Department was kept full of business during 1895. The record of work done, which I put in the forefront of my Report as being of more importance than statistics of births, deaths, &c., increases year by year, and evidence will be found upon the following pages of the



efforts of the small staff of the Health Department having been sustained during last year. The work done, in fact, exceeds that done in any previous year in the Borough, since records first began to be kept.

In 1895 we had a further falling off in the number of cases of infectious disease, the diminution being due to the smaller number of Scarlet Fever cases notified. This disease is by no means extinct in the Borough, and as I showed in my last Report cases have occurred every consecutive year for over twenty years at least, but we appear to be well upon the downward line of the epidemic curve, which reached its greatest height with us three years ago.

Last year seems to have been generally less favourable in regard to the death-rate than the year before. Besides those causes of disease of which we have knowledge, such as insanitary surroundings, there are other great causes at work to cause annual fluctuations in the death-rate and probably also of the birth-rate, such as differences in climatic conditions, and the ease or difficulty of obtaining employment and through it the wherewithal to support life. Our knowledge of these wider influences is not very accurate, and over them we have little or no control. Our death-rate last year is however below the average for the last ten years.

I desire to bear testimony of the very conscientious and thorough manner in which Mr. Hudson, during his first year of office, has carried out his duties as Chief Inspector of Nuisances, and the other members of our staff have worked well and harmoniously with him. As in former years I have also to acknowledge the ready assistance rendered to me on all occasions by the Town Clerk and Borough Surveyor, and their assistants. We are, as usual, obliged to Mr. R. Tyrer for the Meteorological Returns which will be found appended to this Report.

The following Summary of Work done has been drawn up by Mr. A. E. Hudson, the Chief Inspector of Nuisances. Mr. Hudson states that many of the notices served comprise a whole list of defects, each one of which might be reckoned as an individual nuisance.



# WORK DONE, 1895.

## SUMMARY.

Total Number of Visits made by the Inspectors	...	10,436
Including	Ordinary General Inspections	4,872
	House-to-House Inspections	2,622
	Reinspections after Issue of Notices	2,349
	Visits to Slaughter-Houses	193
	“ Common Lodging-Houses	65
	“ Bakehouses	97
“ Workshops	135	
“ Cowsheds, Milkshops, and Dairies	103	
Complaints made during the year	...	127
Notices Issued bearing Town Clerk's signature	...	1,304
“ “ Inspector of Nuisances' signature	...	439
Letters referring to Notices	...	166
Authorities obtained to Open Ground, &c., under Sec. 41 of Public Health Act	...	111
Drains Tested for Sanitary Certificate	...	67
Certificates Granted by Sanitary Inspector	...	49
New Drains Laid	...	182
Water Test Applied to Drains	...	253
Length of New Drains Laid, in feet	...	9,124
Brick Drains Removed	...	43
Cesspools Abolished	...	9
Manhole Disconnecting Chambers provided	...	56
Intercepting Traps Fixed to House Drains	...	161
Soil Pipes provided for proper Ventilation of Drains	...	170
Iron D Traps and Bell Traps Removed	...	580
Stoneware Gully Traps Fixed	...	708
Rainwater, Sink, and other Waste Pipes Disconnected from Drain	...	36
Lead Waste Pipes Provided and Repaired	...	51
Dubois' Traps Fixed to Bath, Lavatory, and other Waste Pipes	...	50
Drains Cleansed and Repaired on notice	...	28
Soil Pipes Tested with Smoke	...	28
New Water Closets Built	...	23
Water Closets Cleansed and Limewashed	...	29
New “ Washdown ” Pans and Traps provided	...	309
Water Closet Pans and Traps Cleansed and Opened	...	34
Waste-preventing Flushing Cisterns Affixed to W.C's.	...	1,035
Ditto ditto Repaired	...	11
Urinals Built, Reconstructed, and Cleansed	...	7
Samples of Water Collected for Analysis	...	92
Houses with no supply of Water caused to be supplied	...	15
Nuisances from Overcrowding Abated	...	12
“ Keeping Animals ditto	...	16
“ Smoke ditto	...	8
Nuisance from Offensive Ditch ditto	...	1



Filthy Houses Cleansed and Limewashed on notice	...	32
Bakehouses	" " "	36
Slaughter-houses	" " "	33
Workshops	" " "	27
Common Lodging-houses	" "	13
Cowsheds	" "	1
Houses Closed as unfit for Human Habitation	...	16
Cellar Dwelling	" " ...	1
House Walls Repaired	... ..	18
Roofs Eaves and Spouting Repaired	... ..	28
House Floors, Yards, and Areas Repitched, &c.	... ..	38
Workrooms Ventilated	... ..	13
Pigstyes Reconstructed, Repaired, Cleansed and Re-drained	...	13
Nuisance from Hog-wash Abated	... ..	12
Accumulation of Manure or Refuse Removed	... ..	22
Receptacles for Stable Manure provided or brought up to requirements of Byelaws	... ..	12
New Ash Receptacles provided	... ..	343
Houses Visited as to Infectious Disease	... ..	150
Notices sent to Parents and Schools <i>re</i> excluding children from school on account of Infectious Disease	...	84
Articles of Clothing, Bedding, &c., Disinfected	...	1,564
Loads of Clothing Disinfected by private request	...	8
Houses Disinfected after Infectious Disease	... ..	97
Rooms	" " " "	110

## IMPROVEMENTS TO DWELLING HOUSES, 1895.

### (a) Closing of Houses as Unfit for Human Habitation under the Housing of the Working Classes Act.

Here and there in the poorer quarters of our town dwellings are to be found which are not far upon the right side of the line that separates the habitable from the uninhabitable. In the course of time if repairs are at all neglected, such dwellings soon fall into a condition properly described as unfit for human habitation. In 1895 advice was given to order the closing of sixteen houses, their situation with the result of the notices to close, which were served, is stated below.

*The Rookery, Grove Street.*—This consisted of seven tenements, and the whole property was in a dilapidated,



overcrowded and dirty condition. The seven tenements were reduced to two independent houses, proper closet accommodation provided, water laid on, and extensive repairs made to the walls, roofs, floors, drainage, &c.

*1, 2, 3, Boodle's Passage and 4, Rutland Street.*—These houses were closed as the result of the notices served, and after a change in ownership, were almost entirely rebuilt. The several tenements of Boodle's Passage being converted into one good dwelling house. At the same time new closets and wash-houses were built on the ground behind, and new drains laid, the result being a great improvement to the premises and neighbourhood.

*1 to 7, Harper's Court and 6, Rutland Street.*—Notice has been served to close these houses as unfit for human habitation. Besides being in a delapidated condition the rooms are absurdly small. The Harper's Court houses have one room upstairs and one down, and the apartments have not sufficient cubic space for two occupants. Overcrowding of these houses has occurred and must always be occurring. As the houses have not been closed on notice, a magistrates' order has been applied for, and the matter is in progress.

*18, Rutland Street.*—As the result of the notice served this house has been in part rebuilt and converted into a respectable dwelling.

*Cottage behind 47, Rutland Street*—This cottage was closed as the result of a notice served, and is not likely to be used again as a dwelling house.

*13, Grosvenor Street.*—This house was found in a neglected condition, and has been renovated by the owner as the result of a notice served to close.

*Closing of a Cellar Dwelling.*—This was the basement of a house in Commercial Street let as a separate dwelling, and for lack of being sufficiently above ground and on account of insufficient window space, &c., it was treated as a cellar-dwelling and caused to be evacuated.



**(b) Dwelling Houses in such a Condition as to constitute severally  
a Nuisance Injurious to Health.**

In addition to the above that were closed as being unfit for human habitation, 29 houses were dealt with as being in such a condition as constituted a nuisance, though not bad enough to close entirely as unfit for human habitation, structural defects of considerable extent existed through continued neglect of owners as to the roofs, walls, ceilings, floors, yards, drains, &c., &c. These were dealt with by comprehensive specifications under Sec. 91 of the Public Health Act, with the result that the insanitary conditions were made good, and the houses in all cases converted into sound dwellings. Old rude tile roofs were replaced in eleven instances by good slates.

**(c) Overcrowded Dwelling Houses.**

During the past year 8 houses were found badly overcrowded and in each case the nuisance was abated on notice being served. Great sluttishness and filth are common accompaniments of overcrowding.

**(d) Improvements to House Drainage, &c., &c., under  
Sec. 41 Public Health Act.**

In conjunction with the improvements to the public sewerage which are now in progress, it is essential to have the house drainage made good. Sec. 41 of the Public Health Act, 1875, is one that serves the purpose very well, and during the past year our new Chief Inspector, Mr. Hudson, has found full occupation in this connection. Authorities were obtained from the Public Health Committee in 111 instances to enter, open the ground, examine the drains, &c. This work used to be carried out by the Borough Surveyor, but it was found advantageous to keep it in the one department, and the Inspector accordingly took it over in the early part of the year. The 111 examinations resulted in 110 specifications being prepared by Mr. Hudson, generally requiring the relaying of the house-drain, besides amendments as to gullies, traps, ventilation shafts, closets,



flushing apparatus, &c. The specifications with only three or four exceptions have all been carried into execution at the time of writing this Report, and these three or four may be looked upon as in progress.

**(e) Improvements to House Drainage Traps, &c., under Sec. 91  
Public Health Act.**

Besides the relaying of drains which resulted from the examinations under Sec. 41, comprehensive notices were served, requiring considerable alterations and amendments to house drainage, as well as numerous Inspector's notices requiring new traps, &c., the existing conditions constituting in each case a nuisance as defined by Sec. 91.

**(f) Improvements to House Drainage, and the general Sanitary  
Condition of Houses by reason of Applications for Sanitary  
Certificates granted by the Chief Inspector of Nuisances.**

The system adopted two years ago of granting certificates as to the sanitary condition of any house on application of owner, occupier, or other person interested, and on payment of a small fee, continues to be of service in leading to the betterment of the drainage, &c., of the better class houses. There were 69 applications for certificates made last year as against 44 in the year before, and 51 certificates have been granted as against 33 in the previous year. This increase is satisfactory and shows that the provision made by the Corporation for granting certificates meets a need. The aim of the certificate is to guarantee that the drainage, appurtenances, and general sanitary condition, are as perfect as they can practically be made. Sometimes it may happen that defects exist in connection with the site, and build of the house, which do not admit of alteration, but these are readily detected and the tenant may take or leave the house on their account as he thinks well. But in regard to the sanitary appliances, of which he will often have but an imperfect knowledge, the certificate is evidence of a searching examination having been instituted and every possible effort made to perfect all the appliances and bring them up to date. This is of course



a more comprehensive matter than the rectification of any particular defect leading to a nuisance of which complaint may have been received, and considerable outlay is often required on the part of the owner, who may perhaps sometimes think that he is being put to unnecessary expense. No certificate however is granted unless and until all requirements are carried into effect, and the number of certificates applied for and never obtained may be taken as proof of the scrupulous care taken by Mr. Hudson not to grant his certificate until satisfied that the sanitary condition of the house has been brought up to the high standard required.

The charging of a small fee is necessary to prevent the abuse of the privilege which the system affords of having an official examination made of the drains, &c., when no actual cause for complaint is known to exist. Under the Public Health Act there must be some sort of complaint as to the actual existence of a nuisance before any examination can be made.

The fees, payable in advance, for a sanitary certificate are little more than nominal, varying with the rent of the house, as below :—

For Houses the Annual Value of which is under £40	the fee is	5/-
Ditto ditto	over £40 and under £100	“ 10/6
Ditto ditto	over £100	“ 21/-

#### LIST OF HOUSES FOR WHICH SANITARY CERTIFICATES HAVE BEEN GRANTED DURING 1895.

Name of House,	Annual Value.
Belmont, Malvern Road ... ..	£ 80
Brentwood, King's Road ... ..	38
Charlton Villas, No. 1 ... ..	30
“ No. 2 ... ..	30
Cloverdale Lawn, No. 3 ... ..	35
Easthide, All Saints ... ..	40
Essex Villa, Pittville ... ..	80
Eversleigh, Bayshill ... ..	over 100
Fernleigh, Lansdown Road ... ..	“ 100



	£
Gloucester Crescent, No. 13 ... ..	12
“ No. 14 ... ..	12
“ No. 15 ... ..	12
“ No. 16 ... ..	12
Haldon House, Painswick Road ... over	100
Hatherley Place, No. 6 ... ..	35
High Street, No. 428 ... ..	38
Huntley Lodge, Montpellier Grove ... ..	35
Kilchberg Villas, No. 1 ... ..	36
“ No. 2 ... ..	36
“ No. 3 ... ..	38
Lansdown Crescent, No. 37 ... ..	50
“ No. 38 ... ..	40
Lansdown Terrace, No. 9 ... ..	45
Magnolia House, Promenade... ..	95
Mona House, London Road ... ..	30
Montpellier Grove, No. 4 ... ..	35
Orrisdale Terrace, No. 5 ... ..	30
“ No. 7 ... ..	30
Overton, Bayshill ... ..	80
Painswick Lawn, No. 7 ... ..	35
Pittville Lawn, No. 8 over £40 under	100
Priory Street, No. 8 ... ..	35
“ No. 26 ... ..	65
Queen's Villas, No. 1 ... ..	40
Regent Street, No. 18 ... ..	35
“ No. 19 ... ..	35
Rodney Terrace, No. 2 ... ..	30
Royal Crescent, No. 11 ... ..	60
Royal Well Terrace, No. 6 ... ..	60
St. Ann's Villas, No. 2 ... ..	38
St. Luke's School House ... ..	15
St. Ronans, Old Bath Road ... over	100
Sandford Villa... ..	30
Scarborough Lawn, Sydenham Road ... ..	65
Spa Buildings, No. 14 ... ..	45
Springfield Lawn, The Park ... ..	80
Southampton Place, No. 1 ... under	40
Tivoli Lawn, Tivoli over £40 under	100
Vernon Place, No. 16 ... ..	12
Westwood, Hales Road ... ..	80
Wishmoor, Hales Road ... ..	80

## THE COMMON LODGING HOUSES.

As some years had elapsed since the Common Lodging Houses were remeasured, and as no records of the measurements of the several apartments, and of the number of the lodgers that might be allowed to occupy them appeared in the houses themselves, the apartments were carefully remeasured, and cards were printed to be hung up in a conspicuous place in each house showing the number and size of the rooms, and the number of persons who could sleep in them upon any night. Smaller cards were also attached to the door of every one of the sleeping rooms giving the same information as to that room. Further, a copy of the Byelaws was sent to every lodging-house keeper, with a letter calling particular attention to them, and ordering them to be hung up in the living room in a place where they could be easily seen.

