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

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Urban District of Acton.

ANNUAL REPORT

OF THE

Medical Officer of Health

For the Year 1919.

1919

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FOR THE YEAR 1919.

COUNCIL OFFICES,
ACTON, W.3.

June, 1920.

To the Chairman and Members
of the Urban District Council of Acton.

LADIES AND GENTLEMEN,

I beg to submit the Annual Report on the work carried out by the Public Health Department, together with the Vital Statistics during the year, 1919.

The Ministry of Health has issued a Memorandum as to the contents and arrangements of the Annual Reports of Medical Officers of Health and in an accompanying Circular urge the desirability to compile the Report upon the lines indicated in the Memorandum ; the subjects therein specified are being dealt with as nearly as possible in the order there given.

Population.

For the sake of accuracy in our vital statistics, it is fortunate that we are approaching the period when a complete Census of the population will be made. The population of the district at the Census of 1911 was 57,497. Since the Census many other enumerations have been made, and estimates of the population have been based upon these enumerations. In this district the earlier enumerations were approximately correct. The first enumeration took place in August 1915 under the National Regis-

tration Act, and it included all persons over 15 years of age. In 1917, the Registrar General based his estimate of the civil population upon the number of sugar cards issued in that year, and probably his estimate was approximately correct.

The Registrar General based his estimate of the civil population in 1918 upon the returns sent to the Ministry of Food in July of that year. The figures on the returns in 1918 were incomplete as the returns were sent in soon after the issue of the ration books and did not include the ration books issued to those who had omitted in the first instance to fill in their addresses, &c.

Evidently last year the Registrar General based his estimates of the civil population on the number of ration books issued in 1919. The number of ration books issued up to November 29th, 1919, was 62,237, and the Registrar General's estimate of the civil population on June 30th, 1919, is 61,732. The Registrar General's estimate of the population for birth-rate purposes is 64,236.

I have accepted both these estimates for the purposes of this report, as they can be corrected, if necessary, after the Census enumeration.

It is almost certain, though, that these figures are an underestimate of the actual population of the district.

For another purpose, a comparison was made of the number of ration books issued in 1918 and 1919; and when the numbers issued to the different addresses were compared, it was found that a number of the families had not applied for ration books in the autumn of 1919, and it is reasonably certain that a considerable number of persons are now supplied with food, but have not taken the trouble to apply for ration books.

Very few houses were vacant in 1918 or 1919, and where a marked decrease had occurred in the number of ration books which had been issued to an address, it was found that one of the families had omitted to apply for the ration books.

General character of the district, social conditions including occupations, &c.

The district is divided into four wards—North East, North West, South East and South West.

Almost all the area included in the South East and South West Ward has been developed and the available space built over.

In the North East and North West Wards, there is a considerable amount of undeveloped ground, but the land in these two wards is rapidly being developed for residential as well as factory purposes.

The whole district has a density of about 28 persons to the acre. In the North East Ward there are 15 persons to the acre, in the North West 17, in the South East 63 and in the South West Ward 82 persons to the acre.

The district is partly industrial and partly residential. At the present time, it cannot be said that one of the wards is entirely residential. Formerly, the South West Ward was regarded as industrial in its character and the three others were residential.

The South East Ward which comprises Bedford Park is almost entirely residential in character, and there are only a few factories in the ward, and these are along the borders of the ward.

A considerable proportion of the inhabitants, and especially those of the North East, North West and South East Wards are employed outside the district.

The oldest industry, and at one time the most important, and almost the sole one, is the laundry industry. This industry has been established in the district for nearly half a century, and absorbs a large number of workers. In August 1915, there were 1048 single and 1640 married women employed in the laundry industry. It is probable that this number was exceeded ten years ago, and it is likely that at the present time fewer persons are employed than in 1915.

The introduction of labour saving machinery has had the effect of closing most of the hand laundries, and this fact alone would account for a diminished number of employees. But it is also possible that less work is now done in the laundries of the district than was the case ten years ago. In addition to the small hand laundries, some factory laundries have recently been closed, and possibly, some of the causes which led to the introduction of the industry into the district may be operative in the establishment of new laundries in another district. Owing to the

introduction of machinery some of the factors operating half-a-century ago, have now become non-operative. Various theories have been advanced to account for the migration of the laundry industry from North Kensington, Kensal Rise and other districts to Acton, such as greater softness of the water, and that the Grand Junction Water Works Company offered special terms, &c. As far as can be ascertained these theories have no foundation on fact.

The true cause probably was a far simpler one. Even now, the natural trend of traffic in London is from the east to west and west to east, and formerly the facilities for transport in these directions were greater than they were to the north and south of the central areas. From the west end of London the natural exit would be further westwards, and if conditions favourable to the washing and drying of clothes existed, the laundry industry would be established on the western outskirts. Before the introduction of machinery, the absence of factories and the existence of a comparatively open country would be necessary. The absence of factories would operate in two ways, the smoke nuisance would be less and female labour would be more plentiful. When the laundries were established along the western fringes—Kensal Rise, North Kensington, Hammersmith and Fulham—the two essential conditions would probably be fulfilled. As these areas were developed and factories established, the laundry industry moved further westward and Acton as the nearest suburb where the essential conditions existed was chosen.

With the introduction of machinery, an open space is not necessary ; the drying is now entirely done indoors, and the presence of factory chimneys in the immediate vicinity is not detrimental to the laundry industry.

Until the next Census figures are published, it is not possible to state exactly what is the number of employees in laundries at the present time, nor the number of married women who are employed.

It was the number of married women employed in the laundries which affected our mortality returns, and in the main it was the infantile mortality that was effected. In former reports this question has been fully discussed, and the manner in which the infantile mortality figures were affected, was indicated. The district has always compared favourably in the respect of deaths attributed to ante-natal causes, but the deaths from Diarrhoeal

diseases and Respiratory diseases were always comparatively high. The explanation probably lies in the fact that the extra nourishment and greater comfort which extra-domestic labour provides mask any harmful effects which may result. Quietude of body and mind in an expectant mother is almost as important as ensuring that she is not overworked.

But if the ante-natal effect of married female labour is not obvious, the conditions under which the child is brought up as a result do affect the infantile mortality.

Want of breast milk, Bronchitis, Pneumonia and Diarrhoeal Diseases have always caused an abnormal infantile mortality in Acton.

The laundry industry has always been a favourite one with married women, and a large number of the employees are married women.

The employment of married women in extra domestic duties tends to produce premature weaning, and it was one of the causes of our heavy mortality from Diarrhoeal Diseases.

The excessive mortality from Bronchitis and Pneumonia was also in part one of the effects of married female labour. The mother has to take her baby to be cared for in the morning as she proceeds to work and fetch him again in the evening. Under the best of conditions the child is liable to contract Respiratory diseases.

In the section on infantile mortality the death-rate from these causes will be referred to, but we should bear in mind that the conditions associated with and assisting in varying degree in the production of excessive infantile mortality are partly social and partly sanitary ; and it is easy, according to the point of view adopted, to magnify unduly the importance of one set of factors.

