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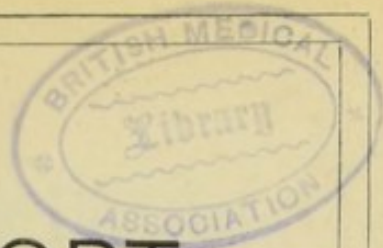
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ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

CHELMSFORD

RURAL SANITARY AUTHORITY

FOR THE YEAR 1893.

CHELMSFORD :

PRINTED BY JOHN DUTTON, 8, TINDAL STREET.

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Chelmsford Rural Sanitary District.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1893.

Sub-Registration District.			Area in Acres.	Population. Census, 1891.
1.	Chelmsford, part of.	One parish ...	692	293
2.	Ingatestone.	Eleven parishes	26,541	6,175
3.	Writtle.	Six " ...	18,079	5,060
4.	Great Waltham.	Eight " ...	19,080	5,133
5.	Great Bhddow.	Six " ...	15,033	6,513
Total ...			79,425	23,174

	Population.	No. of inhabited houses.	No. of uninhabited houses.	No. of houses building.
1881	23,130	5,066	377	6
1891	23,174	5,102	319	17

TO THE CHAIRMAN AND MEMBERS

OF THE

CHELMSFORD RURAL SANITARY AUTHORITY.

GENTLEMEN,

In my Report for the year 1892 I dwelt so fully upon the following subjects—

Geological and Physical Features of the District,

The Water Supplies,

Sewerage and Drainage, Methods of Sewage disposal,

Excrement and Refuse disposal,

Condition of Cottages and overcrowding,

Character of Streams and extent to which they are
polluted,

Burial Grounds,

Acts of Parliament and Bye-laws adopted,

that it would serve no useful purpose to re-capitulate the description here. Such only therefore will be referred to as have received special consideration during the year, or which require for any reason such special consideration.

SANITARY IMPROVEMENTS EFFECTED DURING THE YEAR.

The most important work of a sanitary character which has engaged the attention of the Authority for some time is the water supply for the parishes of East Hanningfield, Rettendon, Runwell, and Woodham Ferris. On April 6th Col. Hasted, R.E., held an enquiry on behalf of the Local Government Board upon the application to borrow the sum of £3,000 to carry out the above work. The requisite permission having been granted, the works were commenced in the autumn and will probably be completed by the time this report is issued. The scheme was somewhat fully described in my Report for 1892, and it was there stated that the Maldon Rural Sanitary Authority contemplated utilizing water from the same source for the supply of certain parishes in their district. The negotiations, however, were broken off, partly because the Maldon Authority raised certain difficulties and partly because our Authority came to the conclusion that before very long there would be a demand for the extension of the mains to several outlying hamlets which are at the present time dependent upon ponds and ditches or are otherwise insufficiently supplied with water. Throughout the whole of the area supplied by the mains cottages can now be erected and occupied without the Authority having to give certificates containing statements not strictly true. In future there will be an abundant available supply of wholesome water which was rarely the case in the past, the certificate to that effect notwithstanding.

At Good Easter the public well has been deepened 10ft. and bored 21ft. lower. A new pump was also provided. As a result there has been a good supply of water throughout the summer.

At North End a public well has been sunk at a cost of £22 10s. and will be a great boon to the inhabitants of this hamlet.

At Little Leighs also a public well has been provided.

At Great Baddow the water mains have been extended to supply an additional number of houses.

At Sandon, ~~Major~~ Major Rasch has placed a pump over a spring at the roadside to supply the cottages around, most of which are on his estate.

At Margaretting Tye trial borings revealed the presence of water at an easily accessible depth. Upon analysis it was found suitable for domestic purposes and a well is now being sunk. The water supply to this hamlet has been a constant trouble to the Authority. Some years ago a well was sunk, but the water proved to be so impregnated with Epsom Salts that it was useless and the well was closed. During this summer the only available pond became nearly dry and a water famine resulted. I therefore suggested a further effort to find water, selecting the opposite slope of the hill to that on which the old well was sunk and I hope the water obtained will be abundant and of good quality. On the opposite hill (Galleywood) there occurs the same great variation in character in the quality of the water obtained from shallow wells. The gravel is very patchy and in places alternates with beds of clay. Probably the same condition obtains on the Tye.

At Ingatestone the water supply is derived from a chain of wells sunk in a bed of loamy sand. The water was constantly turbid especially after rain, and even treatment with alumino-ferric and filtration through flannel (the process

**In error. Done at the expense of the N.S.*

until recently adopted) failed to remove the unsightly opalescence. I found also that the water from one set of wells contained an excessive amount of organic matter. Certain improvements have been effected and a filter bed $36 \times 12 \times 6$ feet constructed containing one ton of polarite and three tons of sand. The water passes through this quite clear and the Surveyor reports that the filter continues to work "beautifully."

At Great Waltham the sewerage system has been improved and tanks and filter beds constructed to purify the sewage before discharging it into the river.

At Woodham Ferris the sewer outfall has been carried further from the village. Minor sanitary improvements are chronicled in the Inspector's summary, but this does not include all which have been effected during the year. At several large houses extensive alterations have been made in the drainage arrangements and modern sanitary fittings substituted for old and insanitary ones. As these were carried out at my suggestion and under my supervision without any interference on the part of the Sanitary Authority they are not formally chronicled but are worthy of mention. Certain other matters will also be referred to under the head of "Result of Periodical Inspection." The closet and urinal accommodation at many of the schools has been considerably improved.

SANITARY REQUIREMENTS AND IMPROVEMENTS CONTEMPLATED.

An Isolation Hospital is at length about to be provided. Col. Hasted, R.E., in April, held an enquiry and subsequently the Local Government Board sanctioned a loan for £1,800 for the purchase of land and erection of an hospital and cottage for the nurses and attendants. The contract for building has just been signed. The tenders varied from £995 to £1,230. The lowest was accepted. During the coming year we hope to have the building completed, properly furnished, and possibly in use for the reception of patients.

The sewerage and water supply of Writtle has been seriously considered during the year and matters have advanced so far that plans have been submitted to the Local Government Board. The special rating area is now being discussed, the Authority wishing to limit it to a portion of the parish, but to this the Local Government Board object. This difficulty will doubtless soon be surmounted and a much needed improvement effected.

At Pleshey the drainage arrangements are very unsatisfactory. A small committee visited the village and afterwards reported in favour of a sewer being laid. The Surveyor has prepared plans and W. Tuffnel, Esq., the principal landowner, has offered the Authority the land necessary for a filter tank, so that this scheme will probably be carried out almost immediately.

At Little Baddow whilst there are numerous springs of water, they are either inconvenient of access or liable to pollution. I have suggested that from the highest of these springs water should be piped down to the cottages. The Surveyor estimated that a loan of £150 will cover the whole expense and the Local Government Board have been asked to sanction this. This improvement therefore is likely to be effected in the near future.

It affords me great pleasure to chronicle that all my suggestions as to sanitary improvements required have received full and careful consideration. Those which have been considered most important and practicable have either been carried out or are now being carried out as my report testifies. Others have been deferred until some of the schemes now in hand are completed when no doubt they will be further considered. Others have been abandoned because they are considered at present to be impracticable. I refer

now more especially to the provision of cottages for the agricultural labourers. This subject was discussed at a special meeting at which I reported upon the cottage accommodation and requirements of Good Easter. I recommended the purchase of two acres of ground and the erection of four pairs of cottages. The total estimated cost was £1,300, which could be obtained by a loan. The annual repayment would be £75, cost of maintenance £8, total £83. Each cottage and garden would let for £6 and the Authority would therefore have to raise by rate the sum of £33 yearly until the loan was paid off when the cottages would become the property of the Authority and the rents received go towards the reduction of the rates. When the suggestion was considered it was pointed out that if the principal land owner in the parish would provide accommodation for only a portion of the labourers employed on the estate the difficulty would be solved. If the Authority therefore provided the cottages it would be practically for the sole benefit of this landowner. The parish is poor and burdened with a heavy School Board rate. The proposition that the burden of the expense should be borne by the whole district was not received with favour, and as the parish was considered too poor and too heavily rated to bear any additional rate, it was ultimately decided that all the facts of the case should be laid before the landowner above referred to and an attempt be made to persuade him (or her) to build the cottages required. The effort has been unsuccessful and nothing more in this direction has been done. The cottages reported by me over a year ago as unfit for human habitation have not been repaired. They are said to be copyhold and heavily mortgaged and if the Authority caused them to be closed a number of families would be driven from the village, and already the farmers complain of the difficulty of obtaining labourers. However, at the last meeting of the Authority, the Clerk was instructed to take proceedings and we still hope that steps will be taken to enfranchise the property and put it in habitual repair.