Just towards the close of the year, however, at a night visit made by the Inspectors, the byelaws were found to be flagrantly contravened in several houses in respect to overcrowding, and the improper placing of persons of both sexes in one apartment. The matter being brought before the Committee, it was resolved that four lodging-house keepers should be prosecuted.

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## DAIRIES COWSHEDS, AND MILKSHOPS.

Having recently obtained new byelaws in regard to Dairies and Cowsheds, it became necessary to measure up the cowsheds existing in the Borough, and give notice to the keepers as to the number of cows that could be kept in each, and this was done during the year. The byelaws require 800 cubic feet of air space for each cow kept in any shed, and it was found in several instances that a smaller space



than this had previously been considered sufficient, some overcrowding having consequently resulted. Provision as to the floors and general construction of all cowsheds were inserted in the original draft or the byelaws, but when sent to the Local Government Board for ratification, these were struck out as being *ultra vires*. Consequently the sheds are not for the greater part such model structures as one might wish them to be. The limewashing of the sheds which came as an innovation to some of the cowkeepers, was also carried out in accordance with the provision in the byelaws, copies of the latter being sent to each cowkeeper. In one important instance the condition of the flooring of a shed was such as to admit of its being dealt with as a nuisance, and improved ventilation was demanded in more than one case.

17 persons made application during the year for registration as dairymen or purveyors of milk, and of these 13 were ultimately placed upon the register, after all amendments required in the sanitary condition of the several premises had been made good according to notices served upon the owners.

So far as could be judged no milk supply was last year responsible for any case of infectious disease or at least there was no evidence of several cases arising concomitantly in persons supplied from the same dairy. Our experience, however, has not always been so happy as this, and the case against milk, as a favourable medium for the growth of disease bacteria, which may have been accidentally introduced into it, has been made out over and over again. The possibility of milk yielded by tuberculous cows, containing from the first the tubercle bacilli, and the likelihood of any person predisposed to consumption receiving into his system the exciting cause of this fell disease through milk, is quite sufficient in itself to demonstrate the necessity of having all milk supplies placed under more stringent regulations. The periodic inspection and testing for tubercle in milch kine, by a veterinary surgeon would appear to be the only course likely to insure in any considerable degree against the sale of tuberculous milk. As it is there is practically no barrier to this serious risk. The process of milking itself is also



generally performed in a very rough and ready manner, often being entirely lacking in such precautions as common cleanliness, and common sense ought to dictate.

Some time ago when Scarlet Fever was epidemic with us, we had evidence of the conveyance of both Scarlet and Enteric Fevers by milk. I then urged the public to adopt the simple but effectual precaution of boiling all milk used for five minutes before use. In the majority of households this is not difficult of accomplishment, if a vessel be set apart for the purpose, and the milk boiled as a matter of routine. When dealing with an article of diet so universally appreciated and valuable as milk, it is essential to avoid any statement that might in any degree restrict the use of it, nevertheless I take this opportunity of renewing the advice to boil all milk. Those who are in the habit of drinking cold milk will probably find the draught more agreeable if taken hot, and the theory is not in accordance with actual experience which supposes boiled milk to be less digestible than raw cold milk.

LIST OF COWSHEDS IN THE BOROUGH AT THE  
PRESENT TIME.

Arle Farm Dairy.....	Mr. J. Wood
Arle Court Farm.....	Mr. W. Brown
Arthursfield Farm .....	Mr. J. Nunney
Benhall Farm .....	Mr. R. T. Smith
Fiddler's Green Farm...	Mr. G. Winstone
Grovehill Farm.....	Mr. T. Buckle
Leckhampton Wood Yard...	Mr. C. Smith
Prior Farm.....	Mr. C. W. Pratley
Sandfield Road.....	Mr. W. Waine
Sandford Mill Farm.....	Mr. J. Loud
Whaddon Farm.....	Mr. M. Wood

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## FACTORIES AND WORKSHOPS.

Cheltenham has little claim to be considered a manufacturing town, and the number and size of its factories is consequently small, but as in every town of such dimensions there are a considerable number of workshops of one sort and another.

The provisions made by Parliament for the sanitary and general regulations of factories and workshops are contained in several Acts of Parliament, and are of rather an intricate nature, the sections of the later Acts often refer to those of previous Acts, sometimes overlapping them and taking their place. The duty of carrying out the provisions of these Acts is divided between the Local Sanitary Authority and the Factory Inspector of the District, but the respective duties of each are not so definitely defined and disconnected as to obviate such disadvantages as may possibly attach to a dual management. Owing to the complications of working presented by these Factory Acts there is a danger that they will never become so effectively and universally applied as they should be. A close study is required even for their comprehension.

Hitherto there was no practical means of ascertaining the number and situation of all the petty workshops in the town, and although an effort was made last year to discover any before unknown, our list is no doubt still imperfect. One of the sections of the *Factory and Workshops Act, 1895*, however, requires every person in the occupation of a workshop at the commencement of the Act (Jan. 1st, 1896) to serve, within twelve months, a notice upon the Factory Inspector of the District containing the name and place of the workshop and the nature of the work carried on therein, &c. Such notices to be forthwith forwarded to the Sanitary Authority by the Factory Inspector.

Recently a circular has been issued by Her Majesty's Chief Inspector of Factories, calling attention to the provisions of the new Act, and giving expression to the necessity of the Medical Officer of Health and the District Factory Inspector working in conjunction to carry the Act into effect.



As the result of inspections of workshops last year notices were served for cleansing and limewashing, and for improving ventilation and making minor structural alterations in a good many instances.

The installation of the electric light in Cheltenham by the Corporation, gives owners and occupiers an opportunity of preventing the pollution of the air of their workshops by the products of combustion of gas. These in close apartments load the air with moisture and irrispirable carbonic acid gas, which undoubtedly act as depressants to the vitality of the workers. From a sanitary point of view I advocate the substitution of the electric light for gas in all close workshops and retail shops where the employees continue to work after dark.

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## THE BAKEHOUSES.

One of the most important sections of the new Factory and Workshops Act forbids any place underground to be used as a bakehouse unless so used prior to January 1st, 1896, when the Act comes into force. This at least will prevent any underground bakehouse being established in the future. It is to be regretted that the Act could not have been made retrospective, or rather that it was not passed fifty years ago so that the establishment of so many underground bakeries in Cheltenham might have been prevented.

The bakehouses in the Borough were all inspected both by myself and by the Inspectors, and as a result numerous notices were served requiring limewashing, and others requiring amendments to drains, &c. One bakehouse situated in Sherborne Street was found to be in a condition totally unfit for the manufacture of bread, and notice was served to prevent its being so used with the result that the place is no longer a bakehouse.



## THE PUBLIC ABATTOIR, PRIVATE SLAUGHTER HOUSES AND MEAT INSPECTION.

The Public Abattoir was used to about the same extent as in the previous year, but as a reduction was made in the charge to the largest user of the Abattoir, a little less money was taken in fees. In many towns where a Public Abattoir exists, the institution is self-supporting and this in my opinion it ought to be everywhere. Our own however is at present worked at a considerable loss to the Corporation when the cost of building is taken into account. This results from its limited use, and although it would be necessary to greatly enlarge the buildings if the private slaughter-houses were abolished, the current expenses would not be so great in proportion as they are at the present time, and it would probably then pay its way.

At a meeting of the Society of Medical Officers of Health held in Cheltenham in July last, the question of public *versus* private slaughter-houses was discussed at length, and as no question can be fairly settled without a consideration of the claims of all parties interested, the apparent reasons which cause the butchers to cling so tenaciously to their private slaughter-houses were placed prominently before the meeting. The butchers consider that as the places now in use cost them little or nothing and as fees will have to be paid at the Abattoir, the change would result in a money loss to them. That the private slaughter-houses being generally adjacent to the shops are convenient to the butchers, whereas having to drive animals to a central abattoir and cart the meat back to the shop means additional labour and expense. That the using of a slaughter-house in common with other butchers destroys the privacy of a man's business. There is also a disinclination on the part of butchers to have their animals and meat submitted to stringent inspection which may occasionally lead to losses by destruction of unsound animals and meat, and they say that no sufficient means have been adopted to compensate butchers for such losses, and that unless all the imported meat is subjected to an equally stringent inspection, an anomaly is created, which places the



nome-killed meat at a disadvantage with that which is imported. Whilst acknowledging, however, that should a butcher suffer loss, through no culpability or want of care of his own, by reason of the destruction of his property on public grounds, he has a right to expect to be fully compensated, it is patent that the convenience of the butcher is of small moment compared to the safety of the public at large. The arguments which the butchers advance do not deny and in no way affect the necessity of having the meat supply under public control. Our knowledge of the dangers to the Public Health attaching to meat renders it imperative that inspection of all animals intended for slaughter, and all meat intended for human consumption should be rendered possible by the use of central abattoirs. Such inspection is impossible so long as the numerous and scattered private slaughterhouses are in use. The greater number of the old registered places are structurally unfit for the important purpose for which they are assigned, and everyone of them is really the emporium of an "offensive trade" situated in many instances in the midst of densely populated quarters, where they cannot severally fail to be a nuisance from one cause and another. Who can deny therefore the advisability of clearing the streets of these centres of uncleanness and bringing them all under the roof of an abattoir publicly owned and managed? With these points in view the Council decided to apply to the Local Government Board for powers by Provisional Order to cause the compulsory closing of any private slaughterhouse. Application was accordingly made, and the matter is now before the Local Government Board.

Recently one of the slaughtering apartments was let for sole use to a firm of butchers at a rental of £15 a year, and it was much to this firm's advantage to get it upon these terms rather than pay the usual fees per head for animals slaughtered. The Health Committee has been anxious to get the butchers to use the Abattoir, and is agreeable to meet them in as fair a way as possible.

The following statement of the Superintendent shows the number of animals killed in the Abattoir last year as compared with the number killed the year before, and the amount received in fees.



## ANIMALS SLAUGHTERED IN ABATTOIR 1895 and 1894.

	1895	1894.
Beeves ... ..	300	222
Calves ... ..	152	248
Sheep ... ..	2064	2377
Lambs ... ..	287	332
Pork Pigs ... ..	1642	1539
Bacon Pigs ... ..	279	245
Total Animals ...	4724	4963

Total Fees received £89 12s. 2d. ... £93 14s. 11.

LIST OF BUTCHERS WHO KILLED IN THE ABATTOIR  
LAST YEAR.

Mr. Asheroft .....	77, High Street
Mr. Carrick .....	294, High Street
Mr. Jackson, (Grocer) .....	High Street
Mr. Jenkins .....	249, High Street
Mr. Lane .....	256, High Street
Mr. Mandy .....	9, Winchcomb Place
Mr. Pleydell .....	High Street
Mr. Pugh .....	341, High Street
Messrs. Waghorne Bros. ...	346, High Street
Mr. F. Waghorne .....	4 Tivoli Buildings
Mr. Wilcox .....	44, Tewkesbury Road
Mr. Willis .....	High Street

Some few others made occasional use of the Abattoir.

The private slaughter-houses were kept sharply inspected and the provisions of the byelaws as to limewashing once a quarter, &c., were carried out, notices being however sometimes required.

## INSPECTION OF MEAT, &amp;c.

Such inspection of meat as was possible was made, and there was one seizure of diseased and unsound meat, which was followed by a prosecution.

There was also a seizure of decaying tripe and cow-heels, which were destroyed on the order of a magistrate.

Two separate lots of fish (in all about 1,000 mackerel) were also destroyed as unfit for food. These however were reported by the owners and were not exposed for sale.



## THE ISOLATION OF INFECTIOUS DISEASES.

Owing to the decrease in the number of cases of Scarlet Fever there were fewer cases requiring treatment in the Delancey Hospital last year than in the two previous years. The new wing which had been for some time in course of erection, was completed in the summer and formally opened by Mr. Charles Wilson, the Chairman of the Delancey Trustees and the chief present patron of the hospital. This wing, the upper wards of which communicate with the older part of the hospital, was designed partly as an extension of the Scarlet Fever Hospital, it having been found in the recent epidemic that the existing accommodation was insufficient. The lower wards, however, which have an entirely independent approach, and are separated from the upper wards by an impervious concrete floor, were intended for the treatment of Enteric Fever. Hitherto all cases of Enteric Fever not treated in the houses in which they arose, had been treated in the Cheltenham General Hospital, the Governing Body of which had claimed payment of the Corporation at the rate of 3s. a day per case. As soon as the special hospital was completed, however, and cases of Enteric Fever began to be sent there, it was said that to have the Enteric Fever cases in the General Hospital served a useful purpose, it being essential for the nurses in training to have the handling of such cases. The influential Governing Board of the Hospital were now most desirous to receive them and declared their willingness to waive the claim for payment previously made and recently increased. I had already advised that Enteric Fever was most appropriately treated in a special hospital, and cases were already being sent into the new special wards built for the purpose at the Delancey Hospital, but the Corporation in the end acceded to the request from the General Hospital that preference should be given to the latter institution until the accommodation that could be afforded there should be exhausted. The new wards which were specially intended for isolation and treatment of Enteric Fever, therefore, will only come into use when we are so unfortunate as to get a severe outbreak of the disease in the town. From the Medical-Officer-of-Health's point of view this arrangement is not satisfactory,



for although it is still the custom in some places to send Enteric Fever cases into General Hospitals when there is no special hospital provided to receive them, or where as in London the provision is insufficient, yet I believe the opinion of all the medical men who are confining their attention to preventive medicine is entirely opposed to the treatment of cases of this disease in such a general way, and is in favour of its being treated in isolation hospitals tended by nurses who have particular experience in it, and no other kind of case to attend at the same time.

