

[Report 1913] / Medical Officer of Health, Dunmow R.D.C.

Contributors

Great Dunmow (England). Rural District Council.

Publication/Creation

1913

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Annual Report

of the

Medical Officer of Health

E. BERTRAM SMITH,
M.B., B.S. ; D.P.H.

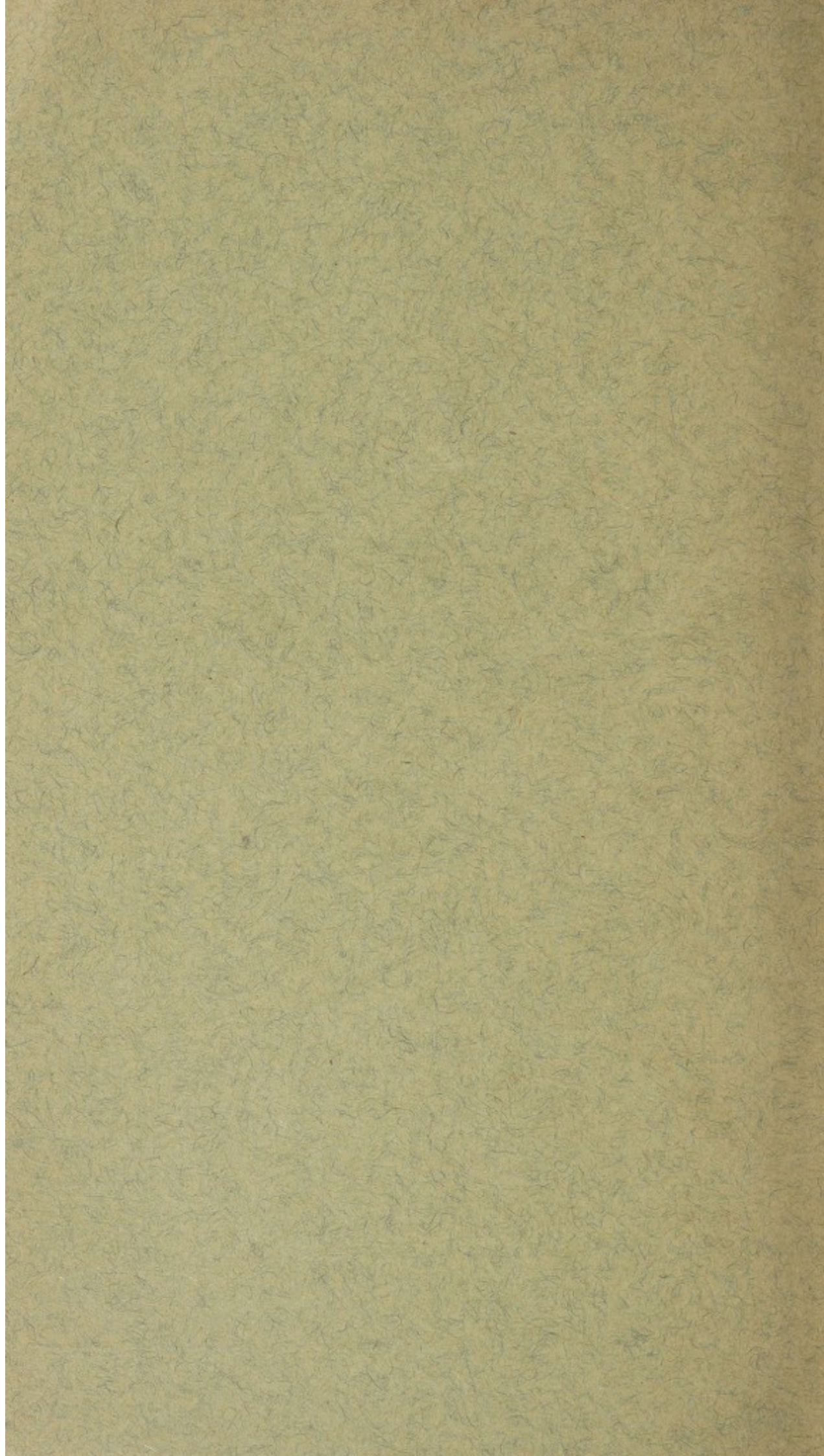
for the

Dunmow Rural District Council
for the Year 1913.

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ANNUAL REPORT

OF

THE MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1913.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

At the commencement of this my first Annual Report, I wish to express my thanks to the members of the Council for the kind and courteous manner in which they have treated me since I took office in April last; also to thank my predecessor, Dr. E. E. Goodbody, your Clerk, Mr. Floyd, and your Sanitary Inspector, Mr. Plumbley, for the assistance they have given me in helping me to obtain a knowledge of the sanitary affairs of the district with the least possible delay.

Although I am only responsible for a report upon the last nine months of the year, I have been asked by my predecessor to report upon the whole of the year, and he has given me the necessary information to enable me to do so.

A.—NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

PHYSICAL FEATURES. The Dunmow Rural District comprises about 74,000 acres, divided into 25 parishes, of gently undulating ground, varying from 127 to 375 feet above Ordnance Datum, and is drained by three rivers, the Chelmer, the Blackwater, and the Roding, the last of which rises in the district and eventually flows into the Thames.

The district measures about 16 miles in its longest and about 11 miles in its shortest axis.

Almost the whole of the district is on the London Clay which covers the chalk thickly, and in parts of the district large areas of boulder clay exist. This latter, is not water bearing, as a rule, but fortunately, in most places, post glacial deposits of sand and gravel are found, where water is usually easily obtainable.

POPULATION, SOCIAL CONDITIONS, &c. The Census population in 1911 was 16,084, and I think may be estimated to have been 16,170 in the middle of the year 1913. The more complete census returns are now being published and are worthy of consideration. The comparison of 1891 and 1911 is very interesting and is made in the following table:—

	1891	1901	1911
Population	16,674	15,705	16,084
No. of separate families	3925	3769	3964
Average no. per family	4.24	4.18	4.06

From this it will be seen that while the population has not recovered to the level of 1891 by 590, the number of separate occupiers is actually 39 more now than it was then. I consider these latter figures are a truer index of the number of wage-earners and the social condition of the district than those of population, which are affected by the decrease in the size of the family—which is so prominent a feature of the last few years, is shown in the table above.