Altogether the Housing of the Working Classes Act has not markedly benefited this district, but the whole of the fault does not lie in the Act of Parliament.

When preparing my report on the village of Good Easter I obtained from the overseers particulars as to the number of cottages belonging to the principle landowners, and this I have since supplemented by similar information concerning all the other parishes in the Union. As the results are interesting and may at some time be useful, they are included as an appendix.

Building and other Bye-laws are much required and a code based upon the model forms have been drafted, and it is hoped will shortly be formally adopted.

PERIODIC INSPECTION AND RESULTS THEREOF.

During the year every parish has been inspected, in many every cottage is believed to have been visited either by the Inspector or myself. Most of the nuisances referred to in the Inspector's report were then discovered. The number of complaints received has been very small. I have not received a dozen during the whole year, if I exclude those having reference to one particular nuisance (bone-boiling) which will be referred to later.

The result of the inspection of the village of Pleshey has, as already stated, lead to a scheme being prepared for draining the village. The improvement in the drainage and system of sewage disposal also resulted from the report of my inspection of that village. I suggested that a small Committee should meet the Surveyor and myself and inspect the place. This was done, and though the improvements they suggested were not quite so radical as I had wished, the alterations will prove very beneficial. A Committee also met at Woodham Ferris and visited every house in the village. Their report confirmed my own (that nuisances requiring abatement existed

on the premises of nearly every inhabitant) and at the following meeting of the Sanitary Authority notices were ordered to be served in every case. Some of the necessary works are now in progress and I hope the Authority will insist upon all being carried out as the parish is notoriously unhealthy. When all these nuisances are abated and the new water supply completed the village will be in a fairly good sanitary condition. It will not, however, relieve the overcrowding which exists and which cannot be relieved without the erection of a few larger cottages.

After an inspection of Great Leighs parish I reported that a foul ditch ran close behind all the cottages on the Braintree road. A Committee and the Surveyor met me there, but on account of the flat character of the district the drainage of the cottages would be difficult and costly. An attempt has been made to improve the condition which then obtained by having certain privies removed, the receptacles of others improved, and by urging the inhabitants to dispose of their slops and refuse on their gardens instead of throwing everything into the ditch.

During my inspections also I found many houses unfit for habitation, and 20 of these have been closed. In every one of these cases the notice to put in repair was responded to by turning out the tenants and closing the cottages, which was a practical acknowledgment that the houses were not only not fit to live in but were not worth repairing. Many other cottages were repaired, some without any formal report being made to the Authority.

All the slaughter-houses and bakehouses and many dairy farms were inspected, but I have nothing to add to what I have stated in previous reports with reference thereto. One slaughter-house, frequently complained of, has been closed.

A serious nuisance arose in Springfield on account of a firm of artificial manure makers adding bone-boiling to their business. Many attempts were made by the owners to

abate the nuisance but without avail. The effluvium was most offensive and I obtained evidence of many persons suffering from nausea, actual vomiting and diarrhoea in consequence of the stench. An action to obtain an Injunction against the company was threatened and resulted in the bone-boiling being discontinued. On account of this nuisance I advised the Authority to obtain from the Local Government Board urban powers under sections 112 and 113 of the Public Health Act, 1875, for certain of the more populous parishes. It was thought desirable to obtain such powers for the whole district, but the Local Government Board declined to grant such. At length, however, they have been obtained for the parishes of Springfield, Great Baddow, Broomfield, Fryerning, and Ingatestone, the first three of which adjoin the town of Chelmsford and contain many suburban residences, in fact the most populous portion of Springfield is practically a part of the town.

During the year I have examined the sanitary arrangements at many public houses and have been surprised at the number found with inadequate or insanitary urinal and closet accommodation. The public rooms also are often very defectively ventilated and lighted. Many of these houses are merely converted cottages. If before granting or renewing a licence a certificate as to the sanitary condition of the premises were required, and the licence were not granted or renewed unless this certificate were satisfactory, these places of public resort would have to be considerably improved. In a few instances we have succeeded in getting proper urinals provided but much more yet remains to be done.

There are no Factories in the District. The Workshops have been inspected with the Villages, and a list of them has been prepared.

Many groups of cottages still remain without an adequate water supply, but the laying of water mains through the worst districts and the provision of public wells and pumps is rapidly diminishing the number. In many cases, however, water does

not appear to be obtainable at a reasonable cost. By aid of boring tools and an Abyssinian pump we have succeeded in finding water in several instances, but cottage owners are very loth to go to the expense of sinking a well and the Authority is exceedingly patient. The extent of this patience may be judged from the fact that not a single prosecution has been undertaken during the year for any purpose. The Authority is too good natured, but the members justly argue that the real improvements effected annually in the district without legal action will compare very favourably with what is done elsewhere, where the Magistrates are constantly resorted to for Orders.

OUTBREAKS OF INFECTIOUS DISEASE AND MEANS TAKEN FOR ARRESTING THEIR SPREAD.

The number of dangerous infectious diseases notified has been larger this year than in either of the two previous years during which notification has been compulsory. The district has never been free from zymotic disease of some kind. In the early part of the year we had Influenza generally prevalent and localised outbreaks of Measles, Whooping Cough, Diphtheria and Scarlet Fever. During the Summer many mild cases of Scarlet Fever occurred, and more marked cases tending to become epidemic were recorded in the Autumn and Diphtheria again became more prevalent. At the end of the year Influenza was reported as being present in several parishes and a number of severe cases have come to my knowledge.

Small Pox. Not a single case has been introduced into the district, notwithstanding that it has occurred in all the surrounding areas. Although the Workhouse is in the Urban district, I communicated with both the Medical Officer and Master asking them to exercise close supervision over tramp and other occupants of the casual wards and to give me information of any suspicious case. During the year I have seen a large number of cases in this and other counties in

order to keep myself thoroughly well acquainted with the varied types of the disease. Once during the year I was called in to see a case in this district which was, it was thought might be Small Pox. The patient was a young adult suffering from a most severe attack of Chicken Pox. Mere isolation prevented any extension of the disease.

Scarlet Fever. At the end of 1892 Scarlet Fever and Diphtheria had been introduced into Ingatestone (*vide* Report for 1892) and during January, February, and March a few additional cases occurred, but by constant supervision, and exclusion of infected families from school, an epidemic outbreak was prevented.

At Battles Bridge, Bicenacre, Great and Little Leighs cases of Scarlet Fever have been notified and in each place I found upon enquiry that some form of illness associated with slight sore throat and an evanescent rash had been prevalent for some time before the occurrence of a more serious case had caused a medical man to be called in. At Great Leighs Dr. Cockey and myself saw a considerable number of these cases, and although now and again a child developed symptoms typical of Scarlet Fever and afterwards peeled fairly copiously, yet the great majority presented no definite signs of that fever and either did not peel afterwards or the desquamation was very slight and of a scaly character. In several cottages in which there were a number of children who had not had Scarlet Fever one child was attacked and though not isolated the disease did not spread. In the family of the National School Mistress a boy aged seven was first attacked. He was slightly feverish on April 20th and a rash was observed on his body, discrete red spots, not raised and only visible for about two days. There was no marked onset, no sickness, no complaint of sore throat. A few days later, a brother aged 10 was attacked, he had a little sore throat and headache, with an evanescent rash same as in the previous case. A third child aged nine had an exactly similar attack. On May 14th

a younger lad, aged four, was very feverish and sick. Next day his body was covered with a scarlet rash entirely unlike that of his elder brothers. He afterwards peeled copiously, the others did not peel. Were all these Scarlet Fever, or only the last? If Scarlet Fever, then we appear to have a progressive infectivity such as is observed with Diphtheria. If not we had two concurrent epidemics affecting children from the same school. Was the occurrence of similar cases in at least three widely distant parishes a mere coincidence? Does it not rather point to a mere variation in the virulency of the contagium? This seems to me to be the more probable explanation. These mild cases are a source of anxiety to a medical man since he does not know whether he is justified in notifying them or not. In the Maldon district I also saw similar mild cases amongst children attending one school and not one of them was notified as Scarlet Fever, though a medical man was called in to some families in which several children were attacked. If the cases referred to were Scarlet Fever then the number of cases which have occurred is probably much more than double the number of those notified. On several occasions Scarlet Fever was introduced by girls sent home from their situations in an early stage of the disease. In one case I advised a prosecution. A girl in service at Romford complained of sore throat and as there had been Scarlet Fever in the family a medical man was sent for. Finding no rash he gave the mistress permission to send the girl home. Within a fortnight of her return two of her sisters were attacked with well marked Scarlet Fever and in the following week two others. One child died. Between the arrival of the girl and the first notified case four other children had had sore throats, but according to the mother's account no rash was observed. Upon fully investigating the case the Clerk doubted the possibility of obtaining a conviction and no proceedings were taken. Much of the infectious disease in our rural districts is imported in this manner, girls, on the first symptoms of disease, being hurried off home,

often to be nursed (?) in small overcrowded cottages where isolation is impossible and dissemination of disease of an infectious character certain. A few weeks later two other houses near the one referred to became infected.