The following list gives some information as to how Enteric Fever is treated in other places :

TREATMENT OF ENTERIC FEVER CASES IN SPECIAL  
AND GENERAL HOSPITALS.

—  
LONDON.

Cases treated in the Fever Hospitals of the Metropolitan Asylums Board in 1894 ... .. 534

*(This is about the average number of cases treated annually in these Hospitals for some years past.)*

Cases Treated in the General Hospitals.

London Hospital, annual average for 5 years, 1890-1894 .....	188
St. Bartholomew's Hospital     ,,     4 years, 1891-1894 .....	94
St. Thomas's Hospital           ,,     5 years, 1890-1894 .....	59
Middlesex Hospital               ,,     "           "           " .....	40
Westminster Hospital           ,,     "           "           " .....	29
Guy's Hospital                    ,,     "           1889-1893 .....	38

In 1894 by arrangement with the Metropolitan Asylums Board to take in their overflow cases, 90 cases were received at Guy's Hospital.

No return has been obtained from other General Hospitals in London including Charing Cross, King's College, University College, St. George's and St. Mary's Hospitals, the Royal Free Hospital, &c., all of which will receive some Enteric Fever cases.



## COUNTRY TOWNS.

LIVERPOOL.....	Cases treated in City Fever Hospitals in 1895...	443
“ .....	“ “ General Hospital „	159
MANCHESTER.....	“ “ Special Fever Hospital „	227
“ .....	“ “ other Hospitals — „	16
LEEDS .....	“ “ Corporation Fever Hospitals in last 5 years ... ..	695
“ .....	“ “ in Leeds General Infirmary ...	98
HULL .....	“ “ in Corporation Fever Hospitals in last 3 years .....	394
“ .....	“ “ in Hull Royal Infirmary.....	62
NEWCASTLE-ON-TYNE..	All cases are treated in Corporation Fever Hospital unless occurring accidentally in the General Infirmary and being too ill to bear removal to the Fever Hospital.	
BRADFORD .....	All cases treated in Fever Hospital with a very few exceptions inadvertently admitted into other Institutions.	
SHEFFIELD .....	All cases treated in City Fever Hospital excepting such as arise in the General Hospital and are too ill to bear removal to Fever Hospital.	
PORTSMOUTH .....	All Hospital treated cases go to the Infectious Diseases Hospital. They are not admitted to the General Hospitals here.	
BRISTOL.....	The complete plans for Infectious Diseases Hospitals include provision for Enteric Fever cases, but at present no such provision exists and all Hospital treated cases have to go to the General Hospital.	
BIRMINGHAM .....	The Infectious Diseases Hospital here only provides for the isolation of Scarlet Fever and Small Pox.	

## THE ISOLATION OF DIPHTHERIA.

At present there is no special accommodation for the isolation of Diphtheria, and so far as one may judge from past records only a small provision is necessary here. Much has lately been said and written about Diphtheria and its Treatment, and it is reported to be on the increase latterly

in London and elsewhere. Popular rumour credited our town last year with a prevalence of this disease approaching to an epidemic. Nothing of the kind however occurred, nor did there ever appear any likelihood of it; on the contrary, as will be found further on in this Report, the incidence of Diphtheria was represented with us last year as usual by a comparatively low figure.

Towards the end of the year the need of accommodation for the isolation of Diphtheria was considered by the Trustees of the Delancey Hospital, and it was decided to build a small hospital on ground adjacent to the other blocks. When this has been done provision will have been made in Cheltenham for the isolation of all the more commonly occurring infectious diseases.

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## THE WATER SUPPLY.

THE DOWDESWELL SUPPLY.—Owing to advice given as the result of numerous analyses of the water supplied to the town from Dowdeswell, and a consideration of the powers of the existing filters, it was decided during last year to materially extend the filtering area and at the same time to increase the provision for storing filtered water by the construction of a new storage reservoir. These propositions are being rapidly carried into effect, and when the work is completed the entire filtering area will have been increased by 50 per cent., the surface of the old filters measuring about 12,000 square feet and that of the new 6,000 square feet. The storage capacity for filtered water is also being increased to rather more than a full day's supply, and the mode of discharge from the filters to the reservoirs of filtered water is to be so altered that the rate of filtration can be kept slow and constant. The means for the most adequate filtration of the water at Dowdeswell will in future be at hand, and every drop of water supplied from the reservoir there should be of first-rate quality.



**THE HEWLETTS SUPPLY.**—In the autumn when water was being supplied which had for some considerable time been stored in the open Hewlett's reservoirs, numerous complaints were received as to its odour and flavour. Formerly this water, which is of excellent quality to begin with, was drawn from the bottom of the reservoirs, but floating arms connected with the affluent pipes by moveable joints are being placed in the reservoirs. This provision will allow of the water being drawn from the surface of the reservoir instead of from its bottom, and the sediment of the reservoirs will consequently be prevented getting into the pipes. This water, however, good as it is when it comes from the springs, cannot be stored for a long time without its quality becoming deteriorated. In the autumn months after long storage the whole of the water in these open reservoirs is spoiled by microscopic growths which appear to feed upon a decaying water weed (*chara*), the decomposing weed itself giving out a most offensive odour. Such water should never be supplied to the town. It is decidedly unpleasant, and the smell and taste of it are sufficient to awaken fears in the minds of the consumers, and lead to a recurring criticism of the water supply. This water which is originally the purest spring water should be used whilst in its fresh state.

**THE SEVERN WATER.**—This continues to be used chiefly for rougher purposes. The compensation water required for the Chelt, 100,000 gallons a day, is now supplied from the Severn, being carried to Dowdswell through an old pipe which has for long existed between Hewletts and Dowdeswell. The Chelt has always helped to supply the Severn but now receives itself a supply from the greater river. The Severn water is also supplied to the standpipes used for street watering, to the Public Swimming Baths, to the Fountain in the Promenade, to the Gas works and to several other places for boilers and trade purposes, as well as to some private houses in the Borough, situated on the line of the main pipe the occupiers of which specially desired it to be laid on. Also to houses *en route* from Tewkesbury in the parishes of Deerhurst and Boddington, at Coombe Hill, at the Corporation Barn Farm and on the Uckington Road, owners in each case having made application for it. This water has, as will be remembered, for a long time been



snppled to the town of Tewkesbury, and as long as it continues to be efficiently filtered it is quite suitable for drinking either in our borough, or outside it. We should have escaped the numerous complaints had Severn water been supplied last Autumn instead of the long stored Hewlett's water.

THE EXTENSION OF THE PUBLIC WATER SERVICE—  
Extension to houses not before supplied proceeded at a good rate last year. There were 574 entirely new connections made with as many premises, and with regard to flushing of house drains there were no fewer than 1,035 flushing cisterns fixed in 1895, chiefly as the result of notices served in the year or towards the end of the previous year. This of course means an increased consumption of water. although such a saving has latterly been effected by discovering and preventing waste by leaks as to compensate to some extent the extra quantity that had to be supplied to fresh places. The Water Rate Assessments have increased in number from 5,000 in 1887 to nearly 8,000 in 1896 and about half this increase has taken place in the last 3 years.

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## NEW BYELAWS.

*The New Building Byelaws* were in operation last year. All plans for proposed new buildings are now submitted to the scrutiny of the Public Health Committee, and of those sent in several were rejected on account of the proposed sanitary arrangements not being in accordance with the requirements of the byelaws, or not being so well planned as was possible in regard to drainage, &c. It became necessary to appoint an inspector of new buildings, and Mr. Moorman, the Surveyor of the late Leckhampton Local Board, was appointed. His office is a highly important one, for the future sanitary state of the town depends in great part upon his insistence in getting good work done, and the



byelaws carried out to the letter. Amongst our older houses numerous instances are to be found of the want in past time of good building byelaws and a good building inspector.

*New Byelaws as to Offensive Trades.*—No byelaws had previous to last year been adopted in Cheltenham to regulate offensive trades, and as a little trouble was experienced in dealing with some of the places in which offensive trades are carried on here, particularly in connection with tripe dressing, advice was given as to the necessity for adopting such byelaws. We have here a few other offensive trades besides the tripe-dressers, viz., tallow factory, fellmongery, &c., and the model byelaws of the Local Government Board drawn up for the regulation of all the more common offensive trades were in the end adopted by the Council and will be in force when the adoption has been ratified by the Local Government Board.

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## PIPING OF OPEN AND OFFENSIVE DITCHES.

The Minnow Ditch which had been a nuisance greater or less for years in the neighbourhood past which it had its course, was piped and filled in as the result of notices served upon the adjoining owners last year. The Alstone ditch which has been complained about and reported upon from time to time during the last three years, has been referred for specification of requirements, and this will probably also be piped to beyond Rowanfield Lane. A notice to prevent its pollution by the overflow from a cesspit has also been served.

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## THE TOWN SEWERAGE.

The necessity for amending the condition of parts of the sewerage system, which I first brought before the Committee some three years ago, has gradually assumed a greater prominence and was the subject of an able Report by the Borough Surveyor in August last. It is absolutely necessary to proceed upon this work systematically, and the Borough Surveyor has commenced by first taking that section of the town situated in the North and West Wards which is bounded by the High Street, the Promenade, the Chelt, and the Midland Railway. Reference can be made to the Borough Surveyor's Report for particulars as to the condition of existing sewers in this district and as to the work he considers necessary to be carried out.

"The cost of the works described, including all expenses other than legal charges, will be about £4,500, and will require six months for completion if carried out during the summer months, i.e., between 1st March and 1st November."

The above paragraph is from Mr. Hall's Report on "Sewering of No. 1 Drainage District" before referred to.

Mr. Hall speaks of continuing the investigation in other districts, and this work must be persisted in until the sewerage of the whole town has been reported upon and improved according to the recommendations given. It will, however, as he says, be a long time before the whole can be completed. Application has to be made to the Local Government Board for powers to borrow the money and until sanction is received from the Board no work can be begun. Before granting sanction the Local Government Board holds an official inquiry, and although application was made some considerable number of months ago for borrowing powers to carry out this work, the inquiry has not yet been held. We hope however that the recommendations of Mr. Hall's Report as to re-sewering of No. 1 District will be carried into effect by the end of next summer.



Apart from the scheme above mentioned over 2,000 feet of imperfect sewers were replaced by good new pipes in various parts of the Borough during last year, and an extension of the sewerage to the extent of 3,600 feet was made to meet drains that were otherwise too far removed from the existing sewerage system.

The length of sewers laid last year however was exceeded by the length of new house drains. The Inspector has been so busy in this department as to be able to record over 9,000 feet of drains laid or relaid upon old premises.

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## LEGAL PROCEEDINGS.

The great activity displayed during the last 3 or 4 years in the Health Department has resulted in the service of a very large number of notices. A reasonable time is always given in the notice for the requirement whatever it be, to be carried into effect but in some instances the work is not done, and experience shows that in the case of some people the work is not done whatever length of time is given. The non-compliance with notices entails much extra labour as the place has to be inspected over and over again. Ultimately nothing remains but to proceed to extremes, and it often happens that when at last the delinquents are summoned they express themselves ready to carry out the work within a week, and pay the cost of the summons rather than come into court with the almost sure result of being fined, as well as exposed. A whole batch of summonses that had to be taken out last year were withdrawn under the above circumstances, notwithstanding that the people summoned had put the Corporation officials to an immense amount of unnecessary trouble.

The following cases were brought into court with the results as stated :



*For Exposing for Sale Diseased and Unsound Meat.*

—The seizure included a whole carcase and a part of a second carcase of lamb together with the lungs, hearts, &c., the lambs being very badly affected with tuberculosis. In the same butcher's shop at the same time a quantity of mutton, veal, sausages, and salted meat all in a putrefying condition were seized. The butcher pleaded ignorance so far as the tuberculosis was concerned, though the signs of disease could not possibly have escaped notice, and in regard to the putrefying meat, which was all exposed for sale, he said he had ordered a hole to be dug in which to bury it. Attention had been drawn to the shop by the complaint of a purchaser. The magistrates fined defendant £10 with costs.

*For Refusing to allow Disinfection of a House and Clothing after a Case of Scarlet Fever.*—

The defendant declined admission to the Inspector sent to carry out disinfection according to the routine rules. No further action could be taken until the matter had been brought before the Committee, who upon the certificate of the Medical Officer of Health, under Sec. 36 of the Public Health Act, stating that disinfection would tend to check disease, ordered the disinfection to be done. After this, defendant had to be given another chance, but he was still so foolish as to obstruct the Inspector, when a summons was obtained, and the magistrates imposed a fine of £1 with 9/- costs, and ordered the defendant to allow the disinfection to be done within eight and forty hours. It was then carried out, though the process to compel it had taken fully a week.

*For creating a Nuisance by Boiling Fish Offal.*—

The offal was boiled to feed pigs. The nuisance seemed to be rather an intangible one, and the matter could hardly be treated as an offensive trade. The magistrates ordered the nuisance to be abated by desisting to boil the offal, and the defendant was mulcted in 9/9 costs.

*For non-compliance with a Notice under Sec. 41 of Public Health Act, requiring Abatement of a Nuisance arising from Defective Drains, &c.*— The magistrates ordered the specified work to be carried out within twenty-eight days, and the defendant was mulcted in 13/3 costs. The work being then done.