If the comparison is carried further the chief increase in the number of occupiers since 1891 is found to have taken place in the parishes of Great Dunmow (55) and Felsted (20), so that the remainder of the district is still 36 behind what it was in 1891, but is 116 ahead of what it was in 1901.

In only three parishes, Broxton, Great Easton and Tilty, has there been a continuous decline in the number of occupiers since 1891.

The proportion of males to females in England and Wales is 1000 to 1068, but in this district it is 1000 to 909, due presumably to the number of girls who are absent from the district as domestic servants. This fact may have some bearing on the death rates from various diseases that are not equally severe in the two sexes.

Another recent volume of census statistics throws some light upon overcrowding. The number of houses containing more than two persons per room (or roughly four per bedroom) is 58, containing 521 persons or 3.4 per cent. of the population in *private families*. Probably these 58 houses are all overcrowded.

The chief occupation of the district is agriculture. There is very little industrial employment of women.

As the Poor Law Union and Rural District are coincident in area, the following particulars of Poor Law Relief may be given. They have been kindly supplied by the Clerk:—

		July, 1903—	Jan., 1904.	Jan., 1913—	July, 1913.
No. of Outdoor Paupers	..	484	484	283	279
„ Indoor Paupers	..	118	140	148	118
„ Lunatics	..	54	55	59	63
For the half-years ending					
		Mar.—1903—	Sept.	Mar.—1913—	Sept.
		£	£	£	£
Cost of Out-Relief	..	1146	1190	768	526
„ In-Maintenance	..	765	798	1161	899
„ Lunatics	..	619	640	948	929

The facilities for other hospital relief, &c., are very small. The Tuberculosis Officer attends at a room in Great Dunmow once a week.

B.—SANITARY CIRCUMSTANCES OF THE DISTRICT.

WATER SUPPLY.

Great Dunmow.—The works were completed in 1908 and were purchased in 1912 by the Council. They consist of a 6in. bore into the chalk which lies at a depth of about 180 feet. The top of the bore tube is 205 feet above Ordnance Datum and the total depth 300 feet, of which the lower 80 feet is unlined; and the water rises to within 32 feet of the surface. A bore tube pump driven by 6½-h.p. suction gas engines raises the water to a concrete reservoir in the highest part of the town, from which it gravitates into the service mains.

The number of houses at present connected is 217 including the work-house, and the daily consumption is about 10,000 gallons.

About 500 yards of extensions of the mains have been laid and 33 houses connected up during the year.

Felstead.—The works here were constructed in 1908, and were purchased by the Council at the same time as those at Dunmow and supply the village. Water is collected from a protected spring which yields about 17,000 gallons of water daily, and is pumped to a steel tank in the village of 6000 gallons capacity and raised 40 feet above the ground level. The pumps were driven by duplicate 2½-h.p. oil engines, but during the year one has been replaced by a 5-h.p. oil engine with very satisfactory results. The number of houses supplied from the service mains is 50 and the daily consumption is about 5000 gallons—including 1000 gallons taken by the Felstead School, and a considerable quantity by a large dairy farm.

During the year 12 houses have been connected and a new scale of charges has been adopted by the Council for both the above supplies, by which the system of charging by meter for water for domestic use has been abandoned. Both works have been very satisfactory, an ample and constant supply of good water having been maintained during the year, but the margin of storage at Felstead is getting very low.

Hatfield Broad Oak.—The Hatfield Broad Oak Water Co's. supply has continued to be satisfactory and well maintained during the year. The water is derived from the Herts. and Essex water works. In Hatfield Town and Hatfield Heath 160 houses are supplied, three having been added during the year.

Thaxted.—The supply at Thaxted is not yet forthcoming. There has been unfortunate delay with regard to the sewage works there, and this has apparently delayed the progress of the water scheme on account of the narrow margin between the cost of the two schemes and the borrowing powers of the parish; so that it was felt wiser not to commence the water scheme until the cost of both should be known. It is unfortunate nevertheless that it has not been possible to get on even with the trial bore for the water, as the present condition is very unsatisfactory.

The remainder of the district has to depend on shallow wells and springs and in a few places upon ponds.

In many parishes some of the wells are now owned by the Council, and whenever the opportunity occurs I recommend them to increase their control of the water supply in this way, as should anything go wrong it is usually a matter of urgency to put it right, and the difficulty of getting anything done promptly by private owners is sometimes very great. In many cases where the only supply to neighbouring cottages is from a public house or shop the cottagers are under an obligation to spend money at these places.

Water certificates have been granted for 12 new houses under the Public Health (Water) Act, one of which derives its supply from a new private well. No public wells have been sunk or private wells taken over by the Council. The public pumps have been kept in good repair and one well improved.

RIVERS AND STREAMS. Progress has been made during the year with the schemes for preventing the pollution of the river Chelmer at Great Dunmow and Thaxted, and the Pincey Brook at Hatfield Broad Oak.

At Felstead there is some pollution from the Council's and School sewers, but at present there is not much nuisance, and if no more closets are connected to the Council's sewer I think no action with regard to it will be required for some time.

SEWAGE AND DRAINAGE.

Great Dunmow.—The Council at their December Meeting accepted a tender for the construction of the new Sewerage Works at a cost of £7150, and they will be commenced early in the year.

Thaxted.—The scheme was approved by the Council in 1912, but has been delayed by the difficulty of obtaining land for the disposal works as the proposed site recently changed hands, and the new owner was unwilling to sell it to the Council, who had to threaten in November to obtain compulsory powers. A new site was then offered and a provisional agreement for its purchase by valuation was in hand at the end of the year, so that it is hoped that the scheme may now go forward without any further delay. As the scheme for water supply is very urgent and is being hindered by that for sewerage, it is important that rapid progress should now be made.

Hatfield.—The sewerage scheme has been accepted by the Council and negotiations for the purchase of the land required were in hand at the close of the year. The urgency of the provision of purification works here has arisen

because the Pincey Brook is a feeder for London's water supply, and is under the jurisdiction of the Lee Conservancy Board, who obtained a conviction against the Council in November, under their special Acts for alleged pollution. It is unfortunate that the parish will thus be put to such a heavy expense.

