[Report 1909] / Medical Officer of Health, Royal Tunbridge Wells Borough.

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ANNUAL REPORT

UPON THE

Health & Sanitary Condition

OF THE

BOROUGH OF ROYAL TUNBRIDGE WELLS,

For the Year ended the 31st December, 1909,

BY

WM. STAMFORD,

Licentiate of the Royal College of Physicians, London,
Fellow of the Royal Institute of Public Health,

Medical Officer of Health for the Borough,

WITH WHICH IS INCORPORATED
THE REPORT OF

JAMES CAVE,

Associate of the Royal Sanitary Institute,
Associate of the Royal Institute of Public Health,
Associate of the Incorporated Society of Medical Officers of Health,

Chief Sanitary Inspector for the Borough.

Borough of Royal Tunbridge Wells, 1909.

Population Estimated to the middle of the year, 35,873.

Area of the Borough, 3,991 acres.

Rateable Value, £293,379.

Census 1901.	Population, 33,373.
	Number of Inhabited Houses, 6,589.
	Average Number of Persons per House, 5·06.
	Density of Population, 8·3 Persons per acre.

Number of Deaths during 1909, 476.

Death-rate per thousand, 13·2. Average for previous ten years, 12·4.

Number of Deaths from Zymotic Diseases, 20. Death-rate from Zymotic Diseases, 0·5 per thousand of inhabitants.

Number of Deaths of Visitors, 20.

Death-rate if Visitors are excluded, 12·7 per thousand.

Number of Births during 1909. Boys, 326; Girls, 292; Total, 618.

Birth-rate per thousand, 17·2. Average for the previous ten years, 19·0 per thousand.

Infantile Mortality, 59·8 per thousand born. Average for the previous ten years, 91·0.

Mean Annual Temperature, 47·3° Fahr.

Hours of bright Sunshine recorded, 1,856 hours 14 minutes.

Total Rainfall, 35·14 inches.

Annual Report.

To the Mayor, Aldermen and Burgesses of the Borough of Royal Tunbridge Wells.

Gentlemen,

I have the pleasure of laying before you my annual report upon the health and sanitary condition of the Borough of Tunbridge Wells for 1909, and though I have to record a somewhat higher rate of mortality than that of the previous year, which was the lowest on record, it is not because of any increase in the number of deaths from preventable causes, but the consequence of disease of the influenza type which characterized the first two quarters of the year. Moreover, the rise is a comparatively slight one, sufficient only to bring us back to the figures of 1907, when the health of the Borough was similarly affected by causes beyond the control of the Sanitary Authority.

Had it not been for this, which I may call adventitious addition to the usual mortality belonging to the normal condition of the Borough in the first half of the year, I would have been again able to report the maintenance of that high level to which the health statistics have been brought in this favoured locality.

The diseases belonging to the Zymotic class are again conspicuous by their infinitesimal effect upon the general mortality, the rate per thousand being a mere fraction.

I must again call your attention to the fact that in this report I am compelled to include matters with which you are well acquainted, but which is required by the Local Government Board in a form that must conform with precedent.

The report of the Chief Sanitary Inspector is again incorporated along with my own, as last year.

Geology.—Tunbridge Wells is situated on the Tunbridge Wells Sands, these forming the highest division of the Hastings Beds or Sands, the chief geological peculiarity being the exceptional character of the rocks underlying the district, interspersed with patches of the Weald Clay.

Its healthful situation and the beauty of the town itself, as well as of its immediate and more distant surroundings, have caused Tunbridge Wells to acquire a high reputation, which it continues to hold, in the esteem of everyone called upon to pronounce an opinion upon such matters, with the consequence that great numbers of health-seekers either visit it annually or make it their permanent home.

The town is laid out in a tasteful manner which takes advantage of every natural feature which lends charm and variety to the scene, and no more beautiful expanse spreads itself before the eye in any health resort in Great Britain than that which extends into the distance from the magnificent promenade that crowns the gentle slope which forms the Common.

This open space, covering some 250 acres, still to a large extent in a state of nature, lies practically in the centre of the town. Upon it the visitor may pick his way among the gorse or across tracts covered with heather, while his eye may take in the diversified delights of a matchless panorama whose range includes the distant height of Crowborough Beacon. Provision is made for the enjoyment of outdoor games, such as golf, cricket and bowls.

Population.—The population of the Borough is estimated at 35,873, as upon June 30th, 1909, as against 35,573 on the corresponding date in 1908.

Births and Birth-Rate.—There were 618 births registered, of which 326 were males and 292 females, showing an increase of 3 births upon the returns for 1908. The corresponding decrease in the birth-rate is from 17·3 to 17·2 per thousand of the inhabitants when the increase in the population of the Borough is taken into the calculation. The birth-rate for the whole of England during the same period was 25·6 When contrasted with the mean birth-rate for ten years there appears a fall from 19·0 to 17·2, and if compared with the corresponding period ten years ago it is forcibly demonstrated that there is a steady decline in this rate, for in the year 1900 it was 20·8 per thousand.

It is therefore a factor in the vital statistics of the Borough that the births recorded are below the normal for a community constituted upon ordinary lines, and a feature which, as I will endeavour to show, is not without its effect upon the mortality returns.

Such a low birth-rate is compatible with the existence of a correspondingly high proportion of either youthful or aged lives or of both ; but a low birth-rate contra-indicates the possibility of an excess of young lives, and we have to assume the excess to be among the aged. This assumption is sanctioned by the fact that there is a large influx of persons beyond the meridian of life because of the gravitation of such as wish to retire from active life to the healthful and peaceful environment which has made Tunbridge Wells so popular a health resort.

This excess of aged lives naturally leads to an increase in the rate of mortality, which the decreasing and already low birth-rate does nothing to counterbalance. This will be better appreciated when it is remembered that more than 55 per cent. of the total number of deaths that occur in the Borough happen at ages beyond 60.

TABLE I.

Showing the Birth-Rate per thousand of the Inhabitants for ten years.

1900	...	...	...	...	20·45
1901	...	...	...	...	20·1
1902	...	...	...	...	20·13
1903	...	...	...	...	19·28
1904	...	...	...	...	18·64
1905	...	...	...	...	18·42
1906	...	...	...	...	19·32
1907	...	...	...	...	16·86
1908	...	...	...	...	17·3
1909	...	...	...	...	17·2
Mean Birth-rate for Ten Years				...	19·0

Deaths and Death-Rate.—There were 469 deaths registered in the district, as against 436 in the previous year, which shows an increase of 33 deaths. But of the number recorded, no less than 43 deaths took place in the cases of persons who were only temporarily resident within the Borough as inmates of one or other of the public institutions. Against these, however, I have to place the larger number of 50 deaths, which must be included with the mortality belonging to the Borough because they occurred in the persons of Tunbridge Wells people temporarily inmates of public institutions in other places.

By deducting 43 from the total number of deaths recorded as having taken place within the Borough and adding 50 I arrive at the net mortality of the district for the year, which was 476 as against 415 for the previous year. Thus it appears that there was an increase of 61 in the number of deaths proper to the statistics of Tunbridge Wells.

The death-rate for the year was 13·2 per thousand of the inhabitants, while that of the year 1908 was 11·7, but it must be borne in mind that the latter was the lowest death-rate ever recorded here, and it is better to compare with the mean death-rate for ten years, which was 12·4 per thousand. I attribute the increase to the prevalence of Influenza during the first two quarters of the year, which led to many deaths from diseases of the respiratory organs, such as Pneumonia and Bronchitis. Fortunately the latter half of the year was immune from any excess due to this cause, as will be seen from reference to the quarterly reports, the results of which are brought out in Table IV. of this report.

TABLE II.

Showing the Death-Rate per thousand of the Inhabitants for ten years.

1900	12·73
1901	12·90
1902	13·14
1903	12·38
1904	12·59
1905	12·43
1906	11·80
1907	13·63
1908	11·7
1909	13·2
Mean Death-rate for Ten Years ..	12·4

The death-rate for England and Wales for 1909 was 14·5 per thousand.

Correction of Death-Rate by Foreign Mortality.—By the term foreign mortality I desire to distinguish those deaths which occur in the person of temporary residents within the Borough who were not inmates of any of the public institutions at the time of demise. Of such foreign mortality there were 20 cases during the year, equal to 4·42 per cent. of the total. When these deaths are taken away from the number registered and a death-rate is calculated upon the remainder, I find it comes out at 12·7, which I call the Corrected Death-Rate.

A reference to the following table will show the incidence of this foreign mortality in augmenting the death-rate and also in rendering the rate less stable than would be the case were the statistics compiled after its exclusion.