## VITAL STATISTICS.

### SUMMARY.

Area of Municipal Borough	...	...	...	4677 acres
Rateable Value	...	...	...	£270,312
Present Population (about)	...	...	...	49,000
Population 1891 Census	...	...	...	47,514
Persons per Acre, 1895	...	...	...	10.4
Average number of Persons per house	1891 census			4.9
Death-rate, 1895	...	...	per 1000	living inhabitants 16.8
Average Death-rate for previous 10 years	...	...	...	" 17.1
Death-rate for 7 chief Zymotic Diseases, 1895	...	...	...	" " .75
Average Death-rate for 7 chief Zymotics for previous 10 years	...	...	...	" " .92
Marriage-rate, 1895	...	...	...	" " 9.1
Birth-rate, 1895	...	...	...	" " 21.8
Average Birth-rate for previous 10 years	...	...	...	" " 22.8
Infant Death-rate (under 1 year old) per 1,000 births	...	...	...	156
Illegitimate Births, 1895	...	...	...	" " 65
Average age at Death, 1895, for whole Borough (under 1 year being reckoned 1 year)	...	...	...	43.5 years

### THE BOROUGH OF CHELTENHAM.

Cheltenham has perhaps the most attractive appearance of any town in England. Compared with many of the Boroughs of the Midlands and the North it is a veritable paradise, the brightness of its gardens, the greenery of its avenues, and the cleanness of its streets and houses contrasting in such a marked degree with the murky thoroughfares and motley buildings of most other country towns. The absence of factory chimneys allows of the air remaining pure and bright, and the rapid darkening of the house walls due to an impure atmosphere, which is commonly seen elsewhere is not observed in Cheltenham. The town is spread



out over a large area, for the house gardens which are such a common feature take up many acres of ground. There is consequently no lack of breathing space, and the site is also a good one, having a fair elevation at the base of the Cotteswold Hills, and looking towards the open valley of the Severn. The situation and surroundings favour the supposition that Cheltenham should be a healthful place of residence, and experience and statistics show that this expectation is borne out in fact, and that the conditions here are not only very attractive and agreeable, but freer from the dangers of epidemic disease and more propitious to life than is the case with most towns. Although the town includes besides its many fine streets some large and populous poor class neighbourhoods, these lie well apart from the streets of better class forming separate districts, and you do not see such a mixing up together of poor and rich as is the case elsewhere. This is a decided advantage to the better class inasmuch as the epidemic diseases commonly have their origin amongst the indigent, whence they are liable to spread to any houses of larger size that happen to be near by. The circumstance would have been most unfortunate if the numerous College Boarding-houses had been surrounded by poor streets ; as it is however, they have no poor houses near them, and they escaped in a truly wonderful way the Scarlet Fever that assumed epidemic proportions with us two years ago. Cheltenham has a high rateable value, comparatively low rates, and few debts. The Corporation has consequently latterly been able to adopt a "forward policy," buy up some important recreation grounds and buildings, and enter into sundry public works calculated to improve the town.

POPULATION.—Our population is a little uncertain and there is no reliable data to go upon in estimating it exactly. If a census could have been taken at the quinquennium, which is this year 1896, it would have been of great service. The increase of births over deaths, or natural increase, is considerable each year. Last year it amounted to 235. The difference in our population, however, from one time to another is chiefly brought about by emigration and immigration, which are factors difficult of estimation. I therefore adhere to the round sum of 49,000 as about representing the population of the Borough.



DEATH-RATE.—The total deaths in the borough numbered 845. 18 of these did not belong to the district, and these deducted from the gross number leave 827 upon which to estimate the death-rate. The death-rate of 16.8 for last year is below the average for the last 10 years, and is therefore satisfactory. The rate upon three of the six wards, which contain about half of our population, was 12.0.

ZYMOTIC DEATH-RATE.—The zymotic death-rate for last year .75, was satisfactory in again being a low one. The average zymotic death-rate for Cheltenham is also low.

INFANT MORTALITY — though not a high one is as high as it ought to be in Cheltenham. The number of deaths of infants under 1 year old shows either that the vitality of some of the children born in the poor districts was low, or that they suffered some neglect after birth. The number of infants dying from the chief zymotic diseases was not excessive last year in the case of either of those diseases, but there was a heavy death-rate from such indefinite causes as debility, inanition, &c.

THE MARRIAGE-RATE—The marriage-rate in Cheltenham is much below the average for the whole of England, or for most English towns, and a low marriage-rate has a bearing upon the number of births.

THE BIRTH-RATE is one of the lowest in the kingdom, a fact partly accounted for by the class of residents, the highest birth-rates belonging to populations consisting of busy manual labourers.





Table of Statistics for the last 10 years, shewing Deaths from Chief Zymotic Diseases, and Zymotic Death-rate, and Total Deaths and General Death-rate; also Total Births and Birth-rate per 1,000, and (under 1 year old) Infant Death-rate per 1,000 children born. Population for first 8 years, 44,000, for last 2 years, 49,000.

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Small Pox ... ..	...	12	3	...	12	5	41	12	2	5
Measles ... ..	...	2	1	...	...	1	7	3	7	...
Scarlet Fever ... ..	1	2	1	2	5	4	2	6	4	5
Diphtheria ... ..	2	1	10	8	4	1	4	...	3	8
Whooping Cough ... ..	...	9	31	7	8	4	1	6	2	6
Enteric and Continued Fevers ... ..	8	14	15	13	14	4	11	20	8	13
Diarrhoea ... ..	28	40	61	30	43	19	66	47	26	37
Total deaths from seven chief Zymotics ... ..	39	40	61	30	43	19	66	47	26	37
Death-rate from chief Zymotics ... ..	.88	.90	1.38	.68	.97	.43	1.50	1.06	.53	.75
Total deaths belonging to District ... ..	760	798	758	696	737	772	794	769	732	827
General Death-rate ... ..	17.2	18.1	17.2	15.8	16.7	17.5	18.0	17.4	14.9	16.8
Total Births ... ..	1116	1049	1033	991	955	987	943	993	1008	1070
Birth-rate ... ..	25.3	23.8	23.7	22.5	21.7	22.4	21.4	22.5	20.5	21.8
Infant Death-rate (per 1,000 born) ... ..	143	156	157	137	155	132	135	167	128	156

## Ward Death-rates.

The following table gives the death-rates in each Ward of the Borough separately. The deaths in the Workhouse and General Hospital, which institutions are situated respectively in the North and South Wards, not being included in the numbers attributed to those Wards.

DISTRIBUTION OF DEATHS IN WARDS AND IN INSTUTIONS, WITH DEATH RATE IN EACH WARD FOR YEAR 1895.			
Wards (excluding Institutions)	Population 1891 census.	Deaths.	Death Rate per 1000 living.
North Ward .....	9,790	175	17·87
South Ward .....	8,020	107	13·34
East Ward .....	8,242	131	15·87
West Ward .....	6,039	81	12·41
Central Ward .....	6,553	133	20·29
Middle Ward .....	8,870	92	10·33
Institutions.			
General Hospital .....		59	
(Including 14 not belonging to District).			
Workhouse.....		59	
(Including 4 not belonging to District).			
Nazareth House .....		5	
Pates' Alms Houses.....		1	
Children's Hospital .....		2	

*The North Ward.*—This is the most populous of our six wards, and contains the greatest poor quarter, in fact the whole ward contains very few houses of any considerable size. The 10,000 people it contains include a large number of labourers and their families, all the Common Lodging Houses, and many who live from hand to mouth by charing, washing, gardening and odd work. It has the lowest elevation of either Ward, and the subsoil is nearly all sand. There is nothing objectionable about its site however, the compara-



tively large death-rate it generally shows being mainly due to quality of its population and the size and condition of its houses. The chief cause last year of its death-rate being higher than that of most of the other Wards was the fact of its having so high a death-rate amongst infants under 1 year of age as 5.8 per 1,000 living. Its total death-rate being 17.8 per 1,000. It also had a comparatively heavy death-rate from diseases of the lungs. The average age at death in this Ward was only 34.6 years in 1895, the great number of infants' deaths bringing it down to this low figure.

*The South Ward.*—Consists chiefly of middle class houses but has a quarter of limited extent containing very poor houses. It has a good elevation, and a subsoil of sand and some clay. By far the larger proportion of houses stand on sand. Its death-rate last year from all and sundry causes was a low one. Average age at death 45.2 years.

*The East Ward.*—Consists of residential middle class and lower middle class houses, and contains the very poor class district of Fairview. It has a fair relative altitude, and is bounded on one side by the rising clay ground of Battle-down. By far the greater part of its houses stand on a sandy subsoil, a few score of houses only being on clay. Considering the poor houses in this Ward the death-rate was very moderate last year. The average age at death was 42.0 years.

*The West Ward.*—This is the "West End" of Cheltenham, containing the fashionable districts of Lansdown and Bayshill. The greater proportion of its houses are of a first-class order. It also contains the middle class semi-rural healthy suburb of St. Mark's. It has very few poor houses in it and most of those to be found are situated in the suburban village of Arle and Alstone, and partake of a rural character. For the greater part this Ward has a comparatively high altitude, and it is characterised in the main by a stiff clay sub-soil. The death-rate is very low, and the average age at death last year was 50.8 years.

*The Central Ward.*—This compact Ward has its ground well covered with houses, and has a population of a mixed sort. It contains the fashionable district of Pittville,



and a large number of middle class and lower middle class houses. It has a limited number of very poor houses on the Rutland Street and Sherborne Street sides. Nine-tenths of its houses stand on a sandy sub-soil, a few being on clay. Last year its death-rate was relatively high—the highest of either Ward in the town. This however was in great part accidental, being to a considerable extent due to the very large number of deaths of persons over 70 years of age. Its poorer houses also contributed a full share of deaths of infants under 1 year of age. The combined death-rates of infants under 1 year and old people over 70 years of age reached the high figure of 10 per 1,000 living. The total death-rate being 20.2 per 1,000. The average age at death last year was 44.6 years.

*The Middle Ward.*—This Ward like the West Ward is favoured in being almost devoid of poor houses. It contains a large proportion of first-class residences, some middle class, and some streets of lower middle class. It occupies high ground for the main part, and has a subsoil partly of sand and partly of clay, and more of clay than of sand. It contains the Promenade wherein are situate the largest shops in the town. It has the lowest death-rate of either Ward. Last year it was 10.3 per 1,000 living, and the average age at death was 49.9. Along with the West Ward it shows comparatively a very low infants' death-rate. The number of children who died under 1 year of age last year gives a rate of 1.6 per 1,000 living, and in the West Ward 1.4. The infants' death-rate gives some clue to the causation of a relatively high or low death-rate in the different Wards, for whereas in the West Ward the deaths of infants only caused a death-rate of 1.4, in the North Ward they caused a death-rate of 5.8. No doubt these two Wards, the West and Middle, not only contain the largest houses, but also relatively the largest number of older children and adults at those ages at which death is of least frequent occurrence. The South Ward in containing the Boarding Houses of the boys' College will to some extent share this comparative immunity from death. Death is of least frequent occurrence at the school age. The number of deaths from diseases of the lungs and respiratory passages was also last year least of all in the Middle Ward.



TABLE SHOWING DEATH-RATES PER 1,000 LIVING IN  
THE SEVERAL WARDS, 1895.

Of Infants 1 year old and under ; of Old People over 70 years of age ;  
and from Lung Diseases, including Phthisis, Pneumonia and  
Bronchitis.

	North Ward	South Ward	East Ward	West Ward	Central Ward	Middle Ward
I year old and under .....	5.8	2.6	4.2	1.4	4.1	1.6
Over 70 years old .....	3.7	3.9	4.4	3.7	5.9	3.8
Lung Diseases .....	5.6	3.6	4.2	3.1	6.1	2.2

The following lists give the deaths which took place last year, alphabetically arranged in Wards. The figures represent the ages at which death occurred, and where there is more than one figure it means there were two or more deaths from the same disease.