During the war large munition works were established in Acton and in the neighbouring districts. In addition to the Filling Works at Park Royal and Hayes, most of the large factories in the district were converted into munition works. At all these factories during the war, women were very largely employed, and the number of married women employed in extra-domestic duties was very much higher than it was in pre-war days. In very few cases where women replaced men in factory work, have they been retained after the war. In the majority of factories, the men were re-instated

as they returned, and in most cases the displacement of the women war-workers is complete.

Some of the married women have returned to work in the laundries, but the number is probably smaller than it was in the pre-war period, and the total number employed in extra-domestic duties is much lower than it was during the war.

At the present time, the industries which employ the largest number of persons are the Engineering Works—Motor, Electrical and General. There are 3 very large motor works in the neighbourhood of the Vale in the southern portion of the North-East Ward, and another factory situated in the South-East Ward on the Southern side of the railway. There is a considerable number of other engineering works in the northern portion of the North-East and North-West Wards.

The three engineering works in the Vale employ between 5,000 and 6,000 persons.

The engineering works in the district employ, including the clerical staff, between 9,000 and 10,000 persons and of these about 1,500 are women.

The other industries include a large Dyeing, Bleaching and Cleaning Factory in the Vale, Soap and Perfume Works in the Vale and Chandos Road, Lithographic and Advertising Printing, Music Printing, Geographical Printing, Preserve making in the Steyne, and an Aeroplane Factory in the North-West Ward. In all these a large proportion of the employees are women.

Temporary Offices have been erected by the Ministry of Pensions and permanent ones are in course of erection. The latter will have accommodation for several thousand clerks.

Vital Statistics.

The vital statistics for the year are exceedingly satisfactory. The birth-rate is higher and the death-rate is considerably lower than in 1918. The birth-rate, though, is still 2.9 per 1,000 lower than that of the 96 Great Towns and 1.3 per 1,000 lower than that of London.

The death-rate, —10.4 per 1,000 inhabitants, is the lowest on record for the district. It is 4.3 per 1,000 lower than that of 1918. It would not be fair to compare the death-rates of 1918 and 1919,

as in the former year 187 deaths were caused by Influenza. There was an epidemic of Influenza in the Spring of 1919, but only 41 deaths were caused by the disease in the year.

Prior to last year, the lowest death-rate recorded in the district was in 1912, when it was 10.8 per 1,000.

The death-rate is 3 per 1,000 lower than that of London and 3.4 per 1,000 lower than that of the 96 Great Towns .

On Table 1 is given the death-rate from most of the Zymotic diseases in England and Wales and the different groups of towns, and Acton compares favourably except in deaths from Enteric Fever and Diarrhoeal diseases.

There was only one death from Enteric Fever. There was no death from Measles or Scarlet Fever.

The record as regards deaths from Scarlet Fever is really a remarkable one. There has been no death from this disease in the district since 1915.

Not since 1903 has the district been free of deaths from Measles for a whole year.

Amount of Poor Relief.

At the present time, the average number of persons in receipt of Poor-Law relief is under 200, and the amount disbursed in money and food is about £40 per week.

The Extent to which Hospital and other forms of Gratuitous Medical Relief are utilized.

30.3 per cent. of the deaths occurred in Public Institutions. On Tables 1, 5 & 11, is given the number of deaths which occurred in Hospitals and similar institutions.

The number of deaths in Public Institutions is lower than that of 1918, but this was due to the large number of deaths from Influenza, which occurred in Public Institutions in 1918. The tendency in the district is to utilize Hospitals and Nursing Homes to a greater extent in every succeeding year. On Table 11 is given the number of deaths of Residents registered outside the district. The majority of these outside deaths occur in Public Institutions.

Births.

An explanation of Table 3 is necessary. In former years the ward distribution of both the notified and the registered births was possible, because the registrar of births and deaths supplied me with the list of *births* and deaths registered in the district. The Notification of Births Act rendered a complete list of the births unnecessary, and the registrar now supplies me only with a list of the births registered but not notified. As a birth has to be notified within 36 hours, and six weeks is allowed before registration must take place, it may happen that the number of notified births may differ considerably from the number of registered births. In order to give an approximate idea of the birth-rate of each ward the list of notified births has been utilized together with these registered in the district but not notified.

Table 3 includes the births notified during the year and those registered in the district but not notified; it does not include the births belonging to the district but registered outside.

On Table 4, the number of births are those registered during the calendar year and are corrected for inward and outward transfers; these numbers differ not only from those on Table 3, but also from the uncorrected registered births compiled locally either for the calendar year or for a period of 52 or 53 weeks.

The figures on Table 4 are supplied by the Registrar General and the birth-rate has been calculated upon these figures and not upon those in Table 3.

The birth-rate is considerably higher than that of the two previous years, and the rate is higher in the second half of the year than in the first half.

The rate for the whole year is still much lower than it was in the pre-war period, though the rate for the second half of the year nearly approached that of 1914. Unless the population is greatly underestimated, the birth-rate for the first quarter of 1920 was as high as that of the years immediately preceding the war.

Illegitimate births numbered 64, compared with 52 in 1918, but the illegitimate birth-rate based upon the total births was only slightly higher, viz.:—58 compared with 57 per 1,000 births in 1918.

Infectious Diseases.

On Table 9 are given the Notifications of Infectious Diseases

received during the year. The outbreaks of Measles and German Measles were of a very mild character, and no deaths resulted from either disease.

The same rules as to exclusion from school attendances were observed as in previous years, and it was not considered necessary to close any department during the year.

All children of school age who come from a house where Scarlet Fever or Diphtheria has occurred are examined at the end of the quarantine period, before they resume attendance at school. All Diphtheria contacts are bacteriologically examined.

Scarlet Fever.

There was an increase in the number of notifications of Scarlet Fever, but there was no death from the disease. Last year was the fourth successive year in which there was no death from Scarlet Fever.

In common with many districts in and around London, Acton was visited by a very mild type of disease. So mild has been the disease that some authorities have doubted its identity with Scarlet Fever, and have suggested the name of Para Scarlet Fever. Others have pointed out its low degree of infectivity.

In most instances, on arrival at the Hospital, the temperature of the patients is normal and the rash has disappeared. But although nursed in the same ward as undoubted cases of Scarlet Fever, we have had no instances of re-infection after admission. The cases also peel in a similar manner as undoubted cases of Scarlet Fever do. Occasionally, the cases are very infectious, and we have had instances of every child in the family being infected one after the other, and as many as 5 and 6 children have been admitted to the Hospital from the same house.

Diphtheria.

There were 54 Notifications of Diphtheria, or 8 more than the number received in 1918. The number of deaths—2—remained the same.

Diphtheria has behaved in Acton in a very similar manner as it has done throughout the kingdom.

The disease has shown periods of minimum and maximum prevalence, and these periods have extended to about 8 years. The period 1892-1899 was a period of maximum prevalence with an average yearly death-rate of .275 per 1,000 inhabitants. The following 8 years 1900-1907 was a period of minimum prevalence with an average yearly death-rate of .08 per 1,000, followed again by another period of maximum prevalence 1908-1915 with an average yearly death-rate of .187 per 1,000.