TABLE III.

Showing the influence of Foreign Mortality upon the Death-Rate over a period of ten years.

	Death-Rate.	Corrected Death-Rate.
1900	12·7	11·4
1901	12·9	11·8
1902	13·1	11·9
1903	12·4	11·7
1904	12·6	12·3
1905	12·4	11·7
1906	11·8	11·3
1907	13·6	12·8
1908	11·7	11·3
1909	13·2	12·7

Quarterly Returns.—The mortality of the several quarters of the year was marked by the heaviest record in the first quarter and the lightest in the third, which is usual. During the first quarter Influenza and Measles exercised a considerable influence, and Influenza was still prevalent in the second.

TABLE IV.

Showing the Quarterly Mortality during the year 1909, also the correction for Foreign Mortality.

	Number of Deaths.	Death-Rate.	Foreign Deaths.	Corrected Death-Rate.
1st Quarter ...	162	18·1	5	17·5
2nd Quarter ...	124	13·8	6	13·1
3rd Quarter ...	93	10·3	5	9·7
4th Quarter ...	97	10·7	4	10·3

TABLE V.

Quarterly Death-Rate per thousand per annum for a period of five years.

	1905	1906	1907	1908	1909
1st Quarter	15·1	15·0	18·6	13·3	18·1
2nd Quarter	12·0	9·6	12·5	11·5	13·8
3rd Quarter	10·1	10·9	10·6	10·1	10·3
4th Quarter	12·4	11·6	12·8	11·7	10·7

Mortality at Several Ages.—My previous reports have invariably shown a remarkable preponderance of aged lives among those which have fallen to be recorded among those which have closed during the several years to which those reports refer.

While it is matter for congratulation that so many of the inhabitants of Tunbridge Wells attain to longevity, it must not be forgotten that there is a great influx of aged lives for reasons which I have already made clear. Such imported lives already

at advanced ages are responsible for a considerable augmentation of the death-rate which would be the normal one for this favoured Borough, and it is with great satisfaction that, although this effect is self-evident and the number of imported lives not a few, the health of the Borough has again and for a long series of years been such that this additional mortality has been absorbed without raising the death-rate to a point beyond the extremely low mean death-rate of the district. This excess of aged lives also tends to depress the birth-rate below the normal, which I have shown to be the case.

TABLE VI.

Showing Deaths at ages beyond Sixty Years.

Over 90 years of age	11
Under 90 and over 80	63
Under 80 and over 70	98
Under 70 and over 60	83
Total	255

Infant Mortality.—Nine out of the 618 births which occurred were premature, but they have to be included among the deaths of infants during the first year of life, making in all 37 such deaths, as against 50 during the previous year. The mortality during the first year of life was therefore at the rate of 59·8 per thousand of those born, and the hope I expressed in my report for the year 1908 has been gratified by the lowest mortality rate among infants on record. In Table VII., which covers a period of ten years, there appears a most gratifying improvement in this respect, and one which reflects great credit upon those whose efforts have seconded those of the sanitary authority to ameliorate the conditions under which infants have been handicapped in their course through the first year of life.

In Table XXII. there appears a detailed statement of the deaths from the several causes at the different ages in weeks and months up to the age of one year.

So far as it affects the vital statistics of the district the low infant mortality acts as a counter to the excess at the other end of life which is due to the preponderance of aged lives of which I have spoken, though that it completely does so is open to considerable doubt.

TABLE VII.

Infant Mortality Rate per thousand Children born, for a period of ten years.

1900	121
1901	81
1902	101
1903	76
1904	98
1905	73
1906	82
1907	73
1908	81
1909	59
Infant Mortality Rate throughout the whole of England and Wales during the year 1909	109

The importance of the conservation of infant life, apart from its humanitarian aspect, has to be accepted in these days of a decreasing birth-rate in a national sense. The loss of young lives has in the past been a reproach, if no harsher term should be used, and it is impossible to estimate the far-reaching

effect of this leakage at the fountain head of national prosperity. Great improvement has taken place in this respect all over the country, and it is a matter of which I am extremely proud that the ratio of loss suffered in Tunbridge Wells appears so low as one half of that of the country generally.

Again I venture to express the hope that no effort will be spared to educate the poorer classes resident in the district upon the duties of motherhood and the hygiene of infant life, and especially would I counsel the inculcation of lessons in cleanliness where food is concerned, and the banishment of dust from the home. Many authorities, notably Dr. Nash, of Norwich, and Dr. Niven, of Manchester, have drawn attention to the part the house fly plays in the dissemination of disease, while in the supplement to the report of the Medical Officer of the Local Government Board, 1887, Dr. Ballard indicates high temperature and dust as specially potent for the contamination of milk.

TABLE VIII.

Showing the Mortality at several ages for a period of five years.

	1905	1906	1907	1908	1909
Deaths at under 1 year ...	46	56	44	50	37
„ 1 & under 5 years	15	9	44	18	27
„ 5 „ 15 „	13	8	13	12	11
„ 15 „ 25 „	13	13	11	14	18
„ 25 „ 65 „	146	146	144	125	161
„ 65 & upwards ...	198	181	225	196	222
Totals	431	413	481	415	476

Zymotic Diseases.—There were 20 deaths which fall under this classification, giving a Zymotic death-rate of 0·5 per thousand of the inhabitants. The same rate for England and Wales for the same period was 1·12. Such a low rate of mortality from preventable diseases, in a Borough of the size of Tunbridge Wells, may be looked upon as an irreducible minimum, nevertheless no effort is spared to still further bring down the mortality under this head. The deaths during 1909 were as follows: Seven from Measles, three from Whooping Cough, three from Diphtheria and Membranous Croup, two from Scarlet Fever, one from Enteric Fever and four from Diarrhœa.

TABLE IX.

Showing the Mortality from Zymotic Diseases for ten years.

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Scarlet Fever	0	0	1	1	0	0	0	1	0	2
Enteric „	0	2	1	3	3	0	1	0	1	1
Erysipelas	2	4	0	0	0	0	0	1	0	0
Diphtheria and Membranous Croup ...	3	1	2	0	1	0	0	6	1	3
Diarrhœa and Dysentery	13	4	1	2	4	3	9	1	2	4
Small-pox	0	0	0	2	0	0	0	0	0	0
Measles	0	11	2	4	5	0	0	16	3	7
Whooping Cough ...	1	21	1	4	15	5	0	17	3	3
Total number of Deaths from Zymotic Diseases	19	43	8	17	28	8	10	42	10	20
Percentage upon Deaths from all causes ...	4·7	10·0	1·8	4·0	6·4	1·8	2·4	8·7	2·4	4·2
Zymotic Death-Rate per thousand living ...	0·6	1·3	0·2	0·4	0·8	0·2	0·2	1·1	0·3	0·5

Scarlet Fever.—There were two deaths from this disease, and 165 cases were notified to me as having occurred within the Borough : 157 of them were removed for isolation and treatment to the Sanatorium, one of which was in a dying condition when received, and consequently appears as one of the two deaths which make up the mortality. The other case in which death occurred was of the type known as Scarlatina Anginosa, wherein profound septic influences are met with. One case was brought into the General Hospital from Southborough, and after notification was removed to the Infectious Hospital belonging to that district.

Scarlet Fever cases which occur in this district are almost invariably of a mild character and the mortality among them is extremely low, a circumstance which renders it most difficult to stamp out the disease, because of the laxity of parents in the matter of seeking medical help when their children are found to suffer from what they conceive to be a simple cold. Children have been detected in attendance at school in one or other of the phases of the disease. The diary of the first few days of the illness of one neglected child is a striking illustration of the careless behaviour of some parents in relation to the spread of zymotic disease. On Sunday the child manifested the outbreak of the eruption. On Monday it was allowed out of bed. On Tuesday it was permitted to attend a circus entertainment, and on Wednesday it was removed to the Sanatorium with the rash still visible upon its skin.

Although for years past the loss of life from this disease has been reduced to almost complete immunity, I am concerned when I know the cases of its occurrence are needlessly, and I might say culpably, multiplied because of the absolute indifference of some parents. I am of opinion that in every case of absence from school a medical certificate of freedom from infection would enable me to cut down the number of cases to a

very considerable extent. As I reported last year, it is essential to get control of the mild cases, and such a measure as I suggest would immediately put me in touch with them.

I have impressed upon school teachers how necessary it is that the ambulatory cases can be trapped by the exercise of precautions such as that mentioned, also how important it is for them to exclude all children suffering from sore throats or discharge from the nose until they have been properly investigated, also that they should keep a constant look-out for cases where the skin is peeling after the illness.

