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TWENTY-FIFTH ANNUAL
REPORT
OF THE
SANITARY CONDITION
OF THE
URBAN DISTRICT
OF
WATFORD,
FOR THE YEAR
1897,

BY
ROBERT A. ST. LEGER, M.B.,

Medical Officer of Health.

WATFORD :

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TO THE CHAIRMAN & MEMBERS OF THE WATFORD URBAN DISTRICT COUNCIL.

GENTLEMEN,

The year has been a very mild one ; no severe epidemic has attacked your district ; and the death rate for the year is remarkably low, the lowest on record.

However, with increase in population the fact remains there has been a diminution in the births, and a glance at Table III. will show that the number of births is lower than it has been for some years.

The railway divides your district into 3 parts, and I have taken advantage of this division for purposes of comparison. These divisions are—

WATFORD,
BUSHEY,
CALLOW LAND.

Situated as it is on the slopes of hills rising up from the banks of the River Colne, the town is naturally well drained with the exception of that portion lying immediately in the valley of the river, which at times is liable to flooding. The soil is gravel on chalk, except in the New Bushey area, where the London clay crops up. Throughout the whole district, with the exception of the narrow courts still existing in the old portion of the town, the streets are well laid out, wide and airy.

The Callow Land or Northern portion of the district is almost entirely new, having been built during the last 7 years. It still continues to grow very fast, rejoices in a phenominally low death rate and a comparatively high birth rate (see Table), due to the fact that it is almost entirely populated by young married people.

WATER SUPPLY.

This is derived from three wells sunk in the chalk.

No. 1.—Built in 1854, is sunk 25 feet and steined with bricks set in cement, then bored 90 feet with 12-in. bore.

No. 2.—Built in 1878, consists of a 9-in. bore 150 feet deep. This well syphons into No. 1.

No. 3.—Built in 1888, is sunk 40 feet and lined with iron cylinders, then bored 100 feet with 18-in. bore.

A study of appended analysis will shew an exceedingly pure but hard water. The hardness, which is chiefly due to Calcuim salt, is removable by boiling, and is in no way detrimental to health.

These wells supply the whole district with the exception of the greater part of New Bushey, which is supplied by the Colne Valley Co., which water is identically the same, but softened before distribution.

On November 27th a constant supply was substituted for the intermittant. With the intermittant supply the daily average quantity of water pumped was

761,639 gallons or 33·7 gallons per head of population.

With constant supply for December 809,098 or 35·8 gallons per head.

The additional cost being for December, £1 16s. 10d.

The wells are situated at the lower end of the High-street, in the centre of the town.

From the wells the water is pumped to all parts of the town, and also to the reservior, which is situated at top of the Pinner road, half-a-mile south from the wells, and is capable of holding 1,000,000 gallons.

The pumps work from 6 a.m. to 10.0 p.m. When the pumps are not working the supply is by gravitation from the Reservoir.

Your attention has been drawn to the great waste of water occasioned by defective service pipes and fittings—and you have drawn up Regulations as to Water Fittings.

This is no new matter ; in 1884 you took advice on this.

At that time you were pumping the same quantity of water (782,721 gallons per diem,) although the population supplied was less than half what it is now.

However, a more serious matter than the waste is the large number of closets, the pans of which are supplied directly from the main with a screw tap.

With these there is very serious risk of fouling the water ; the adoption of the constant supply will, however, minimise the risk very much, but for all that, these taps should not be allowed, and separate water cisterns should be compelled for every closet, old and new.

The water Inspector tells me he has much difficulty in regard to this matter.

A feature of the year has been the fitting up of a laboratory for my use. This has been of great service and it is now possible to conduct chemical examinations of the water, but during the coming year I hope, to also conduct bacteriological examinations of the same. At present we are relying on outside assistance, and samples of the water are sent up once every quarter to Professor Attfield for this purpose.

SEWERAGE AND DRAINAGE.

The town is sewered on the “ separate ” system. The sewage gravitates to the sewage farm situated on the south-eastern outskirts of the town, there it

passes into tanks, from which it is pumped over the farm, being disposed of on the broad irrigation principle. The storm water sewers empty into the river Colne.

