

[Report of the Medical Officer of Health for Orsett].

Contributors

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ORSETT RURAL
DISTRICT COUNCIL

MEDICAL OFFICER'S

AND

SANITARY INSPECTOR'S

ANNUAL REPORTS

1902.

GRAYS:

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1903.

Orsett Rural Sanitary District.

MEDICAL OFFICER'S ANNUAL REPORT, 1902.

General Sanitary Condition of Orsett.

Extent of District of **T**HE Orsett Rural Sanitary District consists of the whole of the Orsett Poor Law Union, with the exception of the parish of Grays Thurrock.

Population It contains 39,764 acres, and a population of 19,912.

	Census 1901.	Pop. Est. 1902.
West and Little Thurrocks ..	4325	4455
Aveley and Stifford ..	2135	2175
Chadwell-St.-Mary and West Tilbury District ..	5662	5800
Ockendons and Bulphan ..	1678	1688
Orsett ..	1326	1326
Stanford-le-Hope ..	1755	1805
Mucking, East Tilbury, Corringham, and Fobbing District ..	2229	2249
Laindon Hills and Horndon-on-the-Hill	802	902
	<hr/> 19912	<hr/> 20400

Being an increase of 488.

Number of Births and Deaths Registered The number of Births registered during the year was 657, of which 345 were boys and 312 girls; the number of Deaths, 386.

Birth and Death Rate The Birth-rate per 1,000 per annum—Census 1901—was 32·31. The Death-rate per 1,000 per annum—Census 1901—was 19·01. The corrected Death-rate (*i.e.* taking away the 51 Deaths occurring within the district among persons not belonging thereto) and adding six belonging to this district occurring in the County Lunatic Asylum,—was 16·71. The Birth-rate 32·31 was ·13 above the average for the last 10 years and 3·65 below that of last year. The corrected Death-rate 16·71 was high and was 1·51 above that of the last 10 years, and ·93 above that of last year.

Infant mortality, or the number of Deaths under 1 year, was 106; and measured by the proportion of Deaths to Births registered was 161 to the 1,000 and is 18 above those of last year, and 31 above the average of the last ten years.

Infant Mortality

The number of Deaths from the principal Zymotic Diseases was 69 and the Death-rate per 1,000 per annum was 3.39. This Death-rate is high, but is .18 below that of last year.

Zymotic Disease

The high Death-rate and the high Death-rate from Zymotic Diseases, was caused chiefly by the number of deaths, from Small-pox (32) and Epidemic Diarrhoea (19).

About 2 acres to 1 person. The number of inhabited houses in the district is 3602, and the number of inhabitants per house 5.5. At West Thurrock there are 7 inhabitants per house.

Number of Persons per acre, and Number per Inhabited House

The geological formation underlying the district is chalk, which crops out at Grays and Stifford. Thanet sands occur on the uplands of Avelev, Grays, Little Thurrock, Chadwell-St.-Mary, and West Tilbury. Woolwich beds at parts of Orsett, South Horndon-on-the-Hill (Pump Street), and North Stanford-le-Hope. London clay crops out at Bulphan and the adjoining parts of Orsett, Horndon-on-the-Hill, and Laindon Hill, Corringham, and Fobbing. Patches of Bagshot beds occur at Laindon Hills (the top) and Dry Street, Fobbing. Brick Earth and Gravel at various places. Alluvial deposit on the whole South border of District and greater part of the Eastern Boundary, and at Orsett and Bulphan Fens.

Chief Geological Features

The District is for the most part flat and low. The only Hill of importance is Laindon Hills (in the North East), 385ft. high. It is bounded on the South and East (in great part) by the river Thames. Bordering the Thames are Marsh lands, varying in width from a few yards (at Purfleet) to 1½ miles on the South-East and East. At the North edge of the Marshes the land rises to a height of 100ft. or so, the greater part of the District being a table-land, which gradually falls to the North.