Enteric Fever.—Seven cases of this disease were notified, of which only one proved fatal. Five of these seven cases belonged to the Borough and two were imported. Of the imported cases one was in the person of a military officer who had had the disease in Ireland, and who, coming here for a holiday, suffered a relapse. The other was brought in from Southborough to the Tunbridge Wells General Hospital and died, the death therefore appearing, not in the statistics relating to this Borough, but in those of Southborough. One death occurred among the five cases belonging to the town. In two cases the patients had eaten a quantity of oysters. Three of the five cases were removed to the General Hospital for treatment, one of them being diagnosed as a case of Gastric Influenza by the doctors on the Hospital staff.

Erysipelas.—There were 14 cases of this disease notified but there were no deaths.

Diphtheria and Membranous Croup.—Eleven cases were notified, and three of them proved fatal. In all three of the fatal cases the patients were *in extremis* and beyond medical aid when a medical practitioner was first called in. Two of the 11 cases notified were imported to the General Hospital for treatment and both died. One came from Penshurst, the other

from Southborough, and the deaths are included in the returns for their respective districts. Four cases were removed to the Sanatorium for treatment and isolation, and all recovered.

Diarrhœa.—There were four deaths from this disease, one adult and three children. This disease, which figures so largely in the mortality statistics of most towns, is not prevalent in Tunbridge Wells, and the mortality attending it has been extremely small for many years.

Smallpox.—No case occurred.

Measles.—There were seven deaths from this disease. There was an outbreak in the March quarter of the year, which was really a recrudescence of one which affected the last quarter of the preceding year. The mistaken idea that Measles is a trifling disease is responsible for many a death, and it cannot be too forcibly brought home to the minds of the people that it is, on the contrary, one of the most fatal of the diseases affecting childhood, perhaps the most to be dreaded of all the infectious diseases. Mothers should be taught the necessity for medical attention from the commencement of the attack, instead of waiting until some fatal complication appears. Measles is a disease of great virulence and cannot be too energetically dealt with.

Whooping Cough.—There were three deaths from this disease Parents are prone to believe that nothing can be done for this extremely dangerous disease, and that the case must be left to nature and a few nostrums, the efficacy of which is a tradition rather than a practical factor in the treatment. Like Measles, Whooping Cough takes a heavy toll of young lives because of the neglect to which the children who suffer from it are submitted. It cannot be too widely made known that there are new and effective methods of treatment which can be relied upon to deal satisfactorily with cases placed early under medical care.

The disease is ruthlessly spread by children being allowed to mix with others when suffering from the disease, and as the victims of it are often permitted to expectorate upon the side-walks, every opportunity is afforded for its dissemination. That the loss of life in this district only amounts to three cases during the year is a matter for great gratification, and I believe it is in some measure due to the special efforts which have been made here to cope with a disease which is looked upon as being outside the scope of a sanitary authority.

Puerperal Fever.—There were three cases notified, but there were no deaths.

Notification of Infectious Diseases.—Two hundred cases of infectious disease were notified to me under the provisions of the Infectious Diseases (Notification) Act, 1889 and 1899. They were as follows :—

Scarlet Fever	165	cases.
Diphtheria	11	„
Enteric Fever	7	„
Puerperal Fever	3	„
Erysipelas	14	„
Total	200	„

TABLE X.

Works carried out under the Infectious Diseases Acts during 1909.

314	Visits to infected houses.
575	Rooms disinfected.
13965	Articles of clothing disinfected.
10	Loads of Bedding removed to the steam disinfector and returned to their respective owners.
23	Visits to disinfect public buildings.
8	Visits to disinfect St. John's Ambulance and private vehicles.
13	Visits to disinfect wards at Hospital.
1	Load of Bedding destroyed.

The General Hospital has been notified of every case of infectious disease occurring within the Borough, and of every case discharged from the Sanatorium.

Bacteriological Examinations.—There were 27 made during the year, 22 for Diphtheria and 5 for Enteric Fever, with the following results :—

Diphtheria—

The Klebs-Loeffler Bacillus	absent,	cases not notified	15
„	„	cases notified ...	2
„	present,	cases notified ...	4
„	„	case not notified	*1

Enteric Fever—

Widal's Reaction	positive,	cases notified	1
„	negative,	cases not notified	4

* In this case the patient died before the examination was completed.

Tuberculosis.—Twenty-one notifications have been received of cases of Pulmonary Tuberculosis occurring among the inmates of Poor Law Institutions, or among persons under the care of District Medical Officers.

Among the local causes of Pulmonary Tuberculosis are poverty, overcrowding, and defective ventilation, light and cleanliness in the homes of the people. I have found bedrooms in a very unhealthy condition owing to the blocking up of the chimney and the sealing of windows with strips of paper, pasted down so as to exclude all air except what is admitted by the doorway when the door stands open. I also find curtains used to cover up the casement so that light cannot enter by the means provided.

We are at times requested to disinfect such rooms, but I am of opinion that nature would do this useful work if windows and doors were thrown open and the chimney allowed to act as an upcast shaft.

Persons suffering from Tuberculosis should be isolated, as far as possible, from the healthy, and should occupy roomy and airy apartments. They should be prevented from spitting upon the floors of rooms and workshops, and be provided with proper receptacles containing a disinfectant, while indoors ; and when going abroad they should carry a portable vessel suitable for the purpose.

Cancer.—While the efforts directed against the last-named scourge have been to a large extent rewarded by success in treatment and a diminution in the number of cases, it has been otherwise with Cancer, for there can be no question of the increase, not only in this Borough but in all parts of the country, of deaths due to this malignant disease. It may be hoped that the researches which are at present in progress may some day result in the discovery of some way to avert the terrible incidence of the disease, not only where the individual is concerned, but upon the vital statistics generally, but in the meantime there is to be recorded a steady increase in the mortality registered under this head. It must not, however, be overlooked that with the advent of abdominal surgery the means of diagnosis have multiplied and the ability to diagnose the presence of internal forms of Cancer has increased, so that a large number of deaths are now ascribed to it which would formerly have appeared to have resulted from some other cause. How far this is responsible for the increase in the number of cases of death from Cancer, it is quite impossible to estimate or even form an approximate opinion. For the year under review there were 53 deaths recorded as having been the direct effect of Cancer.

Infectious Diseases.—In all cases of infectious diseases the disinfection of rooms, bedding and clothing is rigidly carried out by the officers of the Public Health Department, except where it is done under the supervision of the medical attendant (which

is very seldom). Specially constructed vans are used for the conveyance of bedding and clothing to the steam disinfector, and after disinfection for the return of the articles to the owner, but the same van is not used for both purposes.

The Public Health Act, 1875, gives power to the Local Authority to serve notice on the occupier of any premises, requiring him, within a specified time, to cleanse and disinfect any such premises or any part of them, and any article therein likely to retain infection, and on his failing to comply, the Local Authority may do the work themselves, and recover the expense in a summary manner. This method of dealing with infected rooms and bedding is cumbersome; we therefore undertake and do the work ourselves when we are satisfied that the public interests demand it.

Notifications are sent to the various week-day and Sunday school superintendents, informing them of infection in the cases of pupils, and requesting them not to allow the attendance of infected scholars for a stated period. Notices are also sent to public libraries so as to obviate infection by books.

A thorough inspection is made of all premises that may have been infected and tests are applied to drains and sanitary fittings, and steps are taken to remedy any defects.

Other duties in connection with the sources of milk supply, and with outworkers in connection with factories and workshops receive due attention.

Notifications are sent to schools and libraries when houses are judged to be free from infection.

Elementary Schools.—It was found necessary to close one school for a period of 14 days during February, owing to an outbreak of Measles.

There were several outbreaks of Scarlet Fever directly attributable to children attending school when infected with that

disease. These cases were promptly isolated and all available means taken to prevent the spread of the infection

Three children were found to be attending school while suffering from Whooping Cough and were at once excluded.

The sanitary conditions are considered to be fairly satisfactory, although it would not be correct to say that all the w.c. fittings are the most desirable; some of them will have to be replaced with modern appliances at no distant date. It is satisfactory to know that the drains (with one exception) discharge into the public sewers; the disposal of the sewage from the school so excepted is the best obtainable under existing circumstances.

The town water supply is laid on to all schools, and in most instances is drawn from the rising main.