During the year a new high-level intercepting sewer, varying from 18 inches to 2 feet in diameter, was completed at a cost of £12,000. This sewer takes all the Callow Land sewage and that of Watford lying to the north of its course, and as much below as the levels will admit. The sewers are ventilated by means of surface gratings and up-cast shafts. They are flushed once a fortnight by means of a portable van holding 450 gallons, and, with the hose. There is also one large automatic flushing tank, situated at the top of Bedford Street, the upper part of the town, and one at the extreme end of the new sewer.

SEWAGE DISPOSAL.

New engines, pumps and ejectors, on the Shone system, for lifting the sewage on to the farm, are now being fixed.

SCAVENGING.

During the year there has been improvement in this respect—many fixed dust bins having been abolished and the district being scavenged more frequently.

At present there is a daily service for the High Street and all courts and alleys, the rest of the town being scavenged twice weekly.

The refuse is being utilized to raise the new recreation ground, a portion of which is below flood level.

Complaints were received during the year of nuisances arising from this, and now care is taken to have the refuse speedily covered with earth and disinfected.

VITAL STATISTICS.

Growth of the Town.

In 1871 the area of the district was 530 acres and the population 7,461. In 1891 at the general census the population had swollen to 16,819 and the area $784\frac{1}{2}$ acres. In the following year $260\frac{1}{4}$ acres were added to the district. The following tabular statement of plans for new houses approved since that date will show the rapid growth of the Town.

1892.....	418	1895.... ..	218
1893.....	264	1896.....	295
1894.....	328	1897.....	456

The Population of your district estimated to the middle of 1897 is 25,800.

The area of the district is $1,044\frac{3}{4}$ acres, which gives an average density of population of 24.71 per acre.

In Ballard's Buildings—one of the most crowded portions of the Town—the density is 204.66 persons per acre.

Marriages.

1st Quarter	....	....	....	31
2nd „	....	....	....	61
3rd „	....	....	....	64
4th „	....	....	....	51
				<hr/>
		Total	....	207

Deducting 16 of these, in which neither of the contracting parties resided in the Urban District, the

Marriage rate is 14.65

These marriages took place as follows :—

Church of England	....	....	130
Other Denominations	....	....	35
Registry Office....	....	....	28

Births.

The Births registered during the year were 679, 357 males and 322 females. Excluding one which took place in the Union Infirmary, the mother of whom did not belong to your district, the Birth rate for the year was 26·27. In 1896 the Birth rate was 28·58. Illegitimate Births, 15.

Deaths.

The total Deaths registered as occurring in the District during 1897, was 270.

From this number must be deducted 7 deaths which took place in the Workhouse Infirmary, one in the Cottage Hospital, and four in the Isolation Hospital, of patients who, previous to admission, resided outside the District.

The total Deaths thus corrected represented a mortality of 10·0 per 1000 of estimated population.

In 1896 the Death rate was 11·87.

Nineteen of the Deaths registered were above 80 years of age, one being 90.

Comparing the Deaths under one year with Births (*vide* Table subjoined), it will be seen that the corrected infant mortality was 103·09 per 1000 Births registered.

TABLE 1.—(A) TABLE OF DEATHS DURING THE YEAR 1897, IN THE WATFORD URBAN 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 FIVE YEARS OF AGE.																									
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phtisis.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Totals.			
WATFORD—																																
(a) Old Town	169	49	11	6	6	38	59	..	..	..	..	..	..	..	..	..	..	2	1	3	1	..	1	15	1	..	1	133	58	
(b) New Bushey	43	12	3	..	2	11	15	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	2	2	..	..	1	7	15
(c) Callow Land	22	8	..	..	3	7	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	3	8	
Workhouse Infirmary ..	23	..	..	..	1	10	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Isolation Hospital ..	11	1	4	2	4	..	..	..	5	1	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
Cottage Hospital ..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Totals	270	70	18	8	16	68	90	..	5	2	..	6	2	1	..	..	..	2	1	5	2	..	1	19	3	..	2	243	83	
Deaths occurring outside the district among persons belonging thereto.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deaths occurring within the district among persons not belonging thereto.	12	..	1	1	..	4	6	..	1	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	11

TABLE II.—SHOWING COMPARATIVE STATISTICS OF
DIFFERENT PORTIONS OF THE DISTRICT.