What sewers there are at present in the district are chiefly old road drains or piped in ditches. These exist at Great Dunmow, Thaxted, Great Bardfield, Stebbing, Felstead, High Easter, Takeley, Hatfield Broad Oak and Great Easton. With the exception of those at Great Dunmow, Thaxted and Felstead, the drains connected to the sewers are only sink drains to which water closets are not connected. Some few water closets are connected to the sewers at Felstead, about 100 at Thaxted, and Great Dunmow is practically on a water closet system throughout the town.

Apart from a few cesspools and small filters there are no purification works in the district yet, but the steps being taken in the matter are described above.

During the year two sewer ditches at Stebbing have been piped in for a distance of 117 and 100 yards respectively and a great nuisance thereby abated. Sewer ditches at Thaxted, Dunmow, Great Easton, Felstead and Hatfield Broad Oak, have been cleaned out by the Council during the year, and 22 house drains have been repaired or relaid by owners at the request of the Inspector.

CLOSET ACCOMMODATION. With the exception of 500 water closets and 450 pail closets, cesspit privies are mostly in vogue. The majority of the houses have separate closets, and where this is found on inspection not to be so, the owners are being asked to provide them. Estimating the total number of closets at 3000, there must be still nearly 2000 cesspit privies in the district, and I hope the time is not very far distant when these will all be converted into closets of more satisfactory types. Forty-six cesspits have been done away with during the year.

In the majority of parishes there is ample garden ground for dealing with the contents of the pails, but in Stebbing village many cottages have practically none. A scheme was suggested for public scavenging of the pails here and was referred to the Parish Council for consideration. They did not consider it necessary, but when the conversion of privies into pail closets is completed and the practical difficulty of dealing with the excreta is experienced, they may alter their view. The abolition of cesspit privies is especially important here to safeguard the shallow wells which form the only water supply.

SCAVENGING. None is undertaken by the Council, though a refuse tip is provided by them at Great Dunmow, to which house refuse may be removed by householders. This is not satisfactory as heaps of objectionable and decaying refuse may be found in the close proximity of the cottages everywhere in the town.

A proper system of scavenging at both Great Dunmow and Thaxted should be provided. With regard to Thaxted, I have had interviews and correspondence with the Parish Council who are favourably considering the matter.

SANITARY INSPECTION OF THE DISTRICT. The Inspector carries out these in a very diligent manner, but in a large district like this a great deal of time is wasted in cycling about it, and in other ways, such as having to accompany the ambulance when patients are removed to the Isolation Hospital. Both the Local Government Board and I have drawn the attention of the Council to this matter in connection with the slow progress of the Housing Inspection, and the Council will consider the question shortly. The tabular statement of work done is shown on the next page.

DUNMOW RURAL DISTRICT COUNCIL.

Summary of Work done through the Sanitary Inspector and under the H.W.C. Acts, in the Rural District of Dunmow, during the year ending December 31st, 1913.

	Total Number for year.		Total Number for year.
1 Complaints received	35	18 No. of Bakehouses in District Frequency of Inspection ..	37 half-yrly.
2 Nuisances detected without com- plaint	379	19 No. of Dairies and Milkshops. Frequency of Inspection ..	60 half-yrly.
3 Nuisances abated	271	20 No. of Cowkeepers	60
4 Nuisances remaining unabated ..	130	Frequency of Inspection ..	half-yrly.
5 Formal Notices served	31	21 No. of samples of milk taken for examination for cleanliness, etc.	Nil
5A Informal notices served	159	22 Filthy houses cleansed	6
6 Summonses issued	1	23 Houses disinfected	47
7 Convictions obtained	1	24 Cases of overcrowding abated ..	6
8 No. of cottages inspected	214	25 New houses. No. of water certifi- cates applied for	12
8A Primary inspections under H.T.P. Act, 1909, and Housing Inspec- tion Regulations, 1910	132	26 No. of certificates granted	12
9 No. of cottages found unfit for human habitation	12	27 Public wells sunk	Nil
10 No. of representations made with the view of Closing Orders being made	12	27A No. of houses connected to water main	48
11 No. of Closing Orders made	11	28 Privies. No. in district	—
12 No. of cottages in which defects were remedied without a Closing Order	77	No. abolished during the year ..	46
13 No. of cottages in which defects were remedied after making Closing Orders	0	29 No. of pail closets	450
14 No. of cottages closed	8*	30 No. of W.Cs. with proper flushing arrangements	156
15 No. of cottages demolished by order	0	31 No. of hand-flushed W.Cs.	350
16 No. of Common Lodging Houses in District	1	31A Drains repaired or relaid	22
Frequency of Inspection	monthly	32 Animals improperly kept removed	1
17 No. of Slaughter Houses in District Inspections	16 52	33 Samples of water taken for analysis	22
		34 Compensation paid for bedding, clothing, etc., destroyed	Nil
		35 Seizures of unsound food	6

*and 3 Tenants under notice.

J. PLUMBLEY,

SANITARY INSPECTOR.

COMMON LODGING HOUSES. There is only one common lodging house in the district, which is situate at Church End, Great Dunmow. Bye-laws are not in force. A weekly return is made showing the number of lodgers received. The average number of persons received each night was 8.5. The total number for the year being 3108. The premises are visited monthly and were limewashed during the months of April and October. A case of diphtheria was notified from there in the spring, but was promptly dealt with, so that no more occurred.

KNACKERS YARDS. The number of licensed knackers yards in the district is one. This is situate at Great Dunmow. No boiling is done on the premises and no complaint has been received since the business was removed to Mill Lane. Inspections are made periodically. During the year the license has been renewed.

OFFENSIVE TRADES. The Council has not Urban powers and so has no control over these. No action is at present required now that more care is taken to prevent nuisances at the Bacon Factory.

UNDERGROUND SLEEPING ROOMS. There are none in the district.

SCHOOLS. There are 30 Public Elementary Schools in the district and three others, one of which is a large 'Public School' of over 250 boys.