The last 4 years have had an average death-rate of .046 per 1,000.

It is satisfactory to observe that although the disease still has its periods of maximum and minimum prevalence, the peaks are less exalted and the troughs more depressed, as the following figures show :—

Period.	Average Death-Rate per 1,000
1892-1899	.275
1900-1907	.08
1908-1915	.187
1916-1919	.046

Enteric Fever.

There were 5 Notifications of Enteric Fever, and one death.

Three of the cases had food outside the district, and one of them had partaken of shell-fish before the onset of symptoms.

Encephalitis Lethargica.

One case occurred, and the patient died of the disease.

Infantile Mortality.

Seventy-two deaths occurred in children under 1 year of age ; this number corresponds to an infantile mortality of 65 per 1,000 births.

The Infantile Mortality in the whole of England and Wales was 89 per 1,000 births, in London 85 and in the 96 Great Towns 93 per 1,000 births.

The deaths were distributed as follows :—

North-East Ward	9
North-West Ward	8
South-East Ward	21
South-West Ward	34

It has been previously explained that it is not possible under present conditions to give the ward distribution of the registered births, but based upon the distribution of the births notified and registered but not notified during the year, the infantile mortality in each ward was :—

North-East Ward	29
North-West Ward	50
South-East Ward	82
South-West Ward	82

Eleven illegitimate children died under the age of 12 months. This number would correspond to an infantile mortality of 172 per 1,000 illegitimate births compared with 59 per 1,000 births among legitimate children.

There are some features of importance in relation to the Maternity and Child Welfare work of the Council.

The infantile mortality in 1919 is the lowest on record. Forty-two of the deaths or 58 per cent. of the total occurred before the children reached the age of one month.

Thirty-five of the deaths or nearly one-half were due to ante-natal and natal causes—Prematurity, Atrophy Debility and Marasmus, Injury at birth or Congenital Malformations.

Fifteen of the deaths were due to Diarrhoeal Diseases.

The improvement in the figures of the South-West Ward has been maintained, and the average mortality for the last 4 years has been under 100 per 1,000 births.

Maternity and Child Welfare—Ante-Natal Clinic, &c.

Although, logically, organised effort for the protection of the infant should have begun by ensuring the welfare of the mother during pregnancy, in her confinement and during the lying-in-period, this part of the work was undertaken years after post-natal care of

the infant had been considered an essential sphere of public health activity and in this district remains the most imperfectly organised.

An arrangement was entered between the Management Committee of the Acton Hospital and the Council, and an Ante-natal Clinic was established in April, 1917, and beds reserved for complicated cases of pregnancy. Dr. Bell was appointed by the Hospital Conmmittee to take charge of the Clinic, and of the in-patients admitted. In the original agreement a sum was paid by the Council for all the services necessary to carry out the work.

This arrangement was varied last year. Now Dr. Bell is paid directly by the Council for his services at the Clinic and the Hospital Committee is paid for the complicated cases admitted.

When the Ante-Natal Clinic was started, like most innovations, its value was not fully appreciated, but it is becoming more and more popular, and the accommodation at the Hospital is becoming insufficient.

During the year 57 expectant mothers attended. Some of these, of course, attended on several occasions. The Clinic is held on alternate Thursday afternoons and as many as 11 expectant mothers have attended on the same afternoon.

Four cases were admitted into Hospital from the Clinic. The Clinic is not as popular as could be wished with Midwives. Possibly, there may be some fear among them that the Clinic might be the means in some way or other of reducing the number of their clients. But we have found that the best plan for securing an Ante-Natal Clinic has been through the post-natal care by the Health Visitors among the mothers and children ; post-natal care is pre-natal care for the next infant.

Skilled care at the confinement is as important as ante-natal care.

Under the Midwives Act, 1902, the Middlesex County Council is the Local Supervision Authority over Midwives in this District.

On the outbreak of the war, a Relief Distress Committee was formed here, and a Maternity Aid and Needlework Sub-Committee appointed.

Amongst other work carried out, the loan of maternity bags was offered by the religious charity organisations, and doctors and

midwives fees were wholly or partly paid in cases of distress and necessity.

When the Committee was disbanded, the work was carried on by the Health Committee of the Council, and last year 34 maternity bags were loaned, 15 mothers were assisted and £12 14s. 6d. was paid in fees.

It is admitted that the co-operation of the midwives is necessary in pre-natal work, and every attempt has been made to secure this co-operation. In spite of every effort on our part the co-operation of the midwives has not yet been secured, and we have not received the assistance of the midwives either in our ante-natal or post-natal work,

Health visiting has been carried out in the district since 1904. At that time the work of Health Visitor and School Nurse was combined by one person. A second nurse was appointed to devote herself entirely to school work.

At the commencement of 1919, there were two health visitors and 2 school nurses. During the year a fifth nurse was appointed, partly for school work and partly to carry out and superintend the home nursing of Measles. The home nursing of Measles was new work, and like all innovations, its value is not at once appreciated by those for whom it is intended. At any rate, the services of the nurse have not been utilized for the purpose, and there are various reasons for the lack of appreciation.

As is well known, it takes some time before the value of any new work is appreciated, and especially in the case of Measles. Unfortunately, Measles is looked upon as a very benign and innocent disease, and where care is exercised Measles is not frequently fatal. It is not yet fully realised that care is necessary if life is to be saved in epidemics of Measles.

It is also certain that less women are now engaged in extra-domestic duties than formerly, and instruction in the care of Measles is alone necessary ; in most instances the mother can probably do the nursing.

Most of the cases of Measles and German Measles notified, were visited, but in no case was any nursing of the home cases undertaken.

Seven hundred and thirty-eight houses where a birth had occurred were visited, and 4,493 visits were paid to the houses of infants.

Formerly home-visiting was the sole work done in connection with infant welfare, and it still must remain one of the most important phases of the work, but in 1912, an infant consultation centre was opened in the Priory School. In 1916 a second centre was opened in South Acton ; this second centre is now held in rooms hired from the Palmerston Road Mission.

On Table 13 will be found statistics of the children who attended at these centres.

From Table 13 it will be seen that a large percentage of the babies do not attend the centres under the age of three months. Most of the homes have been visited, of course, within a few weeks of the birth. But the health visitors do not have the same opportunities of frequently impressing upon the mothers the importance of breast feeding unless attendance is made early and regularly at the centres.

The investigations which have been made in many countries into the causes of the infantile death-rate have revealed a close connection between the number of infants who are breast-fed and the number who survive the first year of life. The advantages of breast-feeding are now universally admitted, but unfortunately, the admission is hedged in by so many conditions that a large number of babies are brought up on a bottle.

These two primary facts should be stamped upon the mind of every expectant mother ; viz.:—that the benefits of breast-feeding are incalculable and that with rare exceptions, every mother is able to rear ~~its~~ her own infant.

During the latter part of the nineteenth century, a decrease appears to have occurred in the amount of breast -feeding, and this was attributed by some to a decrease in the capacity of the mother for the fulfilment of the function of lactation. Increased experience has shown that the difficulties of breast-feeding which exist in a certain proportion of cases can be satisfactorily surmounted in nearly every instance.