DISTRICT.	POPULATION.	BIRTHS.	BIRTH RATE.	DEATHS.	DEATH RATE.	NO. OF CASES OF INFECTIOUS DISEASE NOTIFIED.
Watford	18300	460	25·13	170	9·29	69
Bushey	3290	79	24·01	43	13·07	20
Callow Land	4210	137	32·54	22	5·22	24

TABLE III.

Schedule of Births and Deaths for previous Years.

Year.	Population.	Births.	General Birth Rate.	Deaths.	General Death Rate.	Zymotic Death Rate.
1880	10,000	323	32·3	191	19·1	2·5
1881	10,073	344	34·15	182	18·06	2·48
*1882	12,653	339	26·78	181	15·68	2·08
1883	12,684	433	34·13	231	16·23	1·13
1884	12,950	442	34·2	261	17·8	1·6
1885	13,220	425	32·9	262	17·3	2·7
1886	13,490	463	34·32	276	18·08	2·37
1887	13,840	462	33·38	216	13·51	1.
1888	15,000	466	31·06	294	19·6	2·49
1889	15,300	457	29·86	237	15·49	1·7
1890	16,000	328	20·5	248	15·5	·71
1891	16,819	396	23·54	242	12·94	·34
*1892	19,400	547	28·19	306	13·93	1·9
1893	20,500	580	28·78	284	12·82	·87
1894	21,500	610	28·37	248	10·46	·51
1895	23,200	724	31·2	400	15·38	2·34
1896	24,000	606	28·58	285	11·87	·87
1897	25,800	679	26·62	270	10·0	1·00

* District enlarged in this year.

ZYMOTIC DISEASE.

The seven principal zymotic diseases caused deaths, as follows:—

Small-pox	....	....	....	....	0
Measles	....	....	....	....	1
Scarlatina	....	....	....	....	0
Diphtheria	....	....	....	....	6
Membranous Croup	....	....	....	....	0
Whooping Cough	....	....	....	....	5
Fevers	(Typhus	....	....	....	0
	Enteric	....	....	....	3
	Others or Doubtful	....	....	....	0
Diarrhœa	....	....	....	....	8
Total				....	<u>23</u>

The Zymotic death-rate is 1·00 per thousand.

The Infectious Diseases (Notifiation Act) was adopted in April, 1891.

During the year 113 cases have been notified:—

Small-pox	....	....	....	....	0
Scarlatina	....	....	....	....	46
Diphtheria	....	....	....	....	41
Membranous Croup	....	....	....	....	1
Enteric Fever	....	....	....	....	6
Continued Fever	....	....	....	....	1
Puerperal Fever....	....	....	....	....	0
Erysipelas	....	....	....	....	18

This gives a notifiable sickness rate of 4·76 per thousand of population, compared with 4·2 for 1896.

The case mortality from Diphtheria was 6·63. There was also one death returned as Acute Laryngitis Of Enteric, 3 out of the 6 cases notified died.

Of the 3 deaths returned as Erysipelas, two were of Infants under a month old.

SMALL-POX.

The district has been free from the disease since February, 1895.

VACCINATION ACT.

It is my duty to call your attention to the large number of defaulters under this Act, there being in the Watford District (comprising Watford, Aldenham, and Bushey), for each 100 registered births. In the year :—

1894	....	....	25 per cent.
1895	....	....	12 „
1896	....	....	30 „

During the year a Special Committee was appointed by the Guardians to report on this matter.

This Committee held several meetings, and interviewed a large number of the objectors. Conscientious scruples were alleged. To modify these the Guardians directed that Calf Lymph should be used whenever desired by the parents. However, so far there is no evident improvement.

The Guardians are desirous of doing their duty, and as soon as the matter is definitely settled by Legislation, no doubt the law will be enforced.

This increasing number of unvaccinated persons is a public danger, and in view of this the old hospital buildings at Holywell Farm are being kept in readiness should any cases of small-pox occur.

The only true means of stamping out small-pox is rigid Vaccination and Re-vaccination.

SCARLATINA.