In September an outbreak occurred in a Boarding School at Boreham. Three of the young lady pupils travelled down from London in the same compartment of a railway carriage on September 9th. Two of them were taken ill on the 13th and the third on the 15th. All developed a well-marked rash and afterwards peeled freely. From the 16th to the 25th five other slight cases occurred. The patients were isolated in a large room at the top of the building and here Diphtheria broke out amongst them causing three deaths. These cases and others which followed will be again referred to under Diphtheria. The unaffected children were all sent home.

During the late Autumn Scarlet Fever has appeared in several parishes, but how the infection was imported in the first instance cannot with certainty be ascertained, but it is worthy of note that the infected places are in proximity to the districts in which the doubtful cases were occurring in the Summer. Thus the infected may have travelled from Great Leighs to Little Waltham and Broomfield, and from Bicknacre to the contagious parish of Woodham Ferris, Little Waltham, Broomfield and Woodham Ferris being the parishes now infected. At Broomfield I had reason to believe that the disease was being spread by school attendance and as ultimately one of the teachers was attacked I advised the closing of the school on December 14th for a long Christmas holiday. Since then there has been no further spread.

In all cases when the last patient had ceased desquamating the houses were fumigated and cleansed, and in some cases repapered and limewashed. Where the persons concerned were not capable of carrying out my instructions a woman has been engaged to do all that was necessary in

conjunction with the Inspector. In several instances where the first case was known, it would have been possible, by removing the patient to an isolation hospital to have prevented the spread of the disease, but in other places where doubtful cases were also occurring such a course would have been impossible.

The age and sex distribution of the cases of Scarlet Fever which came to my knowledge was as under—

	Under 1 yr.	1-5	5-10	10-15	15-25	Over 25.	TOTAL.
Males	7	15	8	2	3	35
Females	4	28	11	4	3	50

Diphtheria and Croup. These names, in this district, are used to signify different manifestations of the same disease, and during the year only one case has been notified in which the Larynx was affected (Croup). It is certainly curious that in some outbreaks of Diphtheria as in Writtle in 1892, a considerable proportion of the cases should be Croupous, whilst in others not a single such case should occur. During 1893 a number of sporadic cases of Diphtheria, have occurred, cases in which no connection with pre-existing ones could be discovered and in which any such connection seemed very improbable. Generally, but not invariably, some grossly insanitary condition was discovered in or near the house attacked.

The most serious outbreak I have to record occurred at the Ladies' School, Boreham, amongst the convalescents from Scarlet Fever. As previously stated the girls attacked with Scarlet Fever were sent to a large room at the top of one end of the building which is reserved for use in such emergencies. Opening from this room was a very small room containing a slop sink and water-closet. The two girls first

attacked with Diphtheria were two of the three who had first suffered from Scarlet Fever. One slept in the bed nearest the door leading to the w.c. and the other was the first patient allowed to use it. Both complained of sore throat on the same day (Oct. 10th) and on the 12th both were found to be suffering from undoubted Diphtheria. On this day another inmate of the ward complained of feeling unwell and during the night or rather between three and four on the following morning she vomited, and when her throat was examined at a later period of the day she was found to be suffering from Diphtheria. On the 14th a sister of one of the above, who had not had Scarlet Fever or so far as we can ascertain been near any of those who had, was suddenly taken ill and she was also found to be suffering from Diphtheria. Within the next few days three maids who occupied a bedroom in common had sore throats, but only one had any membranous deposit thereon. A little later the doorkeeper who was much in contact with these girls had a slight attack. Three of the four earlier cases proved rapidly fatal. A thorough examination of the sanitary arrangements proved that they were defective throughout. The trap to the w.c. adjoining the isolation ward was so badly jointed to the soil pipe that there was a direct communication between the air in the soil pipe and in the closet; still worse the waste pipe from the slop sink passed directly into the soil pipe and was not even covered at its open end by a bell trap. The soil pipe itself was unventilated and served for a tier of three closets. The drains into which this discharged were practically unventilated, and there were no air openings into the main drain which lead to a large covered sewage tank receiving all the sewage of the School and Nunnery. The isolation ward must have been permeated with drain air, and to this I attribute the outbreak. Most careful inquiries were made as to the milk supply (from cows belonging to the establishment) as to the possibility of the infection being introduced from without, but nothing was discovered throwing any further light

upon the origin of the disease. The majority of the w.c.s in use were of the pan and container form. Without exception every closet has been pulled out and replaced with more modern ones. Every soil pipe and waste pipe and every drain has been taken up and the whole of the sanitary arrangements have been remodelled, practically regardless of expense.

At the end of 1892 a few cases of Diphtheria had occurred in Ingatestone (introduced from Romford) and there were infected families at Margaretting, the children having contracted the disease at Stock. During January and February many more cases occurred, and on February 10th I was obliged to recommend the closing of Margaretting School. Three weeks later it was re-opened and there was no further spread of the disease. Influenza was prevalent at this time also and in a considerable number of instances throat affections came under my notice which I did not know whether to attribute to Diphtheria or Influenza. The opinions of the medical men who attended such cases differed also, one considering them of a Diphtherous nature and notifying, another regarding them as due to Influenza and therefore as not notifiable. This great difficulty in diagnosing mild cases of Diphtheria renders our returns of cases very unreliable.

In the following case the infection of Diphtheria appears to have been conveyed by clothing. On May 9th a child who had been visiting at Stratford was sent home to Writtle on account of a child in the house being attacked with Croup. On the 16th the child who had returned home was attacked with Diphtheritic Croup and died on the 22nd, and the house was afterwards re-papered, limewashed, and disinfected with sulphur. On the 20th its brother was sent to Roxwell to his grandparents and he remained there enjoying good health until July 1st when he was attacked with Diphtheria. On the 25th June it appears some clothes which had been in the room in which the younger child died were sent to Roxwell and worn

by the patient, and this seemed the only possible way in which the child could have become infected.

In December an interesting outbreak occurred in a pair of isolated cottages at the extreme end of Springfield parish. On the 6th a child was notified to be suffering from Erysipelas of a very severe type. On the 11th a child, aged three, in the next cottage was notified as suffering from Diphtheria. On the 12th when I visited the patient was in a moribund condition and she died during the following night. A few days later an infant in the same house was attacked but made a good recovery. There were no other children in these cottages, and no other cottage within three-quarters of a mile. The children did not attend school, nor had they been many yards from the cottage for a week. There had been no previous cases of sore throat in the house. No case of Diphtheria was known within four miles. A suspected vehicle for infection was a bundle of clothing sent by a relative from London three weeks before, but upon enquiry the sender assured me there was no possibility of the clothing being infected. There was no nuisance at or near the house, but the cottage itself was somewhat damp.

In Ingatestone an isolated case occurred apparently unconnected with any other case; there was a cesspit nuisance near the cottage and other members of the family had had Influenza. The one child attacked was subject to sore throat. The membrane formed very rapidly and covered the tonsils. From a small portion of this deposit a growth on Agar was obtained different from anything I have seen described, but which I have met with once before, in a transparent piece of membrane about the size of a 5s. piece sent me by a medical man in the County. The letter which accompanied it stated that it was from one of the best marked cases of Diphtheria, the writer (a gentleman of great experience) had ever seen, and that the growth of the membrane had been

very rapid. I doubt very much, however, whether the case was one of true Diphtheria. A study of this and other organisms from Diphtherous deposits is being conducted at the Biological Laboratory of the County Council by Mr. Houston, F.L.S., and myself.

An outbreak of Diphtheria and Diphtheritic sore throat occurred during the Autumn in Great and Little Leighs. North of this district Diphtheria had been very prevalent for some time and finally spread from Black Notley (in the Braintree Rural Sanitary District) into the adjoining parishes in the Chelmsford District. By constant watchfulness and exclusion of children from infected families from school the outbreak was limited to a few households and the epidemic may be said to have been stamped out.