A record has been kept of the number of babies who are breast fed when they make their first attendance at the centre, and

of those who made their first attendance before the age of six months, nearly one-third have already been weaned. The figures for 1919 were slightly better than those of the two previous years.

The numbers were as follows:—

	Number Attended.	Breast Fed.	Percentage
1919 ..	309	233	74
1918 ..	223	148	67
1917 ..	197	133	68

It is frequently stated that, although lactation may be established, it is not possible to maintain it for the necessary period. This statement has led many persons to the belief that the capacity for sustained lactation is decreasing among women. The following figures show the period during which breast-feeding was continued by the mothers attending the centre last year :—

Weaned during first month ..	.. 25
Weaned between 1-2 months ..	.. 27
Weaned between 2-3 months ..	.. 18
Weaned between 3-4 months ..	.. 13
Weaned between 4-5 months ..	.. 12
Weaned between 5-6 months ..	.. 5
Weaned between 6-7 months ..	.. 8
Weaned between 7-8 months ..	.. 7
Weaned between 8-9 months ..	.. 41
Weaned between 9-10 months ..	.. 45
Weaned between 10-11 months	.. 7
Weaned between 11-12 months..	.. 5

Twenty-two removed from the district whilst still on the breast.

From inquiries made, I find that a .large number of the babies are weaned within a few weeks of birth, and the mothers state that their milk has "gone off" when they resumed their domestic duties after the confinement. It is possible that a decreased flow does occur at this period, but it is not sufficient to justify the weaning of the baby, and a little perseverance would re-instate the function of the mammary glands.

Another cause which operates in reducing the period of lactation is the too frequent feeding of the baby. Unless the breast is emptied completely the functions will not be maintained. The child should not be fed so frequently that it is not hungry when fed.

We have frequently seen the amount of milk increased when the intervals between the suckling are increased. Frequent feeding have an injurious effect both on the infant and on the milk supply, tending to cause both a shortened period of lactation and to induce unsatisfactory nutritive conditions in the child owing to a deficiency of fat.

Eleven cases of Ophthalmia Neonatorum were notified; one of the children was admitted to the Infirmary and died there of Mulnutrition.

Nine of the others had only a very slight discharge and swelling of the eyelids and all recovered completely; one of them had a consolation prize in the Daily Sketch Baby Competition.

There was only one very severe case; both the mother and child were admitted to St. Margaret's Hospital and Iridectomy performed. They were in the Hospital for two months, but the child has now recovered and the eyes are not permanently injured.

Milk Supply.

There was only one cowkeeper in the district and during the year he discontinued the keeping of cows.

There were 75 registered milksellers in the district, but some have discontinued, and others have started selling milk during the year. The actual number of premises on which milk was sold varied from 63 to 67.

On another page the retail price of milk in Acton during the year is given and the price varied from 7 pence to one shilling a quart.

Figures are available of the amount of milk sold in the district each week during January, October, November and December, and also for the weeks ending February 1st, 8th and 15th, August 30th, and September 27th.

In these periods there were two abnormal weeks—week ending August 30th, owing to the holidays, and week ending October 3rd, owing to the Railway Strike, and these weeks have been excluded from the following figures.

We have then 8 weeks when milk was retailed at 3s. 4d. a gallon, 4 weeks at 3s. 8d., and 9 weeks at 4s. a gallon. It is in-

teresting to note the effect of the price of milk on the consumption, and the figures were as follows :—

Milk at	3s. 4d.	average	weekly	consumption	17,482 gallons.
" "	3s. 8d.	"	"	"	15,682 "
" "	4s.	"	"	"	14,151 "

We may take another comparison. In January 1919, milk was retailed at 3s. 4d. a gallon and the average weekly consumption was 17,255 gallons; in January 1920, when milk was retailed at 4s. the average weekly consumption was 15,025 gallons. In the five weeks ending January 31st, 1920, 11,152 fewer gallons of milk was consumed in Acton compared with the corresponding period of 1919.

Probably in the months when the retail price of fresh milk was at its highest, there was an increased sale of condensed and dried milks. The increased sale of these though, would not materially affect the total amount of milk consumed, and it may be presumed that the effect of the enhanced price was to reduce the consumption by about 2,000 gallons a week.

It may be of interest to note the amount of milk sold and distributed free at the Infant Centres from April to December 1919.

Month.	Average weekly Amount.		
	Sold.	Free.	Total.
April	215½-lbs.	1½-lbs.	217-lbs.
May	180-lbs.	3-lbs.	183-lbs.
June	190-lbs.	11½-lbs.	211½-lbs.
July	210-lbs.	28-lbs.	238-lbs.
August	179-lbs.	35-lbs.	214-lbs.
September	185-lbs.	32-lbs.	217-lbs.
October	213-lbs.	48½-lbs.	251½-lbs.
November	259-lbs.	71-lbs.	320-lbs.
December	242-lbs.	85-lbs.	327-lbs.

Up to the end of June, the Council issued vouchers to Dairymen for the supply of milk. This was discontinued and dried milk was given instead of liquid milk.

In a previous annual report particulars were given of the premises registered as milksellers, and the details have not altered in any material degree. It was then pointed out that a number of

the premises registered to sell milk, were used as general shops. Most of these premises are entirely unsuitable for the storage of such an important article of food as milk is. The weekly amount of milk sold in the different premises varied from 4½ gallons to over 2,500 gallons, and the following is a summary of the average weekly quantities sold :—

Quantity.	Number of Retailers.
Under 10 gallons	13
10-20 gallons	14
20-30 gallons	8
30-40 gallons	4
80-100 gallons	2
100-150 gallons	2
150-300 gallons	7
300-500 gallons	5
500-700 gallons	3
700-1,000 gallons	2
1,000-1,500 gallons	1
1,500-2,000 gallons	2
2,500-2,700 gallons	1

The Ministry of Health desires information of the general adequacy of the arrangements for the supply and distribution of milk of pure and wholesome character.

If number and general adequacy were synonymous terms, then the district would be very well served, but it may be taken as a general rule, that the efficiency of the arrangements for the distribution of milk is in inverse ratio to the number.

The lower the number per head of the population, the better appointed, as far as cleanliness of premises and utensils are the dairymen's premises.

There is another aspect to the question ; the multiplicity of small premises increases the cost of distribution. In the Winter Prices Order, 1919-1920, the average price to the producer was 2s. 9d., and the average cost of distribution was 1s. 1d. In the Summer Prices Order, 1919, the cost of distribution was nearly 70 per cent. of the price paid to the producer, viz.:—1s. 6d. to the producer and 1s. 1d. for distribution.

It is no uncommon sight to see 3 or 4 milk churns belonging to different retailers in the same street at the same time.

This means waste of time as well as waste of milk, and must of necessity enhance the price of milk. The milk of Acton could be handled at, and distributed from half-a-dozen premises at the most, and this concentration would probably effect an improvement in the facilities for the handling of the milk.

It may be objected that this concentration would eliminate competition. For all practical purposes competition is already eliminated. With the exception of one firm, practically all the milk sold in the district is obtained from one wholesale firm, and a large part of the retail trade of the district is also indirectly controlled by the same wholesale firm.