In the Spring there was a somewhat sharp outbreak of this in the Callow Land portion of your district. The first two cases, which occurred on April 25th and 30th respectively, appear to have been imported, the first from Newborough, near Burton, where scarlatina was prevalent at the time; and the second from St. Albans' Fever Hospital. In the latter case a boy had been under treatment there for seven weeks. On coming home to Watford, whither his parents had removed during his isolation, the disease was contracted by his brother, and, in spite of energetic measures spread throughout the family.

In all there were 17 cases, mostly children. The disease was of a mild type, and caused no deaths.

The following measures were taken to stamp out the disease:—

- (a) Early removal of cases to hospital, and disinfection of infected premises.
- (b) Exclusion of all scholars from infected houses from day and Sunday schools.
- (c) Exclusion of all cases of sore throat, as far as practicable, from school.

DIPHTHERIA.

In January Mr. Arnold Royle, C.B., on behalf of the Local Government Board, made a special investigation regarding the prevalence of this disease in and about Watford, and later in the year issued a report which has been submitted to you.

His investigation extended over a period of five years. Beyond the fact that 76 per cent. of the deaths recorded were between the ages of 1 and 15, and that the disease was spread by personal communication, his conclusions were of a negative character, but he laid special stress on the importance

of thorough disinfection by steam, and I am pleased to say the Isolation Hospital Committee are now having a van built for the conveyance of infected clothing, in furtherance of this suggestion. During the past year 41 cases were notified, 29 of which were removed to the Hospital; many of the cases were of a very mild character, so much so that in 8 cases the Inspector found the patients already recovered, though the house was visited the day after the notification was received, and two others, which were removed to Hospital, were of so doubtful a character that they were isolated during the whole of their stay.

No doubt in certain cases a rapid diagnosis was arrived at, with a laudable desire to comply with the Notification Act. One medical practitioner, who was responsible for several of the very mild cases notified, gave his opinion that all sore throats should be notified, and it is difficult to see how to combat that opinion, unless provision is made by you for the Bacteriological examination of all mild sore throats as is done by the Rural Sanitary Authority. However, on the other hand there were several very severe cases, no less than 6 deaths being attributed to this disease.

ENTERIC FEVER.

Six cases notified, three of which ended fatally.

March 3rd.	M.	æt 16.	Cowboy; no history; new house; good sanitary arrangements.
May 17th.	M.	æt 24.	Plumber; brought home ill from Stanmore.
„	F.	æt 19.	Domestic servant; no history; no sanitary defects.
Oct. 25th.	F.	æt 5.	Disease contracted at Maidstone.
Nov. 15th.	M.	æt 18.	Painter; came home ill from London.
Nov. 28th.	M.	æt 28.	Grocer; sanitary defects in honse; disease believed to have been contracted away from Watford.

MEASLES.

This disease made its appearance in October, and quickly assumed an epidemic character. Unfortunately, my attention was not directed to it until November 5th. On visiting the Callow Land Schools Infant Department, I found nearly half the scholars were absent, and inspection of those present clearly showed several others who were sickening for the disease. Under the circumstances I advised closure of the School. This was done for 14 days with satisfactory result.

A few days later I found it necessary to apply the same treatment to the Infant Department of the Sotheron Road Schools.

In the interim the schools themselves were fumigated and cleansed throughout.

The cases were of a very mild character, only one death being attributed to this cause.

Having regard to the infectious character of this complaint, and the dislocation to school work it entails, besides leading in many cases to life-long deterioration of health, it would be well for you to add Measles to the list of notifiable diseases.

The only chance of doing any good is early notification of the first few cases that occur, prompt attention to these may stave off an epidemic.

Apart from this, it would direct the attention of parents to the serious nature of the complaint, and would then be possible to keep those ill from mixing with the healthy; at present, in many cases, no precaution whatever are taken by the parents in this respect.

TABLE IV.—SHOWING DATES NOTIFICATION RECEIVED.

MONTH.	SCARLATINA.	DIPHTHERIA.	MEMBRANOUS CROUP.	ENTERIC FEVER.	CONTINUED FEVER.	ERYSIPELAS.	TOTAL FOR QUARTER.
January ...	4	2	—	—	—	3	} 28
February ...	7	3	1	—	—	2	
March	1	2	—	1	—	3	
April	2	3	—	—	—	1	} 31
May	14	4	—	2	—	2	
June	—	3	—	—	—	—	
July	3	3	—	—	—	2	} 14
August	1	1	—	—	—	1	
September	—	—	—	—	1	2	
October ...	5	7	—	1	—	—	} 40
November	8	7	—	1	—	1	
December ..	1	7	—	1	—	1	
TOTAL	46	41	1	6	1	18	113

TABLE V.—SHOWING No. NOTIFICATIONS AND DISEASE NOTIFIED FROM 1891—1897.