Chief Physical Features

The chief supply of the district is derived from the South-Essex Water Company. The mains supply Tilbury Docks, Little Thurrock, West Thurrock, Stifford, Aveley, and South and North Ockendon. The wells are situated one at Grays in the chalk pits, and one (recently purchased) at Linford, Mucking, supplying Stanford-le-Hope and having mains laid to Horndon-on-the-Hill and also along the road

Water Supply

from Linford to Grays, connecting with Grays near the cemetery. There is also a well at Horndon-on-the-Hill from which, up to the present, no water has been distributed, and no water has been supplied to Horndon-on-the-Hill although the mains have been laid through the village for more than a year. At Stanford-le-Hope 102 connections have been made with the main during the past year. At Linford a large well has been dug down into the chalk and there is an abundance of good water in it, pumps, &c., are in course of being fixed, and a main laid from it across Mucking Heath to come out into the high road at the junction of the road from Orsett to the South with the road leading from Stanford-le-Hope to Grays, passing then along the county road, and *via* Stifford Long Lane to the company's reservoir at Aveley. The water level in the district has been getting lower for the last few years, and at Orsett, although many wells have been lowered, there is a scarcity of water, and negotiations with the South-Essex Water Company for a supply have been going on for over a year, with, up to the present, no result. The question is, whether to have the supply *via* Horndon-on-the-Hill, or wait till the main from Linford to Aveley passes the top of the road leading down to Orsett. Bulphan and the lower parts of South and North Ockendon are supplied from artesian wells, about 100-ft. deep, many of them overflowing above the surface of the ground. At present Horndon-on-the-Hill is supplied from a well at Pump Street, the water from which is carted up to the village in butts and retailed at a $\frac{1}{4}$ d. per pail, as there is building going on here, it is urged that the South-Essex Water Company be asked to supply water, the mains being already laid. Corringham and Fobbing are supplied by a very few superficial wells, and here a considerable amount of building is going on, and it is essential that a better supply of water be obtained. The Southend-on-Sea Water Company have a well in Fobbing and have an agreement with Orsett Rural District Council to supply water in these parishes at a charge of 1s. 6d. per 1,000 gallons, it would be well to have mains laid down and a supply obtained from this source. Laindon Hills is badly supplied with water, Dry Street, to the East, obtaining its supply from a spring in a pool at Well Green, which is liable to pollution from surface water. A spring half-way down the West Hill has been enclosed and domed over and gives a constant supply of good water. To the North of Laindon Hills, there is a considerable amount of building going on, and application has been made for water certificates, the supply being rain water, caught from the roofs of the houses. I have advised my Council, that the

rain-fall in South Essex is not large enough to make it certain that enough water will be able to be collected from the roof of an ordinary house to give a constant supply for an ordinary family. The Council has consequently, at present, refused to grant certificates. Just lately two wells have been dug which appear to give a good supply and will prove to be of good quality. The source of the water is the cap of bagshot beds on the top of the hill.

A sewer is laid from Tilbury Station to join the Grays system, draining the houses and buildings at Tilbury Docks, and parts of Chadwell-St.-Mary and Little Thurrock. The sewer at Little Thurrock has been extended, and now drains the part near Palmer's Schools, Chadwell Road and the "Slips." At Stanford-le-Hope the sewer has been laid, and bacteria beds formed, and are now in use, 150 connections have been made. At Digby Road, Corringham, about 80 houses are drained down to bacteria beds, near the junction of Corringham and Fobbing. In no other parish is there a proper sewerage system. At Orsett, the Union House and about 28 cottages are connected with a sewer discharging into a subsidence tank, which also receives the sewage from 25 to 30 houses and cottages to the East of the Church, the overflow runs into a ditch some 300 yards away. At Horndon-on-the-Hill, South Ockendon, Aveley, and West Thurrock, some few cottages are connected with drains, which empty themselves into the nearest ditch.

Public scavenging is in force at West Thurrock, Little Thurrock, Stifford, Tilbury Docks, and Stanford-le-Hope. Moveable galvanized dust-bins have been provided. At South Ockendon, Stifford, West Thurrock and Purfleet tank-vans are now employed to empty the cess-pools.