The age and sex distribution of the notified cases is as under:—

	Under 1 yr.	1-5	5-10	10-15	15-25	25-60	Over 60.	TOTAL.
Males	7 & 1 Croup	10	4	5	5	0	32
Females	8	11	10	13	10	1	53

Typhoid Fever. There has been no epidemic of this disease, but most of the cases which have occurred during the year were in Springfield parish. Early in the year five cases occurred in one house. In November, 1892, a case was notified from a house in the main street. The closet was outside against the kitchen wall and the pan had recently been reset. In January four members of the family were attacked simultaneously and one of the nurses stated that when the kitchen was entered early in the morning there was a disagreeable smell. The closet was again taken up and it was found that filth escaped from the junction of the trap with the drain and that the emanations therefrom passed through

the wall and over the skirting board into the kitchen. Smoke could be forced through and the indraught was so great when the doors were closed and a fire burning as to markedly deflect the flame of a candle held near the upper edge of the skirting board. A fifth case occurred a few weeks later. Of course the sanitary defects were remedied. Two cases occurred later in the year in two adjoining cottages at the extreme end of the parish. There was here a privy with defective cesspit allowing filth to soak under the foundations. The water supply also was liable to pollution. Still later another case occurred in a house near Chelmsford but the infection was imported. At Great Leighs a lady who had been visiting in London developed Typhoid symptoms about three weeks after her return home. At Ingatestone a child who had been to Southend was taken ill 18 days after her return and developed Typhoid Fever. At Margaretting a man who had been staying a week at the same watering place commenced with Typhoid Fever in the third week after his return. At Stock a young man who had been lodging with a woman who had taken to her house to wash the linen, &c., used by a patient who had died from Typhoid, was attacked about three weeks later (exact day could not be ascertained). At Runwell a case occurred in a house in which there had been a case during the previous year. The house was old and notoriously unhealthy. The drain discharged into a dry moat near the house. Certain other cases which have been reported in the district had Typhoid symptoms but whether the disease was true Typhoid or not is doubtful. One case only of Continued Fever was notified.

The age and sex distribution of the cases is as under:—

	Under 5 yrs.	5-10	10-15	15-25	25-35	Over 35	TOTAL.
Males .....	...	...	3	6	1	...	10
Females	1	2	...	2	...	3	8

Puerperal Fever. Four cases were notified and all died. One case was notified as Peritonitis following parturition 10 days after the woman had died, the death certificate merely giving "Childbirth" as cause of death. One patient was nursed by a neighbour who had been attending a relative suffering from Phlebitis which was believed to be septic. The cause of the others was doubtful. Three occurred in the practice of one gentleman who adopted every possible precaution. Between the successive cases many others were attended, all of whom did well.

Diarrhœa. Of the 13 deaths which have occurred eight were of infants and three of very aged people.

Influenza. An alarming report of an outbreak of Cholera at Ford End, in the parish of Great Waltham, appeared in the local papers in January. The outbreak proved to be one of Influenza of the Gastro-intestinal type and a special report upon it was prepared, and after being submitted to the Authority appeared in the "Lancet." When the Diarrhœa epidemic was at an end, the Schoolmaster wrote me, saying that some form of sore throat was attacking the children and he feared that it was Diphtheria. This proved also to be Influenza. The patches of infiltration round the appertures of the follicles of the tonsils had a remote resemblance to Diphtheritic exudation (*vide* Diphtheria). Both children and adults were affected; in a considerable porportion of the cases the patients suffered from epistaxis (bleeding of the nose.)

In October I visited East Hanningfield and neighbourhood in consequence of the receipt of information from the Schoolmistress that many children were absent on account of sore throat. I found there were many severe cases of Influenza in the village, some associated with the peculiar condition of the tonsils just described. There were other children who had congested throats, enlargements of glands, herpes of lips associated with and more or less marked fever-

ishness which did not appear to be due to Influenza, since in nearly every instance the child so attacked had been out in the wet grass gathering acorns for the farmers.

Measles. An epidemic outbreak occurred in January at Highwood. Five families were infected when I first visited and the children were excluded from school. During the following week, however, the disease spread so rapidly that the schools had to be closed for a short period.

Whooping Cough. During the summer many cases occurred in Sandon parish, and for the past few months the disease has been prevalent in and around Great Waltham. I am afraid children sometimes are allowed to return to school before they are free from infection, assuming that a child is infectious so long as it continues to cough, although the cough may not in this late stage be associated with the peculiar "Whoop" which is characteristic of the disease at an earlier stage.

Chicken Pox. Many cases have come to my knowledge, one so severe (in an adult) that Small Pox was suspected. There has been no extensive prevalence however.

<i>Condition of the district with reference to Zymotic Diseases.</i>	At the present time (end of 1893) we have cases of Scarlet Fever in Springfield, Roxwell, Broomfield, Little Waltham and Woodham Ferris; a case of Diphtheria at Ingatestone, and a few cases of Erysipelas in various parishes. Whooping Cough still prevails at Great Waltham, and Chicken Pox has appeared amongst the children at Woodham Ferris School. Influenza is pretty generally prevalent, but the number of cases in any one district is not large.
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STATISTICS OF SICKNESS, MORTALITY, &c.

During the year 227 cases of Infectious Sickness have been notified, but as stated in an earlier portion of the report this does not include all the cases which have occurred. The

difficulty in diagnosing very mild cases is so great that it is impossible to give accurate figures, and I think it better therefore to include in my returns only those cases which were sufficiently well marked to justify the Medical Attendant in notifying. Where I discovered cases I always recommended that a medical man be called in, and this advice was almost invariably acted upon at once.

	Cases Notified.		Deaths.		Deaths per 100 cases.	
Scarlet Fever	...	84	...	1	...	1·2
Diphtheria	...	80	...	10	...	12·5
Fevers	...	22	...	8	...	34·3
Erysipelas	...	41	...	0	...	·0

The number of cases notified per 1,000 population was 9·8, in 1892 it was 8·8 and in 1891 only 4·9. Scarlet Fever and Diphtheria are chiefly responsible for the excessive number of cases notified. The majority of the cases occurred in the Great Waltham and Ingatestone Sub-registration districts.

Deaths from Zymotic Diseases. Notwithstanding the large amount of infectious sickness the death-rate from the seven principal Zymotic Diseases has not exceeded the average for the past 12 years, 1·65, and is lower than in 1892 and 1890. The whole of the excessive mortality occurred in the Great Waltham district, and it is interesting to note that over this same area in 1892 the death-rate from such diseases was exceptionally low.

Deaths from all Causes. The total number of deaths registered was 323, but of these seven were of persons not residing in the district. Five of these deaths occurred in the County Gaol, one in the Billericay Infectious Hospital, and the seventh was that of a person who drowned himself in the district. On the other hand 29 paupers belonging to the

Rural district one in the Union Workhouse which is within the Urban area. The number of deaths for the year therefore is $323 + 29 - 7 = 345$ giving a death rate of 14.9 which is below the average of the last 12 years and considerably below that of 1892. In every sub-registration district the death-rate has been lower than in the previous year. Great Waltham district had the highest rate and this was due to the excessive mortality from Zymotic Diseases. *Vide* Table III. The period of the year when most deaths occurred varied with the locality, thus in three of the four sub-registration areas the first quarter was the most fatal, whilst in the fourth (Great Waltham) the deaths were especially numerous in the third and fourth quarters. *Vide* Table II. Considerably over a third of all who died were over 65 years of age.

The death-rates in the larger parishes and in groups of smaller parishes are given in Table VIII. Taking the average of the 12 years, 1881-1892, the four contiguous parishes of Widford, Margaretting, Ingatestone and Fryerning have the highest death-rate, and it is very singular that during the past year these are the very parishes which have had an exceptionally low death-rate. If this continues for a few years the mean death-rate will become as low as for the district generally.

The Birth-rate. 608 births have been registered corresponding to a Birth-rate of 26.2 per 1,000, this whilst below the average of the preceding 10 years is higher than that recorded in 1892.

Infantile Mortality. The number of infants who have died before attaining the age of one year is 55, which is equivalent to 88 per 1,000 births. This is below the average of the last 12 years.

