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Contributors

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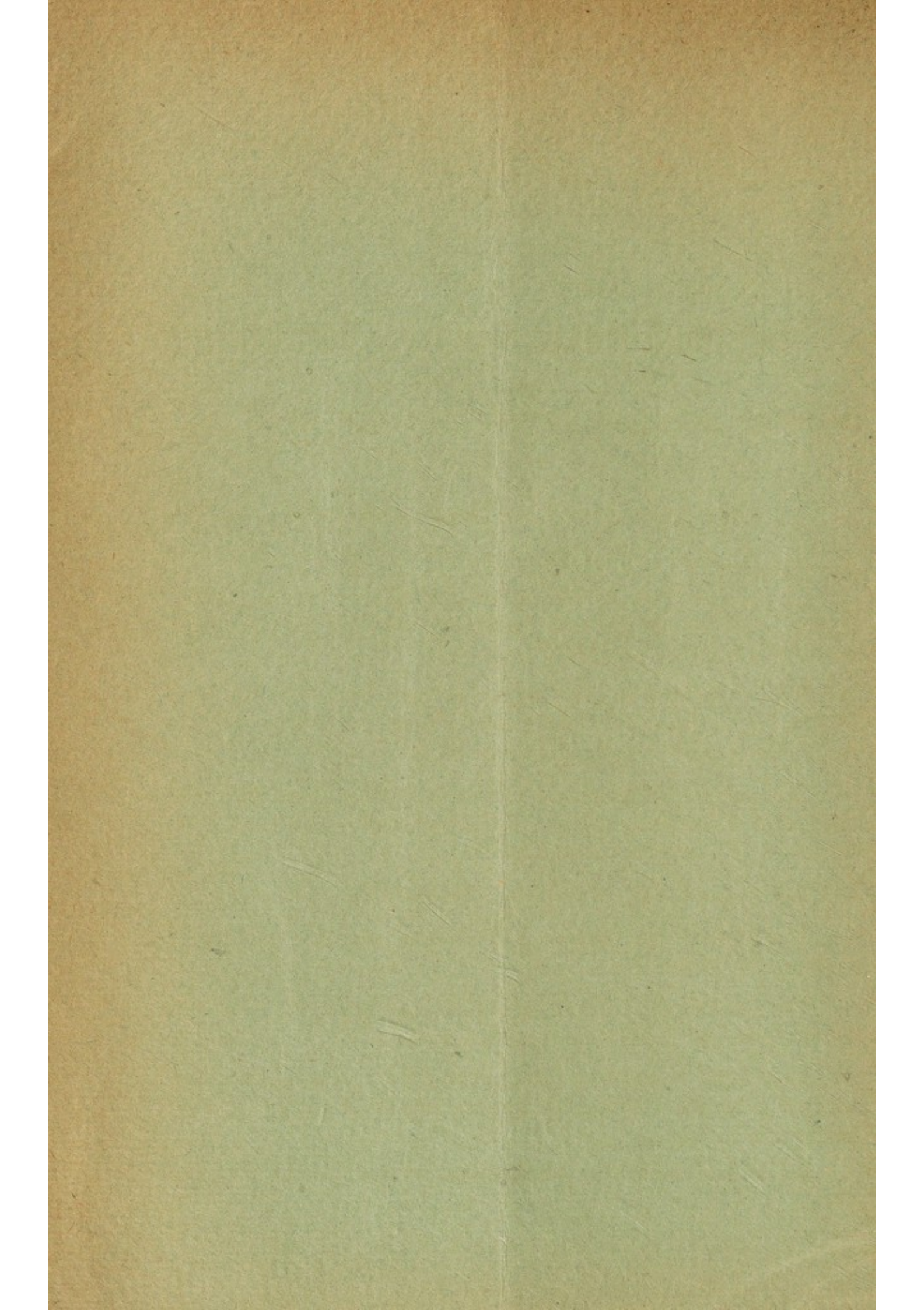
GUILDFORD
Urban Sanitary Authority.

MEDICAL OFFICER'S
REPORT

For the Year ending 31st December, 1897.

GUILDFORD :

PRINTED BY W. MATTHEWS, HIGH STREET.



Guildford Urban Sanitary District.

MEDICAL OFFICER'S REPORT FOR THE YEAR 1897.

To, the Guildford Urban Sanitary Authority.

GENTLEMEN,

I have the honour to present to you my Annual Report upon the health and conditions affecting the Borough of Guildford for the year 1897.