Water Supply.—The water supply provided for the Borough of Tunbridge Wells is all that could be desired, both as regards purity and excellence of quality. It is derived from the springs in the Tunbridge Wells Sands and from deep borings through the Wadhurst Clay into the Ashdown Sands. The gathering ground of the springs is mostly woodland and pasture land kept constantly under inspection. The spring supply gravitates to a large open storage reservoir and filters through sand before delivery through the mains. The underground waters are of excellent character, and are treated for the removal of iron in solution by a special process of compressed air oxidizing mechanical filters of the Candy type. The supply is of four or five degrees of hardness, and no cases of plumbo-solvent action have occurred.

Sewerage, Drainage and Sewage Disposal.—The town is well drained by a system of sewers maintained in a good state of repair, and the sewage is delivered to two sewage farms having a total area of 386 acres, where it is treated on the broad irrigation principle, assisted at one of the farms by percolating

bacteria beds. The drainage of all new buildings is laid down upon sound sanitary principles, and subjected to the "water test" before approval by the Corporation.

Rivers and Streams.—All water courses are regularly inspected at frequent intervals, and no cases of pollution are permitted.

The Factory and Workshop Act, 1901.—This Act requires that:—"The Medical Officer of Health of every District Council shall in his Annual Report to them report specificially on the administration of the Act, and he shall send a copy of his Annual Report, or so much of it as deals with the subject, to the Secretary of State."

The administration of the law in respect of factories and workshops is in the hands of two authorities, *i.e.*, H.M. Inspector of Factories and the local authorities. The duties and powers assigned to each authority are so complicated that it is often a difficult matter to dissect them.

In accordance with the provisions of Section 131, a register is kept of all workshops situate within the district. The schedule of the register records the following information:—Date, name and address of occupier, situation of workshop, nature of work carried on and amount of moving power, number and description of workers, cubic capacity, sanitary accommodation, and means of escape from fire. With regard to bakehouses, extra information is obtained and recorded with respect to the lighting and ventilation. To keep this register complete is a very difficult matter by reason of the opening and closing of different premises, the changing of outworkers and alteration of proprietorship.

During the year 991 visits of inspection have been made in order to secure observance of the provisions of the law in regard to cleanliness, ventilation, overcrowding, drainage of floors, sanitary accommodation and proper means of escape from fire.

Ninety-four defaults were discovered, and means taken to remedy same.

The majority of the workshops in the town are provided with a system of maintainable ventilation, which most of the workers highly appreciate. The system recommended generally is the provision of a fresh-air inlet on an outside wall (a few inches from the ceiling), so constructed as to prevent actual draught to the workers, and an outlet in the chimney breast or other suitable place.

As time permits the workshops are measured up and the air space ascertained, and tickets stating the cubic capacity and the number of persons that may be employed therein during daytime and overtime are fixed in each room. This is in addition to the provision provided for in the prescribed abstract of the Act.

Particulars in respect of 63 workshops were reported by H.M. Inspector, which had been formally reported to him by the occupiers. Five complaints were received from the Home Office during the year, referring to neglect as to limewashing, overcrowding, and W.C. accommodation, which received immediate attention.

No certificates for means of escape from fire have been given, there having been no new factory or workshop established employing over 40 persons.

The means of escape provided in existing workshops employing over 40 persons is considered satisfactory.

The work in connection with outworkers and home work steadily increases. The Home Office Orders now include some 31 different trades, and all persons connected with such trades are required to keep on the premises lists of names and addresses of outworkers employed by them, and to forward copies of same to the Sanitary Authorities on or before the 1st of February and the 1st of August in each year. Every

authority must cause the lists to be examined, and furnish the name and place of employment of every outworker included in any such list whose place of employment is outside its district to the Council of the district in which his place of employment is.

The register of outworkers is always examined when a notification of infectious disease is received, in order, if necessary, to stop work being given out to any person who may be in contact with infection.

There have been 28 lists of outworkers sent in during the year by persons trading within the Borough, containing the names and addresses of 110 persons.

Eighteen names and addresses of outworkers have been forwarded by us to other Councils, and we have received from other Councils the names and addresses of four outworkers.

A Form for the return of "Outworkers" has been prescribed by the Secretary of State, and may be obtained from His Majesty's printers at a nominal cost. In Tunbridge Wells these forms are supplied free (in duplicate) but even with this facility considerable difficulty is experienced in getting the employers to send in the lists on the date required; many of them have been visited personally by the Inspector in respect of this failure, and if proceedings are instituted against offenders during the coming year they will have no one to blame but themselves.

I append a copy of the tables made out as required by the Home Office showing particulars of works carried out that lend themselves to statistical treatment.

Shop Hours and Seats for Shop Assistants Acts.—The above Acts are practically bound up with the Factory and Workshop Act, and during the year 125 visits have been made *re* the hours of employment and the provision of seats. We have had no cause to complain, neither have we received any complaint from employees or other persons concerned.

TABLE XI.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND HOMEWORK.

(Home Office No. 1.)—INSPECTION.

INCLUDING INSPECTIONS MADE BY CHIEF SANITARY INSPECTOR AND HIS ASSISTANTS.

Premises.	Number of		
	Inspections	Written Notices.	Prosecutions.
Factories... ... ... (Including Factory Laundries).	41		
Workshops ... ... (Including Workshop Laundries).	390		
Workplaces ... ... (Other than Outworkers' premises included in Part 3 of this Report).	560		
Total	991	Nil.	Nil.

TABLE XII.

(Home Office No. 2.)—Defects found in Factories, Workshops and Workplaces.

Particulars.	Number of Defects			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts :—**				
Want of cleanliness...	53	53	Nil.	Nil.
Want of ventilation	11	11	,,	,,
Overcrowding	2	2	,,	,,
Other nuisances	21	21	,,	,,
† Sanitary accommodation — insufficient	2	2	,,	,,
† Sanitary accommodation — unsuitable or defective ...	3	3	,,	,,
† Sanitary accommodation — not separate for sexes ...	2	2	,,	,,
Total	94	94	Nil.	Nil.

* Including those specified in sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† For districts not in London state here whether section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the District Council; and if so what standard of sufficiency and suitability of sanitary accommodation for persons employed in factories and workshops has been enforced.

Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted, and the standard of sufficiency and suitability enforced is as follows:—"That one W.C. be required for every 20 females, and subject to sufficient urinal accommodation being provided, one W.C. be required for every 25 males."

TABLE XIII. (Home Office No. 3.)—HOME WORK.

NATURE OF WORK*	Outworkers' Lists, Section 107.											Inspections of Outworkers' premises.	Outwork in Unwholesome Premises, Section 108.			Outwork in Infected Premises, (Sections 109, 110).		
	Lists received from Employers.						Addresses of Outworkers.		Notices served on Occupiers as to keeping or sending lists.	Prosecutions.								
	Sending twice in the year.			Sending once in the year.			Received from other Councils.	Forwarded to other Councils.		Failing to keep or permit inspection of lists.	Failing to send lists.		Instances.	Notices served.	Prosecutions.	Instances.	Orders made. (S. 110).	Prosecutions. (Sections 109, 110).
	Lists.†	Outworkers †		Lists.	Outworkers †													
		Contractors	Workmen.		Contractors	Workmen.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Wearing Apparel—Making, &c.	12	2	36	4	...	11	4	18	11	Nil.	Nil.	141	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
No Outworkers' Lists received for any of the other 30 trades enumerated in the Home Office Table.																		

* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class *only*, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3 and 4 are the *total* number of the lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be *even* numbers, as there will be two lists for each employer—in some previous returns odd numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

TABLE XIV.

(Home Office No. 4)—REGISTERED WORKSHOPS.

Workshops on the Register (Sec. 131) at the end of the year.		Number.
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Bakehouses	45
	Dressmakers and Milliners ...	58
	Tailors	26
	Laundries	43
	Various	109
Total Number of Workshops on Register		281

TABLE XV.

(Home Office No. 5)—OTHER MATTERS.

Class.		Number.
Matters notified to H.M. Inspector of Factories:—		
Failure to affix Abstract of the Factory and Workshop Act (s. 133)...		Nil.
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector	5
	Reports (of action taken) sent to H.M. Inspector...	4
Underground Bakehouses (s. 101):—		
Certificates granted during the year		Nil.
In use at the end of the year		13

NOTE.—The Factory and Workshop Act, 1901 (s. 132) requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, laundries, workplaces or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

TABLE XVI.

List of Workshops (as per Section 131) on the Register at the end of 1909.