Considerable attention has for years been given to the condition of cottages. Many have been condemned and closed, and many more put into a good state of repair. Overcrowding does not prevail to any great extent.

The industries carried on largely in the District are Oil refineries.—Paper making —Explosives.—Cement making.

The only streams in the District are the Mardyke and Stanford Brook. The Mardyke rises in Warley and enters this District between Bulphan and North Ockendon, flows Southward between Orsett and South Ockendon, then turns to the West through Stifford and between West Thurrock and Aveley, and empties itself into the Thames above Purfleet. It occasionally overflows and submerges parts of

Villages with Public Sewers, mode of disposal, &c., W.C.'s, privies, ash pits

Condition of Cottages overcrowding

Industries carried on

Character of Streams

Bulphan and Orsett Fens, and the land adjoining its banks through Stifford to its junction with the Thames—not polluted. Stanford Brook drains the Southern and part of the Western slope of Laindon Hills, it runs between Horndon-on-the-Hill and Stanford-le-Hope, and then between Mucking and Stanford-le-Hope, joining the Thames in the Lower Hope. It is a tidal stream as high as Stanford Bridge.

Condition of Burial Grounds Some of the burial grounds are overcrowded, especially so at Horndon-on-the-Hill. At Orsett, Chadwell-St-Mary, Little Thurrock, North Ockendon, Bulphan, Stanford-le-Hope, Stifford, and South Ockendon, additions to burial grounds have been recently made. There is a cemetery in Little Thurrock belonging to Grays.

Bake-houses Slaughter Houses Bake-houses and Slaughter-houses have been found in good order.

Cowsheds Dairies and Milkshops Cowsheds, Dairies, and Milkshops are frequently inspected by the inspector of Nuisance and occasionally by myself. All, with trifling exceptions, have been found in good order. Most of the milk is sent to London new. The larger dairies and cowsheds are always found in good order; in the smaller ones containing from 1 to 3 or 4 cows, it is that defects are found.

Bye-laws in force and Acts of Parliament adopted. Public Health Act, 1875; Notification of Diseases Act; Dairy, Cowsheds, and Milkshops' Order; Model Bye-laws as to New Streets and Buildings; Housing for the Working Classes' Act; Clauses of Public Health Act Amendment Act, 1890; all of which are enforced.

Periodical Inspection A house to house inspection of Aveley has been made, about 150 houses having been inspected and many defects found, which have almost all been rectified. In other parts over 600 inspections have been made.

Number of Houses unfit for habitation The number of houses found unfit for habitation was six, all of which were repaired and made fit for habitation.

Sanitary improvements The sewerage of that part of Little Thurrock near Palmer's School, and on Chadwell Road and the "Slips," the total length of the sewer is about $1\frac{1}{2}$ miles. Stanford-le-Hope—Drainage.

Chief Sanitary requirements Water supply to Horndon-on-the-Hill. Drainage of West Thurrock and Aveley.

Action taken to prevent spread of Infectious Disease Removal of 255 cases to the Orsett and Grays Joint Isolation Hospital. The isolation and disinfection of those

treated at home, and disinfection of all houses where cases of infectious disease have occurred, all bedding, wearing apparel, &c., is taken to the Isolation Hospital and disinfected there in one of Dr. Thresh's portable steam disinfectors; urgently advising vaccination and re-vaccination.

The most unhealthy part of the district was round Tilbury Docks; here the soil is peaty and water-logged; cesspools have been continually overflowing for years, back yards frequently under water, houses damp. Nearly all cottages are now connected with the sewer, and there is a considerable improvement in the death-rate.

Cause of Dis-
tribution of
Disease

Notification of Diseases.

Small-pox—256 cases notified and 33 deaths; giving a death-rate of 12·8 per 100.