#### NORTH WARD.

Albert Street, St. Peter's ...	bronchitis 1, cancer 60
Albert Street, St. Paul's ...	bronchitis 69, hemiplegia 52, old age 80, pneumonia 73, renal disease 63
Baker Street ...	debility 1
Bloomsbury Place ...	cancer 47
Bloomsbury Street...	asthma 44, congenital malformations 1, gout 61, hemiplegia 54, influenza 38
Brunswick Street ...	apoplexy 75, pneumonia 1, 66, gastritis 1, 58
Burton Street ...	bronchitis 2, cyanosis 1, diarrhoea 1, heart disease 34, 50, old age 76, 80, 82, phthisis 2
Carlton Place W. ...	gastro-enteritis 1
Cleveland Street ...	bronchitis 1, convulsions 1, diarrhoea 1, old age 70, pneumonia 1, peritonitis 55, phthisis 46, renal calculus 68, syphilis 1, tuberculosis 2
Devonshire Street ...	debility 1, 1, phthisis 54
Elm Street ...	phthisis 10, tuberculosis 2
Folly Lane Pond ...	found drowned 50



Granville Street	...	...	cancer 61, influenza 58
Grove Street	...	...	cancer 49, diarrhoea 2, meningitis 11, phthisis 42
Hanover Parade	...	...	meningitis 1, pulmonary disease 70
Hamilton Place	...	...	peritonitis 63
Hereford Passage	...	...	bronchitis 1, tuberculosis 2
High Street...	...	...	bronchitis 2, diplegia 75, pneumonia 1, phthisis 41, old age 81, heart disease 54, 86, tuberculosis 3, umbilical hernia 59
Hungerford Street	...	...	bronchitis 67, old age 86, lung disease 1, paralysis 68, pneumonia 38, 50
King Street	...	...	bronchitis 2, 87, debility 1, diarrhoea 1, heart disease 77, pneumonia 33, puerperal fever 27
Larput Place	...	...	pulmonary disease, 18
Marsh Lane...	...	...	convulsions 1, diabetes 51
Malvern Street	...	...	convulsions 1, 1, 1, malignant disease of bowels 50
Milsom Street	...	...	bronchitis 76, debility 1, diabetes 72, heart disease 69, syphilis 1
Mythe Cottage	...	...	cerebral hemorrhage 73
Nailsworth Terrace	...	...	gastritis 2, placenta prævia 22
New Street	...	...	bronchitis 74, 77
Nightingale Cottage	...	...	inanition 1
Normal Terrace	...	...	bronchitis 66, angina pectoris 67
Pantile Row...	...	...	old age 93
Park Street	...	...	bronchitis 32, catarrh 1, hip disease 58
Queen Street	...	...	bronchitis 71, convulsions 1, 1, inanition 1, gastric catarrh 1, old age 84, tuberculosis 2, 2
Russell Street	...	...	hæmatomata 34
St. Paul's Street N...	...	...	hemiplegia 1, laryngitis 1, old age 82, whooping cough 2, tuberculosis 7
St. Paul's Street S...	...	...	debility 1, pneumonia 1, paralysis 74, phthisis 40, heart disease 44, 44
Stoneville Street	...	...	apoplexy 53, bronchitis 1, premature birth 1
Stanhope Street	...	...	bronchitis 1, cancer 69, convulsions 11 cerebral hæmorrhage 80, pneumonia 54, gangrene 81
Sun Street	...	...	bronchitis 70, gastric catarrh 1, intestinal obstruction 73
Swindon Place	...	...	bronchitis 1, cerebral disturbance 1, otitis 2
Swindon Road	...	...	bronchitis 69, 79, cellulitis 39, debility 1, convulsions 1, pneumonia 49, paraplegia 24, prolonged confinement 1, fistula 71, fracture from fall 93, heart disease 75, tuberculosis 1,
Swindon Street	...	...	phthisis 36, heart disease 84, tabes mesenterica 8
Tewkesbury Road	...	...	asphyxia 46, apoplexy 78, debility 1, bronchitis 1, 70, 78, convulsions 1, 2, cerebral anæmia 1, pneumonia 40, gastritis 1



Townsend Street	...	...	premature birth 1, heart disease 70
Victoria Street	...	...	bronchitis 68, phthisis 32, meningitis 1
Waterloo Street	...	...	diarrhœa 1, marasmus 1
Whitehart Street	...	...	bronchitis 1, 60, debility 1, old age 90
Worcester Street	...	...	renal disease 57

## THE WORKHOUSE.

atony of colon 45, bronchitis 65, 69, 74, cancer 72, confinement 35, cerebral hæmorrhage 45, 61, 66, 67, 69, 71, 74, 77 hæmaturia 72, influenza 75, epilepsy 48, heart disease 45, 65, 68, 70, 73, 74, paralysis 62, 70, 70, pneumonia 56, 60, phthisis 23, 28, 46, 48, 50, old age 75, 79, 78, 80, 76, 75, 74, 81, 95, 68, 80, 75, 85, 80, 74, 69, 80, 81, marasmus 1, 2, 1, suffocation 1, senile gangrene 75, 78, tumour 29, 43

## SOUTH WARD.

Bath Road	...	...	bronchitis 48, 58, 87, Bright's disease 73, gout 53, hemiplegia 54, influenza 4, old age 80, heart disease 72, paralysis 71, placenta prævia 35, premature birth 1, phthisis 34
Bath Street	...	...	pneumonia 43
Bath Terrace	...	...	marasmus 1, paralysis 68
Bon Marche Buildings	...	...	bronchitis 1
Cambray	...	...	phthisis 25, heart disease 56
Clare Place	...	...	bronchitis 74, marasmus 1
College Road	...	...	cerebro-spinal meningitis 1, cerebral hæmorrhage 68, influenza 63, measles 5
Commercial Street	...	...	atrophy 1, bronchitis 78, heart disease 45, old age 78, phthisis 39
Corpus Street	...	...	old age 75, 79
Ewlyn Terrace	...	...	cerebral hæmorrhage 70, debility 1
Exmouth Street	...	...	bronchitis 59, marasmus 1, phthisis 9
Francis Street	...	...	diarrhœa 1, disease of kidneys 50, pneumonia 4, phthisis 9, marasmus 1
Gratton Street	...	...	broncho-pneumonia 66, apoplexy 50, old age 76
Greville Terrace	...	...	lupus non exedens 73
Great Norwood Street	...	...	bronchitis 1, 76, Bright's disease 57, heart disease 42, pertussis 1, 3
Hermitage Street	...	...	bronchitis 48, Bright's disease 71, marasmus 1, heart disease 24
High Street	...	...	heart disease 15, peritonitis 19
London Road	...	...	apoplexy 69, intestinal obstruction 45, endocarditis 75
Leckhampton Road	...	...	apoplexy 83, accidental fall 16, bronchitis 1, 74, cancer 73, debility 1, 1, heart disease 83, old age 74, papilloma 47, phthisis 45



Mitre Street...	...	...	bronchitis 1, 1
Montpellier Villas	...	...	old age 88
Nazareth House	...	...	Bright's disease 65, old age 66, 80, phthisis 41, tuberculosis 8
Naunton Park Terrace	.	.	cerebral hæmorrhage 82, pneumonia 5
Naunton Parade	...	...	phthisis 27
Orrisdale Terrace	...	...	heart disease 71
Pilley	...	...	brochitis 1, gastro-intestinal disease 5, heart disease 76, old age 74
Rodney Terrace	...	...	diphtheria 41
Sandford Street	...	...	cancer 60
Sandford Terrace	...	...	diarrhœa 85, influenza 83
Sandford Mill Lane	...	...	bronchitis 67
St. Luke's Place	...	...	convulsions 1
St. Luke's Road	...	...	influenza 89, 92, pleuro-pneumonia 66, uterine disease 67
Suffolk Parade	...	...	diabetes 42
Suffolk Road	...	...	debility 1, 1, heart disease 64, suicide by poisoning 24
Suffolk Street	...	...	phthisis 38
Thirlestane Road	...	..	heart disease 67, lung disease 92
Upper Norwood Street	...	...	old age 86, phthisis 62
Victoria Place	...	...	old age 74, 78
Vittoria walk	...	...	cirrrossis of liver 51, lung disease 55

## GENERAL HOSPITAL.

Ancœmia 16, abscess 13, appendicitis 30, burns 5, 19, 9, branchitis 42, bronco-pneumonia 6, cancer 39, 42, 57, cirrhosis of liver 28, cholecystitis 55, croup 4, diphtheria 26, 2, enteric fever 6, 23, 49, endocarditis 8, 27, gastritis 4, empyema 27, gangrene 49, 65, heart disease 16, 23, 24, 26, 37, 43, meningitis 12, malignant disease of intestines 58, intussusception 13, otitis media 3, pneumonia produced by accidental fall 63, phthisis 21, 21, 29, 52, 53, pneumonia 2, 37, 55, 80, rheumatism 20, strangulated hernia 27, 50, 62, suicide by shooting 23, suffocation produced by swallowing boiling tea 2, stricture of bowels 57, shock to system result of having tried to drown herself 80, tabes mesenterica 4, necrosis 42, nephritis 4, injuries sustained through being accidentally run over by timber carriage 33, accidental fall 76, ulcer 31

## EAST WARD.

All Saints Road	...	...	cough 51, influenza 60, fibroid lung 50, pneumonia 65, cancer 28
All Saints Terrace	...	...	laryngitis 1
Berkeley Street	...	...	peritonitis 35
Brighton Road	...	...	bronchitis 83, premature birth 1
Carlton Street	...	...	hemiplegia 74, old age 84
Duke Street...	...	...	nephritis 2, old age 75, bronchitis 1, disease of rectum 61, tuberculosis 1



Fairview Street	...	...	old age 73, 85, 73, croup 2, gout 50, heart disease 60, atrophy 1, asphyxia 1, bronchitis 79
Glen Cottages	...	...	bronchitis 2
Glenfall Street	...	...	meningitis 5
Grosvenor Terrace	...	...	plumbism 57, old age 90, 79, measles 1
Hales Road	...	...	influenza 78, tuberculosis 1, debility 1, 1, diphtheria 2
Hewlett Road	...	...	disease of breast 63, heart disease 81, congestion of lungs 72, want of attention at birth 1
Hewlett Street	...	...	bronchitis 78, 77, influenza 74, heart disease 64, atrophy 1, measles 2
Jersey Street	...	...	heart disease 76, cancer 48, diphtheria 3, pneumonia 4
Keynsham Street	...	...	cerebral hæmorrhage 77, old age 71, heart disease 78, debility 63
Keynsham Terrace	...	...	tuberculosis 12
Kings Road	...	...	heart disease 70, pneumonia 57
Leighton Road	...	...	meningitis 2, phthisis 22
London Road	...	...	old age 91, pericarditis 28, convulsions 1, malformation of heart 1, heart disease 67, 77, softening of brain 82 gastro-enteritis 11, pneumonia 63, diarrhœa 1, bronchitis 73
Marlborough Place	...	...	pneumonia 27, gastro-enteritis 1
Pittville Circus	...	...	gout 82
Pittville Villas	...	...	obstruction of bowels 87
Prestbury Road	...	...	Addison's disease 41, heart disease 73
Princes Street	...	...	rubeola 1
Priory Parade	...	...	softening of brain 77
Priory Place	...	...	cancer 59
Priory Street	...	...	bronchitis 83
Priory Terrace	...	...	heart disease 55
Rosehill Street	...	...	abscess 1, fatty degeneration of heart 55
"Ryeworth"	...	...	blood poisoning 73
St. Ann's Terrace	...	...	syphilis 1, bronchitis 69
St. James Street	...	...	bronchitis 1, 76, cancer 64, cerebral hæmorrhage 66, old age 68, 74, premature birth 1, pertussis 1, measles 1, heart disease 52
Selkirk Street	...	...	bronchitis 64
Sherborne Street	...	...	bronchitis 1, phthisis 62, old age 76
Sherborne Terrace	...	...	rheumatism 30
Sidney Street	...	...	bronchitis 61, rachitis 1, old age 71
Southam Cottages	...	...	enteric fever 25
Sydenham Road	...	...	influenza 75, old age 86, cerebral thrombosis 76
Union Street	...	...	bronchitis 79, rickets 1, marasmus 2, chill 52 heart disease 69
Upper Park Street	...	...	bronchitis 1, 1
Victoria House	...	...	bronchitis 77



Victoria Street	...	...	old age 88, tuberculosis 2, bronchitis 1, cancer 50
Victoria Place	...	...	phthisis 51, obstruction of bowels 1, marasmus 1
Witcomb Place	...	...	phthisis 7, cerebral hæmorrhage 67, 77
York Street	...	...	premature birth 1, bronchitis 1, diarrhœa 1, convulsions 2, heart disease 57

## WEST WARD.

Arle	...	...	convulsions 1, bronchitis 75, influenza 59
Bayshill Parade	...	...	heart disease 72
Bayshill Terrace	...	...	bronchitis 75, serous effusion of brain 59
Bayshill Villas	...	...	heart disease 47
Bramley Villas	...	...	phthisis 34, heart disease 75
Brooklyn Terrace	...	...	premature birth 1
Chapel Street	...	...	kidney disease 50, convulsions 1, phthisis 16
Christ Church Road	...	...	heart failure 56, influenza 82
Christ Church Terrace	...	...	suppressed exanthem 1
Clifford Bank	...	...	heart disease 59
Douro Road	...	...	albumenuria 40
Fiddler's Green Cottage	...	...	heart disease 2
Gloucester Road	...	..	bronchitis 74, 74, 1, suppression of urine 78, lung disease 82, croup 1, debility 1, heart disease 57, phthisis 67, convulsions 2, disease of rectum 67, diarrhœa 2 placentaprœvia 39, old age 87
Great Western Terrace	...	...	influenza 67, bronchitis 66
Hester's Way	...	...	malnutrition 1
Higgs Cottages	...	...	old age 85
Hinckley Cottages	...	...	apoplexy 62, old age 74
Lansdown Crescent	...	...	influenza 71, paralysis 71, stomach disease 23
Lansdown Parade	...	...	heart disease 69, angina pectoris 67, intestinal obstruction 65, influenza 78
Lansdown Road	...	...	influenza 81, cerebral hæmorrhage 75, pneumonia 46, old age 81
Lansdown Terrace	...	...	mitral regurgitation 80, bronchitis 80
Little Bayshill Terrace	...	...	bronchitis 23
Manchester Street	...	...	diabetes 51, bronchitis 69, hemiplegia 37 stricture of rectum 58, pneumonia 5
New Street	...	...	phthisis 32
New Street Place	...	...	tuberculosis 65
Parabola Road	...	...	cancer 62
Queen's Parade	...	...	bronchitis 82
Queen's Retreat	...	...	pneumonia 31, dentition 1
Queen's Villas	...	...	heart disease 70
Roman Road	...	...	phthisis 39, diabetes 68
St. George's Place	...	...	arterial sclerosis 68, convulsions 2



St. George's Road ...	...	heart disease 65, influenza 69, tubercular meningitis 18, cancer 92, nephritis 62, marasmus 72, Bright's disease 76, bronchitis 58
St. Marks ...	...	heart disease 41, 62, otitis media 5
Western Road ...	...	cancer 53