WORKSHOPS.	No. on Register.	Persons employed.		
		Male.	Female.	Total.
Bakers	45	121	—	121
Basket Maker	1	3	—	3
Blacksmiths	12	53	—	53
Boot Makers	9	26	—	26
Builders and Carpenters	34	275	—	275
Cycle Manufacturers	8	24	—	24
Cabinet Makers	5	23	—	23
Carvers and Gilders	3	7	—	7
Carriage Builders	5	19	—	19
Confectioner	1	3	2	5
Dressmakers and Milliners	58	—	506	506
French Polisher	1	3	—	3
Gas and Hot Water Fitters	6	50	—	50
Laundresses	39	3	156	159
Monumental Masons	3	12	—	12
Motor Engineer	1	2	—	2
Picture Frame Makers...	1	4	—	4
Saddlers and Harness Makers... ...	5	16	—	16
Sign Writer	1	2	—	2
Scale Makers	2	4	—	4
Tailors	26	77	8	85
Telephone Fitter	1	4	—	4
Undertakers	3	11	—	11
Upholsterers	9	19	5	24
Umbrella Manufacturer	1	1	1	2
Watchmaker	1	4	—	4
	281	766	678	1444

TABLE XVII.

List of Factories and Workplaces at the end of 1909.

FACTORIES.	No.	Persons employed.		
		Male.	Female.	Total.
Brewer	1	8	—	8
Builder	1	20	—	20
Cabinet Maker	1	6	—	6
Carpet Beating Works...	1	3	—	3
Carriage Builder	1	25	—	25
Coffee Roaster	1	2	—	2
Cycle Manufacturer	1	6	—	6
Electrical Engineer	1	2	—	2
Engineer	1	2	—	2
Electric Light Works	2	22	—	22
Gas Works	1	40	—	40
Laundries	4	15	179	194
Mineral Water Factories	3	16	—	16
Photographers...	2	27	21	48
Printers	11	150	10	160
Saw Mills	2	32	—	32
Stone Breaker...	1	12	—	12
Tonbridge Ware Factory	1	7	3	10
Wood and Metal Letter Maker ...	1	3	—	3
	37	398	213	611
WORKPLACES.				
Including— Restaurant Kitchens, Livery Stable Yards, &c., &c., &c.	78	286	39	325
Totals	115	684	252	936

TABLE XVIII (Local Government Board No. 1.)

Vital Statistics of Whole District during 1909 and Previous Years.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 year of Age.		At all Ages.						
		Number.	Rate *	Number.	Rate per 1,000 Births Registered	Number.	Rate *				Number.	Rate *
1	2	3	4	5	6	7	8	9	10	11	12	13
1899	30,975	629	20·30	75	119·23	460	14·80	35	—	—	*418*	*13·40*
1900	31,335	641	20·45	78	121·68	399	12·73	31	—	—	*357*	*11·39*
1901	33,433	673	20·1	55	81·7	432	12·90	35	—	—	*396*	*11·84*
1902	33,773	680	20·13	69	101·47	430	12·73	43	24	38	444	13·14
1903	34,073	657	19·28	50	76·10	407	11·94	37	24	39	422	12·38
1904	34,373	641	18·64	63	98·28	418	12·16	42	25	40	433	12·59
1905	34,673	639	18·42	47	73·55	419	12·08	52	29	41	431	12·43
1906	34,973	676	19·32	56	82·84	406	11·60	66	36	43	413	11·80
1907	35,273	595	16·86	44	73·94	454	12·87	60	28	55	481	13·63
1908	35,573	615	17·3	50	81·4	436	12·3	81	56	35	415	11·7
Averages for years 1899-1908.	33,845	644	19·0	58	91·0	426	12·6	48	—	—	421	12·4
1909	35,873	618	17·2	37	59·8	469	13·0	73	43	50	476	13·2

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are as follows:—The General, the Homœopathic, and the Eye and Ear Hospitals, the Kent Nursing Institution, and Tunbridge Wells Sanatorium, situate within the district; the Tonbridge and Ticehurst Union Workhouses and the Small-pox Hospital at Dislingbury, near Capel, situate beyond the district.

Area of District in Acres (exclusive of area covered by water) 3,991; Total population at all ages, 33,373; Number of inhabited houses, 6,589; Average number of persons per house, 5·06. At census of 1901.

The numbers in Italics in columns No, 12 and 13 are not quite correct owing to the act that the particulars for columns No. 10 and 11 were not obtained previous to 1902.

TABLE XIX (Local Government Board No. 2.)

Vital Statistics in 1909 and previous years.

Year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1899	30,975	629	418	75
1900	31,335	641	357	78
1901	33,433	673	396	55
1902	33,773	680	444	69
1903	34,073	657	422	50
1904	34,373	641	433	63
1905	34,673	639	431	47
1906	34,973	676	413	56
1907	35,273	595	481	44
1908	35,573	615	415	50
Averages of Years 1899 to 1908 ...	33,845	644	421	58
1909	35,873	618	476	37

TABLE XX. (Local Government Board No. 3.)

Cases of Infectious Disease notified during the Year 1909.

Notifiable Disease.	Cases notified in whole District.							
	At all Ages.	At Ages—Years.						Total Cases removed to Hospital.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	
Diphtheria, including Membranous Croup	11	—	6	2	1	2	—	8
Erysipelas	14	1	—	1	2	8	2	—
Scarlet Fever	165	—	31	114	12	7	1	156
Enteric Fever	7	—	—	—	3	4	—	4
Puerperal Fever	3	—	—	—	1	2	—	1
Totals	200	1	37	117	19	23	3	170

The Accommodation provided for the treatment of Infectious Diseases is as follows :—

THE SANATORIUM (The Tunbridge Wells Isolation Hospital) situate in Tunbridge Wells ... ... Scarlet Fever ... 48 Beds. Diphtheria ... 6 Beds.

THE GENERAL HOSPITAL, situate in Tunbridge Wells (the Authorities are under an Agreement to treat all cases of Enteric Fever and cases of Diphtheria that require Surgical Treatment) ... ... All Beds required.

THE DISLINGBURY HOSPITAL for Small-pox and Plague, situate at Capel in the Tonbridge Rural District, belonging to the Joint Hospital Board of the Tunbridge Wells Corporation, the Tonbridge Urban District Council, the Southborough Urban District Council, and the Tonbridge Rural District Council ... ... 20 Beds.

TABLE XXI.

(Local Government Board No. 4.)

Causes of, and Ages at, Death during Year 1909.

CAUSES OF DEATH.	Deaths at the Subjoined Ages of "Residents" whether occurring in or beyond the District.							Total Deaths whether of residents or non-residents in Public Institutions in the District.
	All Ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Small-pox	...	...	...	...	...	...	...	...
Measles	7	...	5	1	...	1	...	...
Scarlet Fever	2	...	1	1	...	...	...	2
Whooping Cough... ...	3	1	2	...	...	...	...	...
Diphtheria (including Membranous Croup)	3	...	2	1	...	...	...	2
Croup	...	...	...	...	...	...	...	...
Fever (Typhus	...	...	...	...	...	...	...	...
Fever (Enteric	1	...	...	...	1	...	...	2
Fever (Other continued	...	...	...	...	...	...	...	...
Epidemic Influenza ...	27	3	2	...	1	6	15	...
Cholera	...	...	...	..	...	...	...	...
Plague	...	...	...	...	...	...	...	...
Diarrhœa	4	2	1	...	...	...	1	...
Enteritis	2	...	...	1	...	1	...	...
Gastritis	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	43	...	2	1	5	33	2	3
Other Tuberculous Diseases	7	1	2	1	2	...	1	1
Cancer, Malignant Disease	53	...	...	...	...	26	27	10
Bronchitis	28	1	1	...	...	6	20	3
Pneumonia...	22	3	3	...	...	10	6	1
Pleurisy	3	...	...	...	...	2	1	...
Other Diseases of Respiratory Organs	2	...	...	...	1	...	1	...
Alcoholism, Cirrhosis of Liver ...	6	...	...	...	...	4	2	...
Venereal Diseases ...	1	...	...	...	..	1	...	...
Premature Birth	9	9	...	...	...	...	...	...
Diseases and Accidents of Parturition	3	1	1	...	...	1	...	1
Heart Diseases	68	2	...	...	1	25	40	5
Accidents	10	...	...	1	2	4	3	7
Suicides	1	...	...	...	...	1	...	1
All other Causes	171	14	5	4	5	40	103	35
All Causes	476	37	27	11	18	161	222	73

TABLE XXII. (Local Government Board No. 5.)

INFANTILE MORTALITY DURING THE YEAR 1909.

Deaths from stated Causes in Weeks and Months under 1 Year of Age.