The wholesale firm in question directly or indirectly also supplies a large proportion of the milk sold in London and it may be assumed that the condition of the milk sold in Acton approximates closely to that sold generally in London. It was found in London that nearly 10 per cent. of the samples contained tubercle bacilli, as shown by the inoculation of guinea pigs. Almost every sample is more or less contaminated with dirt, and a teaspoonful of average milk contains some millions of germs. There is no "certified" milk sold in the district; some milk was sold as "nursery" and "invalids" milk in bottles at an enhanced price of one penny a quart.

Before the latest Order was passed, in many instances this milk was bottled from the churn in the street. This has now been stopped, but there is no guarantee that "nursery" milks and others with fancy names (except "certified" milk) differ in any respect except in price.

There is reason to believe that some if not most of the large milk distributors—wholesale and retail—are alive to the danger as well as the waste which must result from the present state of affairs. Steps are being taken by the firms themselves not only for a fairly complete chemical analysis of milk, but also for its bacteriological examination. It is hopeless to expect much improvement though, until some inducement is given to those who produce clean milk of a high quality, and some punishment meted out to those who produce dirty milk which just conforms to the Government standard of fat content.

With the exception of the Graded Milk authorised by the Food Controller, all milk is sold at one price irrespective of quality or cleanliness.

The State of New York has issued Regulations which came into force in November, 1914, and which described explicitly the nature of the grades in milk. There are 3 grades—A., B. & C.—Raw and Pasteurised.

Grade A. Raw must not contain more than 60,000 bacteria per c.c. at any time previous to the delivery of the milk to the consumer. Under the same conditions Grade A. pasteurised must not contain more than 30,000 per cubic centimetre, Grade B. raw must not contain more than 200,000 per c.c. and Grade B. pasteurised not more than 100,000 per c.c.

Grade C. raw and pasteurised has no bacterial standard, but can only be used for cooking and manufacturing purposes.

The Cows from which the milk of Grade A. is obtained must have been tested at least once in the previous year with tuberculin and any tuberculous cow must be excluded from the herd.

For Grade B. the cows must be healthy, as disclosed by an annual physical examination.

Very little, if any of the milk retailed in Acton complies with the conditions of Grade A and Grade B, and yet the Regulations issued by the Department of Health for the City of New York define milk of Grade A only as being suitable for infants and children.

If we examine the sources of the external milk supply of London, we can easily understand that the milk is open to all the sources of contamination. Most of the milk sold in Acton is produced in the counties of Berks, Buckingham, Oxford, Somerset and Wilts. ; the last county is responsible for 18.7 per cent. of the total extreme supply of milk sold in London.

Milk (Mothers and Children) Order, 1918.

A circular letter was received from the Ministry of Health on the subject of milk for expectant and nursing mothers and for infants and children under 5 years of age.

Before dealing with the measures advocated by the Ministry, in order to ensure that no mother or children shall suffer from insufficient supply of milk on account of the high prices ruling, it may be advisable to set forth the Orders and Instructions issued by the Ministry of Health and the Food Controller.

Section 1 of the Maternity and Child Welfare Act, 1918, enacts that any local authority within the meaning of the Notification of Births Act, 1907, may make such arrangements as may be sanctioned by the Local Government Board, for attending to the health of expectant mothers and nursing mothers, and of children who have not attained the age of five years and are not being educated in schools by the Board of Education.

Prior to the passing of the Maternity and Child Welfare Act, an Order had been made by the Food Controller by which a local authority may, and when required by the Local Government Board, shall arrange for the supply of food and milk for expectant mothers and nursing mothers and of milk for children under 5 years of age, subject to such conditions as may from time to time be presented by the Food Controller.

The quantities of food and milk to be supplied shall not in any case exceed the amount certified to be necessary by the Medical Officer of Health, or the Medical Officer of a Maternity and Child Welfare Centre working in co-operation with the local Authority, or by a person authorised in that behalf by either of such Medical Officers, or by some other person appointed by the Local Authority for this purpose.

In necessitous cases in which the Medical Officer of Health or the Medical Officer of a Maternity or Child Welfare Centre or any person authorised by the Medical Officer or appointed by the Local Authority, certifies that the provision of food, or milk is necessary, food or milk may be provided free, or milk may be sold at less than cost price.

The expression Milk for the purpose shall include any preparation of milk which may be prescribed by the Medical Officer of Health or by the Medical Officer of a Maternity or Child Welfare Centre.

The Local Government Board at the same time (February 1918) made an Order conferring and imposing upon every local authority within the meaning of the Notification of Births Act, 1907, and upon such officers as they may designate or appoint the powers and duties necessary to provide for the due discharge within their district of the functions assigned to local authorities by the Milk (Mothers and Children) Order, 1918.

In order to give effect to these orders, a local food control committee can adopt a Priority Scheme whereby priority of supply

can be obtained for expectant and nursing mothers, for infants and young children and for invalids.

The necessity for these Orders arose from the feared scarcity and the high price of milk in the winter of 1918-1919.

The retail price of milk in the winter of 1918-1919 was as follows :—

1918.		1919.
Oct. 1st to Nov. 21st.	Nov. 21st to Dec. 31st.	Jan. to Apr.
3s.	3s. 4d.	3s. 4d.

The summer prices of 1919 were reduced per gallon and were as follows :—

May and June ..	2s. 4d.
July	2s. 8d.
August	2s 8d.
September	3s. od.

An increase of 4d. was allowed during the month of July. This increase in price was granted to the producer to meet the increased cost of production brought about by the prolonged drought.

On September 11th, 1919, the milk (Winter Prices) Order 1919, was made, and this Order fixed the maximum prices that might be paid to the producers, wholesalers and retailers.

The maximum retail prices were as follows :—

October, 1919	3s. 8d.
November and December, 1919 ..	4s. od.
January, February and March, 1920	4s. od.
April, 1920.	3s. 8d.

The retail prices were made up as follows :—

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Producer's Price	2.2	2.8	3.3	3..3	3.3	3.0	2.2
Wholesaler's Margin, including railage	9	7	2	2	2	4	9
Retailers distribution margin	9	9	7	7	7	8	9
	3.8	4.0	4.0	4.0	4.0	4.0	3.8

The maximum prices to the producers were fixed on the basis that the milk was delivered at the seller's expense to the buyer's premises, or to the buyer's railway station, and that in the latter case all charges for transport beyond the buyer's railway station, were borne by the buyer.

In both the wholesaler's and retailer's case, a deduction of ¼d. a gallon was to be made when churns were provided by the buyer.

The following table shows the manner in which the price of milk has been raised since 1917 :—

	1920.	1919.	1918	1917.
January ..	4s. 0d.	3s. 4d.	2s. 8d.	
February ..	4s. 0d.	3s. 4d.	2s. 8d.	
March ..	4s. 0d.	3s. 4d.	2s. 8d.	
April ..	3s. 8d.	3s. 4d.	2s. 8d.	
May ..	2s. 0d.	2s. 4d.	2s. 0d.	
June ..		2s. 4d.	2s. 0d.	
July ..		3s. 0d.	2s. 4d.	
August ..		2s. 8d.	2s. 4d.	
September ..		3s. 0d.	2s. 4d.	
October ..		3s. 8d	3s. 0d.	2s. 4d.
November ..		4s. 0d.	3s. & 3s. 4d.	2s. 8d.
December ..		4s. 0d.	3s. 4d.	2s. 8d.