Of the 256 cases notified, 97 were in the Thurrocks and Purfleet, 29 in Aveley and South Stifford, 76 in Chadwell-St.-Mary and West Tilbury, 27 in South Ockendon, 13 in Stanford-le-Hope, 8 in Mucking and East Tilbury, 4 in Orsett, and 2 in the Union House. The epidemic which had raged in the District during the latter part of 1901, continued, in January there were 73 cases notified, in February 59, in March 30, in April 18, in May 18, in June 9, in July 4, in August 19, in September 20, in October 5, since when there has been no case notified. There had been no case notified at the Docks from the middle of June till the end of August. During July, 11 cases of Chicken-pox were notified, and on two cases of Small-pox being notified at the end of August, Mr. Hurst, the Sanitary Inspector, while removing these two cases, saw some other children said to have had Chicken-pox, and reported them as suspicious of Small-pox. An inspection was at once made and during the next few days 17 cases of Small-pox were found, some of them having been mistakenly diagnosed as Chicken-pox, and several of them not notified at all, although Chicken-pox was notifiable in the District at that time. In September, 20 more cases of Small-pox were notified in this part of the district, and in October, 2, since then there has been no case. A *special report* on this outbreak was made at the time. All the cases were promptly moved to the Isolation Hospital, and the bedding and clothing also taken there to be disinfected, and all the houses in which cases had been were promptly disinfected.

Small-pox

In 1894 and 1895, I said I had investigated supposed sources of Small-pox and was of opinion that great suspicion attached to the Hospital Ships—at that time direct communication was made between the ships and a landing stage at Purfleet, and this was stopped. Now again when the ships have a large number of cases on board, we have a severe epidemic of the disease, especially at that part of the district nearest to the ships, and the opinion that the M.A.B.'s Ships are the great source of contagion, is strengthened by the fact, of the little effect the immediate removal of cases to Hospital and isolation of contacts had here, as compared to that in outbreaks happening in other parts of the district.

I append a statement as to vaccination and re-vaccination of all cases of Small-pox admitted into the Orsett and Grays Joint Hospital. The numbers being larger than in the Orsett District only, will be more likely to give a correct idea of the results of vaccination and re-vaccination than if taken from the Orsett cases only.

During the epidemic arrangements were made for opening more vaccination stations, and inspections were made at almost all the schools as to the state of vaccination amongst the children. Many assistant vaccinators were appointed, and altogether during the epidemic some 7000 persons were vaccinated or re-vaccinated.

The work caused by the epidemic threw a great strain upon the Medical Officer of Health and the Sanitary Inspector, the latter had assistance given him for four months. I am very pleased with the energy and ability shewn by Mr. Hurst, the Sanitary Inspector, in carrying out his duties. I gave from 5 to 6 hours daily to the work, and used one of my horses entirely for this work for five months.

Scarlet Fever

There were 139 cases of Scarlet Fever notified and 4 deaths. Forty-five of the cases were at the Thurrocks and occurred at different times. Seven of the cases occurred at Tilbury Docks. Two at the Ockendons. Twenty-eight at Aveley and Stifford. Two at Orsett. Three at Stanford-le-Hope. Thirty-seven at Mucking and Corringham. Seven at Laindon Hills. The disease was everywhere of a very mild type.

Diphtheria

There were 54 cases of Diphtheria notified and 6 deaths. Four cases at Chadwell-St.-Mary (Docks), and no death. Two at South and North Ockendon and no death. Twenty-four at Mucking and Corringham and three deaths. Fourteen at the Thurrocks and two deaths. Three at Aveley and Stifford and one death. One at Orsett and no death.

Six at Stanford-le-Hope and no death. The epidemic at Linford, Mucking, was a continuation of that of last year, and was of a mild character.

No cases notified.