The population of the District at the Census of 1891 was 14,316. Since then there has been building over a large district, and I now estimate the population at 16,180.

The number of inhabited houses during the year 1897 was 3,232, and allowing an average of five persons to each house, this will allow of a population of 16,060.

The total rateable value of the District is £81,670.

The area of the District is 607 acres, and the mileage of roads about twelve.

The number of Births registered in the District was 345, and the birth-rate per 1000 of the population was 21·3.

The total number of Deaths was 241, plus eight cases belonging to the District of persons who died at Brookwood Asylum.

The annual death rate per 1000 was for the District 15.

The Infant Mortality for the past 10 years under five years of age was :—

1888	..	..	..	..	41
1889	..	..	..	..	62
1890	..	..	..	..	75
1891	..	..	..	..	59
1892	..	..	..	..	59
1893	..	..	..	..	78
1894	..	..	..	..	66
1895	..	..	..	..	66
1896	..	..	..	..	83
1897	..	..	..	..	49

The number of Deaths among Infants under five years of age was much less than 1896, when it was 83. This improvement I am of opinion is due in a great measure to the improved sanitary arrangements consequent upon the carrying out of the new Sewerage operations.

There were only two deaths from the seven principal Zymotic Diseases in the District, namely :—Membranous Croup 1, Whooping Cough 1 ; there was also one death from Puerperal Fever. This is the smallest death rate from Zymotic Diseases for the past 16 years.

SICKNESS DURING THE YEAR FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND ACTION TAKEN THEREON.

The total number of cases reported during the year was as follows :—Smallpox 0, Scarlet Fever 32, Diphtheria 11, Enteric Fever 8, Puerperal Fever 1, Erysipelas 22.

The whole number of cases of Zymotic Disease was small, but the number of cases of Enteric Fever was large, and was due

to importation from outside into the County Hospital. The mortality was slight, the cases being of a mild type. The deaths were only three, namely—one Membranous Croup, one Puerperal fever, one Whooping Cough. One death occurred from Scarlet Fever outside the District in a person belonging to the District.

Smallpox.

There was no case in the District during the year.

Diphtheria.

There were ten cases of this disease in the District during the year, of these one case died. They were distributed throughout the year as follows:—

March	..	..	..	..	1
May	..	..	..	..	1
June	..	..	..	..	1
July	..	..	..	..	1
August	..	..	..	..	2
October	..	..	..	..	4

They were generally of mild type. The fatal case was a child two and a half years of age in the Addison Road. The case in June (William Russell) was imported into the Royal Surrey County Hospital from Godalming. No special cause was detected, and the cases were distributed over the District, no particular portion being specially affected.

Scarlet Fever.

This was much more rife than in 1896, there being thirty-two cases in all distributed throughout the year as follows:—

March	..	..	..	..	1
April	..	..	..	..	1
May	..	..	..	..	1
June	..	..	..	..	4
July	..	..	..	..	3
August	..	..	..	..	*5
September	..	..	..	..	9
October	..	..	..	..	2
November	..	..	..	..	4
December	..	..	..	..	2

No special focus of infection was detected, though it was strongly suspected that some child might have conveyed it into one of the schools. In some cases the drains were defective or required reconstructing. There was only one fatal case.

Enteric or Typhoid Fever.

There were eight cases of this Disease in the District, five of which occurred in the Royal Surrey County Hospital, and two in the Nursing Institute.

1. March. A case was admitted into the Royal Surrey County Hospital from High Coombe Valley, Thursley, from a house where three others were suffering from the disease.

2. May. One case which probably had its origin in the Sussex County Hospital, Brighton.

*Four of these were from one house.

3. July. A boy aged eleven years, 16, Millmead. This case was in a family in which was a case in 1895, when the family were living in Wheeler's Row, Mount Street.

4. July. A servant was removed from the Nursing Home into the Isolation Hospital, which proved to be a case of Enteric Fever. The sanitation of the Home was all that could be desired, and no cause could be found for the disease.

5. August. A case occurred in a nurse at the Nursing Institute, and was probably contracted from the first case in July.

6. August. A boy was admitted into the Royal Surrey County Hospital from Littleton.

7. September. A child was admitted into the Royal Surrey County Hospital from Godalming.

8. December. A girl aged 20 admitted into the Royal Surrey County Hospital from Aldersey Place, but who had been staying at Binstead from October 13th to 18th.

Puerperal Fever.

One fatal case occurred in the Epsom Road.