The Elementary Schools have recently been subject to a survey by the Board of Education, as a result of which numerous improvements in heating, lighting, ventilation and sanitary offices, have been or are being carried out. When these are completed they will be for the most part quite satisfactory. The medical inspection of children and supervision of the sanitary condition of the schools is carried out by the medical staff of the County Education Committee. The action taken with regard to infectious disease is dealt with under that heading.

MILK SUPPLY. Regulations under the Dairies, Cowsheds and Milkshops Orders are in force. Printed reminder notices are sent twice a year to each cowkeeper to limewash his cowsheds during the months of May and October, and these are followed up by inspections, at which other matters may be dealt with.

The number of registered cowkeepers in the Rural District is 60, and the number of cows kept by registered cowkeepers is just over 1000.

Under the new Tuberculosis Order, 1913, six notices have been received from the Supt. of Police (the Inspector under the Contagious Diseases of Animals Acts), respecting four cows and three bullocks, all of which were afterwards killed. Care was taken to see that the carcasses were not afterwards used for food.

SLAUGHTER HOUSES AND UNSOUND FOOD. Owing to the pressure of other work the inspection of slaughter houses and fish shops has not been frequent as might have been desirable only 52 visits having been made during the year to these premises, in the course of which two pigs heads, half a carcase of beef and several organs, altogether weighing 420 lbs., were found to be diseased and unfit for the food of man, and were surrendered by the owners and destroyed. Two boxes of herrings weighing four cwt. were also formally seized and destroyed owing to their being in such a decomposed condition as to be unfit for human food. There are 16 slaughter houses scattered in various parts of the district and it is almost impossible to inspect them properly.

At the Dunmow Flich Bacon Factory about 300 to 500 pigs are killed weekly. The Company employ a Veterinary Surgeon who examines the carcase and organs of every pig that is killed on their premises and he condemns them if necessary. I have seen the method of inspection which is very thorough, but I have no information as to how much condemnation takes place.

I consider that slaughter house bye-laws are required, and that the Local Government Board should be asked to grant the Council powers for the purpose.

BAKEHOUSES. There are 37 bakehouses in the district none of which are underground. Printed reminder notices are sent to each occupier of a bakehouse twice a year to limewash his premises and these are followed up by inspection.

SALE OF FOOD AND DRUGS ACTS, AND MILK AND CREAM REGULATIONS, 1912. These are administered by the County Council and I have no information as to the action in this district. It is perhaps as well to point out however, that under the above regulations which came into force in October, 1912, no person may add or permit the addition of *any* preservative substance to milk intended for sale for human consumption. No thickening substance shall be added to cream, and the use of preservatives is very strictly defined.

HOUSING. In July a thorough inspection of the housing of the whole district was made by Mr. Courtenay Clifton, a Housing Inspector of the Local Government Board, and as I accompanied him on most of his tour of inspection, I was able to get a rapid insight into the housing conditions.

As an outcome of his visit a letter was received from the Local Government Board stating that they considered that four houses were required in Great Easton, six in Stebbing and six in Felstead, and also urging the necessity of expediting the housing inspection. In the meantime I had called the attention of the Council to these matters and at the close of the year they were receiving very careful consideration.

The house to house inspection has been carried steadily forward, but the many duties of the Sanitary Inspector make it impossible for him to give as much time to this matter as should be given in such a large district. The number of houses inspected under the Act of 1909 during the last three years has been as follows:—

1911 .. 215	1912 .. 258	1913 .. 132
-------------	-------------	-------------

or an average of 200 a year. As there are some 3000 cottages in the district, at that rate it will not be covered in less than 12-15 years. The decrease in the number of inspections this year has been due partly to the re-organisation of the inspection, and partly to the increased number of re-inspections necessitated by the work of the two previous years.

A new system of record keeping has been introduced which I devised with the object of reducing the time spent in clerical work to a minimum, and this is now working well and helps to expedite matters a little. Towards the close of the year I made a report to the Council and suggested that provision should be made for the inspection of 600 houses per year, so that the district can be got through in about five years. The need for routine house to house inspection is very great as only in this way can the defective condition of many houses be discovered. Of the 132 houses inspected only nine were found not to be defective in some way or another from a practical sanitary point of view. The tabular statement of work done is as follows:—

No. of dwelling houses inspected under and for the purpose of Section 17 of the Act of 1909 : found defective, 123 ; not defective, 9	132
No. of dwelling houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	12
No. of representations made to the local authority with a view to the making of closing orders	12
No. of closing orders made	11
No. of dwelling houses the defects in which were remedied without the making of closing orders	77
No of dwelling houses which after the making of closing orders were put into a fit state for human habitation	0

General Character of the Defects. In most parishes more houses with three bedrooms are wanted, and the existing houses are in many instances damp, the ceilings very low, and the bedrooms chiefly in the roof. The old lath and plaster cottages have frequently no lining of lath and plaster over the inner face of the studs or rafters, and are consequently cold and damp. Damp courses are almost unknown and the brick floors and lower parts of the walls are frequently damp in consequence. The provision of eaves guttering, and of cement channels on the ground below the eaves in thatched houses will remedy this in a good many cases, especially where the floor is low.

Other defects frequently found are:--Windows defective and some not made to open, Doors that fit badly, broken fire grates and ovens, dilapidated wash-houses, defective cesspit privies, and damp and dirty unpaved yard surfaces near the dwelling houses. Very few of the old cottages have a larder. Many of the houses are small and in some cases it would be a great improvement if two were converted into one so as to give accommodation for a family. The landlord will object to such a conversion so long as he is allowed to let the small cottages separately by which he makes more profit.

It is obvious therefore that there is plenty of work to be done in improving the conditions of the existing cottages, but this will not complete the improvements necessary.

Fifteen cases of overcrowding have been discovered during the year, of which eight are in the parish of Stebbing where every house has been inspected. Six have been dealt with.

Only twelve new houses have been built in the district during the past year, (viz.: Great Dunmow three, Little Dunmow two, Hatfield Broad Oak three, High Easter two, Thaxted two,) as against 16 last year and 19 in 1911. So that private enterprise is doing very little to remedy the situation, and is not likely to do so, while wages are so low and the cost of building remains so high. Of the twelve new houses, only six are labourers' cottages.