Notwithstanding the prevalence of Influenza, Scarlet Fever, and Diphtheria the death-rate at all ages and from

nearly all causes has been below the average. The Infectious Diseases were mild in character and the porportion of deaths to persons attacked was low, suggesting that the infectivity does not always increase with the severity of the disease. The true explanation, however, probably is that in severe cases much greater care is taken to prevent extension in the household. When the cases are mild fewer precautions are taken and greater facilitics are offered for the spread of infection. This is certainly my experience in this district during the past year.

JOHN C. THRESH.

TABLE I.

BIRTH RATES, DEATH RATES, & INFANTILE MORTALITY
DURING 1893, COMPARED WITH PREVIOUS YEARS.

Period.	Per 1,000 Population.			Deaths of Infants under 1 year per 1,000 births.
	Birth-rate.	Death-rate all causes.	Death-rate Zymotic Diseases.	
1893	26·2	14·9	1·68	88
1892	24·5	18·2	1·85	96
1891	26·6	15·5	·95	91
1890	26·8	15·6	2·6	105
1881-90	28·0	15·3	1·65	92

TABLE II.

QUARTERLY RETURNS OF MORTALITY IN SUB-REGIS-
TRATION DISTRICTS. PER 1,000 PERSONS PER ANNUM.

	1893.				1892.				1891.			
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Writtle ...	19·8	15·0	13·4	11·9	49·0	18·2	13·4	15·8	19·0	15·8	12·6	17·4
Great Waltham	12·5	13·2	20·3	21·6	36·6	13·25	13·25	14·0	16·0	22·6	14·0	10·1
Great Baddow ...	17·8	12·5	16·8	14·1	31·9	14·1	12·9	14·7	14·7	18·4	12·3	17·2
Ingatestone ...	14·9	14·25	10·4	12·3	18·1	13·6	7·8	10·3	19·1	21·4	10·4	11·6
Chelmsford ... R.S.D.	15·9	13·1	15·3	14·8	32·6	13·3	11·7	13·5	16·5	19·3	12·1	14·0

TABLE III.

DEATH RATES FROM ALL CAUSES, AND FROM THE SEVEN
PRINCIPAL ZYMOTIC DISEASES, AND INFANTILE MOR-
TALITY IN THE VARIOUS SUB-REGISTRATION DISTRICTS.

Sub-Registration District.	1893.			1892.		
	Death rate.	Zymotic Death rate.	Infantile Mortality.	Death rate.	Zymotic Death rate.	Infantile Mortality.
Writtle ...	14·4	1·0	109·	24·1	3·4	130·
Great Waltham ...	15·6	3·7	82·8	19·3	·6	82·
Great Baddow ...	13·7	1·7	114·	18·4	2·0	150·
Ingatestone ...	11·5	·67	61·	12·5	1·45	46·
Widford Parish ...	13·7	...	...	13·3	...	...

TABLE IV.

TABLE of DEATHS during the year 1893, in the Rural Sanitary District of Chelmsford, classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

[illegible]

TABLE V.

TABLE of POPULATION, BIRTHS, and of NEW CASES of INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1893, in the Rural Sanitary District of Chelmsford, classified according to DISEASES, AGES, and LOCALITIES.

SUB-REGISTRATION DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Census 1891.	Estima- ted to middle of 1893.			1	2	3	4	FEVERS.						10	11	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Writtle	5060	5060	156	Under 5 5 upwards.	...	3 14	1 4	1 0</

* Includes six cases not notified.

TABLE VI.

TABLE OF METEOROLOGICAL DATA, DEATHS, AND INFECTIOUS DISEASES.
YEAR ENDING DECEMBER 31st, 1893.

Meteorological Data.					Deaths from all causes.		Deaths from Zymotic Diseases.							Infectious Diseases Notified.							
	Mean Temp.	Mean daily Range.	Relative Humidity.	No. of Rainy Days.	Rainfall.	Total Deaths.	Under 1 year.	Over 65 years.	Scarlatina	Diphtheria and Croup.	Revers.	Diarrhoea	Erysipelas.	Whooping Cough.	Measles	Total	Scarlatina.	Diphtheria and Croup	Revers	Erysipelas	Total.
January	34.3	10.2	94.8	18	1.435	36	7	13	...	...	1	1	...	1	3	6	8	9	7	1	25
February	40.35	12.9	94.2	20	2.645	25	3	11	...	...	...	...	...	...	...	...	5	22	1	1	29
March	44.2	22.65	89.	7	.325	34	6	17	...	1	...	...	...	...	...	1	2	3	...	1	6
April ...	49.2	26.4	70.	2	.103	27	7	11	...	...	...	1	...	1	...	2	3	1	...	3	7
May ...	56.19	23.84	65.	9	1.243	29	5	15	...	1	...	...	...	...	...	1	3	3	...	2	8
June ...	60.19	24.21	72.	7	.583	20	3	10	1	...	...	...	...	...	...	1	14	2	...	1	17
July ...	62.6	20.2	73.5	18	3.075	34	4	18	...	...	...	6	...	...	...	6	1	3	2	1	7
August	64.66	22.0	70.5	7	2.20	32	7	10	...	...	2	2	...	...	...	4	5	1	1	4	11
September	56.05	18.93	77.	10	1.14	22	5	6	...	...	1	3	...	...	...	3	5	7	3	6	21
October	50.88	15.51	88.	19	3.00	23	2	8	...	3	2	...	...	1	...	6	9	15	5	5	34
November	49.62	13.28	88.	17	2.475	25	3	10	...	3	2	...	...	...	...	5	6	5	3	7	21
December	38.67	11.99	94.	16	1.982	38	3	16	...	3	...	...	...	...	...	3	23	9	...	9	41
Means & Totals for 1893	49.8	18.5	81.3	150	20.206	345	55	145	1	11	8	13	0	3	3	39	84	80	22	41	227
Ditto	47.2	16.55	84.3	162	24.32	421	54	188	4	12	4	4	1	8	9	42	55	98	17	34	204
Ditto	47.7	16.0	83.3	187	22.74	359	56	122	2	11	4	...	2	3	1	23	30	43	14	26	113

* Corrected for Aliens, &c.

TABLE VIII.

DEATH RATES IN THE PARISHES PER 1,000 POPULATION.

PARISHES.	Popula- tion.	1893.	12 years 1881 to 1892.
Boreham, Little Baddow, Danbury and Sandon...	2890	16.9	14.1
Runwell, Rettendon, Woodham Ferris, and the Hanningfields	2830	14.5	14.2
Roxwell, Chignall, Good Easter, Mashbury and Pleshey ...	2155	17.1	15.7
Writtle (including Highwood)	2487	14.4	15.8
Great Waltham	2285	14.9	16.0
Broomfield, Little Waltham, Little Leighs and Great Leighs	2354	15.7	15.8
Springfield	2582	13.5	15.5
Great Baddow (including Galleywood)... ..	2037	16.2	15.9
Margaretting and Widford	815	11.0	17.5
Stock and Buttsbury	1064	15.0	15.6
Ingatestone and Fryerning	1659	10.2	17.9

SUMMARY of WORK done through the Sanitary Inspector in the
Rural Sanitary District of Chelmsford during the year
ending December 31st, 1893.

	Total Number for Year.	Result of Inspection, &c.
1. Complaints received	202	
2. Cottages inspected	1300	
3. Lodging-houses inspected	—	
4. Slaughter-houses inspected	17	All in fair condition when in- spected
5. Bakehouses inspected... ..	24	All fairly clean when inspected
6. Dairies and Milk Shops inspected	29	
7. Cowsheds inspected	67	These "are all in fair condition"
8. Workshops inspected... ..	—	
9. Filthy houses cleansed, sec. 46 Public Health Act, 1875... ..	7	
10. Houses disinfected	—	
11. Overcrowding abated... ..	11	
12. Houses placed in habitable repair	55	Several not reported to the Rural Sanitary Authority
13. Houses closed	20	Condemned by Medical Officer of Health
14. Houses erected or re-built, for which "Certificates" were applied for	16	
15. "Certificates" granted	16	
16. " " deferred	—	
17. Wells sunk or improved supplies of water afforded	4	
18. Wells cleansed or repaired	13	
19. Wells closed	—	
20. Defective pumps repaired or new pumps erected to existing wells	9	
21. Leaky taps repaired where drawing from public mains... ..	137	
22. Houses connected with sewers	16	
23. Houses connected with water mains	55	
24. Earth, pail, or improved Privies constructed or existing Privies altered	40	
25. Privies and W.C.'s repaired; W.C.'s supplied with water	35	
26. Cisterns cleansed, repaired, or covered	3	
27. Animals improperly kept removed...	—	
28. Samples of water taken for Analysis	—	Many taken by Medical Officer of Health
29. Samples of food or drink taken for Analysis	—	
30. Compensation paid for destruction of infected bedding	12s.	
31. Seizures of unsound Meat, &c.	—	
32. Nuisances reported or detected	275	
33. Nuisances abated	309	
34. Notices served	250	
35. Summonses taken out	—	
36. Convictions	—	

(Signed) I. C. SMITH.