## CENTRAL WARD.

Albion Street ...	...	mania 55, bronchitis 80, cancer 48, alcoholism 43
Beaufort Buildings...	...	emphysema 53
Beaufort Place ...	...	apoplexy 63, premature birth 1, old age 86
Bennington Street ...	...	phthisis 42
Berkeley Avenue ...	...	cancer 62, atrophy 1
Brunswick Place ...	...	paralysis 76
Brunswick Street ...	...	syphilis 1, renal disease 54, 66, diarrhœa 1
Camden terrace ...	...	hypertrophy of prostate 78, old age 83
Children's Hospital...	...	phthisis 8, enteric fever 24
Clarence Square ...	...	old age 83, 90, cancer 54
Courtenay Street ...	...	bronchitis 70, phthisis 28, old age 81, paralysis 68
Dunalley Parade ...	...	old age 84, bronchitis 2
Gloucester Place ...	...	hemiplegia 76, 72
Grosvenor Place S.	...	asthma 65, gastric tumour 73, cerebral hæmorrhage 86
Grosvenor Terrace ...	...	old age 73, phthisis 28, heart disease 74
Hall's Court...	...	old age 74
Hawarden Parade ...	...	premature birth 1
Henrietta Street ...	...	scald 8
High Street ...	...	convulsions 1, epilepsy 28, pneumonia 73, 19, 45, 46, heart disease 56, bronchitis 67, cirrhosis of liver 46, paralysis 60
Keighley Terrace ...	...	debility 1
Knowsley Parade ...	...	locomotor ataxy 65
Marlehill Parade ...	...	cerebral hæmorrhage 75
Marlehill Road ...	...	cancer 67, pneumonia 2, phthisis 27, old age 85, cerebral hæmorrhage 41
Mountpleasant ...	...	jaundice 43, tuberculosis 2
North Place...	...	bronchitis 82, phthisis 20, convulsions 1
Northfield Terrace ...	...	paralysis 80
Pates' Alms Houses ...	...	cerebral hæmorrhage 75
Pittville Lake ...	...	found drowned 37
Pittville Lawn ...	...	heart disease 79, pulmonary catarrh 52
Pittville Parade ...	...	apoplexy 74, bronchitis 76
Portland Square ...	...	syncope 60, eczema 1, dentition 1
Portland Street ...	...	influenza 79, bronchitis 65, 1, hepatitis 43, apoplexy 52
Prestbury Road ...	...	Bright's disease 68
Queen's Terrace ...	...	phthisis 42, convulsions 2



Rutland Street	...	...	congenital deformity 7, paraplegia 60, convulsions 1, influenza 1, gangrene 70, tuberculosis 1, phthisis 41, apoplexy 75, malnutrition from birth 1, old age 80
Rose and Crown Passage	...	...	premature birth 1
St. George's Street	...	...	cancer 48, bronchitis 80, 73, diarrhoea 2, heart disease 62
St. Paul's Parade	...	...	bronchitis 61
St. Paul's Road	...	...	diarrhoea 1, influenza 57
St. Paul's Street N.	...	...	phthisis 29, bronchitis 70, cerebral hæmorrhage 94
St. Paul's Terrace	...	...	debility 1, bronchitis 79, pertussis 1
Sherborne Street	...	...	abscess 74, bronchitis 2, phthisis 40, tuberculosis 5, syncope 43
Swindon Road	...	...	cerebral hæmorrhage 80, debility 1, heart disease 56, nephritis 56, bronchitis 68, inanition 1, phthisis 45
Sherborne Place	...	...	eczema 1
Warwick Buildings	...	...	pneumonia 1
Warwick Villas	...	...	heart disease 72
Wellington Passage	...	...	bronchitis 1
Wellington Square	...	...	pneumonia 79, peritonitis 24, laryngitis 12, old age 86, heart disease 66
Winchcomb Street	...	...	heart disease 47, bronchitis 1, 74, apoplexy 70, phthisis 29, premature birth 1, cancer 60
Windsor Street	...	...	cerebral disease 2, tuberculosis 6, arthritis 6

## MIDDLE WARD.

Andover Retreat	...	...	pertussis 1, rheumatism 67, bronchitis 71
Clarence Parade	...	...	phthisis 39
Colonnade	...	...	heart disease 76, influenza 50
Crescent Parade	...	...	influenza 39
Crescent Terrace	...	...	gastritis 1, bronchitis 1
Dagmar Terrace	...	...	convulsions 4
Edward Street	...	...	debility 1, premature birth 1
Edward Terrace	...	...	old age 90
Hatherley Street	...	...	bronchitis 1, old age 73
High Street	...	...	phthisis 19, bronchitis 39, influenza 42, electric shock 27
Lypiatt Street	...	...	marasmus 2, old age 81
Montpellier Retreat	...	...	heart disease 70
Montpellier Terrace	...	...	bronchitis 90, glycosuria 59
Montpellier Villas	...	...	pertussis 1, phthisis 27
Montpellier Walk	...	...	spinal disease 69
Moorend Street	...	...	bronchitis, 70, 75, 64, pertussis 2, tuberculosis 36, marasmus 1, cancer 49, puerperal eclampsia 29
Moorend Parade	...	...	bronchitis 83



Moorend	...	...	apoplexy 77, 72
Norwood Terrace	...	...	old age 85, softening of brain 68
Painswick Lawn Cottages	...	...	phthisis 13
Painswick Road	...	...	tumour 61
Park, The	...	...	nephritis 57, paralysis 77, liver disease 57, cancer 42, rheumatism 74, old age 92, 88
Park Place	...	...	hemiplegia 87, cerebral hæmorrhage 87
Promenade	...	...	heart disease 39, 72, influenza 65, scirrhus of breast 40, phthisis 43, softening of spinal cord 72
Princes Terrace	...	...	cerebral hæmorrhage 61
Regent Street	...	...	gastric catarrh 1, old age 75
Royal Crescent	...	...	cirrhosis of liver 53
Royal Parade	...	...	biliary calculus 60, debility 78, premature birth 1, old age 79
Royal Well Terrace	...	...	influenza 88, heart disease 74
St. James' Parade	...	...	old age 86
St. Phillip's Terrace	...	...	premature birth 1
St. Mark's Place	...	...	pneumonia 4, old age 83, bronchitis 2
St. Phillip's Street	...	...	old age 85, Bright's disease 50
Shelbourne Cottage	...	...	heart disease 56
Spa Buildings	...	...	old age 80
Shurdington Road	...	...	old age 92
Tivoli	...	...	heart disease 81, influenza 1, embolism 80
Tivoli Street	...	...	bronchitis 1, old age 81, heart disease 78, phthisis 30, paralysis 57, diabetes 55, marasmus 1
Tivoli Terrace	...	...	premature birth 1
Trafalgar Street	...	...	cerebral hæmorrhage 54
Upper Norwood Street	...	...	enteric fever 39, cancer 57, bronchitis 53

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## Zymotic Disease in 1895.

The number of cases of Infectious Diseases notified last year was fewer than in the two previous years. The following list shows the numbers of each notifiable disease for which certificates were received during each quarter of the year :

CASES OF INFECTIOUS DISEASES NOTIFIED DURING 1895.					
Disease.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Scarlet Fever....	30	19	13	27	89
Enteric Fever...	8	8	6	12	34
Puerperal Fever	...	...	...	3	3
Diphtheria. ....	2	6	3	14	25
Small Pox.....	...	1	...	...	1
Total from all Diseases notified ...	...	...	...	...	152

### SCARLET FEVER.

The 89 cases of this disease notified were of a mild type and there was no death, and indeed the character of this disease during the whole of the epidemic period extending through the five years 1891-1895 was fortunately benign, only 18 deaths having occurred in 994 cases notified or less than 2 per cent. A very large proportion of all these cases (78 per cent.) were removed to the Fever Hospital, most of them from poor houses, the death-rate being in consequence, no doubt, materially reduced on account of the superior treatment and nursing they received at the hospital, as compared with what they would have received at their own homes.



**ENTERIC FEVER.**

During last year there were several limited outbreaks of this disease, resulting altogether in the notification of 34 cases. In several instances the exciting cause appeared without doubt to be the polluted water of a shallow well. In other instances it was as evident that the water supply had no connection with the disease, and my experience here coincides with that gained in other places by other Medical Officers of Health in showing that emanations from faulty sewers and drains are a constant source of typhoid. Two marked examples of this occurred with us last year. In the one case a mother and her child both developed severe and typical symptoms of this disease. The house had some months before been re-drained and everything upon the surface appeared to be modern and good. The water was that of the town supply, and no other cases of typhoid had occurred in the neighbourhood. Enquiries led to the discovery of an old public sewer which ran under the basement of the house. In re-draining the house which formerly had drained into this sewer, the latter was not removed, but was blocked in the front garden of the house with the apparent idea of cutting it off from the main sewerage system, the fact of its receiving sewage from other houses being neglected. It should be said that this work was all done at the owner's own instigation and not on notice from the Sanitary Authority. The result of course was a defective brick sewer at no great depth beneath the basement of the house filled with sewage under pressure. A pick being driven into it in the front garden caused the roadway to be flooded with sewage. Besides the two cases of typhoid in the house, one other case arose in a neighbouring house. The other example occurred in an institution in which an adult and several children developed typhoid, some of them being quite typical cases. Investigation showed serious defects in the drainage which led to contamination of the atmosphere of part of the house by emanations. No suspicion could be attached to the water supply. In other cases of enteric fever faults were found in the drainage which were not of such a decidedly suggestive character as those above mentioned.



### PUERPERAL FEVER.

Two of the three cases of puerperal fever notified arose within a week of each other, both having been attended by the same midwife. Measures were at once taken to prevent the disease being further spread by the midwife. This is the third time recently in our borough that midwives have carried the infection of this disease from case to case often with fatal results. The third case was also attended by a midwife; the actual cause of it however probably lay in the extremely dirty and septic conditions under which the woman was confined. The practice of the midwife was stopped for a month, and her clothing disinfected.

### DIPHTHERIA.

The greater half of our 25 cases of diphtheria occurred in the 4th quarter of the year. The incidence of diphtheria in this town since notification began, and so far as can be judged by the death-returns, for many years prior to that, has been very light compared to most other towns and districts. The average number of deaths certified as having been caused by diphtheria during the last 15 years is 3 per annum, the largest number that has occurred in any of the 15 years being 6 for the year 1893. It is quite possible that mild cases of diphtheria have occurred which have not been notified, and some of the cases of "croup" which have resulted in a few deaths might properly have been notified as diphtheria. On the other hand it is more than probable that some of the cases notified as diphtheria were not true diphtheria.

### SMALL-POX AND VACCINATION.

During last year only one case of small-pox was notified which was an introduction from beyond the borders of our district as clearly shown by the history of the case. The Vaccination Act has latterly ceased to be strictly enforced by the Guardians of this District, they having determined a year ago no longer to prosecute those who do not comply with the law as to vaccination. For some time they were without a Vaccination Officer and only recently when small-pox had become prevalent in the neighbouring town of Gloucester



did they appoint a lady to fill the vacant post. Gloucester which for some years has enjoyed the unenviable notoriety of being the worst vaccinated town in the kingdom, is at this moment of writing suffering from an epidemic of small-pox, and the Anti-vaccinationists there, who have for so long been in the ascendancy, are now experiencing the result of their wilful mistake. Unfortunately the harm is not limited to those sufferers who, having contracted the disease, have died or been disfigured, nor to the trade and reputation of the town of Gloucester, both of which have suffered heavily, but Gloucester, through its anti-vaccination craze, has become a standing danger to every town around with which it has communication.

### INFLUENZA.

In the winter and early spring months of last year influenza again became prevalent here as it did throughout the country, and occasioned 28 deaths. This was an unfortunate revival and in no previous year since the first appearance of influenza amongst us have so many deaths from influenza been registered in Cheltenham.

INFECTIOUS DISEASES NOTIFIED IN CHELTENHAM SINCE NOTIFICATION BEGAN IN 1890.					
Year.	Scarlet Fever.	Enteric Fever.	Diphtheria.	Puerperal Fever.	Small Pox.
1890	93	24	16	2	...
1891	75	19	15	...	...
1892	264	10	10	...	...
1893	419	63	33	4	2
1894	147	27	26	1	3
1895	89	34	25	3	1

Appended will be found a summary of analyses made during the year by the public analyst, as well as Mr. Tyrer's valuable Meteorological Report.

I am, Gentlemen, your obedient Servant,

J. H. GARRETT.

Feb. 19th, 1896.



INFECTIOUS DISEASES NOTIFIED IN 1895.  
DISTRIBUTED IN WARDS AND INSTITUTIONS.

Ward,	Small Pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Total Cases in each Ward.
North Ward .....	...	21	5	8	2	36
Central Ward.....	...	14	5	2	...	21
East Ward.....	...	15	3	8	1	27
South Ward ...	...	17	3	6	...	26
Middle Ward.....	1	14	5	2	...	22
West Ward.....	...	7	3	5	...	15
General Hospital .....	...	...	1	...	...	1
Delancey Hospital .....	...	1	...	...	...	1
Children's Hospital .....	...	...	...	3	...	3
Totals in whole of Borough...	1	89	25	34	3	152
Numbers treated in Hospitals in 1895.....	1	74	5	20	1	101



### UNCERTIFIED DEATHS IN 1895.

There were 17 deaths during the year for which no medical certificate was given and in which no inquest was held. They are tabulated below according to causes assigned by Registrar.

	CASES.
Premature Birth resulting in death within 24 hours of birth...	1
Debility ... ..	3
Convulsions (2 days old) ... ..	1
Heart Disease at ages of 70, 72 ... ..	2
Bronchitis, ages 74, 66, 67, 80 ... ..	4
Old Age, ages 93, 87, 85, 73 ... ..	4
Paralysis, age 68 ... ..	1
Renal Calculus, age 68 ... ..	1
	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/>
	17

### RESULT OF CORONER'S INQUESTS, 1895.

31 deaths were reported as having been certified by the Coroner after an inquest.