Membranous
Croup

There were 55 cases of Typhoid Fever notified and 7 deaths. Eleven were in the Thurrocks, one death. Seven of the cases were at Tilbury Docks, two deaths. Six cases at Orsett (imported from Shoeburyness, a man died there and the widow and children came to Orsett, and developed the disease there), no death. Six cases at East Tilbury, Mucking, Corringham, and Fobbing, one death. Fifteen cases at Stanford-le-Hope, two deaths. Eight at Aveley and Stifford, no death. Two at South Ockendon, one death. One case was moved to Isolation Hospital.

Typhoid Fever

There were 3 cases of Puerperal Fever notified and 2 deaths. One at Docks, one death. One at Corringham, one death. One at Orsett, no death.

Puerperal Fever

There were 35 cases of Erysipelas notified and 1 death. Four cases in the Thurrocks. Four at Aveley. Seven at Chadwell-St.-Mary. Twelve at Fobbing and Corringham. Five at Stanford-le-Hope. Two at Orsett. One at Horn-don-on-the-Hill. The death occurred at the Docks.

Erysipelas

Un-notified. No death.

Measles

Un-notified. One death.

Whooping Cough

Un-notified. Nineteen deaths. Eight at the Thurrocks. Three at Aveley and Stifford. Six at the Docks. Two at Orsett.

Diarrhœa

Chicken-pox was made notifiable from January 1st, 1902, for one year, there were 106 cases notified. Twenty in the Thurrocks. Eleven at Aveley and Stifford. Forty-nine at the Docks. Fifteen at the Ockendons. Four at Orsett. Six at Stanford-le-Hope. One at Corringham and Fobbing.

Chicken-pox

I have examined 23 samples of water and found 11 unfit for use for drinking purposes. Several at Laindon Hills are held over for further examination.

Examination of
Water

115 new houses have been occupied in the district during the year.

REA CORBET,

Medical Officer of Health.

ORSETT, FEBRUARY 23RD, 1903.

SMALL-POX HOSPITAL.

ORSETT AND GRAYS DISTRICT.

RECORD from 23rd September, 1901, to 31st December, 1902.

		Under 1 Year.	1-5	5-10	10-15	15-25	25-65	Over 65	Total Cases.	Total Deaths.	Percentage.
1	UN-VACCINATED	9	40	40	18	2	10	1	120		
	Deaths	5	10	3	3	2	6	1		30	25 per cent.
2	PRIMARILY VACCINATED Within 16 days of Admission to Hospital	6	12	8	2	1	...	...	29		
	Deaths	1	1	1						3	10 per cent.
3	All Other	none	none	10	19	115	194	5	343		
	Deaths	none	none	none	none	4	16	1		21	6 per cent.
4	RE-VACCINATED Within 16 days of Admission to Hospital	...	...	...	2	8	14	...	24		
	Deaths						1			1	4½ per cent.
5	All Other	none	none	none	none	1	17	3	21		
	Deaths	none	none	none	none	none	1†			1†	()
6	STATED TO BE VACCINATED But no Marks Visible	...	1	1	1	5	26	1	35		
	Deaths				1		7	1		9	25 per cent.
7	NOT SUFFERING from SMALL-POX								1		
									573	65	11½ per cent.

(The Death-rate in M.A.B.'s Hospitals was 16.5).

Among the Vaccinated there was one case aged 5 years and 11 months, the others were all over 6 years of age.

There was no death among the Vaccinated under 16 years of age.

† The only death among the Re-Vaccinated Cases was George Murrell, aged 50, working with Threshing Machine, of no fixed abode. He was Re-Vaccinated 24 years ago.

There was one Case of a Soldier who was last Vaccinated 15 years ago, which has been placed in Section 3 (Primarily Vaccinated), it being uncertain whether he was successfully Re-Vaccinated as he only had 3 faint marks.

In the 21 Re-Vaccinated Cases the Operation was performed:—

In 1 Case over 6 years ago.	||	In 1 Case over 12 years ago.
„ 1 Case „ 7 „		„ 1 Case „ 17 „
„ 1 Case „ 8 „		„ 8 Cases „ 20 „
„ 2 Cases „ 10 „		„ 6 Cases „ 30 „

REA CORBET,
Medical Officer.