DISEASE.	1891	1892	1893	1894	1895	1896	1897
Small Pox	* —	—	10	1	1	—	—
Scarlatina	4	52	364	60	66	44	46
Diphtheria	12	10	8	7	23	28	41
Membranous Croup ...	—	2	5	2	2	—	1
Fevers—							
Enteric or Typhoid...	9	5	2	7	3	9	6
Continued	—	—	—	—	1	—	1
Puerperal	—	1	1	—	1	—	—
Erysipelas	7	18	26	6	13	20	17
Estimated Population ...	16,819	19,400	20,500	21,500	23,200	24,000	25,800

* For 9 months.—Notification Act came into force in April of this year.

PRECAUTIONS TAKEN TO PREVENT THE SPREAD OF INFECTIOUS DISEASE.

The following are the means adopted to prevent spread of infectious disease :—

Immediately notification is received, the infected house is visited, and if the patient be not removed into Hospital, steps are taken to see that he is properly isolated.

Intimation is given to the Head Teacher of the Schools, attended by members of the infected household, with the view to exclude any scholars from attendance until there is reason to believe they have ceased to be in an infectious condition.

On the recovery of the patient, or his removal to Hospital, the infected rooms are sulphured, the walls are stripped, and all woodwork cleansed with carbolic acid and water, and ceilings limewashed. Where permission is given the infected bedding is sent to the Hospital for disinfection by steam.

All Library books found on the premises are either sent to the Fever Hospital or burnt.

The Disinfection of houses is personally superintended by Mr. Baker or his Assistant.

FEVER HOSPITAL.

This has done good work, and continues to grow in public favour. No less than 75 cases, out of a possible 92, being removed there for treatment. For further details I would refer you to the report of the Medical Superintendent.

COTTAGE HOSPITAL.

In commemoration of Her Most Gracious Majesty's Long Reign, this Institution was enlarged during the year, the additions including a new ward of six beds and operating theatre.

The accomodation now being—

15 Beds and 2 Cots.

During the Hospital year (June to June), 147 in patients (113 surgical and 36 medical) were treated, an increase of over 30 per cent. on any previous year.

This Hospital is chiefly supported by voluntary contributions, and is deserving of your support.

DAIRIES.

Dairies, cowsheds, and milk shops order :

The regulations of dairies, cow sheds and milk shops, and the supervision of milk sellers has had systematic attention throughout the year, fortnightly visits being paid by the sanitary inspector. Special care is taken that the ventilation, lighting, cleansing, draining, and water-supply of premises used for the milk trade are thoroughly efficient. Printed regulations are supplied free to all engaged in the business, and all that is necessary for maintaining milch cows in health and condition, and for protecting milk from infection or contamination is insisted on.

BAKEHOUSES.

These have been inspected from time to time ; they have all been found clean and well kept.

SLAUGHTER HOUSES.

These have been regularly inspected during the year. They have been kept clean, but certain of them, from the method of their construction, are unfit for use, and should be closed. Especially I would mention the one in the rear of Day's Lodging House, New Street. Situated among crowded surroundings, approached through an ill-paved yard, and shut in by high walls, this place is most objectionable.

I trust in the near future you may see your way to erect a public abattoir, and, in furtherance of this object, will refuse all applications for new licenses that may be applied for.

All slaughter houses should be provided with properly covered receptacles for the removal of blood, garbage and filth, and other products of slaughtering. At present the common practice is to deposit same on the manure heap.

UN SOUND FOOD.

There were 13 seizures of unsound food. In each case the article was condemned, but in no case did you consider it advisable to take legal proceedings.

Mr. Baker reports that a great deal more care is taken by the various vendors than was the case a few years back.

ALLOTMENTS.