Before the war, the price varied from 4d. to 6d. a quart. The contract price in the Hospital for a twelve-months supply was 10½d. a gallon.

The following table shows the average contract prices paid per gallon by the wholesale firms in London in the years 1913, 1914 and 1919 :—

	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. to Mar.
1913	7½d.	7½d.	7½d.	7½d.	7½d.	7½d.	10¾d.	10¾d.
1914	7½d.	8d.	8d.	8d.	8d.	8d.	10¾d.	10¾d.
1919		16d.	15d.	20d.	20d.	20d.	26d.	37d.

I have entered fairly fully into the question of prices, because it affects not only the whole aspect of the question of Infant Welfare and the work of this Committee, but also the policy of the Council in respect of the distribution of free milk and milk under cost price.

The Local Food Control Committee has protested against the price allowed to the producer, but the only reply which the Food Controller has vouchsafed is that these prices are based upon the cost of production to the farmer.

Although milk at present prices is not by any means an economical food, it is an essential one for babies, infants, expectant and nursing mothers and invalids. Formerly we were dependent upon fresh milk and condensed milk; recently enormous strides have been made in the manufacture of dried or powdered milk, and I hope to show that the use of dried milk can be safely used under certain conditions advantageously and economically.

At the beginning of the winter of 1918-1919, when the prices, of milk were raised, the Local Government Board issued a Circular and arrangements were made for the distribution of free milk and milk under cost price. The question of the form in which this milk should be distributed was debated, and it was decided to try the experiment of giving vouchers to dairymen so that fresh milk might be distributed to mothers and children. It may be stated that the deciding factor in our attitude was not the advantage of fresh milk in itself, but the possibility that milk in such form would be used by the persons for whom it was intended, and not shared with other members of the family.

During the months of October to December, 1918, and the early months of 1919, the table at the end of this section will show the number of persons benefitted and the amount distributed and paid for. When the winter prices of 1919 came into operation the question was again considered, and it was decided to distribute dried milk.

The manufacture of dried milk is rapidly assuming proportions of considerable magnitude. In addition to its use in the preparation of certain food stuffs, dried milk and its products play a more important part in the artificial feeding of infants.

The subject of dried milk is of such importance as to warrant a full description—because probably it will be the means of stimulating the production of a clean milk. Its manufacture opens up the possibility of obtaining a clean milk supply in an easier and more practicable manner than by transport of new milk from a great distance. It is only in recent years that commercially successful processes have been brought out for preparing a substance containing only the solids of milk without the addition of foreign ingredients

and capable of being reconstituted into a fluid more or less closely resembling the original milk.

It is true that dessicated milk was an article of commerce as far back as 1868 and between this date and the end of the century we have milk powders mentioned, but in almost every instance they contain sugar and cereal flours in addition to the solids of milk. In 1910, Campbell's process was patented in England. Since 1902, considerable improvements have been made in the manufacture of dried milk, and several processes are now in use on a comparatively large scale for the production of dried milk without the necessity of adding sugar or other foreign substances. The products now obtained by several processes are sufficiently good to allow the preparation, by mixing the dried milk with warm water, of a fluid bearing a fairly close resemblance to fresh or at least heated milk.

Several of the patented processes for making milk powders are comparatively simple, and the plant required is relatively inexpensive. The processes can therefore be carried out on the premises of farms or small manufacturers, and do not require the resources of a large and expensively equipped factory. It is therefore not merely an idle dream on the part of some of the enthusiasts to look forward to a time when the existing conditions as to the collection and distribution of the milk will be done away with and practically all milk consumers will buy their milk by the pound, instead of by the quart, and stock it in the house along with their groceries.

It is contemplated that the great financial saving in cost of distribution and of transport, and the avoidance of waste, owing to milk going bad, will more than cover the expense of manufacturing processes and that an article will be produced purer, more constant in composition and less liable to contain and convey the germs of infectious disease than ordinary milk.

In the Winter Prices Order 1919-1920, the average price to the producer was 2s. 9d. and the average cost of distribution was 1s. 1d. In the Summer Prices Order, 1919, the cost of distribution was nearly 70 per cent. of the price paid to the producer, viz.:—1s. 6d. and 1s. 1d. for distribution. The distributors claim this large margin of profit, because of the large amount of wastage which occurs through souring in the summer months.

Some retailers have already recognised the advantage and the profit of adding reconstituted milk to the fresh milk. One firm of

dried milk manufacturers circulated dairymen on the advantages of reconstituted milk, and their letter stated that "as there will, in all probability, be an unprecedented demand for milk during the next few weeks, we have once more to draw your attention to our full cream and separated milk powders which are entirely soluble and when properly reconstituted, form a perfect substitute for fresh milk. Our milk powders are now used very largely and to a constantly increasing extent by dairymen and others, especially in time of shortage. We shall be prepared to quote very moderate prices which we are sure you will find work out much cheaper than those charged for accommodation milk."

As soon as a process was available for producers on a commercial scale and at a moderate price, dried milk which on a mixture with water could be reconstituted to a fluid resembling fresh milk, it was perhaps to be expected that certain dairymen would take advantage of it for the purpose of toning milk or for making up for shortage. To the dairymen who tones milk carefully to the 3 per cent. limit, dried milk powders afford additional facilities, as it enables him to carry on his manipulations with less chance of detection, since he will not be observed to receive fresh liquid separated milk in churns; the practice became so prevalent that the Food Controller issued an Order under the Defence of the Realm Act, making it an offence to sell reconstituted milk as fresh milk.

Four main varieties of Dried Milk are on the market, namely:

"Full Cream."
"Government Standard Milk."
"Half Cream."
"Separated."

The separated Dried Milk contains as low as 1% of fat. The Half Cream Milk contains from 12% to 15% of fat. Government Standard Dried Milk was intended to correspond to the 3% presumptive standard of the Board of Agriculture and Fisheries. This Dried Milk would contain about 24% of fat. Full cream milk made from the whole fresh milk, as received—this contains usually about 27% of fat, but it may vary from 22.5% to 30% of fat.

A few firms also make a "super-fatted" dried milk, cream being added to Full Cream Milk before starting the process of drying. As far as we are concerned, the Full Cream Milk is the one mainly used. Half Cream Milk is only occasionally prescribed on account of digestive troubles.

Before deciding upon a preference for Dried Milk to Fresh Milk, the question was viewed from three different aspects :—

1.—Cleanliness and freedom from disease organisms.
2.—Economy.
3.—Suitability for the artificial feeding of infants.

1.—In connection with a product specially intended for the food of infants, the question of the action of the drying process on organisms, and especially on the tubercle bacilli contained in the milk, is naturally of great importance and at an early stage claims were made on behalf of a Dried Milk manufacturerd by means of cylinders heated considerably above the boiling point of water. The tubercle bacilli were invariably destroyed and also other pathogenic organs.