The worst parishes are Felstead and Stebbing, and in these something will have to be done at the earliest possible moment, and the matter is occupying the serious consideration of the Council, who at their December meeting asked for estimates of the cost of building, etc.

In Felstead two houses were closed by the Council, and the roof fell in a few days after the tenants left. Five other houses urgently need closing as I consider they are dangerous and past repair, but there is at present no where for the tenants to go.

In Stebbing there are very few that require to be permanently closed. The chief difficulty is the size of the houses and consequent overcrowding. In ten instances blocks of houses could be made habitable by converting two into one, or three into two. If we can get a few more houses built to move the displaced persons into and can then prevail upon the owners to make these alterations, the conditions will be greatly improved; but if the owners do not meet the Council by doing this, the number of houses required will be considerable and the expense to the rates greater in consequence.

No Bye-laws regulating new buildings are yet in force in the district. The question has been considered and a draft prepared by the Clerk and Sanitary Inspector, and as I reported during the year houses were being built in the district without damp courses, the draft will shortly be considered and I hope adopted by the Council.

During the year six dirty houses have been dealt with.

WORKSHOPS, WORKPLACES, ETC. Many of the 160 on the register are men's workshops, which require very little supervision; but all the premises

that require inspection, such as bakehouses, dressmaker, etc., are visited twice a year. The work under this heading is shown in Table V.

HOMEWORK. No lists have been received during the year.

(C). SANITARY ADMINISTRATION OF THE DISTRICT.

1. STAFF. Up to March 31st the duties of Medical Officer of Health were performed by Dr. Goodbody, but the Rural District having entered into the North Essex combination of districts for the purpose of employing a whole-time Medical Officer of Health, I took over the duties from him on April 1st.

The work of Sanitary Surveyor and Inspector, and Housing Inspector, is carried out by Mr. Plumbley, who ably and conscientiously carries out as many of his various duties as he can make time for. The question of providing more assistance for him has been referred to the Sanitary Committee. During the time that he has been with the Council he has greatly increased his value to them by taking the Meat Inspector's Certificate of the Royal Sanitary Institute.

2. HOSPITAL ACCOMMODATION. The Council has provided an Isolation Hospital at Dunmow, which is of great use and very much appreciated throughout the district. From Table II. it is seen that 31 cases were isolated there during the year. As there is only accommodation for eight beds it is frequently full, and I have asked the Council to consider the question of enlarging it. The Hospital is administered by the Council's Medical Superintendent, Dr. Gardiner.

For dealing with small-pox cases, the Council pay a retaining fee for the right to use a field in Lindsell parish at any time for the erection of tents or temporary buildings. As I can hardly call this a satisfactory arrangement, I am glad to say the Council are considering an alternative scheme proposed by the County Medical Officer.

With some 320 births registered in the district, the number of 'conscientious objections' to vaccination during the year was 45.

3. BYE-LAWS, ADOPTIVE ACTS, ETC. There are no local or adoptive Acts in force in the district, and no bye-laws except a very old set for removal of refuse, etc. The Council are considering drafts of various bye-laws, &c., and I am anticipating that they will shortly take action.

The Council meets every fourth Tuesday at the conclusion of the meeting of the Board of Guardians, and the time at their disposal is consequently sometimes limited. The Sanitary Committee does not meet regularly to transact some of the routine business, but only when special matters are referred to it by the Council. Important matters connected with individual parishes have been dealt with by Parochial Committees during the year.

4. CHEMICAL AND BACTERIOLOGICAL WORK. The Council provide for the examination of throat swabs, blood, sputum, etc., and for the analysis of water.

During the year the following number have been examined :

Water analysis—Chemical	..	..	..	..	22
„ „ Bacteriological	..	..	..	..	0
Throat swabs for diphtheria	..	..	..	..	23
Blood for typhoid fever	..	..	..	..	4
Sputum for tubercle	..	..	..	..	13

As the detection of pulmonary tuberculosis is now partly in the hands of the Tuberculosis Officer some examinations of sputum are also conducted through him.

(D.) PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASE.

NOTIFIABLE.

The number of cases notified is seen from Table II. to be 58, which is rather above the average.

SCARLET FEVER. The epidemics of Scarlet Fever in the village of Rayne and parish of Lindsell accounted for 35 out of 39 cases. The remainder were sporadic.

Great difficulty has arisen in dealing with these epidemics, as the cases have been of such a mild and a typical character that probably several were never discovered at all, and were responsible for continuing the spread of the disease in spite of all our efforts to trace them.

Lindsell. All but one of the cases here occurred in three households, five members of which were found in a convalescent condition when at last a typical case was notified and a search instituted; and by that time the original source of infection could not be traced. Two of the houses attacked were overcrowded, and in them all the 16 inmates were affected but four; but outside the house the power of infectivity seemed much less, for although some of these affected children had been attending the school for over a week, no cases occurred subsequently in connection with it. As a precaution however, the school was at once closed for a week until the commencement of the summer holiday of six weeks.

Rayne. This epidemic affected portions of three parishes in three different districts, all of which go to constitute the village of Rayne. The total number of cases was as follows:

	Cases.	In houses.
Felsted parish—Dunmow R.D. ..	19 ..	10
Rayne „ —Braintree R.D. ..	12 ..	10
Braintree „ — „ U.D. ..	2 ..	2

As I am Medical Officer of Health for all three districts I was able more easily to keep in touch with it.

The first case was notified on July 21st, on the last day of a school holiday of three weeks. On its re-opening next morning, I visited the school and found four children desquamating, and two more during the course of the week. Next I discovered that the brother of one of these children was also desquamating, who was an assistant at a shop in the village and had been at his work for the past fortnight. These were all isolated and the school closed until the harvest holiday. Four more cases were notified in the next fortnight, only two of which could possibly have been connected with the school before it was closed.