TABLE I.
For Whole District.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES. TOTAL.		DEATHS IN PUBLIC INSTITUTIONS.	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	DEATHS AT ALL AGES. NETT.	
		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
1892	15,299	538	35.63	78	143	290	19.20	30	10	..	280	18.55
1893	15,359	491	31.97	60	122	261	16.98	37	12	2	251	16.34
1894	15,375	491	31.93	52	105	191	12.42	19	11	2	182	11.83
1895	15,499	503	32.31	56	109	227	14.45	27	12	5	220	14.10
1896	15,649	474	30.29	58	122	205	13.09	22	7	7	205	13.09
1897	16,134	483	29.93	74	153	256	15.86	14	12	1	245	15.18
1898	16,774	544	31.23	72	132	266	15.85	36	14	5	257	15.32
1899	18,124	572	31.55	84	146	306	16.88	37	31	3	278	15.33
1900	18,890	568	30.07	92	161	341	18.05	70	38	10	313	16.57
Census 1901	19,912	695	35.96	88	121	324	16.76	56	20	1	305	15.78
Averages for years 1892-1901	16,901	536	32.08	71	130	266	15.95	34	16	3	253	15.20
1902	20,400	657	32.31	106	161	386	19.01	103	51	6	341	16.71

† 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 those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.

Area of District in acres (exclusive of area covered by water)—39,803.

Total population at all ages—19,325.
Number of inhabited houses—3,602.
Average number of persons per house—5.36 } At Census of 1901 (uncorrected)

[SEE OVER.]

I.	II.	III.
<p>Institutions within the District receiving sick infirm persons from outside the District.</p> <p>Orsett and Grays Joint Isolation Hospital.</p> <p>Union House</p> <p>Tilbury Cottage Hospital</p>	<p>Institutions outside the District receiving sick and infirm persons from the District.</p> <p>Warley Asylum ...</p>	<p>Other Institutions, the deaths in which have been distributed among the several localities in the District.</p>

TABLE

Names of Localities.	1 Little and West Thurrock.				2 Aveley and Stifford.				3 West Tilbury and Chadwell-St.-Mary.				4 North and South Ockendon and Bulphan.			
	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
Year.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1892	3314	122	52	13	1496	48	25	8	4000	191	90	28	1716	51	27	6
1893	3514	112	48	17	1556	54	17	1	3900	174	71	19	1716	41	16	4
1894	3550	108	37	13	1596	46	7	1	3800	166	38	20	1716	46	28	6
1895	3600	113	40	12	1620	57	24	9	3800	147	46	15	1716	51	30	5
1896	3600	117	38	11	1720	50	25	10	3800	138	57	24	1716	49	20	4
1897	3600	107	45	13	1800	58	18	10	3900	146	83	21	1716	32	18	8
1898	3650	119	55	20	1820	59	23	10	4000	166	62	22	1716	45	19	2
1899	4000	142	51	15	1820	42	22	6	4800	186	89	27	1766	40	32	10
1900	4200	117	63	19	1920	67	32	9	4900	182	100	32	1800	39	29	7
Census 1901	4325	178	59	14	2135	63	36	10	5662	222	95	28	1678	37	22	9
Averages of Years 1892 to 1901.	3735	123	48	14	1735	54	22	7	4256	171	73	23	1725	43	23	6
1902	4455	138	78	26	2175	69	38	12	5760	192	79	33	1688	43	20	2

NOTES.—(a) The Separate localities adopted for this table should be areas of which the populations registration sub-districts. Block 1 may, if desired, be used for the whole district; of known population this Table need not be filled up.

(b) Deaths of residents occurring beyond the district are to be included in sub-columns Table I. as to meaning of terms "resident" and "non-resident.")

(c) Deaths of residents occurring in public institutions are to be allotted to the respective

II.