The far-seeing policy of leasing Brightwells Farm last year has already become apparent, and not only has the additional ground enabled you to carry the sewage further away from the Town, but also to give up a portion of the old farm in allotments, which were urgently required, owing to the appropriation of many of those at Harwoods Farm.

The present allotments are as follows :—

Loates Lane	....	....	....	177
Callow Land	....	....	....	181
Harwoods Farm....	....	....	....	100
Holywell Farm	....	....	....	89

The great benefits derived from the provision of allotments for the working classes is of so manifest a character, that any step in this direction is a wise one.

COMMON LODGING HOUSES.

The annexed Schedule gives full particulars regarding accommodation, sanitary arrangements, etc. It is desirable that for cleanliness sake, single beds be substituted where at present double beds are used for other than married couples.

TABLE VII.—COMMON LODGING HOUSES.

NAME OF HOUSE.	KEEPER OF HOUSE.	NUMBER OF BEDROOMS ALLOTTED TO LODGERS.	NUMBER OF BEDS.				CUBIC SPACE AFTER MAKING DEDUCTIONS.	VENTILATION PROVISION, &c.	SANITARY ARRANGEMENTS AND GENERAL CONDITION OF PREMISES.	REMARKS.		
			Double	Single	Married Couples	Average Number of Lodgers per Night.						
			Men	Women	Children							
No. 3, New Street.	Wm. Day.	6	6	14	2	20	Nil.	2	306 cubic feet	Windows to outer air, and Chimneys.	One Closet situate in yard. Public Urinal close by. The walls are dry. The water supply sufficient.	This house is clean and orderly kept. The question of further closet accommodation is having attention. The married couples' rooms are properly separated from the single beds.
The Angel Inn, High Street.	A. Rayment.	5	18	2	3	14	1	3	436 cubic feet	Windows to outer air, and Chimneys.	Three Closets situate in yard. Urinal. The walls are dry. The water supply sufficient.	Improvement has taken place in this house by partitioning off the double beds, and is steadily improving in cleanliness under the new Landlord.
The Hit or Miss Inn, High Street.	Mrs. Lovegrove	5	5	8	3	8	2	1	301 cubic feet	Windows to outer air, and Chimneys.	Filthy and defective Closet adjoining Day Room. Kitchen and Day Room filthy and insufficient. Water is laid on to the house. Unventilated and defective drain passing through building.	This house is orderly kept and the rooms for sleeping clean. The question of enlarging the Day and Kitchen Rooms, providing new Closets, Urinal and Drainage is now in hand.
The Holly Bush Inn, High Street.	H. Barr.	3	4	8	Nil.	15	Nil.	Nil.	250 cubic feet	Windows.	The sanitary condition is bad. Ill-ventilated Closet indoors, next Day Room. Unventilated Drain passing under building, etc.	The question of improving the sanitary arrangements have been placed in hand and will shortly be commenced. This house receives single men only.
The Red Lion Inn, Red Lion Yard	M. Sullivan.	2	2	7	Nil.	8	Nil.	Nil.	396 cubic feet	Windows and Chimneys.	Indoor and outdoor Closets and Urinal. The walls, etc., are dry and the water supply sufficient.	This house receives single men only.

TOWN IMPROVEMENT.

Meeting Alley.—This has been repaved.

Recreation Grounds.—These require attention. With the rapid growth of the town their necessity becomes more apparent.

The ground in Watford Fields requires attention ; it would be well to make some provision for the better care of the turf and protection of the young trees.

The New Recreation Ground, situated on the bank of the river, should be properly laid out and planted with shrubs.

Another ground is badly required for the Callow Land district.

St. Albans Road Bridge.—It is with pleasure that I record the fact that steps are now being taken to widen this important approach to the town.

Water Lane.—The development of the Bushey Grove estate and increased traffic resulting therefrom, urgently calls for the widening of this street. I trust you will take this matter in hand and at the same time will demolish the wretched insanitary cottages *en route*.

Public Lavatories.—More of these are required in various parts of the town.

Electric Light.—Preparations are being made for lighting the town with electricity, the generating station to be at the Sewage Disposal Works.

Bathing Place.—I must again draw your attention to this matter. As the town has grown, so has the number of the bathers, leading in summer weather to much overcrowding.