	CAUSE OF DEATH.	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under 1 Year
All Causes.	Certified	10	3	1	3	17	6	2	2	2	...	1	2	...	3	...	..	35
	Uncertified	1	...	...	...	1	..	...	...	...	...	...	...	...	...	...	1	2
Common Infectious Diseases	Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria: Mem. Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Diarrhœal Diseases	Diarrhœa, all forms	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2
	Enteritis, Muco-enteritis Gastro-enteritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gastritis, Gastro-intestinal Catarrh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wasting Diseases.	Premature Birth	7	1	...	...	8	1	...	...	...	...	...	...	...	...	...	...	9
	Congenital Defects	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2
	Injury at Birth	1	...	...	..	1	...	...	...	...	...	...	...	...	...	...	...	1
	Want of Breast-Milk Starvation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Atrophy, Debility, Marasmus	2	1	...	...	3	...	1	1	...	...	...	...	...	...	...	...	5
Tuber-culous Diseases	Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tuberculous Peritonitis: Tabes Mesenterica	...	...	...	..	...	...	...	...	...	..	...	...	...	...	...	...	...
	Other Tuberculous Diseases	..	...	...	...	...	...	..	...	1	..	...	...	...	...	...	...	1
Other Causes.	Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Meningitis (*not Tuberculous*)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Convulsions	...	...	...	1	1	3	...	...	...	...	...	...	...	...	...	1	5
	Bronchitis	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	..	1
	Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pneumonia	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...	3
	Suffocation, overlying	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Other Causes	1	...	...	2	3	1	...	...	...	..	...	2	...	1	...	...	7
		11	3	1	3	18	6	2	2	2	...	1	2	...	3	...	1	37

Population estimated to middle of 1909 35,873

Births in the Year.		Deaths in the Year.	
Legitimate	599	Legitimate Infants	32
Illegitimate	19	Illegitimate Infants	5

Deaths from all Causes at all Ages 476

TABLE XXIII.

List of Works carried out under the Public Health and Tunbridge Wells Improvement Acts during 1909.

36	Complaints received and investigated.
40	Premises in respect of which notices have been served.
410	Houses, drains and sanitary fittings inspected.
1749	Visits of re-inspection or to works in course of progress.
50	Drains re-constructed.
41	Drains repaired.
15	Choked drains cleared and cleansed.
102	Inspection chambers constructed.
31	Inspection chambers repaired.
44	Drain ventilation shafts erected or repaired.
36	Soil pipes erected.
25	Soil pipes repaired.
120	W.C.'s re-constructed and provided with flushing apparatus.
8	Flushing apparatus repaired.
242	Efficient traps substituted for inefficient ones.
88	Rain-water and waste pipes disconnected from drains and made to discharge over properly trapped gullies.
64	Yards and areas paved or paving repaired.
7	New w.c. buildings and apparatus constructed.
2	W.C.'s ventilated to outside air.
31	W.C.'s cleansed and repaired.
36	New sinks provided.
19	New lavatory basins provided.
83	Old sinks provided with new waste pipes.
1	Urinal provided at licensed premises.
22	Eaves gutters repaired.
51	Windows repaired.
35	Floors repaired.
8	Air inlets under floors provided.
17	Roofs repaired.
1	Defective cistern abolished and water supply taken from rising main.
65	Houses provided with sufficient supply of water.
6	Samples of water submitted for analysis.
180	Rooms cleansed and limewashed.
45	Dustbins provided or repaired.
69	Various improvements.
258	Hours' observation work.
2	Pigs removed.
240	Chicken, ducks, etc., removed.
4221	Inspections of stable yards and manure pits.
844	Offensive accumulations removed.
3	Stables paved and drained.
112	Inspections of slaughter houses.
161	Inspections of cowsheds, dairies, and milkshops.
80	Inspections of common lodging houses.
571	Inspections of food shops.
490	Parcels of food examined.
93	lbs. food unfit for human comsumption seized and destroyed.
1138	Visits, interviews, etc., *re* work to be carried out.

General Sanitary Work.—A great deal of useful work is undertaken and carried through every year, and in 1909 it was continued with unremitting energy and perseverance. I cannot speak in terms sufficiently laudatory to convey my appreciation of the work of Mr. James Cave, the Chief Sanitary Inspector. His time is frequently employed after office hours and even on Sunday in the work of his office, with a zeal that cannot be too highly commended, and I have again to thank him for having assisted me to a considerable extent in the preparation of this report.

Some builders, not the most reputable, have continued the practice of doing sanitary work without giving notice to the sanitary authority. This is most objectionable and subversive of efforts made to reach a high standard of excellence, but no regulation exists to put an end to it. The result is that defective work is carried through and covered up, only to come into evidence through its defects. I trust some useful regulation will be passed to prevent the recurrence of this evil, of which I have given some glaring instances in recent reports.

TABLE XXIV.

Summary of Proceedings.

NAME.	OFFENCE.	PROCEEDINGS.
Mr. J. D.	Failing to register as Purveyor of Milk.	Fined 9/-, including costs
Mr. C. K.	Ditto	Ditto

Sanitary Certificates.—These are issued to owners or occupiers applying for same, provided the drains and sanitary fittings comply with the prescribed regulations and certain fees are paid.

The issue of Sanitary Certificates is under the control of the Health Committee, and the requirements and conditions

TABLE XXV.

Comparative Table of all Works carried out during the past ten years.