Names of Localities.	5 Orsett.				6 Stanford-le-Hope.				7 East Tilbury, Mucking, Corringham, and Fobbing.				8 Horndon-on-the-Hill and Laindon Hills.				Names of Localities.
	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	
Year.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	
1892	1379	41	14	3	1135	33	16	7	1300	30	23	9	759	20	13	4	1892
1893	1379	30	16	4	1235	35	20	6	1300	30	24	5	759	13	12	2	1893
1894	1379	38	14	2	1275	38	22	5	1300	27	14	3	759	17	12	2	1894
1895	1379	26	14	2	1325	49	21	9	1300	36	14	3	759	22	11	1	1895
1896	1379	35	9	1	1375	39	11	3	1300	28	14	2	759	14	9	2	1896
1897	1379	30	16	6	1500	45	25	6	1480	39	26	6	759	22	11	3	1897
1898	1379	35	17	3	1550	47	18	6	1700	54	25	6	759	13	11	2	1898
1899	1379	29	15	4	1800	51	26	7	1800	42	30	11	759	22	4	3	1899
1900	1400	34	22	4	1900	54	26	8	2000	55	31	10	770	15	10	3	1900
1901	1326	38	23	6	1755	53	25	4	2229	72	34	6	802	22	11	—	1901
Averages of Years 1892 to 1901.	1375	33	16	3	1484	44	21	6	1570	41	23	6	764	18	10	2	Averages of Years 1892 to 1901.
1902	1326	32	31	9	1805	77	39	10	2249	84	46	13	904	21	10	1	1902

are obtainable from the census returns, such as wards, parishes or groups of parishes, or and blocks, 2, 3, &c., for the several localities. In small districts without recognised divisions

c of this table, and those of non-residents registered in the district excluded. (See note on

localities, according to addresses of the deceased.

TABLE
Cases of Infectious Disease

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES			
	At all Ages.	At Ages—Years.						1 West and East Thurrock (H).	2 Aveley and Stifford.	3 Chadwell-St.-Mary and West Tilbury.	4 North and South Ockendon and Bulphan.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.				
Small-pox ...	256	11	25	43	51	121	5	97	29	76	27
Cholera ...	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ...	54	..	13	27	6	8	..	14	3	4	2
Membranous croup ..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ...	35	1	..	2	9	21	2	4	4	7	..
Scarlet fever ...	139	2	39	74	11	13	..	45	28	5	2
Typhus fever ...	..	..	..	..	..	..	..	..	..	..	..
Enteric fever ...	55	1	6	13	22	13	..	11	8	7	2
Relapsing fever ...	..	..	..	..	..	..	..	..	..	..	..
Continued fever ..	..	..	..	..	..	..	..	..	..	..	..
Puerperal fever ...	3	..	..	..	1	2	..	..	..	1	..
Plague ...	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox ...	106	10	54	38	4	..	..	20	11	49	15
TOTALS ...	648	25	137	197	104	168	7	191	83	149	48

NOTES.—The localities adopted for this table should be the same as those in Table II. & IV. State the name of the isolation hospital, if any, used by the sick of the district. it is situated, and in what district. Orsett Joint Isolation Hospital.

III.
notified during the Year 1902.

NOTIFIED IN EACH LOCALITY.	No. of Cases removed to Hospital from each Locality.												
	5 Orsett.	6 Stanford-le-Hope.	7 East Tilbury, Muck- ing, Corringham, and Fobbing.	8 Horndon-on-the-hill and Laindon Hills.	9 Union House.	1 West and East Thurrock (H).	2 Aveley and Stifford.	3 Chadwell-St.-Mary and West Tilbury.	4 North and South Ockendon and Bulphan.	5 Orsett.	6 Stanford-le-Hope.	7 East Tilbury, Muck- ing, Corringham, and Fobbing.	8 Horndon-on-the-hill and Laindon Hills.	9 Union House.
4	13	8	..	2	96	29	76	27	4	13	8	..	2
1	6	24	..	..	..	..	..	..	..	..	..	..	..
2	5	12	1	..	..	..	..	..	..	..	..	..	..
2	13	37	7	..	..	..	..	..	..	..	..	..	..
6	15	6	..	..	1	..	..	..	..	..	..	..	..
1	1	..	..	..	..	..	..	..	..	..	..	..	..
4	6	1	..	..	..	..	..	..	..	..	..	..	..
22	59	88	8	2	97	29	76	27	4	13	8	..	2