The enlargement of the bathing basin, and provision of more bathing cabins and less primitive sanitary arrangements is called for in the interests of public decency.

I trust in the coming year some of your number may take a personal interest in the matter, and any outlay in the improvement of this will be well made.

It is very desirable that the town should be furnished with a Swimming bath which would be available in winter.

Fire Brigade.—Your attention has been directed to this, and steps are now being taken to take over the Engine and Escape and build a Fire Station.

INSANITARY PROPERTY.

Otterspool Cottages.—These buildings were condemned and closed during the year.

Courts and Alleys.—These were the subject of a special report to you during the year. Many of them require paving and more adequate closet and slop-water provision, and all of them require lighting. Peopled as they are by the poorest classes, where habits are not of the cleanest, it is almost impossible, in their present state, to keep them clean. During the year much care was given to them and a daily scavenging service instituted, but this is not sufficient, and in the coming year I trust you will take them in hand and see that they are put in a sanitary condition. Below I append details of some of them.

Ballard's Buildings.—Legal proceedings for the closure of a portion of these, early in the year, failed, the opinion of the Bench being that the whole property should be treated as an insanitary area. I trust the matter will not be allowed to rest. The

yard is paved with cobbles and drained by means of gullies situated in the centre of the roadway, down which it is the custom of the inhabitants to empty their bedroom utensils and slop-water. As the cobbles are loose round about the gullies this proceeding is most objectionable. The cottages are in a bad state of repair—many by reason of adjacent buildings—badly ventilated, damp and dark. The only sanitary conveniences are two rows of antiquated trough closets, situated at the bottom of the yard, and over 50 yards distant from some of the cottages. Sufficient care is not taken to keep these closets flushed, being left, as they are, to manual labour. Automatic flushing cistern should be provided; however, owing to their construction it is impossible to keep them sweet.

Butchers Yard.—This yard calls for immediate attention, being dangerous to health and limb, owing to defective paving, storm water provision, and absence of public lighting.

Red Lion Yard.—This yard requires paving and making up, and the cottages made habitable.

* In January 1898, whilst excavating the ground for the purpose of relaying a drain, five human graves were opened: they were evidently very old—no traces of the coffins, with exception of the iron fittings, remaining. The bones were replaced in position.

Boot Yard.—This yard consists of 8 cottages and a bakehouse. It is gravelled in the upper part and lower down paved with cobbles loosely set. The sanitary arrangements consist of 2 filthy closets and 3 gullies for the disposal of the storm water, the latter being used also for disposal of bedroom slops.

N.B.—Since writing this report steps have been taken for the abolition of the closets and the erection of proper sanitary conveniences.

Lamb Yard.—The cottages have been put in a proper sanitary state, but the yard itself requires paving and making up. Frequent complaints are received of foul smells from the yard gullies, and in the wet weather the water settles in pools.

Farthing Lane.—This yard requires repaving and provision for storm water, also better closet accommodation.

Bridge Place.—This Court, situated at the bottom of the town, and liable to occasional flooding, consists of 14 cottages, in which reside 67 inhabitants—14 men, 16 women, 37 children. All the cottages, without exception, are in a delapidated, almost ruinous state, the ground floors of eight of them being about a foot below the level of the Court. Everywhere the guttering is defective, rendering the cottages very damp, especially in wet weather. The sanitary arrangements consist of 3 closets and four yard gullies. The Court is gravelled, and round the gullies paved with cobbles loosely set. These gullies are used for all refuse water and bedroom slops. Every care is taken that the closets are well flushed, and the Court is scavenged daily. I trust in the coming year you will have this Court properly made up and paved, and will call upon the owners to put the cottages in habitable repair.

GENERAL SANITARY NOTES.

Difficulties have arisen through more than one house being connected with a single drain. The owners in several cases calling upon the Board to refund a portion of the expenses incurred in carrying out alterations required by the Sanitary Department, on the plea that the drain was a "public sewer."

Inspection Chambers.—More care is required in the building of these. In several cases blockages have occurred in quite new premises, constituting the chambers little cesspools.

In the coming year I would suggest for your consideration the appointment of a Sanitary Committee as distinguished from the Plans Committee. At present so much time is taken up with plans of new houses, &c., that but scant attention is given to this important department.

EDUCATION ACT.