At first it appeared to have been taken for granted that the Dried Milk was absolutely sterile—at least at the moment of coming from the drying cylinders. Recent examinations though, have shown that in no instance was the sample absolutely sterile, but when these results are compared with milk freshly drawn from the cow and every care and cleanliness have been observed, the high standard of bacterial purity of dried milk is very satisfactory. The number of organisms in every sample of dried milk never exceeds a few thousands, whilst the number in ordinary milk, as delivered to the consumers, is measured by millions. Although the process theoretically does not destroy the tubercle bacilli, in no instance did inoculated guinea pigs show evidence of tuberculosis. So that from the cleanliness and disease-carrying points of view, Dried Milk compares very favourably with New Milk.

2.—Economy.—Some have doubted if dried milk, carefully prepared under hygienic conditions, will ever be able to be sold at a price which can compete with that of ordinary milk. They think the capital charges on installation of apparatus and on the provision of a thoroughly sanitary factory coupled with the cost of working apparatus, and the expense of skilled labour to run it, will more than counterbalance any saving on transport and distribution. Evidently, these opinions were formed before the recent high price of milk occurred. Full cream dried milk requires to be mixed with about seven parts by weight of water to give a mixture corresponding to ordinary milk, but with the introduction of toning, one part of dried milk mixed with eight parts of water will in most instances give as good a milk as is now delivered to consumers. But

taking as a basis one part of dried milk with seven of water, five ounces of dried milk should reconstitute to correspond to one quart of fresh milk.

Based upon the price for which dried milk is sold now at our Centres, it is equal in price to fresh milk at 8¾d. per quart. Reconstituted on the basis of one part to eight of water, it would correspond to fresh milk at 7d. per quart. In any case at 2s. 4d. a packet, it was considerably cheaper than fresh milk last winter.

3.—As far as we are concerned, suitability in the artificial feeding of infants is the most important point in the use of Dried Milk. Of course it will be clearly understood that we are now dealing only with the artificial feeding of infants, and that the only physiologically correct food for a young mammal, is its mother's milk, or the milk of some other animal of the same species. The milk of each species is adjusted so as to contain a suitable proportion of such substances as are needed for the young of that species. Undoubtedly in the 19th century a decrease occurred in the amount of breast-feeding. There was a tendency to exaggerate the value of certain substitute foods, and this may have conduced to neglect of breast-feeding. There is every reason to hope that this tendency has not only been checked, but a marked increase in the number of nfants who are breast-fed has been noticed.

There is a certain number of mothers who fail to establish the function of lactation, and it is in connection with the infants of these and of older children that the comparison between dried milk and fresh milk is being instituted, or rather between dried milk and liquid milk as it is being delivered to ordinary London households.

Dried Milk has been tried in a large number of Child Welfare Centres and Municipal Milk Depots, both in this country and abroad and in almost every instance a favourable opinion has been formed of the value of Dried Milk in the artificial feeding of infants. The curd formed in the stomach is softer and more granular than that formed from fresh milk. Probably this easier digestibility and also its higher standard of cleanliness account for the comparative freedom from Diarrhoea of children fed on Dried Milk. Babies fed on Dried Milk are not exempt from Diarrhoea, but undoubtedly we had less Diarrhoea during the past summer amongst babies fed on Dried Milk than amongst those fed on Fresh Milk, and as the figures show, although we had a hot and dry summer, we have had comparatively few deaths from Diarrhoea amongst the children attending the Child Welfare Centres.

It is also feared that rickets and scurvy would be associated with dried and preserved foods, but there is no reason to think that these diseases are any more prevalent among children brought up on Dried Milk, than amongst those brought up on Fresh Milk.

Recently a good deal has been written upon substances found in food called " vitamines," and in view of the importance of the subject of Dried Milk, experiments have been carried out under the supervision of the Local Government Board, in order to find out whether the vitamines in Fresh Milk are destroyed in the process of drying. The experiments have not been extensive, but as far as they go they prove that the vitamines are not destroyed in the process of drying.

From this point of view of the subject, I think I am entirely justified in changing our mode of procedure and to distribute Dried Milk instead of Fresh Milk, and in any recommendation which the Committee may make upon the Circular of the Ministry of Health, it will be understood that the distribution in every instance will be Dried Milk.

The Circular calls the attention of Local Authorities to the price of Milk and trusts that those who have already made arrangements for the supply of milk to necessitous mothers and young children in the district, will consider whether any extension of these arrangements is required. The Circular strongly urges that adequate steps should be taken by means of hand-bills, or otherwise, to bring to the notice of all expectant and nursing mothers who are likely to be unable to provide sufficient milk for themselves and their children, the facilities provided by the Local Authorities and by other agencies in the District for obtaining a proper supply of Milk.

The Health Visitors, the doctors and Midwives practising in the district, should be asked to report to the Medical Officer of Health any expectant and nursing mothers, who in their opinion require an additional supply of Milk. The Health Visitors should be instructed to urge all women with children under school age, to bring their children to the Maternity and Child Welfare Centres, and when this cannot be done, to report all cases in which an extra supply of milk appears to be required.

The Medical Officer of Health should place before the appropriate Committee of the Local Authority the cases of women and children reported to need additional milk.

Milk can best be supplied by the Local Authority through the Centres. The question of the cases in which Milk should be supplied at less than cost price or free, is left to the discretion of the Local Authority. It is important that the Local Authority in exercising its powers with regard to the supply of milk, should co-operate with the Local Health Insurance Committee, the Local Food Control Committee, the Board of Guardians, and any charitable agency in the district which supply milk and food so as to prevent over-lapping.

The Ministry also draws attention to paragraph No. 8 of the Circular to the Local Government Board of February 9th, 1918, in which it is suggested that if the Local Authority arranged for a supply of milk by a voluntary agency, the Local Authority should pay the expenditure of the voluntary agency for this purpose, and should apply to the Ministry for a grant in respect of the expenditure so paid.

The Ministry trusts that Local Authorities will take all possible steps to secure that expectant and nursing mothers and young children in their district shall not suffer during the coming winter from a shortage of milk, owing to inability to obtain a sufficient supply at the prices which they can afford to pay.

The following scale was adopted by the Council in 1918, for the supply of Milk :—

Under 30/-.	a pint a day free (1 packet.)
Under 35/-.	over 3 in family, a pint a day free.
Under 35/-.	under 3 in family : a pint a day for 1d.
35/- to 40/-.	over 3 in family : a pint a day for 2d.
35/- to 40/-.	under 3 in family : a pint a day for 3d.
40/- to 45/-.	over 3 in family : a pint a day for 4d.

Exceptional cases of course, were dealt with as they arose. Under present conditions this scale required revision. It was certain that many families came above this scale and were unable to obtain a sufficient supply of milk.

The matter was reconsidered by the Maternity and Child Welfare Committee in October, 1919, and the rates of charges were amended as follows :—

Where the weekly earning power of a family is

Under 35/-. a pint a day or its equivalent in dried milk free.