		1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Public Health and Tunbridge Wells Improvement Acts.	Complaints received and investigated	125	113	105	109	117	118	93	113	94	36
	Premises in respect of which notices have been served	279	732	357	398	102	138	30	27	65	40
	Houses, drains and sanitary fittings inspected	439	936	869	1058	1022	945	822	656	718	410
	Visits of re-inspection or to works in course of progress	3888	3164	2603	2948	2687	2589	2053	2323	2053	1749
	Drains re-constructed	179	269	122	111	71	61	64	89	48	50
	Drains repaired	169	71	64	33	40	45	34	32	43	41
	Choked drains cleared and cleansed	...	21	28	18	20	32	41	28	21	15
	Inspection chambers constructed	92	178	102	85	186	137	138	152	131	102
	Inspection chambers repaired	...	6	9	20	13	9	13	16	32	31
	Drain ventilation shafts erected or repaired	160	208	80	36	45	42	52	37	80	44
	Soil pipes erected	16	40	66	41	61	73	48	35	29	36
	Soil pipes repaired	...	...	...	...	...	...	...	6	25	25
	W.C.'s re-constructed and provided with flushing apparatus	554	513	243	178	196	195	143	129	126	120
	Flushing apparatus repaired	...	...	...	49	6	8	...	...	11	8
	Efficient traps substituted for inefficient ones	476	557	387	273	385	283	287	300	257	242
	Rain water and waste pipes disconnected from drains and made to discharge over properly trapped gullies	207	283	152	169	177	140	89	80	159	88
	Yards and areas paved or paving repaired	260	312	161	112	78	78	69	80	63	64
	New w.c. buildings and apparatus constructed	...	6	22	11	7	7	6	15	5	7
	W.C.'s ventilated to outside air	...	...	...	...	...	2	...	...	2	2
	W.C.'s cleansed and repaired	...	...	...	...	...	3	5	...	29	31
	Defective w.c. buildings condemned and demolished	...	...	...	...	...	4	...	...	6	...
	Urinals re-constructed	...	...	...	...	...	2	...	1	...	...
	New sinks provided	...	...	11	40	25	35	35	39	35	36
	New lavatory basins provided	...	...	...	...	...	...	...	...	29	19
	Old sinks provided with new waste pipes	...	6	11	9	11	45	63	73	119	83
	Urinals provided at licensed premises	2	1	1	2	5	1	2	1	3	1
	Eaves gutters repaired	2	2	5	13	13	5	2	21	53	22
	Windows repaired	4	7	4	14	10	...	9	13	86	51
	Floors repaired	7	...	8	24	6	4	4	12	41	35
	Air inlets under floors provided	...	...	...	...	...	10	6	7	9	8
	Roofs repaired	7	13	7	14	3	7	6	10	47	17
	Defective cisterns abolished and water supply taken from rising main	...	...	43	42	8	38	12	2	11	1
	Houses provided with sufficient supply of water	345	476	23	18	38	137	71	69	86	65
	Samples of water submitted for analysis	11	26	10	4	12	32	26	9	3	6
	Rooms cleansed and limewashed	51	58	37	116	88	92	82	66	179	180
	Dustbins provided or repaired	35	78	105	189	27	69	23	17	81	45
	Wells and cesspools abolished	10	31	3	4	9	3	1	5	3	...
	Cases of overcrowding abated	1	2	1	1	5	...	...	...	...	...
	Offensive ditches cleansed	2	2	4	4	6	2	6	...	...	...
	Houses condemned and closed	...	...	...	5	...	...	1	...	...	...
	Various improvements	38	26	41	38	42	39	56	79	81	69
	Numbers of hours observation work	391	404	605	781	876	732	306	374	478	258
	Pigs removed	23	18	14	...	...	2	19	13	23	2
	Chicken, ducks, etc., removed	...	...	...	...	...	...	...	240	283	240
	Inspections of stable yards and manure pits	2256	2794	2196	1574	2395	2466	3343	3119	3136	4221
	Offensive accumulations removed	38	121	321	244	608	496	684	745	848	844
	Stables paved and drained	5	7	6	5	4	5	1	6	5	3
	Inspections of slaughter-houses	21	25	96	81	68	106	98	189	140	112
	Inspections of cowsheds, dairies and milkshops	121	225	324	243	249	49	129	130	128	161
	New cowsheds constructed	...	...	...	...	...	2	1	3	...	...
	Cowsheds paved and drained	...	1	...	5	3	...	1	...	...	1
	Inspections of common lodging houses	57	104	261	378	72	25	44	92	112	80
	Inspections of food shops	122	134	191	210	332	588	521	508	570	571
	Parcels of food examined	520	601	584	620	1120	916	980	435	520	490
	Food unfit for human consumption seized and destroyed, No. of lbs.	1178	450	403	1937	1344	358	1216	1261	1418	93
	Visits, interviews, etc., *re* work to be carried out	...	...	...	...	...	...	684	1246	1373	1138
Factory and Workshops Acts.	Complaints received from Home Office	...	...	...	2	13	3	2	1	6	5
	Notices served	...	...	...	16	23	17	...	...	...	...
	Inspections of factories, workshops, bakehouses, etc.	49	501	927	1078	1360	1529	1448	1712	1840	991
	Workshops provided with sufficient and maintainable ventilation	...	...	...	21	33	27	3	1	...	11
	Workshop walls and ceilings cleansed and limewashed	...	...	...	92	74	42	9	48	65	53
	Workshop floors repaired	...	...	...	...	...	5	...	...	3	2
	Workshop roofs repaired	...	...	...	...	...	2	...	...	2	2
	Underground bakehouses made certifiable	...	...	...	7	7	...	...	...	...	...
	Underground bakehouses abolished	...	...	...	2	2	...	...	...	1	...
	New bakehouses provided	...	...	...	2	1	...	...	...	1	...
	Drains re-constructed or repaired	...	...	...	4	5	...	...	...	6	2
	New w.c.'s provided	...	...	...	4	6	2	...	1	2	7
	W.C.'s repaired	...	...	...	6	7	5	...	...	3	5
	Cases of overcrowding abated	...	...	...	3	5	7	...	...	1	2
	Yard pavings re-constructed or repaired	...	...	...	5	16	5	...	...	6	...
	Dustbins provided	...	...	...	6	4	2	...	...	3	...
	Drain inlets inside workshops abolished	...	...	...	5	9	2	...	...	1	5
	Efficient traps substituted for defective ones	...	...	...	9	13	...	...	...	21	5
	Workrooms measured up	...	...	...	20	38	19	14	18	19	6
	Visits to outworkers' premises	...	...	...	...	...	...	114	114	132	141
	Visits *re* Shop Hours and Seats Acts	...	...	...	...	...	...	...	74	209	125
Infectious Diseases Acts	Visits to infected houses	405	324	244	748	572	501	274	249	228	314
	Rooms disinfected	162	145	127	366	239	195	337	455	355	575
	Articles of clothing disinfected	2010	2081	1928	3620	4300	3460	7441	6888	7879	13965
	Loads of bedding removed to the steam disinfector and returned to the respective owners	11	10	8	40	12	1	8	2	2	10
	Visits to flush w.c.'s and drains	...	...	155	129	70	620	138	41	51	...
	Public buildings disinfected	...	...	...	...	...	...	6	12	12	23
	St. John's ambulance and private carriages disinfected	...	...	...	...	...	...	10	6	8	8
	Wards at hospital disinfected	...	...	...	...	...	...	4	5	20	13
	Loads of bedding destroyed	...	...	...	...	...	...	...	...	1	1
Food and Drug Acts	Samples of food examined in Public Health Department	52	61	74	86	164	216	142	131	141	157
	Samples of food submitted for analysis	74	44	31	41	100	101	96	103	99	104
	Samples of milk submitted for bacteriological analysis	...	...	...	...	...	...	1	9	8	13
	Samples of food to Clinical Research Association for analysis	...	...	...	...	...	...	8	...	...	5

governing the issue go somewhat farther than what is required by the various Acts of Parliament, especially as regards the law affecting old houses.

It has been proved over and over again that a Sanitary Certificate for a house increases the value thereof to a considerable extent.

It is therefore advisable for all persons when carrying out alterations to drainage or sanitary fittings to bear in mind these facts.

During the year, properties of an aggregate rateable value of £3,521 were examined as a result of applications made, and fees amounting to £59 11s. 11d. were received. A great deal of time is necessarily taken up in carrying out these examinations and in watching the various works carried out, but it is a most satisfactory work from a public health point of view.

TABLE XXVI.

Showing Income derived from Sanitary Certificate Work during the past ten years.

Year.	Aggregate Rateable Value of Properties Surveyed.	Amount of Application Fees received.	Amount of Certificate Fees received.	Total amount received.	What the Income would have been if all the Certificates were taken up that it was possible to grant.
	£	£ s. d	£ s. d.	£ s. d.	£ s. d.
1900	2079	22 1 0	11 15 6	33 16 6	55 2 10
1901	2315	27 6 0	10 7 1	37 13 1	73 10 6
1902	3069	24 13 6	9 0 6	33 14 0	81 1 11
1903	3651	29 7 0	27 0 4	56 7 4	104 1 3
1904	4711	32 0 6	50 14 2	82 14 8	120 3 8
1905	3178	26 5 0	29 3 7	55 8 7	85 0 0
1906	2712	27 6 0	14 1 1	41 7 1	44 16 9
1907	3440	63 15 7	9 1 0	72 16 7	103 10 9
1908	3678	67 5 9	11 0 6	78 6 3	108 15 3
1909	3521	41 14 11	10 10 0	52 4 11	59 11 11
Totals	32354	361 15 3	182 13 9	544 9 0	835 14 10

Food Inspection.—One hundred and four samples of food were submitted to the Public Analyst with the result shown on Table XXVII.

Thirty samples of milk and 19 samples of butter out of the 104 total were purchased informally.

Thirty-two samples of milk out of 48 procured, and seven samples of butter out of 25 procured, were purchased in the public street.

The majority of the samples were purchased by deputies.

The ten samples reported as adulterated were all taken informally, but the following action was taken :—

The eight samples of cream were purchased in receptacles with a label attached in each case stating that a boron preservative had been added to the cream in order to preserve it.

When these samples were submitted to the Analyst his attention was called to the information concerning cream, contained in the circular letter from the Board of Agriculture and Fisheries dated 1st October, 1909, and he was requested to especially direct his attention to the information contained therein.

The vendors of each sample were communicated with, and informed that if more than 35 grains of preservative per pound of cream was found in any further samples analyzed action would be taken against them, notwithstanding the notice on the label.

The vendor of the sample of separated milk was informed of the result of the analysis and that he must not sell separated milk for skimmed milk. He stated he had acted quite in ignorance and promised not to do so again.

The vendor of the sample deficient of 10 per cent. of fat was informed of the result of the analysis. His explanation

was considered satisfactory, and it may be stated that, out of many samples taken during the past twelve years, this was the first complaint against him.

All the samples were submitted to the Public Analyst by the Chief Sanitary Inspector, Mr. James Cave, who is the Officer specially appointed to carry out the provisions of the Acts.

Ninety-three lbs. of food was seized which may be summarized as follows :—47lbs. of Kidneys, 10lbs. of Liver and 36lbs. of Beef.

All these goods were taken before a Magistrate and condemned, and cremated in the Baths furnace.

No action was taken beyond the destruction, no attempt having been made to sell the goods for human consumption.

One hundred and fifty-seven samples of various foods were examined in the Public Health Office ; 113 of these were obtained on Saturday nights and Sunday mornings.

Eighteen samples of various foods were submitted to the Clinical Research Association for examination for tubercle and other bacilli ; these examinations brought to light certain things that enabled useful action to be taken which would have otherwise not been obtained.

Refuse Removal.—The Corporation undertake the removal of house refuse, and very few genuine complaints of nuisance caused by irregular removal have been received, although at times considerable delay has been caused by the inclement weather.