During the month of closure (Aug 1—Sep. 2) a strict watch was kept upon a number of children who had showed some signs of desquamation, over 40 visits to the houses being paid by me. No further cases occurred from August 10th to September 17th. From then to December 5th ten houses were attacked. In six there was a possibility that infection had occurred at school, but two were more probably infected from cases next door. The six cases occurred at regular intervals of 2–3 weeks, so that there was no evidence of a constant source of infection in the school; but it was disinfected on Nov. 14th without obvious result. As I inspected the children every week or oftener it was not felt necessary to close it. On Dec. 5th, two probable school cases occurred, and I inferred that there was a focus of infection there, so by arrangement with the School Medical Officer the school was closed until after the Christmas holiday; two further cases developing a day or two after this was done. In this surmise I was right, as the child who gave rise to these four cases at school has subsequently been discovered. He had only a very slight illness and had had no doctor, but has also given rise to five cases in his own home and three next door. Since he has been isolated no further cases have occurred.

The milk supply was thoroughly investigated, but as the majority of the houses in the village are supplied from one source and two of the cases notified (which could not be connected with the school either) obtained milk from elsewhere, nothing definite could be determined. The brother of a boy who was said to have had a rash on September 30th and was notified on October 14th was excluded from the dairy on October 6th.

The hospital was full after October 28th, and no further cases were removed there from this district. One child gave rise to return cases.

DIPHTHERIA. Only six cases were notified in four families. One was imported from London. The other three outbreaks were not connected and no source could be found. The contacts were examined by me and swabs taken where advisable.

ENTERIC FEVER. The source of infection could not be traced in either case. One occurred in a house in an isolated spot, which had been illegally occupied before completion, and was then without water supply or closet accommodation in spite of vigorous action by the Council. The other case occurred in a part of the town of Dunmow where the drainage and closet accommodation are in a very bad state, awaiting the long-promised sewerage scheme, the water supply being from the mains. No history of eating shell-fish could be obtained in either instance.

POLIO MYELITIS. Two cases were notified; both in Great Dunmow, but in opposite ends of the Parish and no connection could be traced between them. The first case was a boy aged 2 years and 4 months, who was taken ill on July 1st. Paralysis was first noticed on July 19th, the left leg muscles being affected. The house was visited by me on 3 occasions and no other case of illness occurred among the inmates discovered. The family were isolated until August 29th. The second was a girl aged 6. She was at School on October 3rd, taken ill on the 4th, paralysis was noticed on the 12th and she was notified on the 13th. There were 5 other children in the family but the patient had had a bed to herself. The family were isolated for a month, until November 10th. Both were warned by me of the infectious nature of the disease; in neither case was the child removed to hospital. Both recovered without obvious permanent paralysis, though Convalescence was protracted.

The measures taken for the control of notifiable infectious disease are roughly as follows: - As soon as the case is notified arrangements are made for its removal to hospital where advisable, and the house is visited and full particulars taken by the Sanitary Inspector or myself. The schools are visited by me in all cases possibly connected therewith, the children and register examined, and the homes of the absentees from an unknown or suspicious cause are visited by me. The Sunday School attendance is also investigated where necessary. Throat swabs are taken where I consider it advisable and examined at the Council's expense. The Head Teacher and School Attendance Officer are asked to report any suspicious case to me at once. Contacts and cases after recovery are excluded from school until allowed to return by the practitioner in attendance or myself.

Diphtheria antitoxin is provided by the Council in necessitous cases.

After removal to hospital, or recovery of cases nursed at home, the house is disinfected with formalin spray or vapour lamp by the Sanitary Inspector. Bedding or infected articles such as homework are not removed to the steam disinfectant at the hospital. Stripping of walls and repapering is not insisted upon after disinfection. I consider that in the case of Typhoid Fever patients nursed at home at any rate the bedding should be removed to the hospital for steam disinfection, or destroyed and compensation given.

NON-NOTIFIABLE INFECTIOUS DISEASE. This has not been very prevalent in the district during the year. The teachers notify the School Medical Officer and myself of every case that they hear of, and any action necessary is usually taken by the School Medical Officer in consultation with me.

With regard to cases of infectious disease in schools we are in constant communication, and a member of the School Medical Staff visits the schools with me where we think it advisable. School closure, if necessary, is usually ordered by the School Medical Officer after consultation with me.

The following schools have been closed by him :—

Margaret Roding	.. Jan. 27—Jan. 31	.. Influenza.
Lt. Dunmow	.. Feb. 17—Mar. 7	.. Measles.
High Roding	.. " 27— " 14	.. German Measles.
Stebbing, Infants	.. May 1—May 17	.. Measles and Wh. Cough.
Barnston	.. Sep. 11—Sep. 26	.. Measles.
Gt. Dunmow C.E.	.. Oct. 20—Oct. 31	.. "
" " Downs	.. " 20— " 31	.. "
High Easter C.E.	.. Nov. 10—Dec. 5	.. "
" " Memorial	.. " 10— " 5	.. "
Lindsell	.. May 19—May 30	.. German Measles

Measles was epidemic in Barnston in September, and thence travelled to Dunmow in October and High Easter in December.

The school at Lindsell was closed owing to a case of German Measles at the Head Teacher's house adjoining. No further cases occurred.

(E). PREVALENCE OF AND CONTROL OVER TUBERCULOSIS.

Important measures have been recently initiated to deal with this dread disease. Since February 1st, 1913, all cases of Tuberculosis, whether of the lungs or other parts of the body, have been compulsorily notifiable, and a further system of notification was instituted of the admission and discharge of persons into and from Workhouses and all Sanatoria approved by the Local Government Board, under the Finance Act, 1910. This is of great value in keeping track of all notified cases, and of arranging for the disinfection of the house when a patient goes away to an institution for treatment.

Fortunately also the County Council has determined to provide for treatment of non-insured as well as insured persons. During the year two non-insured persons have had institutional and four dispensary treatment provided by it. It has also arranged for the services of its Tuberculosis Officers to be utilised for the benefit of non-insured persons.

In order to avoid irritation by the unnecessary duplication of visits to notified cases by different officials, most of the primary visits are paid by the Tuberculosis Officer, who informs me if any sanitary action is required, and if it is not I usually defer my visit for a time. In all cases where a shelter is to be provided, I visit and inspect the proposed site, and only after removal to an institution or death does the Sanitary Inspector visit, and then for the purpose of disinfecting the premises. In these cases I think the bedding should be removed to the hospital for steam disinfection in all instances.