CHELMSFORD RURAL SANITARY DISTRICT.

EXTRACT FROM 1891 CENSUS RETURNS.

		No. of Occu- pants.	No. OF HOUSES WITH			
			1 Room	2 Rooms	3 Rooms	4 Rooms
Population	23174	1	33	69	57	125
Males	11620	2	9	46	85	475
Females	11554	3	...	23	57	386
No. under 1 year	544	4	3	6	42	275
between 1-2	536	5	1	3	37	252
2-3	546	6	...	1	27	206
3-4	539	7	...	...	6	150
4-5	558	8	...	...	6*	100
5-10	2932	9	...	...	4*	46*
10-15	2669	10	...	1*	...	18*
15-20	2086	11	...	...	...	3 ^v
20-25	1700	12 or more	...	...	...	4*
25-30	1536					
30-35	1401					
35-40	1221	Totals	46	149	321	2040
40-45	1207					
45-50	1125					
50-55	1036					
55-60	890					
60-65	818					
67-70	688					
70-75	566					
75-80	353					
80-85	149					
85-90	62					
90-95	11					
95-100	1					

In the 2556 Cottages with 4 rooms and under there are 9716 inhabitants, giving 3·8 persons per cottage.

In the 2697 houses with more than 4 rooms there are 13,458 inhabitants or 5 persons per house.

In the whole of the 5253 houses there are 23,174 inhabitants; the average number of persons per house therefore is 4·4.

* Indicates overcrowding.

RUNWELL.

Landowner.	Acres owned.	No. of Cottages.	No. of Acres per Cottage.	Remarks.
Bell, T. ...	133	1	133	Farmhouse used as cottage
Berens, R. B. ...	45	...	...
Wright, J., Exors. of ...	255	...	...
Brunwin, G. A. ...	79	1	79	Farmhouse used as cottage
Broderick, Mrs. ...	39	...	...
Kemble, T. ...	1212	16	75	4 Farmhouses and Mansion
Bartlett, Rev. R. E. ...	71	...	...
Spitty, Major ...	114	4	29	
Small owners ...	143	32	...	
Total ...	2071	54	38	

No. of separate families	...	...	59
No. of inhabited houses	...	...	59
Population ...	...	...	275
Rent of Cottages 2/10 to 6/-	Average	£4	
Cottage Accommodation	...	...	No complaint received.

RETTENDON.

Landowners.	Acres.	No. of Cottages.	No. of Acres per Cottage.	Remarks.
New England Company	479	8	60	
Villafranca, Madame ...	449	3	150	
Wedds Trustees ...	285	3	95	
Oxford University ...	251	4	63	
Routledge Exors. ...	218	1	218	
Egham Charity ...	145	2	72	
Smith, Sydney ...	132	2	66	
Raincock, Esquire ...	128	3	43	
Spitty, Major ...	119	2	60	
Parker, C. ...	112	...	...
Nash, Edward ...	104	1	104	
Craike, Mrs. ...	104	...	...
Webster, Rev. ...	90	...	...
Finch, Exors. ...	91	2	45	
Aldham, Thos. ...	88	3	29	
Flindell, F. B. ...	87	1	87	
Dennis, Jane ...	72	3	24	
Hardy, J. E. ...	50	3	17	
Owners of from 3 to 50 acres ...	475	29	16	
Still smaller owners ...	234	70	...	
Total ...	3713	140	27	

No. of separate families ... 174

Total No. of inhabited houses .. 158

Rental, £3 to £8, both exceptional. Average £4 14s.

Population ... 785

Accommodation apparently sufficient, since there are 13 unoccupied cottages.

At certain parts of the parish more cottages would let readily, but it would probably cause existing ones to become unoccupied.

WOODHAM FERRIS.

Landowners.	Acres owned.	No. of Cottages.		Remarks.
Jones' Trustees ...	401	5	80	104 Acres Wood
Catchpole, T. ...	535	8	69	
Rayleigh, Lord ...	947	...	...
Gilson, Mrs. ...	64	1	64	
Squire, J. ...	61	...	Farm-house	
Fielding, J....	154	6	26	
Charity Trustees ...	83	...	...
Lowe, John ...	203	4	51	
Ashworth, A. ...	340	2	170	
Chapman's Trustees ...	57	...	...
Marriage's „ ...	177	1	177	
Morgan, J. ...	136	...	...
Draper's Co. ...	75	...	...
Christy, S. ...	175	...	...
Smyth, W. D. W. ...	252	4	88	
Starkey, A. ...	169	...	...
Bowden, J. ...	52	...	...
Smaller owners ..	501	105	...	
Total ...	4482	136*	33	

(* 18 unoccupied.)

No. of separate families ... 156

No. of inhabited houses ... 155

Population ... 769

Rental of Cottages from £3 to £5. Average £4 10s.

Cottage accommodation. -- Overcrowding in village. The unoccupied cottages are in outlying parts of parish.

EAST HANNINGFIELD.

Landowners.	No. of Acres owned.	No. of Cottages.	Acres per Cottage.	Remarks.
Brewer's Exors. ...	63	...	...	Farmhouse
Lovibond, Ccl. ...	120	...	...	1 Farmhouse in W. H.
Rose, Mrs. ...	108	14	8	
Smith, J. J. ...	176	2	88	
Gardiner's Exors. ..	230	3	76	
Pledger, A....	118	3	39	
Hendry, G....	84	...	...	Farmhouse
Scott, H. ...	52	...	...	Do.
Mugleston, R. B. ...	128	2	64	Do.
Randall, E....	195	...	...	Do.
Hardy, J. C. ..	94	1	94	Do.
Rosling, E. ...	250	5	50	2 Farmhouses
Baddeley, E. ...	324	5	65	Farmhouse in W.H. also
Heywood, H. ...	248	2	124	
Smaller owners .	492	43	...	
Total ...	2682	80	34	

No. of separate families ... 96

No. of inhabited houses ... 96

Population 396

Rental of cottages, £2 10s. to £6 10s. Average £4 12s.

Cottage accommodation.—Sufficient in number but many are very old.

SOUTH HANNINGFIELD.

Landowners.	No. of Acres owned.	No of Cottages.	Acres per Cottage.	Remarks.
Benson, C. ..	122	2	61	
Brunwin, G. ...	203	3	68	
Wright's Exors. ...	264	8	33	
Smaller owners ...	899	26	...	
Total ...	1488	39	38	

No. of separate families ... 44
 No. of Inhabited houses ... 43
 Population ... 204
 Rental of cottages, £3 to £5. Average £4 10s.
 Cottage accommodation. Deficient in quality and quantity.

WEST HANNINGFIELD.

Alstone, Sir F. ..	140	4	35	
Baddley, J. ...	285	3	95	
Benson, Charles ...	165	5	33	Including farmhouse as 2 cottages
„ Colin ...	195	9	22	
Cole, E. ...	117	2	58	Farmhouse used as 2 cottages
Crabb, R. H. J. ...	78	4	20	
Dennis, J. ...	142	4	36	
Dunster, T. ...	337	5	67	Farmhouse as 2 cottages
William's Trustees ...	460	2	230	
Smaller owners ...	920	49	...	
Total ...	2839	87	33	

No. of separate families ... 110
 No. of houses inhabited ... 109
 Population ... 464
 Rental of Cottages, £3 to £5. Average £4 10s.
 Cottage accommodation. Fair.

STOCK & BUTTSBURY.

(The village of Stock is in both parishes).

Landowners.	Acres owned.	Cottages owned.	Acres per Cottage.	Remarks.
Petre, Lord ...	1404	14	100	
Petre, Lawrence ...	782	11	71	
Branfil, Col. ..	63	1	63	
Goodchild, W. ...	81	2	40	
Hunt, E. J. ..	311	2	156	
Spitty, Major ...	257	1	257	
Hardy, E. S. ...	257	11	23	
Jones, E. ...	65	4	16	
Benson, Colin ...	59	1	59	
Mackinnon, F. A. ...	219	2	110	
Johnson's Exors. ...	114	2	57	
Brunwin, G. A. ...	55	18	3	
Battiscombe, Capt. ...	63	...	...
Gillow, W. ...	134	2	67	
Rist, J. ...	227	4	57	
Smaller owners ...	746	133	...	
Total ...	4837	208	23	

No. of separate families ... 257

No. of inhabited houses ... 252

Population ... 1110

Rental of Cottages, £2 to £6. Average £4.