The rapid growth of the town has necessitated much expenditure on the part of the School Board. There are now seven Board Schools, four having been built in recent years, and on most approved sanitary principles.

One, the Victoria Schools, which has accommodation for 480 boys, 240 girls, and 300 infants, was completed during the year at a cost of over £10,000.

In connection with one of the older ones, viz., those in Red Lion Yard, serious sanitary defects were discovered in the late autumn, necessitating thorough reconstruction and remodelling of the whole arrangements.

I regret in this matter it was not deemed advisable to erect the latrines in the open, and apart from the building as I strongly advised at the time. The sanitary arrangements of all Schools, and especially compulsory ones, should be above suspicion.

Subjoined you will find an epitome of MR. BAKER'S report, and also some meteorological returns for the year.

In conclusion I would like to express my indebtedness to Dr. Gruggen, Medical Officer of Health for the Rural Districts, who has at all times been ready to give one the benefit of his advice and assistance, and, during my absence from home has acted for me.

To Mr. Waterhouse for much kindly help in drawing up the report.

And to Mr. Baker for the zealous way in which he has carried out his duties, and in so doing has contributed very materially to the healthiness of the town.

I am, Gentlemen,

Your obedient servant,

ROBERT A. ST. LEGER.

SUMMARY OF ACTION TAKEN BY THE
SANITARY INSPECTOR FOR THE
YEAR, 1897.

Communications received respecting complaints, &c. ...	...	459
Orders issued for sanitary amendment and premises ...	...	268
Defective drains opened up and re-laid ...	...	211
Defective soil pipes and ventilating shafts carried up efficiently		96
Wastes from baths, lavatory fittings, and sinks properly trapped		214
Defective closets ...	...	157
Drains repaired, cleansed and trapped ...	...	58
New water closets constructed to replace dilapidated buildings		19
Houses and premises repaired, cleansed and purified ...	...	153
Houses fumigated, paper taken off walls, and either re-papered or coloured ...	...	113
Accumulations of manure and organic matter removed		39
Manure receptacles constructed ...	...	11
Yards re-paved ...	...	22
Unwholesome houses reported ...	...	4
„ do. closed ...	...	4
Overcrowdings abated ...	...	3
Animals removed, being improperly kept ...	...	17
Common lodging houses visited (including 4 nightly surprise visits) ...	...	5
Bakehouses ...	Regularly inspected.	
Licensed slaughterhouses ...	Do.	
Dairies, cowsheds and milkshops ...	Do.	
Meat seizures, etc. ...	...	13
Prosecutions following thereon ...	...	0
Houses numbered ...	... Various.	
Scavenging of the district ...	... Superintended.	
Carcases of dead dogs, cats, &c., removed and properly buried ...	Numerous.	
Travelling vans visited ...	... Various.	
Prosecutions, Sections 41 and 102 P. H. A. ...	...	2
Urinals provided ...	...	2
Infected houses visited ...	...	113

1897. A CONTRIBUTION TO THE WATFORD METEOROLOGICAL RETURNS.

The total rainfall for the year was 25·73 inches.

The fluctuation of subsoil water being 5ft. 1in.

MONTH.	DAYS IN WHICH RAIN FELL.	RAINFALL. *	AVERAGE HEIGHT OF SUBSOIL WATER ABOVE SEA LEVEL. †
January	17	1·90	194·42
February	13	2·51	195·525
March.....	22	3·60	195·975
April	17	1·64	195·7
May.....	11	1·19	194·4
June	12	3·35	193·35
July	6	·96	192·9
August	15	3·40	192·3
September.....	14	2·54	192·075
October	8	·72	191·54
November	12	·93	191·15
December	19	2·99	190·975

166 days on which ·01 inch or more fell.

* As measured at Frogmore by A. P. Blathwayt, Esq.

† As measured at Ashlands by Professor Attfield, F.R.S. Ashlands is 267 feet above sea level, and the well in which these observations were taken is 80 feet deep. The observations were made weekly. The highest readings observed were on March 14th, 21st, 28th and April 1st, namely 196 feet, while the lowest was on December 5th and 12th, namely 190·9. The whole fluctuation for the year was therefore 5 feet 1 inch.

1881 A COMPANION TO THE MIRROR

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