Asphyxia ... ..	1
Convulsions ... ..	3
Cerebral Anæmia ... ..	1
Diseases of Lungs and Air Passages ... ..	3
Diseases of Heart and Syncope ... ..	2
Perforation of Stomach... ..	1
Senile Decay ... ..	1
Malformation of Heart ... ..	1
Accidentally ran over by Carriage ... ..	1
Accidental Falls and Injuries resulting therefrom ... ..	3
Accidental Burns and Scalds ... ..	5
Accidental Electric Shock ... ..	1
Suicide by Shooting ... ..	1
"    Poisoning ... ..	1
Want of attention at Birth ... ..	1
Overlain ... ..	2
Found Drowned ... ..	2
Shock, the result of attempting Suicide by Drowning ... ..	1
	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/>
	31

(A) Table of DEATHS during the Year 1895, in the Cheltenham Urban Sanitary District, classified according to Diseases, Ages, and Localities.

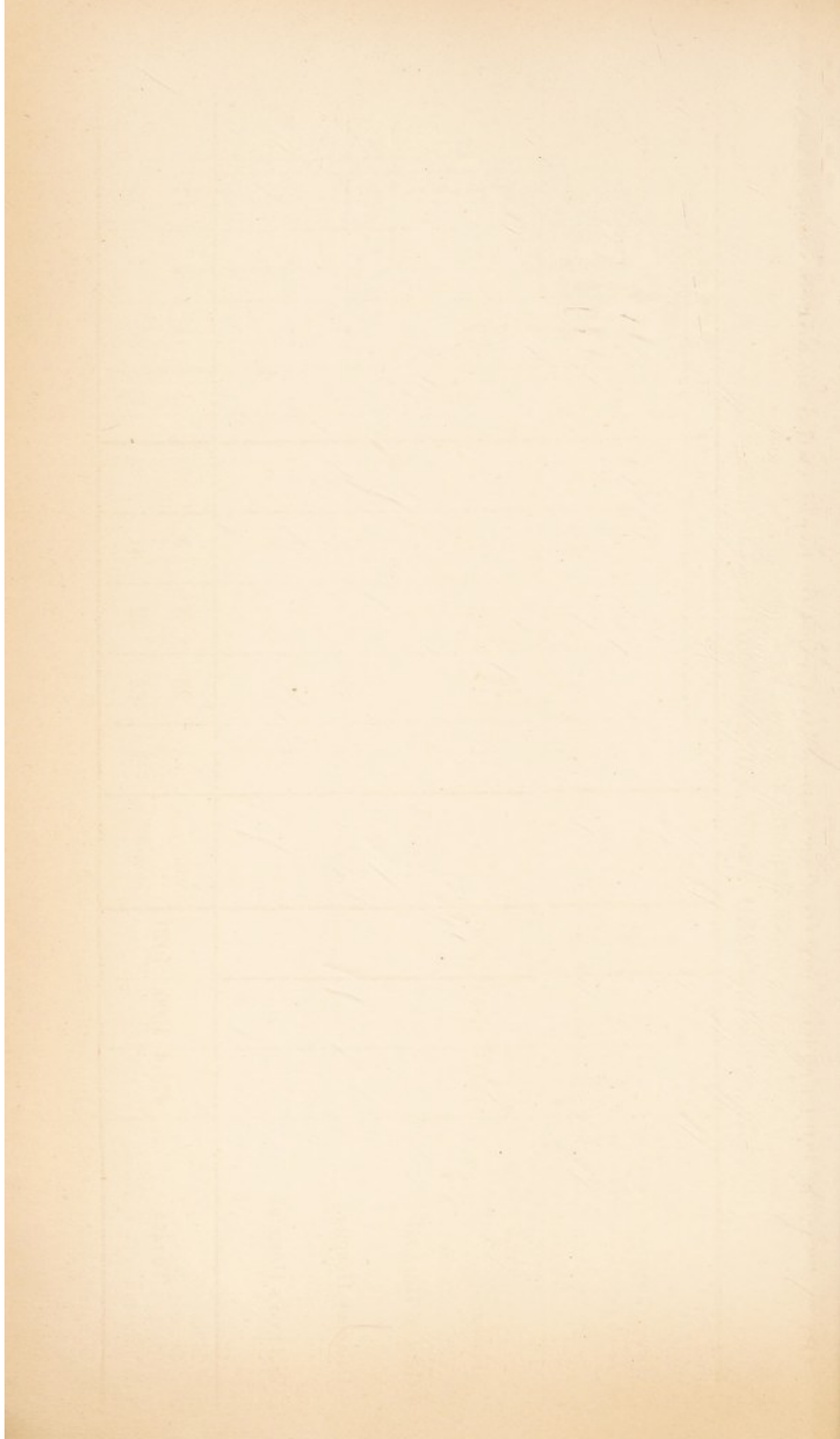
Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities.	Mortality from all causes at Subjoined ages							Mortality from Subjoined Causes, distinguishing Deaths of Children under 5 years of age														Total													
	(b) At all Ages	(c) Under 1 year	(d) 1 and under 5	(e) 5 and under 15	(f) 15 and under 25	(g) 25 and under 65	(h) 65 and upwards	(i)	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22				
									Smallpox	Scarlatina	Diphtheria	Membranous Croup	Typhus	Enteric or Typhoid	Continued	Relapsing	Fuerepal	Cholera	Erysipelas	Measles	Whooping Cough		Diarrhoea and Dysentery	Rheumatic Fever	Phtisis	Bronchitis and Pneumonia	Heart Disease	Influenza	Injuries	All other Diseases					
Cheltenham	719	164	52	15	17	200	271	Under 5 ... 5 upwards	2	2	1	1	2	2	...	...	1	...	...	5	8	12	...	...	1	...	43	50	3	4	2127				
General Hospital	59	...	8	8	10	29	4	Under 5 ... 5 upwards	1	1	1	1	1	1	...	...	3	...	...	...	...	...	...	...	5	6	1	...	97	69	23	7259			
Union	59	3	1	...	1	15	39	Under 5 ... 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	8		
Nazareth House	5	...	...	1	...	1	3	Under 5 ... 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5
Children's Hospital	2	...	...	1	1	...	...	Under 5 ... 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Pates' Alms Houses	1	...	...	...	...	...	1	Under 5 ... 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
TOTALS	845	167	61	25	29	245	318	Under 5 ... 5 upwards	3	3	2	3	6	6	...	...	1	...	...	5	8	12	1	...	55	51	108	83	24	14	323	617			

The Subjoined Numbers have also to be taken into account in judging of the above Records of Mortality.

Deaths occurring outside the District among persons belonging thereto.	...	...	...	...	...	...	...	Under 5 ... 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths occurring within the District among persons not belonging thereto.	18	...	1	...	3	10	4	Under 5 ... 5 upwards	3	3	2	3	6	6	...	...	1	...	...	5	8	12	1	...	55	51	108	83	24	14	323	617		









(B) Table of POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1895, in the Cheltenham Urban Sanitary District, classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purposes of these Statistics; Public Institutions being shown as separate localities.	Population at all ages.		Registered Births	Age under 5 or over 5	New cases of Sickness in each locality coming to the knowledge of the Medical Officer of Health.						Number of such cases removed from their Homes in the several localities for treatment in Isolation Hospital.				
	Census 1891	Estimated to middle of 1895			Smallpox	Scarlatina	Diphtheria	Fevers.		Smallpox	Scarlatina	Diphtheria	Fevers.		
								Enteric or Typhoid	Puerperal				Enteric or Typhoid	Puerperal	
Cheltenham ...	47514	49000	1070	Under 5 ..... 5 upwards .....	1	23	3	2	3	...	1	14	...	1	...
General Hospital ...	...	...	...	Under 5 ..... 5 upwards .....	...	...	1	...	...	...	...	...	...	...	...
Delancey Hospital ...	...	...	...	Under 5 ..... 5 upwards .....	...	1	...	...	...	...	...	1	...	...	...
Children's Hospital ...	...	...	...	Under 5 ..... 5 upwards .....	...	...	...	1	2	...	...	...	...	...	...
TOTALS ...	47514	49000	1070	Under 5 ..... 5 upwards .....	1	66	22	31	3	3	1	60	5	19	1

**SALE OF FOODS AND DRUGS ACT.**

*Summary of Articles submitted to the Public Analyst during the year  
1895, with Results of Analyses.*

*(G. Embrey, Esq., Gloucester, Public Analyst).*

*Samples all submitted by Superintendent Donald McRae.*

Quarter ending March 31st.

<i>Articles submitted.</i>	<i>Result.</i>
5 Samples of Butter	All Genuine.
7 " Milk	"
4 " Lard	"
4 " Pepper	"
3 " Coffee	"
1 " Gin	"

Quarter ending June 30th.

4 Samples of Butter	All Genuine.
11 " Milk	9 Genuine, 1 containing added water, Fined 1/- and £1 4s. costs. 1 with fat abstracted, Fined £1 and £1 4s. costs.
3 " Lard	All Genuine.
1 " Coffee	"
3 " Pepper	"
1 " Rum	"
1 " Gin	"

Quarter ending September 30th.

1 Samples of Bread	All Genuine.
6 " Butter	"
3 " Milk	"
3 " Lard	"
3 " Coffee	"
5 " Pepper	"
1 " Gin	contained 9 per cent. added water, Fined £2 and costs.
1 " Whiskey	Genuine

Quarter ending December 31st.

12 Samples of Butter	10 genuine, 2 adulterated with 80 and 86 per cent. other fats, Fined £2 and £1 9s. costs, and £4 and £1 13s. costs.
3 " Milk	All Genuine.
3 " Lard	"
2 " Coffee	one genuine, one 34 per cent. added Chicory, Fined 10/- and £1 3s. 3d. costs.
1 " Pepper	Genuine.
3 " Whiskey	1 genuine 2 contained 5 per cent. excess of water, each fined £1 and £1 3s. 3d. costs.
1 " Gin	Genuine.
1 " Rum	"
2 " Sugar	"



# THE METEOROLOGY OF CHELTENHAM.

Abstract of Meteorological Observations taken at the Modern School, Cheltenham, during 1895,  
by RICHARD TYRER, B.A., F.R. Met. Soc.

Latitude 51° 54' 57" N. Longitude 2° 3' 21" W. Height above Mean Sea Level, 190ft.

*(The Instruments are all of the highest quality, and have been verified at Kew).*

Month.	Mean of Pressure at 9 a.m. and 9 p.m.		AIR TEMPERATURE.										Relative Humidity.		Rainfall.		Ozone 0-10
			9 a.m.	9 p.m.	Means of		Absolute Max. and Min.				9 a.m.	9 p.m.	Total Fall In.	No. of Rainy Days.			
					Max.	Min.	Max.	Date	Min.	Date.							
															°	°	
January	32.1	30.6	36.6	25.5	47.0	16	15.0	27	92	93	3.31	20	2.9				
February	26.2	27.5	34.5	20.6	44.6	28	6.5	9	90	92	.17	4	1.1				
March	40.7	39.6	49.6	33.3	62.2	22	12.2	4	85	87	2.03	18	2.4				
April	46.7	46.6	55.3	39.9	62.6	21	27.0	13	83	85	2.34	14	3.3				
May	57.2	52.8	66.4	42.8	82.1	30	30.2	2	77	85	.40	6	2.2				
June	61.0	58.2	70.9	46.5	84.5	25	33.2	15	69	77	.82	7	2.1				
July	61.7	59.0	68.9	52.9	77.8	8	42.0	5	77	83	2.47	16	2.7				
August	62.0	58.5	69.2	52.1	78.2	21	39.5	25	74	83	2.45	18	2.3				
September	59.5	58.6	72.5	48.4	83.0	27	36.0	22	80	82	.83	9	0.3				
October	44.4	42.6	53.1	36.9	70.0	1	22.0	24	90	92	3.01	18	1.4				
November	46.4	46.7	52.1	42.2	62.2	16	29.0	18	90	90	5.34	23	2.4				
December	38.8	39.3	44.8	34.5	56.5	5	23.8	11	90	91	1.82	21	2.0				
Totals	359.072	560.0	673.9	475.6					997	1040	24.99	174	2.51				
Means	29.923	46.6	56.2	39.6					83	87	2.08	15	2.1				
	1	3	4	5	6	7	8	9	10	11	12	13	14				



## NOTES ON THE TABLES.

COLUMN 1 is the mean reading of the Barometer at 9 a.m. and 9 p.m., corrected for temperature and reduced to mean sea-level.

COLUMNS 4 to 9.—The maximum and minimum thermometers are read and set at 9 p.m., and the readings entered to the same day.

COLUMNS 10 & 11.—The relative humidity is calculated by dividing the elastic force of aqueous-vapour at the temperature of the dew-point for the month by that at the temperature of the air.

COLUMN 14.—Observations are taken by means of prepared tests. The amount of colour produced after 24 hours' exposure in an Ozone-cage is compared with a scale of ten degrees of colour of increasing intensity.

### WIND.

During 1895 the observations taken show that the general directions have been as follows:—

From the North ..... on 21 days " North-East .. on 21 " " East ..... on 12 " " South-East .. on 33 "		From the South ..... on 44 days " South-West.. on 56 " " West ..... on 66 " " North-West.. on 34 "
There were Calms on 76 days.		

North Winds prevailed in May.

North-East " in February.

South-East " in November.

South " in November.

South-West " in July, August, December.

West " in April, July, August.

North-West " in May, June.

Calms " in January, February, March, October.