The number of officials visiting is thus kept as low as possible consistent with efficiency of action.

The examination of sputum is provided for by the Council, but as the arrangements for the detection of unrecognized cases among contacts are chiefly in the hands of the Tuberculosis Officer some examinations are now carried out through him.

The number of cases notified will be seen from Table II. to be 26, of which 22 are pulmonary Phthisis. The notification of pulmonary Tuberculosis was in force last year, when 40 were notified, but the figures are not strictly comparable.

Of these 66 cases 17 died and one removed during 1912, and *10 have died and two removed during 1913, leaving the number of 36 notified cases in the district on December 31st.

* The total number of eleven deaths from Tuberculosis in Table III. includes one from abdominal tuberculosis occurring in January last when it was not yet notifiable.

Four cases of Phthisis and one of Knee Disease have had institutional treatment during the year, and of these three are cured or much improved and one is since dead.

PHTHISIS DEATH RATE. From Table III. it will be seen that eight deaths from Phthisis have occurred, which is the lowest recorded during the past thirteen years. This gives a death-rate of .494. Rates based upon such small numbers are not of much real value for comparative purposes, and so I have calculated the average death-rate for the past five years (1909-1913) which is .888, and for the previous five year period (1904-8) when it was .893. The death-rate for the County for 1912 was .74, and for its Rural Districts .65, so that until this year our rate has been rather above the average. This is perhaps partly accounted for by the very abnormal proportion of males in our population, among whom phthisis is more prevalent than among females.

(F). INVESTIGATION OF OTHER DISEASES.

The death returns have not suggested any special action under this heading.

CANCER. On Table III. are shown 30 deaths from this cause, giving a death-rate of 1.855. The average rate for the past five years is 1.679, and for the previous five years is 1.358. The Cancer death-rate for the County for 1912 was .980, so that our rates are unduly high. I think that fact is largely accounted for by the undue proportion of older persons in the population of the district.

Venereal disease is not prevalent I am glad to say; there are no local facilities for modern methods of diagnosis and treatment.

(G). MEANS FOR PREVENTING MORTALITY AT CHILD BIRTH AND INFANCY.

The Midwives' Act is administered by the County Council. From Table IV. it will be seen that only 18 deaths occurred under the age of one year, six of which were in the first fortnight of life. The mortality rate is 60 per 1,000 births. During the year a circular was received from the Local Government Board drawing the attention of the Council to the Notification of Births' Act, and the importance of the sanitary conditions of yards and ash-pits, &c. I felt it difficult to recommend the Council to adopt the Act, considering the difficulties of administration and our low mortality rate, but pointed out the importance of the other recommendation of the circular.

(H). VITAL STATISTICS.

TABLE I.—BIRTH AND DEATH RATE. The birth-rate for 1913 is 18.5 per 1,000 of population, which is the lowest yet recorded.

The rate for England and Wales for 1913 was 23.8, and for Essex 23.3.

The number of deaths registered in the district was 191, to which must be added the deaths elsewhere of ten residents of the district, less two deaths of non-residents that were registered in the district—giving a nett total of 199. The nett death-rate is 12.3, which is the lowest on record.

Before comparison can be made with the death-rates of other districts or of England and Wales, a further correction must be made.

It is obvious that a district containing an undue proportion of the very old, must have a higher death-rate than a district with an undue proportion of persons in the prime of life. Factors for correcting for differences between the age and sex constitution of individual districts and that of England and Wales as a whole have therefore been calculated by the Registrar General on the census population of 1911, and for Dunmow the death-rate must be multiplied by .7791, and giving a standardised death-rate for comparative purposes of 9.48.

It will therefore be seen that the Dunmow Rural District contains an undue proportion of persons of the age groups in which the death-rate is highest.

The death-rate for England and Wales for 1913 was 13.6, and for Essex 10.9

Table II. shows the cases of infectious disease, which have already been discussed (pages 12 & 13).

Table III. analysis the causes of, and ages at death, and does not show undue mortality from any special cause.

Table IV.—Infantile Mortality. This table is satisfactory, and has been discussed (page 15).

Table V.—Factories and Workshops. The work under this heading has already been referred to (pages 10 & 11).

(I). RAINFALL.

The following table shows the monthly rainfall measured at Lt. Saling.

January ..	2.74	July ..	1.53
February ..	0.62	August ..	0.35
March ..	1.50	September ..	1.18
April ..	1.64	October ..	3.67
May ..	1.98	November ..	1.97
June ..	1.55	December ..	0.94

Total : 19.67 inches.

In conclusion, I have to thank the Clerk and the Sanitary Inspector for much valuable help in the production of this Report.

I remain, Ladies and Gentlemen,

Your obedient servant,

E. BERTRAM SMITH.

March, 1914.

TABLE I.—VITAL STATISTICS OF WHOLE DISTRICT DURING 1913 AND PREVIOUS YEARS—DUNMOW RURAL DISTRICT.

YEAR	Population estimated to middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number	Nett		Number	Rate	of Non-residents registered in the District	of Residents not registered in the District	Under 1 Year of Age.		At all Ages.	
			Number	Rate					Number	Rate per 1000 Nett Births	Number.	Rate
1908	15979	342	..	21.3	225	14.1	3	2	19	55	224	14.0
1909	16017	326	..	20.3	222	13.8	4	2	31	95	220	13.7
1910	16055	374	..	23.3	203	12.6	7	1	19	51	197	12.3
1911	16093	315	303	18.8	218	13.5	2	18	30	99	234	14.5
1912	16131	326	321	19.9	222	13.8	4	11	22	68	229	14.2
1913	16170	313	300	18.5	191	11.8	2	10	18	60	199	12.3

Area of District in acres (land and inland water)

73,503

Total Population at all ages

16,084

Number of inhabited houses

3,927

Average number of persons per house

4.1

At Census of 1911 (Vol. VI.)

TABLE II.—CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1913. DUNMOW RURAL DISTRICT.