Mark (H) the locality in which it is situated, or if not within the district, state where

TABLE IV.
Causes of, and Ages at, Death during Year 1902.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES).								DEATHS IN PUBLIC INSTITU- TIONS.
	All ages.	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards.	1	2	3	4	5	6	7	8	
Small-pox	33	5	5	5	3	13	2	17	5	4	2	2	2	1	..	51
Measles ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	4	..	2	1	1	..	..	1	..	..	..	..	1	2	..	..
Whooping-cough	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Diphtheria and Mem- branous Croup }	6	..	2	4	..	..	..	2	1	..	..	..	..	3	..	..
Croup .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus Fever ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	7	..	..	..	4	3	..	1	..	2	1	..	2	1	..	1
Epidemic Influenza	5	2	..	..	..	2	1	..	..	3	..	..	1	1	..	..
Cholera ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	19	12	5	1	..	1	..	8	3	6	..	2	..	..	..	..
Enteritis ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	2	..	..	..	1	1	..	..	..	1	..	..	..	1	..	..
Erysipelas	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Other septic diseases ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phthisis	11	..	1	..	1	8	1	2	1	4	..	2	..	1	1	2
Other tubercular diseases	7	2	2	2	..	1	..	1	2	1	..	2	1	..	..	..
Cancer, malignant disease	14	..	..	..	..	11	3	4	..	3	2	1	2	2	..	1
Bronchitis	43	18	8	..	..	2	15	9	5	12	3	7	1	5	1	3
Pneumonia	7	..	2	..	2	3	..	2	..	2	2	..	1	..	..	1
Pleurisy ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other diseases of Res- piratory organs }	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..
Alcoholism }	2	..	..	1	..	..	1	..	..	1	..	..	..	1	..	..
Cirrhosis of liver ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Venereal diseases	3	2	..	..	..	1	..	1	..	2	..	..	..	..	..	..
Premature birth	19	19	..	..	..	..	..	2	1	6	1	3	2	4	..	..
Diseases and accidents of parturition }	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
Heart diseases	29	1	..	3	2	13	10	5	4	2	3	3	1	5	6	5
Accidents	14	..	..	2	3	6	3	4	1	4	..	..	4	1	..	2
Suicides	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..
All other causes	111	43	7	5	4	16	36	19	15	24	6	9	19	17	2	37
All Causes	341	106	34	24	21	84	72	78	38	79	20	31	39	46	10	103

Summary of Work done through the Sanitary Inspector.

	Total Number for Year.
Complaints received	72
Nuisances detected without complaint ..	160
Nuisances abated	232
Notices served	101
Cottages inspected	712
Slaughter-houses inspected	9
Bakehouses inspected	21
Dairies and Milk Shops inspected	22
Cowsheds inspected	27
Filthy houses cleansed, sec. 46 Public Health Act, 1875	4
Houses disinfected	398
Overcrowding abated	2
Houses placed in habitable repair	6
Houses erected or re-built for which Water "Certificates" were applied	115
"Certificates" granted	105
"Certificates" deferred	20
Wells sunk or improved supplies of Water afforded	4
Wells cleansed or repaired	7
Wells closed	2
Houses connected with sewers	317
Houses connected with water mains	138
Earth, pail, or improved Privies constructed or existing Privies altered	45
Privies and W.C.'s repaired	64
W.C.'s supplied with water	138
Cisterns cleansed, repaired or covered	13
Animals improperly kept, removed	3
Samples of water taken for Analysis	23
Compensation paid for destruction of infected bedding	£139 6s. 9d.

(Signed) JOHN HURST, C.S.I.

Inspector of Nuisances, O.R.D.C.