Cottage accommodation. Fair.

INGATESTONE & FRYERNING.

(Ingatestone village is in both parishes.)

Landowners.		Acres owned.	Cottages owned.	Acres for Cottages.	Remarks.
Caldicott's Exors.	...	139	4	35	
Disney's Exors.	...	116	2	58	
Disney, E. J.	...	444	32	14	Woodland in part
French, T. ...	...	63	3	21	
Kirbright, A.	...	336	24	14	
Neave, J. N. M.	...	81	8	10	
Parkinson, F.	...	58	2	29	
Pedley, W.	...	101	2	50	
Petre, Lord	...	1098	18	61	Woodland included
Smith, B. ...	...	54	...	...
Wadham College	...	758	2	379	Woodland included
Smaller owners	..	885	180	...	
Total	...	4133	277	15	

No. of separate families 384

No. of inhabited houses 376

Population 1688

Rental of Cottages, £4 to £8 10s. Average £6.

Cottage accommodation. Very deficient in the village.

MARGARETTING.

Landowners.	Acres.	Cottages.	Acres per Cottage.	Remarks.
Petre, Lord ...	573	10	57	
Petre, L. J. ...	419	4	105	
Pryor, A. ...	369	6	61	
Baker, G. ...	123	1	123	
Parnell, C. ...	91	7	13	
Soper, J. P. N. ...	88	2	44	
Disney, E. J. ...	80	3	27	
Baker, W. ...	76	4	19	
Barker, G. ...	66	3	22	
Smaller owners ...	399	64	...	
Total ...	2284	104	22	

No. of separate families ... 116
 No. of inhabited houses ... 116
 Population ... 511
 Rental, £4 to £5. Average £4 10s.
 Cottage accommodation—sufficient.

WIDFORD.

Pryor, A. ...	556	19	29	Includes part of park
Phillip's Exors. ..	55	2	27	
Smaller owners ...	69	33	...	
Total ...	680	54	13	

No. of separate families ... 70
 No. of inhabited houses ... 62
 Population ... 293
 Cottages, rental of £3 to £7 10s.
 Cottage accommodation.—A few large cottages much required.
 Many of tenants however are employed in Chelmsford.

WRITTLE (including HIGHWOOD).

Landowners.		Acres owned.	Cottages owned.	Acres per Cottage.	Remarks.
Wadham College	...	990	10	99	Some woodland
Blyth, W.	...	211	3	70	
Petre, Lord	...	2520	22	114	
Challis, J. J.	...	123	1	123	
Fooks, J.	...	175	5	35	
Pryor, A.	...	1650	39	42	Includes portion of park
Caton, A.	...	123	5	25	
Cattley, Messrs.	...	106	2	53	
Townsend, W.	...	125	2	63	
Radford, W.	...	84	...	...
Rosling, E.	...	355	11	32	
Straight, W.	...	84	1	84	
Turner, E.	...	96	2	48	
John's Trustees	...	158	2	79	
Marriage's Trustees	...	119	..	...
Philpot's	...	59	...	...
Brewery Co.	..	61	6	10	
Smaller owners	...	1785	378	...	
Total	...	8624	489	18	

No. of separate families ... 564

No. of inhabited houses ... 539

Population ... 2462

Rent of Cottages, £4 to £6. Average £5 10s.

Cottage accommodation—Fair in Writtle. Several cottages recently erected and occupied. Many very old cottages, especially in Highwood. More cottages much wanted here.

ROXWELL.

Landowners.	Acres.	No. of Cottages.	Acres per Cottage.	Remarks.
Bramston, Col. ...	2135	35	61	
Petre, Lord ...	916	11	83	
Christ's Hospital ...	208	...	...
Gibson, Henry ...	193	14	14	
Wadham College ...	135	3	45	
Widows' Charity, Richmond ...	125	...	..
Phillips, J. S. ...	93	...	...
Foy, Elizabeth ...	83	2	41	
Crush, William's Exors. ...	73	...	...
Smaller owners ...	821	84	...	
Total ...	4782	149	32	

No. of separate families ... 182

No. of inhabited houses ... 171

Population ... 766

Rental £3 to £5. Average £4.

Cottage accommodation— Many very old cottages, some of which are overcrowded.

BROOMFIELD.

Landowners.	Acres owned.	No. of Cottages.	No. of Acres per Cottage.	Remarks.
Sir Simeon Stuart ...	897	3	299	Owns other cottages in village
Wakefield, C. M. ..	334	9	37	
Peacock, Mark ...	112	2	56	
Seabrook, Eliza ...	104	2	52	
Felsted Charity Trustees	98	...	...
Blyth, John ...	85	2	42	
Wells, Frank ...	90	1	90	
Radcliffe, Mrs. ...	71	3	24	
Tufnell, J. J. ...	67	...	...
Christy, David ...	55	4	14	
Marriage, W. & H. ..	50	2	25	
Smaller owners ...	369	92	...	
Total ...	2332	120	19	Many large private residences. Suburb of Chelmsford

No. of separate families ... 208

No. of inhabited houses ... 208

No. of Cottages ... 120

Population ... 898

Rental of Cottages, £3 to £7 10s. Average £5.

Cottage accommodation.—Probably better than in any other parish in district.

CHIGNALS.

Landowners.	Acres owned.	Cottages owned.	Acres per Cottage.	Remarks.
Cooke, Rev. C..	159	3	53	
Cush's Trustees	220	4	55	
Bramston, Col.	345	3	115	
Marriage, Messrs.	144	15	10	
Petre, Lord	374	3	125	
Rayleigh, Lord	135	2	67	
Richardson, F.	404	17	25	
Smaller owners	246	38	...	
Total	2027	85	24	

No. of separate families ... 96
 No. of inhabited houses ... 95
 Population ... 426
 Rental of Cottages, £2 10s. to £7 10s. Average £4 10s.
 Cottage accommodation. Some wretched cottages.
 New ones much needed.

GOOD EASTER.

Irving, Elizabeth	520	2	263	
Locke-King, Hon.	240	8	30	
Matthews, F. J.	219	2	110	
Pitt, H. T. ...	176	4	44	
Phillips, Spencer	158	3	53	
Marriage, W. & H. Exors.	140	3	47	
Rayleigh, Lord	85	3	28	
Tuffnell, J. J.	75	2	38	
Oliver, H. ...	50	5	10	
Smaller owners	325	48	...	
Smaller owners ...	1988	80	25	

No. of separate families ... 102
 Population ... 508
 No. of inhabited houses ... 101
 No. of Cottages ... 80
 Rental, £4 to £5. Average £4 10s.
 Cottage accommodation. Wretched repair generally.
 New cottages urgently needed.

MASHBURY & PLESHEY.

Landowners.	Acres.	Cottages.	Acres per Cottage.	Remarks.
MASHBURY—				
Bramston, Col. ...	322	...	...
Marriage, H. ..	331	6	55	
Matthews, C. ...	161	13	12	
PLESHEY—				
Tuffnell, J. J. ...	492	6	82	
Matthews, J. R. ..	62	5	12	
Quilter, P. J. ...	49	15	3	
Smaller owners in both parishes ...	213	56	...	
Total ...	1630	101	16	

	Mashbury.		Pleshey.	
No. of separate families	37	...	82
No. of inhabited houses	34	...	77
No. of Cottages	34	...	67
Population	154	..	317
Rental, £2 15s. to £7.	£4	...	£3 5s. 6d.
Cottage accommodation.—Fairly good. Sufficient. (?)				

GREAT WALTHAM.

Landowners.	Acres.	Cottages.	Acres per Cottage.	Remarks.
Tuffnell, J. J. ...	3473	100	35	Includes large park
Guy's Hospital ...	1213	10	121	
Craig, D. ...	232	6	39	
Poole, Mrs....	98	6	16	
Charity Trustees ...	67	...	...
Dannatt, W. ...	51	3	17	
Hooper, Rev. ...	176	...	...
Dowsett, J. ...	154	7	22	
„ P. ...	160	6	27	
Elliott, J. ...	55	...	...
Wellartin, J. ...	219	13	16	
Hatley, J. ...	72	3	24	
Foster, J. T. ...	118	8	15	
Livermore, W. ...	97	..	...
Trinity College ...	190	..	...
Radcliff, Mrs. ...	73	13	6	
Young, F. ...	76	9	8	
Smaller owners ...	927	211	...	
<hr/>				
Total	7451	395	19	

No. of separate families ... 505

No. of inhabited houses ... 503

Population 2222

Cottage Rentals, £3 to £5. Average £3 10s.