### COMPARATIVE TABLE OF THE METEOROLOGY OF CHELTENHAM FOR THE YEARS 1878-95.

Year.	Atmospheric Pressure.	MEAN AIR TEMPERATURE.				Humidity.		Rainfall.	
		Max.	Min.	Mean.	Range.	9 a.m.	9 p.m.	Inches.	Days.
	INCHES.	°	°	°	°	%	%		
1878	29.913	56.1	41.5	48.8	14.6	83	88	33.18	176
1879	29.944	52.2	38.5	45.3	13.7	87	89	32.63	212
1880	29.971	55.8	40.5	48.1	15.3	85	88	33.72	177
1881	29.957	55.0	38.9	46.9	16.1	82	85	25.28	185
1882	29.914	55.9	41.5	48.7	14.4	81	86	37.92	214
1883	29.964	55.6	40.6	48.1	15.0	85	89	29.93	204
1884	29.978	56.8	41.9	49.3	14.9	84	89	24.04	190
1885	29.930	54.8	40.0	47.4	14.8	84	87	26.45	193
1886	29.912	55.0	40.6	47.8	14.4	83	86	32.55	193
1887	30.029	55.3	38.6	46.9	16.7	80	83	22.78	153
1888	29.959	53.8	40.1	46.9	13.7	82	84	28.85	195
1889	29.971	55.4	40.6	48.0	14.8	84	87	27.07	181
1890	29.959	55.6	40.1	47.8	15.5	84	88	20.09	191
1891	29.957	55.1	40.0	47.5	15.1	83	87	33.14	192
1892	29.948	54.6	38.7	46.6	15.9	82	85	19.45	175
1893	29.990	59.1	41.3	50.2	17.8	81	83	19.91	169
1894	29.963	56.2	41.6	48.9	14.6	83	87	29.12	194
1895	29.923	56.2	39.6	47.9	16.6	83	87	24.99	174
Means	29.954	55.4	40.2	47.8	15.2	83	86	27.84	187



The year may be characterised as one of great extremes, and will long be remembered for the intense and almost continuous frost throughout January and February, broken by a week's mild weather in the middle of January; the low rainfall of February, May and September; the exceptionally high temperature at the end of September; the intensely cold period at the end of October; the gales of November and December; and the heavy rainfall during the former month.

There were snow-falls, chiefly very light, on seventeen days; thunderstorms on seven days; and very light fog on eighteen days.

Fruit ripened well; the early fruits suffered considerably from the drought of May and June, but those of the late summer and autumn were gathered in perfection, and the out-door crop of tomatoes was as fine as that of 1893.

The mean temperature of the year is 47.9 deg., which is very slightly *above* the average of the past eighteen years. The direct solar temperature was high, especially during June, July and September; it was *above* the average in every month in the year, and the mean for the year is 7.6 deg. *above*.

The rainfall is 2.85 ins. below the average; it was especially low during the summer months, but much in excess during the last quarter.

The accompanying tables will show at a glance the excess or deficiency in temperature and rainfall for each quarter of the year:—

*Temperature.*

	Mean.	1895.	
	deg.	deg.	deg.
1st Quarter .....	38.6	33.3	5.3 below
2nd „ .....	51.8	53.6	1.8 above
3rd „ .....	58.5	60.7	2.2 „
4th „ .....	42.5	43.9	1.4 „
Means .....	47.8	47.9	0.1 above

*Rainfall.*

	Mean.	1895.	
	inch	inch	inch
1st Quarter .....	5.68	5.51	0.17 below
2nd „ .....	6.31	3.56	2.75 „
3rd „ .....	7.89	5.75	2.14 „
4th „ .....	7.96	10.17	2.21 above
Totals .....	27.84	24.99	2.85 below

JANUARY.—Atmospheric pressure was very much disturbed throughout the month, especially from the 11th to the close. There was a deep and persistent depression from the 12th to the 17th. Range of pressure, 1.641 ins.

The frost, which, with a brief intermission, lasted till the beginning of March, set in on December 30th, and the ice was safe for skating on the 8th. There was a gale with a heavy fall of snow, on the 12th. The weather then became much milder, and there was a considerable rainfall



for the next fortnight. The last week was very cold, with slight snow falls, and skating was resumed on the 27th. Mean temperature, 31.0 deg. —5.3 deg. *below* the average of the past eighteen years.

**FEBRUARY.**—Atmospheric pressure was steady, and generally high throughout the month. Range of pressure, 0.922 ins.

The main features of the month were the persistently low temperature, especially during the nights and mornings and the very slight rainfall. The mean minima, 20.6 deg. on the stand, and 13.6 deg. on the grass, are by far the lowest hitherto recorded. We have had much colder nights, as in January, 1881, but never before such a persistent frost, and its effects were, in many ways, very unpleasant. Mean temperature, 27.5 deg., 11.2 degrees *below*.

**MARCH.**—Atmospheric pressure was steady from the beginning of the month till the 10th. It then rose gradually, and remained high until the 22nd. Then followed a rapid fall, and it was very irregular till the close. Range of pressure, 1.637 ins.

The great frost came to an end on the 5th, and from that date the temperature during the month fell below freezing point on seven nights only. The first week was bright and cold, with some slight snow, but the temperature rapidly rose, especially during the day, reaching 51.0 deg. on the 11th, and 62.2 deg. on the 22nd, when the weather was beautifully fine and warm. The last week was very much disturbed, with high wind, and a thunderstorm on the 25th. Mean temperature, 41.4 deg., 0.5 deg. *above*.

**APRIL.**—Atmospheric pressure was somewhat irregular throughout the month; there was a rapid fall between the 6th and the 7th. It was high from the 10th to the 16th, and somewhat low till near the close of the month. Range of pressure, 1.097 ins.

The weather during the first fortnight was very fine, especially so during the Easter week, when the days were brilliant. There was a severe thunderstorm on the 17th, followed by a complete change in the weather, with heavy rain and gales. The closing days of the month were fine and bright. The cuckoo was heard on the 13th, but swallows did not appear till the 24th, rather later than usual. The trees also came into leaf and bloom somewhat later than general. Mean temperature, 47.6 deg., 1.7 deg. *above*.

**MAY.**—Atmospheric pressure was very steady throughout the month. Range of pressure, 0.952 ins.

The month is remarkable for the great variation in the temperature—especially during the day—the nights, with few exceptions, were somewhat cold, and the range of mean temperature, 23.6 deg., is great. On fifteen days the maximum reached 70 deg. and upwards.

The first week was fine, with cold nights. From the 6th to the 15th, the days were hot with cloudless skies. Then followed a brief period of cold, dull and unpleasant weather. The last week was bright and very hot, and in consequence of the great scarcity of rain, and the heat, the ground was dried up, and plants ripened prematurely. Mean temperature, 54.6 deg., 2.9 deg. *above*.

**JUNE.**—Atmospheric pressure was very steady during the first half of the month, then falling, and afterwards rising considerably, with a gradual decline till the close. Range of pressure, 0.806 ins.



A hot and very dry month, though many of the nights, especially from the 11th to the 21st, were cold, and there was a sharp ground frost on the 15th, causing considerable damage in places. From the 16th till nearly the close of the month the weather was very hot, bright and dry, and vegetation suffered much; the 24th was an intensely hot and close day, and the direct solar temperature, 143.5 deg., was the highest hitherto recorded. The month closed with thunderstorms and rain, which was much needed. Mean temperature, 58.7 deg., 0.9 deg. *above*.

JULY.—Atmospheric pressure was high from the 3rd to the 9th; generally steady, though somewhat low for the rest of the month. Range of pressure, 0.844 ins.

A pleasant month, with little variation in temperature throughout; the second week was somewhat hot and bright; this was followed by thunderstorms and rain, and there was some particularly damp and close days at the end. Mean temperature, 60.9 deg., 0.6 deg. *above*.

AUGUST.—Atmospheric pressure for the first half of the month was low and irregular; from the 14th to the 21st, it was high and steady; somewhat irregular till the close. Range of pressure, 0.947 ins.

The atmospheric conditions were somewhat disturbed during the first fortnight, and rain fell on nearly every day. Then followed a week of bright and hot weather, with high night temperature. There was a thunderstorm on the 22nd, and the month closed with fine and very pleasant days. Mean temperature, 60.7 deg., 1.0 deg. *above*.

SEPTEMBER.—Atmospheric pressure was high and very steady throughout the month, especially during the latter half. Range of pressure, 0.675 ins.

A very remarkable month, both on account of the abnormally high day temperature, the maximum rising above 80 deg. on five days, and on nine only was it below 70 deg., and the very low rainfall. The nights were generally cloudless, and this caused great radiation of heat, so that the range of mean temperature, 24.1 deg., was very high; there were ground frosts on the 20th and 22nd, and then followed a week of most extraordinary weather for the time of year. A week of cloudless skies and tropical heat, which was most oppressive. The month closed with somewhat cooler days, but the temperature still remained high. Mean temperature, 60.4 deg., 5.1 deg. *above*.

OCTOBER.—Atmospheric pressure was low and very irregular during the first week. Two well-developed anti-cyclonic systems then followed, lasting till the 22nd, after which the pressure remained generally steady till the close. Range of pressure, 1.344 ins.

The weather during the first few days was very unsettled, with high winds and a considerable amount of rain. A fortnight of very pleasant weather followed, though the night temperatures were often low, and there was a sharp frost on the 17th which killed all tender plants. From the 23rd to the 30th the mean temperature was lower than that of midwinter, snow fell on the 26th, and the open water was covered with ice on the 28th, a circumstance which has never occurred in October before. Most trees were bare at the end of the month. Mean temperature, 45.0 deg., 2.2 deg. *below*.

NOVEMBER.—Atmospheric pressure, which was high at the commencement of the month, fell rapidly till the 5th, after which it con-



tinued much disturbed until the 18th, remaining fairly steady to the close. Range of pressure, 1·472 ins.

A month of high temperature, very heavy rainfall and strong winds, gales occurring on nine days. The rainfall on the 5th and 10th was particularly heavy. The elm trees, which were beautifully tinted at the end of the first week, had lost all their leaves by the 12th. The month was remarkably free from fog, though the weather towards the close was dull and gloomy. Mean temperature, 47·1 deg., 4·3 deg. *above*.

DECEMBER.—Atmospheric pressure was very irregular from the beginning of the month until the 16th, when it was very low. It rose gradually till the 20th, and was very high on the 27th. Range of pressure, 1,424 ins.

The weather for the first few days was bright and pleasant: then followed some dull and stormy weather. This was succeeded by nights of much lower temperature with slight snowfalls. From the 19th to the 27th the temperature during the day was very low, the maximum not reaching 40 deg. on nine consecutive days. There were gales on the 23rd and 24th, with some rain. This was followed by slight snowfalls. The temperature rose considerably on the evening of the 28th, and the month closed with bright and warm days. Mean temperature, 39·6 deg., 2·0 deg. *above*.

#### RAINFALL IN THE COUNTY OF GLOUCESTER IN 1895.

STATION.	OBSERVER.	RAIN-FALL	RAINY DAYS
		Inches	
Beckford ... ..	F. Slade ... ..	21·25	155
Moreton-in-Marsh ... ..	W. Arkell ... ..	29·11	153
Cheltenham ... ..	R. Tyrer ... ..	24·99	174
Bourton-on-the-Water ... ..	E. W. Kendall ... ..	31·22	158
Great Barrington ... ..	H. J. Barrett ... ..	27·54	146
Coleford ... ..	I. Trotter ... ..	40·53	188
Whitminster ... ..	F. A. Jones... ..	27·35	154
R.A.C., Cirencester ... ..	C. C. Duncan ... ..	26·33	152
Berkeley ... ..	R. Shore ... ..	29·12	150
Lechlade ... ..	T. Arkell ... ..	23·07	137
Horcott ... ..	R. A. Iles ... ..	24·13	138
Over Court ... ..	R. C. C. Lippincott ... ..	35·51	168
Clifton... ..	R. F. Sturge ... ..	31·50	162

The rainfall was irregularly distributed over the county, ranging from 21·25 ins. at Beckford to 40·53 ins. at Coleford. The number of rainy days varied considerably, ranging from 137 at Lechlade to 188 at Coleford. Though the rainfall at Cheltenham was low, the rainy days were numerous, but on twenty-three of the number the fall was only just measurable. The mean fall is 28·43 ins., which was exceeded at six stations, and the mean number of rainy days is 156, which was exceeded at five.



# THE CLIMATE OF CHELTENHAM, 1895.

## *Comparison with other Health Resorts.*

The Climatological Statistics for the various stations with which the Cheltenham results are compared in the following tables are courteously furnished to this Observatory by the Superintendents of the Stations, who alone are responsible for the accuracy of the Data. The values for Cheltenham are so made as to be as comparable as possible with those obtained at these Stations, which are all under the control of the Royal Meteorological Society.

	1ST QUARTER.				2ND QUARTER.				3RD QUARTER.				4TH QUARTER.			
	Mean Temperature	Mean Daily Range of Temperature	Humidity 9 a.m.	Rainfall, Total	Mean Temperature	Mean Daily Range of Temperature	Humidity 9 a.m.	Rainfall, Total	Mean Temperature	Mean Daily Range of Temperature	Humidity 9 a.m.	Rainfall, Total	Mean Temperature	Mean Daily Range of Temperature	Humidity 9 a.m.	Rainfall, Total
	°	°	%	ins.	°	°	%	ins.	°	°	%	ins.	°	°	%	ins.
CHELTENHAM	33.3	13.8	89	5.51	53.6	21.1	76	3.56	60.7	19.1	77	5.75	43.9	12.1	90	10.17
Scarborough	35.3	12.2	?	8.16	51.9	15.6	?	4.75	60.3	15.6	85	9.22	43.3	11.1	86	?
Harrogate	33.3	10.4	81	7.02	51.3	17.2	72	5.20	58.4	15.2	76	10.76	41.7	9.9	87	11.86
Blackpool	33.9	12.0	88	6.31	52.2	16.3	75	3.99	60.3	14.4	76	7.76	42.9	11.3	86	11.37
Southport	33.8	10.0	84	5.50	52.0	14.3	74	3.78	59.4	12.1	78	7.60	43.2	9.7	87	10.09
Llandudno	36.6	8.5	81	6.45	53.1	12.4	73	3.70	60.5	11.9	77	7.47	45.6	8.6	82	12.32
Eastbourne	36.0	9.4	85	5.72	52.5	12.1	80	2.83	61.3	10.9	85	7.36	47.2	9.4	84	14.84
Torquay	38.1	10.0	84	7.22	54.0	12.8	75	4.19	60.4	11.9	82	5.42	48.0	9.5	85	17.74