The following table shows the number of Deaths in the District from the principal Zymotic Diseases since 1882:—

	Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Continued Fever.			Diarrhoea.	Total.
						Typhus.	Typhoid or Enteric.	Other sorts.		
1882	2	..	2	4	..	..	..	..	8
1883	2	1	..	4	1	..	..	..	..	8
1884	8	1	2	4	..	2	..	..	17
1885	1	2	2	..	..	..	..	5
1886	11	8	..	1	..	..	20
1887	4	3	2	1	..	3	..	..	13
1888	1	1	..	3	..	..	5
1889	1	1	12	..	..	..	..	14
1890	26	..	5	2	..	..	..	..	33
1891	2	1	5	13	..	1	..	..	22
1892	4	..	12	1	..	1	..	..	18
1893	2	..	19	..	..	2	..	..	23
1894	2	5	6	..	..	..	..	13
1895	2	..	..	2	..	..	4
1896	1	19	..	..	4	..	1	..	5	30
1897	1	..	1	..	..	..	..	2

THE ISOLATION HOSPITAL.

The Guildford Urban Sanitary Authority have joined since 1893 the Guildford, Godalming, and Woking Joint Hospital Board.

At present there is accommodation for forty patients, allowing 2,000 cubic feet of air space to each patient, and 140 square feet of floor space per bed.

In my last report I said, "there is urgent need for an increase of accommodation for nurses, for bath-rooms, and for lavatories." I am now able to report there is now building an additional wing to the administration block, to contain—

1. A nurses' common hall.
2. Four bed-rooms for nurses.
3. Three other bedrooms which could give accommodation for two nurses in each.
4. Separate bath-room and lavatory accommodation for the nursing staff and Superintendent.
5. Improved surgery and kitchen arrangements.
6. The provision of a large larder and store in connection with the administration department.

The extension of the scarlet-fever block includes two new bath-rooms, each approached through a lobby separating it from the wards, and having an external doorway so that a convalescent can be discharged from the bath-room without re-entering the wards.

It would be better if the patient could be discharged from the bath into a waiting room.

The Isolation Hospital has been found to be of great benefit to the District in preventing the spread of infectious diseases, and I think that whatever prejudice there may have been in the first instance against sending cases there is fast disappearing.

The District sent 24 cases of Scarlet Fever, with one death, four cases of Diphtheria, and one case of Enteric Fever.

THE WATER SUPPLY.

This was drawn as hitherto from a well sunk into the chalk in Millmead, which is supplied by the large underground lake which occupies the valley of the River Wey.

As in former years in the height of Summer there has been some doubt as to whether the quantity of water supplied by the well would be sufficient to meet the great demands made upon it owing to the large number of garden hoses in use and from other causes. In consequence, however, of the temporary use of a small reservoir near the well the supply has been well kept up.

The quality of the water has continued to be as good as heretofore.

The Authority has ordered two rising mains to the reservoirs of eight inches each, to replace the present ones, which are five and six inches respectively, and have been in use since 1872.

There are now only twelve private wells in use in the District.

REPORT OF PUBLIC ANALYST ON THE WATER SUPPLIED FROM THE BOROUGH WATER WORKS.

Hants County Laboratory, Southampton,
And at 7, Victoria Street, London, S.W.,
November 8th, 1897.

*Analysis of, and Report on, a sample of Water received on the
30th October, 1897, being a sample taken from the Town Well.*

DESCRIPTION OF SAMPLE.—F, Sealed.

PHYSICAL PROPERTIES.—Colour at a depth of 2 feet, colourless; Smell when heated, not noticeable; appearance of Residue after Evaporation, clean and white; Turbidity, very bright; Suspended Matter, very slight quantity of.

CHEMICAL ANALYSIS.

				Expressed in parts per hundred thousand.	Expressed in grs. per Gallon.
I.—Free Ammonia	..	..	..	not any	—
II.—Albuminoid Ammonia	..	..	..	·003	·0021
Equal to Nitrogen obtained from Organic Matter	..	..	..	—	—

III.—Nitrogen present as Nitrates and Nitrites ..	·441	·308
Total Nitrogen (in I., II., and III.) ..	—	—
IV.—Chlorine	1·28	·89
Calculated as Common Salt	2·1	1·47
V.—Phosphoric Acid	very slight trace of	
VI.—Poisonous Metals	not any	
VII.—Total Solids dried at 212° F. ..	31·6	22·12
Oxygen Absorbed, 15 minutes, 80° F. ..	·0025	·0017
Oxygen Absorbed, 4 hours, 80° F. ..	·0225	·0157

HARDNESS BY CLARK'S SCALE.—Total hardness, 13·8 degrees ; Fixed, 5·8 degrees ; Removable by boiling, 8 degrees.