Cottage accommodation. Fairly good and sufficient.

LITTLE WALTHAM.

Landowners.		Acres.	Cottages.	Acres per Cottage.	Remarks.
Bird, Mrs. ...	...	578	9	64	
Tufnell, Mr.	...	517	2	258	
Wells, Mr. ...	...	228	14	16	
Johns, Mr. ...	...	71	13	6	
Rust, Mr. ...	...	76	..	...
Charity Trustees	...	114	2	57	
Skill, C. ...	...	62	1	62	
Smaller owners	...	664	74	...	
Total	...	2310	115	20	

No. of separate families ... 156

No. of inhabited houses ... 154

Population ... 661

Cottage Rentals, £3 to £4. Average £3 10s.

Cottage accommodation. Fair, a few wretched old cottages.

GREAT & LITTLE LEIGHS.

Landowners.	Acres.	Cottages.	Acres per Cottage.	Remarks.
GREAT LEIGHS —				
Brewster, Mrs. ...	85	...	...
Brown's Exors. ...	315	14	22	
Tritton, Mrs. ...	807	21	38	
Rector ...	112	...	...
Townsend, Mrs. ...	255	2	127	
Nottidge, Messrs. ...	67	.	...
Brown, Mrs. ...	100	3	33	
Hitchcock, Mr. ...	106	...	...
Porter, Capt. ...	174	...	...
Holland, George ...	114	18	6	
Joslin, S. ...	123	2	61	
Allard, F. J. ...	130	2	65	
Cousins, C. ...	121	3	40	
Speakman, Mr. ...	60	...	...
Smaller owners ...	577	55	...	
LITTLE LEIGHS—				
Guy's Hospital ...	321	...	...	Acres per cottage
Porter, R. H. M. ...	151	...	...	Great Leighs, 26
Rayner, E. A. ...	64	...	...	Little Leighs, 45
Badley, J. ...	311	...	...
Smaller owners ...	232	24	...	
<hr/>				
Totals ...	4225	144	29	

	Gt. Leighs.	Lt. Leighs.
No. of separate families ...	164	27
No. of inhabited houses ...	162	27
No. of inhabited cottages ...	120	24
Population ...	720	115
Rental of Cottages, £3 to £4 ...	£3 10s.	£2 10s. to £6 10s.
Average, £4.		
Cottage accommodation. — There are many wretched little cottages.		

BOREHAM.

Landowners.	Acres.	Cottages.	Acres per cottage.	Remarks.
Butler, Mrs. ...	86	6	14	None occupied by Labourers
Anthony, J. H. ...	52	2	26	
Tufnell, W. M. ...	55	...	..
Rayleigh, Lord ...	176	2	88	
Cousins, C. ...	55	12 not occupied by Labourers 4 not occupied by Labourers
Townsend, Rev. ...	126	2	63	
Tufnell-Tyrell, Col. ...	1587	47	34	
Haselfoot, R. ...	395	21	19	
Hurrell, G. ...	273	2	136	
Ketley, A. ...	208	5	42	
Smith, J. ...	103	1	103	
Walford-Gosnall, J. ...	278	1	278	
Smaller owners ...	407	78	...	
Totals ...	3801	167	23	

No. of separate families 209

No. of inhabited houses 202

Population 944

Rental of Cottages, £3 to £6. Average, £4.

Cottage accommodation. A number of old cottages.

SPRINGFIELD.

Landowners.	Acres.	Cottages	Acres per Cottage.	Remarks
Black, W. ...	140	9	16	All occupied by Ag. labourers
Chelmsford Sewage Farm	108	5	21	Do. do.
Jackson, T. ...	79	4	20	
Mildmay, Sir H. ...	274	5	55	Occupied by Ag. labourers
Pearson, A., Exors. ...	149	1	149	
Marriage, W. ...	493	4	123	Occupied by Ag. labourers
„ W. H. ...	55	7	8	Do.
Seabrook, J., Exors. ...	268	5	54	Do.
Kitchener, J. ...	166	6	28	Do.
Tufnel-Tyrell, Col. ...	151	7	22	Do.
White, J. H. ...	57	8	7	Do.
Smaller owners ...	968	356	...	Occupants chiefly employed in Chelmsford
Total ...	2908	417	7	Portion forms a suburb of Chelmsford

No. of separate families ... 542

No. of inhabited houses ... 524

Population ... 2636

Cottage Rentals, £2 15s. to £9. Average £6.

Cottage accommodation. Fair. A few old cottages in outlying parts.

GREAT BADDOW.

Landowners.	Acres.	Cottages.	Acres per Cottage.	Remarks.
Tabor, James ...	324	3	108	
Prior-Johnson, P. W. ...	240	3	80	
Finch, C. R. & E. ...	237	1	237	
Radford, Jas. ...	221	5	44	
Parker, A. C. ...	295	9	32	
Carter, H. ...	220	2	110	
Copland, J. A. ...	244	17	14	
Foster, J. T. ...	131	10	13	
Stacey, Samuel ...	137	2	68	
Ratcliff, S. C. ...	96	1	96	
Chaplin, T....	95	3	32	
Rimmer, Jno. ...	87	...	...	Farmhouse only
Wiffen, W....	92	...	...	Do.
Wonaley, Charles ...	84	...	..	Do.
Darley, T. C. ..	80	...	...	Do.
Smaller owners ...	436	273	...	
Totals ...	3019	329	9	Partly suburban in character

No. of separate families ... 480

Population ... 2019

No. of inhabited houses ... 456

Rental, 2s. to 3s. 6d. per week.

Cottage accommodation.—Always a demand. Good.

Many occupied by persons working in Chelmsford.

SANDON.

Landowners.		Acres.	Cottages.	Acres per Cottage.	Remarks.
Lovibond, C.	...	931	4	233	Two unoccupied
Goodeve, H.	...	160	...	...
Bogg's Trustees	...	105	5	21	Very old
Plumtree	...	97	...	...
Peacock's Trustees	...	56	...	...
Prior-Johnson	...	89	...	...
Pledger, A. ...	..	299	9	33	
Rasch, Major	...	166	17	10	
School Trustees	...	83	...	...
Taylor	...	64	1	64	Park land
Smaller owners	...	358	53	...	
Total	...	2408	89	27	

No. of separate families ... 106

No. of inhabited houses ... 106

Population ... 476

Cottage Rental, £3 to £5 10s. Average £4 10s.

Cottage accommodation. Several barely fit for human habitation. Accommodation said not to be sufficient and that land cannot be obtained for building purposes.

LITTLE BADDOW.

Landowners.		Acres.	Cottages.	Acres per Cottage.	Remarks.
Rayleigh, Lord	...	918	24	38	
Bush, J. & J.	...	129	2	64	
Portway Exors.	...	222	24	9	
Phillips, J. S.	...	219	8	109	
Plumptree, H. F.	...	834	13	64	2 in ruins
Bird, Capt.	...	71	2	35	
Smaller owners	...	363	39	...	
Total	...	2756	112	25	

No. of separate families	...	...	129
No. of inhabited houses	...	...	125
Population	...	...	543
Cottage Rental, £3 to £5.	Average, £4.		
Cottage accommodation.	Fair.		

DANBURY.

Landowners.	Acres	Cottages.	Acres per Cottage.	Remarks.
Docura, T. ...	130	4	32	
Thomas, J. W. ...	178	...	...
Phillips, J. S. ...	252	18	14	
Lovibond, Col. ...	374	...	...
Plumptre, H. F. ...	667	19	35	1 in ruins
Dennis, J. ...	108	2	54	
Bird, Capt. ...	114	2	57	
Pierce, J. T. ...	142	6	24	3 in ruins
Prowse, Capt. ...	98	8	12	
Trussell, G. S. ...	147	12	12	
Taylor, S. ...	194	4	48	
Wood, W. H. ...	133	...	...
Smaller owners ...	958	98	...	
Total ...	3495	173	20	Includes 9 in ruins

No. of separate families ... 198

No. of inhabited houses ... 195

Population ... 839

Cottage Rental, £3 to £5. Average, £4.

Cottage accommodation. Many wretched cottages on the Common. Number sufficient.

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