The regulation time for removal is once in nine days in winter and once in seven days in summer, but an effort is made to remove the refuse in the hottest part of the year once in every five days or oftener.

TABLE XXVII.

Return of Analyses of Food Samples submitted to the Public Analyst during 1909.

Description of Samples taken.	No. of Samples.	Analyst's Report.	Proceedings.
Milk	47 — No. 46	Genuine.	
	No. 29	10% deficient in Milk Fat.	Vendor cautioned (see note)
Skimmed Milk ...	1	Separated Milk.	Vendor cautioned (see note)
Butter	25	Genuine.	
Margarine ...	8	Genuine.	
Cheese	6	Genuine.	
Cream	8	All contained a boron preservative, ranging from 11 to 35 grains per lb.	All Vendors cautioned (see note)
Lard	3	Genuine.	
Coffee	6	Genuine.	

The method of disposal of the refuse (which is by means of a shoot at the High Brooms Brick Company's Works, situated at Southborough) is by no means the most satisfactory, and calls for serious consideration.

Common Lodging Houses.—These houses are generally well kept, and the cleansing and limewashing has been carried out in conformity with the Bye-laws.

There are five houses on the register, providing accommodation for 115 persons.

Cowsheds, Dairies and Milkshops.—There are 27 cowkeepers and dairymen and 54 purveyors of milk on the Borough register.

Nine of these persons have no residence in the town, but come in to sell milk. The Dairies Order requires the names of such persons to be on the Borough register.

There has recently been before me some unpleasant evidence of the need for reform in the method of registration, and some further stringent legislation is necessary in order to ensure a pure milk supply, which is so highly desirable.

Slaughter Houses.—There are six private slaughter houses in the town, namely, five registered ones that were established before 1847, and one which was licensed in 1907. Frequent inspections have been made of the premises at all hours, in order to inspect as far as possible the animals slaughtered.

The cleansing and limewashing has been carried out in accordance with the Bye-laws.

Main Sewers, New Houses, &c.—Information has been obtained from the Borough Surveyor's Department, showing that main sewers in the following streets have either been provided, reconstructed or repaired:—

Bowen Road.
Church Road.
Court Road.
Dale Street.
Dunstan Road.
Eridge Road (outfall sewer).
Hungershall Park.
Molyneux Park Road.
Mount Ephraim Road (rear of No. 4).
Mount Pleasant Road.
Mount Sion.
Park Road.
Somerset Road.
Southwood Road.
Standen Street.
Thomas Street.
Trixford Road.
Upper Grosvenor Road (near Bridge).
Upper Grosvenor Road (rear of No. 151).
Victoria Road (from No. 41 to 59).
Westwood Road.
William Street.

207 streets and roads have been regularly swept.

65 new houses have been built.

7,175 dustbins have been periodically emptied and cleansed.

48 road gullies have been re-constructed and properly trapped.

Sanatorium.—One hundred and seventy-six cases of infectious diseases were admitted for isolation and treatment—157 of Scarlet Fever and 11 of Diphtheria. Two deaths occurred, both from Scarlet Fever. At the time of writing this report, increase of accommodation and improvement of the administration of this institution is under consideration.

Health of the Borough.—At the close of the year the health of the Borough was in a most satisfactory condition, and we were practically free from Infectious Disease.

By the kind permission of F. G. Smart, Esq., J.P., of "Bredbury," Mount Ephraim, I am enabled to append the meteorological notes for the year.

I am,

Your obedient servant,

WM. STAMFORD.

METEOROLOGICAL NOTES AT ROYAL TUNBRIDGE WELLS
For the Year 1909.

The total amount of sunshine shown by the Jordan (Photographic) Recorder was 1,856 hours 14 minutes. The mean is 1,847·48. The most sunny day was May 31st, when 15 hours 20 minutes were recorded. There were 67 sunless days, 60·9 being the average.

The sunshine recorded in—

	Hrs.	Mins.	Average. Hrs.	Mins.
January was ...	71	15	63	12
February „ ...	103	41	89	24
March „ ...	82	25	143	27
April „ ...	263	8	190	1
May „ ...	333	1	235	22
June „ ...	136	4	224	12
July „ ...	200	53	244	17
August „ ...	243	58	226	52
September „ ...	137	46	182	22
October „ ...	109	56	119	35
November „ ...	115	54	71	57
December „ ...	58	13	49	55

10	hours of	sunshine	were	first recorded on	March 17th.
11	„	„	„	„	April 4th.
12	„	„	„	„	April 5th.
13	„	„	„	„	May 4th.
14	„	„	„	„	May 22nd.
15	„	„	„	„	May 31st.

15 hours of sunshine were last recorded on May 31st.
14 „ „ „ „ Aug. 7th.
13 „ „ „ „ Aug. 12th.
12 „ „ „ „ Sept. 3rd.
10 „ „ „ „ Oct. 6th.

The greatest heat in the sun was 121·5 degrees on August 12th.

It first reached 100 degrees on March 25th.
„ „ 110 „ April 9th.
„ „ 120 „ May 23rd.
It last reached 120 degrees on Aug. 12th.
„ „ 110 „ Sept. 20th.
„ „ 100 „ Oct. 21st.

The mean solar maximum for the year was 86·0 degrees.

The greatest heat in the shade was 84·0 degrees on August 12th.

It first reached 60 degrees on April 7th.
„ „ 70 „ May 12th.
„ „ 80 „ May 21st.
It last reached 80 degrees on Aug. 15th.
„ „ 70 „ Sept. 17th.
„ „ 60 „ Oct. 19th.

The lowest temperature, 4ft. above the ground on Mount Ephraim, was 17·3 degrees, on March 5th.

The hottest night was August 16th, when the thermometer did not go below 59·9 degrees.

The mean temperature of the year was 47·3, the average being 48·6.

The mean daily range was 13·8 ; the average is 14·6.

The mean temperature of each month was :—

	Deg.	Average. Deg.
January	37·4	37·4
February	35·6	38·0
March	37·2	41·7
April	48·3	46·4
May	51·7	52·3
June	53·8	57·8
July	58·8	61·4
August	61·3	60·4
September	54·4	56·7
October	51·5	49·6
November	40·0	43·6
December	38·4	38·5

The lowest temperature on the grass was 1·4 degrees on March 5th.

The difference between the wet and dry bulbs at 9 a.m. was greatest, 13·5 degrees, on April 9th; the mean being 2·7 degrees.

The last frost in the air in Spring was on April 5th, and the first in the Autumn was on October 30th. The last on the grass in Spring was on June 11th, and the first in the Autumn was on October 6th.

The temperature of the soil at the depth of 1ft. was highest, 67·9 degrees, on August 16th; and lowest, 33·8, on March 6th and 7th. The mean was 48·8 degrees, 49·9 being the average.

It first reached 50 degrees on April 20th.
" " 60 " May 23rd.
It last reached 60 degrees on Aug. 31st.
" " 50 " Oct. 25th.

The means for the months were :—

	Deg.	Average Deg.
January	38·0	38·1
February	35·5	38·3
March	37·3	40·9
April...	47·5	46·8
May	53·8	53·8
June	57·9	59·6
July	61·4	63·6
August	63·7	62·7
September	57·4	58·4
October	53·8	51·4
November	41·0	44·8
December	38·6	40·3

The Anemometer, showing the horizontal force of the wind recorded 87,269 miles, the mean being 88,673. The most windy day was October 23rd, when 614 miles were recorded. The calmest, January 3rd, when only 35 miles were shown.

The wind at 9 a.m. was	N.	on	34	days.
„ „	N.E.	„	40	„
„ „	E.	„	34	„
„ „	S.E.	„	30	„
„ „	S.	„	41	„
„ „	S.W.	„	61	„
„ „	W.	„	61	„
„ „	N.W.	„	64	„

The rainfall amounted to 35·14 inches. The average is 30·25 inches. It fell on 197 days, the average being 175·2. It came as snow on 27 days. The most rain that fell on one day was 1·73 inches, on October 26th.

The rainfall in—

	ins.	Average ins.
January, was	1·16	2·54
February „	·63	2·1
March „	4·51	2·48
April „ ...	1·73	1·83
May „	1·88	1·70
June „	2·91	2·32
July „	2·93	2·21
August „	2·60	2·46
September „	3·80	2·03
October „	7·15	4·23
November „	1·18	3·22
December „	4·66	3·11

The mean amount of cloud at 9 a.m. was 6·6, 7·2 being the average ; 10 representing overcast.

There were 15 fogs, and it was slightly foggy on 14 other mornings.

There was thunder and lightning on 23 days, there being five storms near.

F. G. S.