BEHAVIOUR OF RESIDUE ON IGNITION.—Satisfactory.

MICROSCOPICAL EXAMINATION.—Satisfactory.

BIOLOGICAL EXAMINATION.—Satisfactory.

In addition to the sample taken from the Town Well, other samples taken from the Mains at different points within the district of supply were submitted to analysis, and the following is the Analyst's general report on all the samples :—

“The samples although varying slightly in some of their properties, do so only within very narrow limits. They are all pure drinking waters of excellent quality.

“Guildford water supply still holds its position as one of the purest in the country.

“ARTHUR ANGELL, *Ph.D., F.I.C., Public Analyst.*

“Dated, 8th day of November, 1897.”

The following communication to the Town Council from the Public Analyst accompanies the reports :—

“Norham Lodge, Shirley,

“Southampton,

“November 8th, 1897.

“These samples of Guildford water, of which I have the honour of enclosing my report, have been submitted to a most rigid and drastic examination, and have come out of the ordeal well.

“In my opinion all those people who are supplied with such an ideal water are congratulated.

“I beg to remain, your obedient Servant,

“ARTHUR ANGELL, BOROUGH ANALYST.”

SEWAGE AND OUTFALL WORKS.

These have been in use since May 29, 1895, and have continued to work fairly satisfactorily since.

The difficulties encountered have been chiefly in connection with the filtration of the sewage after chemical treatment.

It was found that it was impossible to get the liquid sewage to pass through the layers of polarite in the filters.

The whole of the polarite has been removed, and the filter beds recharged with coarse gravel, coarse and fine coke, with breeze.

Since the above alteration the effluent is reported by Mr. Bosley, the Superintendent of the Outfall Works, to be much improved.

The present works are still unfinished in that the carriers for the distribution of the sewage over the land are not yet placed; it is also found that the land drains are not placed deep enough, and in consequence of this shallowness, portions of the land have become sodden and swampy.

The Sanitary Authority have in contemplation a radical change in the method of sewage treatment, and are proposing to establish an experimental tank and filter bed after the model of the Sutton Works, with a view to adopt the system should their experiment be successful.

The Superintendent at the Outfall Works, Mr. Bosley, has continued to find alumino of ferric to be the best precipitant for the crude sewage.

The number of houses with connections with the sewers up to December 31st, 1896, was 2,045. The number of houses and premises with connections to the sewers on December 31st, 1897, was 2,691,—of this number 2,607 were completed.

The number of connections on the high level was 1,175 ; the number of connections on the low level was 1,516.

The number of foul drains disconnected from the surface water drains was 1,361, and the number of cesspools emptied and filled in was 1636.

The inspection of the connections with the sewers and the disconnections of foul drains from the surface drains has been in the hands of Mr. Tribe, the Sanitary Inspector, who has been most diligent and painstaking in seeing the work thoroughly and satisfactorily carried out.

Mr. Bosley reports as to the condition of the Outfall Works, that the whole of the machinery and plant continues to work satisfactorily, that he has very little sludge cake on hand, and has orders for 800 tons more.

The quantity of sewage received for the year ending December 31st, 1897, amounted to 114,975,000 gallons, or a daily average flow of 315 gallons, to which has been added 65 tons of chemicals, or an average of 7·294 grs. per gallon.

From the quantity of sewage has been precipitated 3,744 tons of wet sludge, to which has been added 96 tons of lime, or an average of 2·5 per cent., producing when pressed 1,248 tons of dry cake, or a weekly average of 24 tons.

The 114,975,000 gallons of sewage includes some surface drains overflow, and the quantities are distributed throughout the year as follows:—

January	..	..	8,195,000 gallons
February	..	..	14,170,500 „
March	..	..	13,120,000 „
April	..	..	8,195,000 „
May..	..	..	7,682,000 „
June	..	..	9,460,000 „
July..	..	..	8,935,000 „
August	..	..	9,121,000 „
September	..	..	8,850,000 „
October	..	..	9,290,000 „
November	..	..	8,387,000 „
December	..	..	9,569,000 „

SURFACE WATER DRAINS.