NOTIFIABLE DISEASE.	NO. OF CASES NOTIFIED							Total Cases notified in each locality.															Total Cases removed to Hospital.				
	At Ages—Years.																										
	At all Ages.	Under 1.	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Gt. Dunmow	Lt. Dunmow	Felstead	Lindell	Takeley	High Easter	Stebbing	Hatfield Broad Oak	Lt. Easton	Broxted	Gt. Bardfield	Lt. Bardfield	White Roding	Aythorp Roding		Lt. Canfield	Thaxted	Lt. Saling	Tilty
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera (C) Plague (P)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membranous croup)	6	1	4	..	1	..	..	4	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
Erysipelas	9	1	..	..	..	3	3	2	1	..	1	1	..	1	1	1	2	..	..	1	..	..	..	..	..	..
Scarlet Fever	39	..	3	22	13	1	..	..	1	2	19	16	1	..	..	..	..	..	..	..	..	..	..	..	..	25
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis	2	..	1	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	22	2	6	10	3	1	6	..	3	2	1	1	1	1	1	1	1	1	..	2	1	4
Other forms of Tuberculosis	4	..	..	2	1	1	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1
Totals	84	1	5	33	20	16	6	3	18	2	25	17	1	1	3	2	3	1	2	2	1	1	1	1	2	1	36

Isolation Hospital or Hospitals, Sanatoria, &c.

Dunmow Rural District Council's Isolation Hospital, Gt. Dunmow (within), and various Tuberculosis Sanatoria provided by the Essex County Council, (without the district).

TABLE IV.—INFANT MORTALITY, 1913.—DUNMOW RURAL DISTRICT.
 Nett Deaths from stated causes at various ages under one year of age.

CAUSE OF DEATH.		Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 wks.	4 wks. and under 3 ms.	3-6 months	6-9 months	9-12 mths.	Total Deaths under 1 year.
All Causes	{ Certified ..	5	1	..	..	6	2	1	2	6	17
	{ Uncertified ..	..	..	..	..	..	..	..	1	..	1
<hr/>											
Small-pox .....		..	..	..	..	..	..	..	..	..	..
Chicken-pox .....		..	..	..	..	..	..	..	..	..	..
Measles .....		..	..	..	..	..	..	..	..	..	..
Scarlet Fever .....		..	..	..	..	..	..	..	..	..	..
Whooping Cough .....		..	..	..	..	..	..	..	..	3	3
Diphtheria and Croup .....		..	..	..	..	..	..	..	..	..	..
Erysipelas .....		..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis .....		..	..	..	..	..	..	..	..	..	..
Abdominal Tuberculosis .....		..	..	..	..	..	..	..	..	1	1
Other Tuberculous Diseases .....		..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) .....		..	..	..	..	..	..	..	..	..	..
Convulsions .....		..	..	..	..	..	..	1	..	..	1
Laryngitis .....		..	..	..	..	..	..	..	..	..	..
Bronchitis .....		..	..	..	..	..	1	..	1	1	3
Pneumonia (all forms) .....		..	..	..	..	..	..	..	..	..	..
Diarrhoea .....		..	..	..	..	..	..	..	..	1	1
Enteritis .....		..	..	..	..	..	..	1	..	..	1
Gastritis .....		..	..	..	..	..	..	..	..	..	..
Syphilis .....		..	..	..	..	..	..	..	..	..	..
Rickets .....		..	..	..	..	..	..	..	..	..	..
Suffocation, overlying .....		..	..	..	..	..	..	..	..	..	..
Injury at birth		1	..	..	..	1	..	..	..	..	1
Atelectasis .....		..	..	..	..	..	..	..	..	..	..
Congenital Malformations		1	..	..	..	1	..	..	..	..	1
Premature birth		3	1	..	..	4	..	..	..	..	4
Atrophy, Debility and Marasmus ..		..	..	..	..	..	1	..	..	..	1
Other Causes .....		..	..	..	..	..	..	..	1	..	..
<hr/>											
		5	1	..	..	6	2	1	3	6	18
<hr/>											
Nett Births { legitimate 287 in the year { illegitimate 13						Nett Deaths { legitimate infants 16 in the year { illegitimate infants 2					

TABLE V.—Annual Report of the Medical Officer of Health for the year 1913, for the Rural District of Dunmow, on the administration of the Factory and Workshop Act, 1901, in connection with FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

1. INSPECTION.			
Premises.	Number of		
	Inspections.	Writ. Notices.	Prosecutions.
Factories (including Factory Laundries)	4	1	..
Workshops (including Workshop Laundries) ..	105	2	..
Workplaces (Other than Outworkers' premises included in Part 3 of this Report) .. ..	..	..	..
Total	109	3	..

2. DEFECTS FOUND.				
Particulars.	Number of Defects.			Prosecutions.
	Found	Remedied.	Referred to H.M. Inspector.	
Want of Cleanliness	1	1	..	..
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	1	1	..	..
Total	2	2	..	..

3. HOME WORK.—No Lists received.

4. REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.				Number.
Important classes of workshops, such as workshops bakehouses may be enumerated here.	Milliners .. .. .	..	..	5
	Dressmakers .. .. .	..	..	15
	Cycle Repairs .. .. .	..	..	7
	Harness Makers .. .. .	..	..	10
	Boot and Shoe Makers .. .. .	..	..	16
	Tailors .. .. .	..	..	6
	Plumbers .. .. .	..	..	3
	Wheelwrights .. .. .	..	..	13
	Carpenters .. .. .	..	..	16
	Coachbuilders .. .. .	..	..	4
	Blacksmiths .. .. .	..	..	25
	Cabinet Maker .. .. .	..	..	1
	Brickmaker .. .. .	..	..	1
	Laundry .. .. .	..	..	1
	Bakehouses .. .. .	..	..	37
Total number of Workshops on Register				160

5. OTHER MATTERS.

Class.				Number.
Matters notified to H.M. Inspector of Factories :—				
Failure to affix Abstract of the Factory and Workshop Acts (s. 133, 1901) ..				..
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Acts (s. 5, 1901)	Notified by H.M. Inspector ..		..	1
	Reports (of action taken) sent to H.M. Inspector ..		..	..
Other .. .. .				..
Underground Bakehouses (s. 101) :—				
Certificates granted during the year .. .. .				..
In use at the end of the year .. .. .				..