An alteration, renewal, and enlargement of the Surface drains in certain parts of the District having become imperative, the Council sitting in Committee considered the report of the Borough Surveyor, and the scheme which accompanied it, and the Committee recommended the adoption of the proposal of the Surveyor, and a loan has been applied for and is now under consideration by the Local Government Board for the sum of £8,000.

WATERWORKS.

An alteration has occurred in the management of this department, the Works having been placed in the hands of Mr. Mason, the Surveyor, and the necessary enlargement and improvements of the Works are being carried out by him.

These consist of increased pumping power, by means of two new turbines, improved water wheels, and by a motor pump placed over the wells.

The number of new houses on the service is 81 for the whole year, viz: 49 built under the new model Bye-laws adopted March 17, 1897, and 32 built between January 1st and March 17th.

The number of private wells closed in 1897 was only one. Only three wells are known to be in use for private houses.

NUISANCES AND WORK CARRIED OUT.

Mr. Mitchell's Brickyard, Guildford Park Farm, was complained of in August by residents as causing an offensive smell and being a nuisance. This was visited on more than one occasion, and was also visited by the Sanitary Committee, and Mr. Mitchell has reduced the nuisance by burning less, and by greater care in the selection of his fuel.

Brewery Refuse.

This matter was placed in the hands of Professor Groves. He has not yet given his consent to any Brewery refuse being received into the sewers.

Mr. Crooke, having consulted Dr. Oddy, erected a filter, the filtrate from which was not successful. Mr. Crooke now, after treating his waste liquor with lime and aluminoferric, passes it into the filters and thence into the sewers.

The Friary and Holroyd Brewery Company and Lascelles, Tickner & Co., Limited, have given notice that they intend to take their refuse into the sewers.

The principal Sanitary work in the District has been, as it was last year, the carrying out of the connections of the house drains to the new Sewerage system, and the cutting off of foul drains from the surface water drains. A good deal still remains to be done to complete the latter improvement.

The Rainfall for 1897 was as follows, and amounted to 28·59 inches :—

January	..	..	..	2·42 inches
February	..	..	..	3·06 „
March	..	..	..	4·77 „
April	..	..	..	1·45 „
May	..	..	..	1·76 „
June	..	..	..	1·83 „
July	..	..	..	1·82 „
August	..	..	..	3·89 „
September	..	..	..	2·48 „
October	..	..	..	·56 „
November	..	..	..	1·09 „
December	..	..	..	3·46 „

28·59 inches.

Rain fell on 160 days. The greatest fall in one day was ·99 on March 2nd, and on December 3rd when ·86 inches fell.

THE PUBLIC BATHS.

These Baths continue to be as popular as ever. The number using them is as follows:—

Swimming Baths, males	..	..	12,369
„ „ females	..	..	829
Warm Baths	..	..	3,497
			<hr/>
Total	..	..	16,695

Sum taken £216 9s. 7d.

Schools regularly attending and receiving lessons in Swimming—Messrs. Priddon, Hampton, Moody, Royal Grammar School, and Union Workhouse children.

The Common Lodginghouses, Bakehouses, Slaughterhouses, Factories, &c., have been conducted with as little nuisance as possible.

The work of the Sanitary Inspector has been very heavy throughout the year in examining the connections to the new Sewers, in seeing that old cesspools were emptied and filled in, and all foul drains cut off from the sewers. His report is annexed.

I have the honour to be,

Your obedient Servant,

(Signed) JOHN MORTON.

March 9th, 1897.

(A)

TABLE

During the Year 1897, in the Guildford Urban Sanitary

<small>NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities.</small> (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							MORTALITY			
	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
	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	1	2	3
Urban District }	160	30	11	4	6	49	60	Under 5 .. 5 upwards	...	...	...
Union Infirmary }	47	1	.....	.....	.....	21	25	Under 5 .. 5 upwards	...	...	...
County Hospital }	34	3	3	1	5	19	3	Under 5 .. 5 upwards	...	...	...
TOTALS..	241	34	14	5	11	89	88	Under 5 .. 5 upwards	...	...	...

The subjoined numbers have also to be taken into

Deaths occurring outside the District among persons belonging thereto.	8	.....	1	.....	1	5	1	Under 5 .. 5 upwards	...	1	...
Deaths occurring within the District among persons not belonging thereto.	59	2	3	.....	4	29	21	Under 5 .. 5 upwards	...	...	...

Area and Population of the Dis

Area in Acres

Population (Last Census)

„ (Estimated to middle of 1897)

Death Rates { General

{ Infants (under one year of age)

January 6th, 1898.

DEATHS

et, classified according to Diseases, Ages, and Localities.

SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.

Fevers.				Cholera	Erysipelas	Measles	Whooping Cough	Diarrhoea and Dysentery	Rheumatic Fever	Phthisis	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease	Injuries	All other Diseases	TOTAL	
Enteric or Typhoid	Continued	Relapsing	Puerperal													
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
.....	1	.....	.....	.....	1	4	..	4	6	.....	.....	.....	25	41
.....	1	.....	.....	.....	.....	.....	1	17	12	19	..	4	65	119
.....	1	.....	.....	.....	.....	1
.....	1	4	1	7	..	.....	33	46
.....	1	.....	.....	.....	4	5
.....	1	3	3	4	..	2	16	29
.....	1	1	4	..	4	8	29	47
.....	1	3	24	16	30	..	6	114	194

nt in judging of the above records of mortality.

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to which this Return relates.

..... 607
 14,316
 16,421
 14.6 per 1000 Population, estimated to middle of 1897.
 9 per 1000 Births Registered.

JOHN MORTON, *Medical Officer of Health.*

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the Guildford Urban Sanitary District, classified according to Diseases, Ages, and Localities

[illegible]

APPENDIX.

ANNUAL REPORT OF THE SANITARY INSPECTOR for the Year ending December 31st, 1897.

To the Guildford Urban Sanitary Authority.

GENTLEMEN,

I beg to submit for your consideration my Third Annual Report of the Sanitary Works executed under your Authority during the year ending December 31st, 1897.

Complaints received and attended to	91
Preliminary Notices to connect to Sewers (served)	76
Preliminary Notices served to abate nuisances	42
Statutory Notices to abate nuisances	10
Defective house drains cleansed and reconstructed	47
Houses repaired and put in habitable state	35
Dilapidated privies pulled down and rebuilt and provided with proper sanitary fittings	12
D traps instructed to be taken out and replaced by anti-D traps	14
Old pan closets instructed to be taken out and provided with valve or pedestal w.c.	15
Ventilating pipes provided to unventilated drains	3
Nuisances abated from improper keeping of animals	26
Accumulations of filth removed	15
New sinks provided in place of defective ones	12
Overflowing cesspools emptied	16
Urinals repaired	3
Water supply to w.c. disconnected from cisterns supplying same for domestic purposes	6
W.C.'s provided with proper flushing cisterns in place of defective ones	6
Nuisances from overcrowding abated	3
Defective floors repaired	8
Defective roofs repaired	4
Accumulations of manure removed	16
Manure pits provided	2
Ditto repaired	6
Nuisances remedied (due to defective gas mains)	7
Accumulations of house refuse	5
Defective privies emptied and cleansed	7
Defective guttering repaired	8
Smoke nuisances abated	2
Paving of stables repaired	2

Premises provided with proper washhouses	3
Ashpits built and bins provided	30
Yards paved	13
Cesspools emptied and filled in where found to exist under floors..	14
Accumulations of stagnant water	2
Wells closed and water supplied from mains	2
Persons cautioned for slaughtering animals (for sale) on unlicensed premises	2
Persons cautioned for exposing unsound food	2
Proceedings taken against a person for having sold unsound food ..	1
Visits to bakehouses, slaughterhouses, cowsheds, and dairies ..	74
Premises registered for the sale of milk during the year 1897 ..	4
Number of letters sent calling attention to sanitary matters, &c. . .	366
Visits to schools	26
Premises disinfected after infectious diseases	35
Number of houses where bedding, clothing, etc., has been removed to be disinfected	30
Number of patients removed to Isolation Hospital	28

REPORT OF THE PROGRESS OF HOUSE CONNECTIONS TO SEWERS.

The number of houses and premises with connections to the sewers are	2691
Of this number 2607 are completed, the remaining 84 being in progress.	
The number of connections on the high level are	1175
Ditto on the low level	1516
Number of foul drains disconnected from the street surface water drains are	1361
Number of cesspools emptied	1636
During the year 1897, 1535 inspections to house connections were made.	

As pointed out in my previous Reports every opportunity has been taken to ensure that the works connected with the above were carried out in a satisfactory manner.

I remain, Gentlemen,
Your obedient Servant,
F. C. TRIBE,
Assoc. Sanitary Inst.

*Tuns Gate,
Guildford,
January 25th, 1898.*