Under 40/-. (over 3 in family). a pint a day or its equivalent in dried milk free.

40/- to 45/-. (over 3 in family). a pint a day or its equivalent in dried milk for 1d.

40/- to 45/-. (over 3 in family). a pint a day or its equivalent in dried milk for 2d.

45/- to 50/-. (over 3 in family). a pint a day or its equivalent in dried milk for 3d.

Exceptional cases to be dealt with as they arise.

The following table shows the number of persons who received milk free and under cost price :—

FRESH MILK.

Month.	No of Women	Pints Free	No of Women	Pints at 1d.	No. of Women	Pints at 2d.
1918						
Dec.	17	291	3	31	15	169
1919						
Jan.	36	714	3	87	20	369
Feb.	50	962	5	88	26	581
Mar.	55	1219	4	112	28	689
April	46	1,039	4	115	23	583
May	32	658	4	115	14	130
June	22	488	3	69	5	104

1918		at 3d.		at 4d.	Total Women	No of Pints
Dec.	1	20	1	2	37	513
1919						
Jan.	1	31	—	—	60	1,201
Feb.	2	12	1	26	84	1,669
Mar.	2	61	—	—	89	2,081
April	2	60	1	22	76	1,819
May	2	6	—	—	52	909
June	—	—	—	—	30	661

DRIED MILK.

1918	No. of Women	No. lbs.	No. of Women	lbs. at 6d.	No. of Women	lbs. at 1/-
Oct.	5	8				
Nov.	8	15	—	—	—	—
Dec.	10	20	—	—	—	—
1919						
Jan.	11	18	—	—	—	—
Feb.	7	15	—	—	—	—
Mar.	11	23	—	—	—	—
April	6	11	4	8	—	—
May	5	12	5	22	—	—
June	21	34	6	29	2	2
July	43	117	4	15	5	14
August	44	167	7	17	4	11
Sept.	43	132	10	25	4	7
Oct.	71	252	6	30	4	6
Nov.	98	294	7	30	3	6
Dec.	102	337	10	53	2	7

Offensive Trades.

There is only one offensive trade " in the district, viz.:— Fat extractor. No complaints have been received of the manner in which the work is carried out at these premises.

Numerous complaints have been received though, about the rubber industry carried on at Agnes Road. Some misapprehension exists as to the definition of an offensive trade and the powers vested in the Council in respect of the establishment and control of offensive trades.

By Section 112 of the Public Health Act, 1875, it is enacted that no person shall, after the passing of the Act, establish within the district of an Urban Authority, without consent, any offensive trade; that is to say the trade of

Blood boiler.
Bone boiler.
Fellmonger.
Soap boiler.
Tallow melter.
Tripe boiler or

any other noxious or offensive trade, business or manufacture. Section 113 authorises any Urban Authority to make bye-laws in order to prevent or diminish the noxious or injurious effects thereof.

In relation to a trade other than those expressly mentioned in the section, the question whether the materials and processes are such as to constitute a noxious or offensive business or manufacture, is one which will often be found to require careful consideration. Broadly speaking as a result of legal decisions, in seeking the analogy between a particular trade and those specified in Section 112 of the Public Health Act, 1875, the Council must prove the identity or similarity of the materials used in the process. If a trade can be shown to involve the collection of large quantities of animal matter, which without anything being done to them, must be or by process of time must necessarily become a nuisance, it is probable that the terms of Section 112 will be found sufficiently comprehensive to include such a trade.

In districts where the Public Health Amendment Act, 1907, has been adopted, a much wider interpretation can be given to an offensive trade. Section 51 of that Act provides that the words " any other trade, business or manufacture, which the local authority declare, by order confirmed by the Local Government Board, and published in such a manner as the Board direct, to be an offensive trade," shall be substituted for the words " any other noxious or offensive trade, business or manufacture," in Section 112 of the Public Health Act, 1875.

Under the 1907 Act, there would be no question of the materials used, whether they be of animal origin or not; if the Local Government Board confirmed the decision of the local authority any trade which would give rise to a nuisance, could be scheduled as an offensive trade.

But a difficulty would arise in the manner of enforcement of any bye-law made by the Council. Under the Factory and Workshops Act, 1901, Workshops are under the control of the local authorities and factories are supervised by the Home Office Inspectors. This, of course would be without prejudice to the Council's powers under the Public Health Acts, and presumably, if the Council made bye-laws which applied to factories, it would also have some power to enforce those bye-laws.

In the manufacture of rubber and its products there are at least 6 stages :—

1. Purification.
2. Rolling.
3. Mastication and Mixing.
4. Calendering.
5. Vulcanization.
6. Making up of the finished articles.

1.—Purification consists in the removal of various impurities and formerly the process used to be carried out in this country. Some of the lower grades of African rubber contained a considerable amount of impurities and it was stated that such unconsidered trifles as Negroes skulls have been found in the crude rubber. The impurities in some instances amounted to as high as 10 per cent., but recently the importance of purity in the rubber has become appreciated to such an extent that no purification is carried out in many works in this country. In the Agnes Road Works no purification takes place, and the crude rubber contains less than 2 per cent. of impurities.

The rubber is imported in two forms—the smoked and unsmoked varieties.

(2) Rolling.

The material is then passed between grooved rollers over which hot water passes from a series of fine jets. All particles of sand and dirt are removed, and the rubber leaves the machine in the form of rough sheets. These sheets are hung up so as to get rid of the water incorporated with the rubber in its passing through the washing machines.

(3) Mastication and Mixing.

After drying, the rubber is removed to the grinding mills, so that it can be brought into a condition in which it can be mixed with the materials necessary for giving it consistence and any required colour and to prepare it for the subsequent process of vulcanization. Portions of the mixture are placed in buckets and the contents covered with naphtha. The naphtha combines with the rubber and the compound then forms a dough or thick paste.

(4) CALENDERING.

The rubber dough or paste is next run into sheets by repeated passages over a calender machine. A band of calico is passed between the rollers and on the calico layers of paste are placed. The "bed" of the machine is heated and as the calico passes through, the naphtha evaporates, leaving a thin sheet of rubber on the calico. Subsequent passages increase this layer until the desired amount has been deposited.

(5) VULCANIZATION.

Vulcanization is carried out in different ways, but in every instance the result is the incorporation of a certain amount of sulphur with the rubber. A physico-chemical combination is obtained composed of the rubber and sulphur. This compound, unlike the raw rubber can be utilized for a variety of articles, because of its pliability and resiliency. It does not become hard when cooled or sticky when heated, and at these works the articles made ranged from the inner tubes of motor-car wheels to bathing-caps and syringes. The various articles required are modelled and worked from the sulphur-incorporated rubber paste and then buried in French chalk in trays or boxes, which are then run into an autoclave, where steam under pressure is turned on for the requisite period of time. The carbon disulphide process is not employed in this factory.

The principal nuisance that can arise from the manufacture, arises from the presence of naphtha in the atmosphere.

The rubber after mastication and mixing, has an unpleasant odour, but the odour is too slight to be observed unless a portion of the rubber is handled and sniffed.

It is also stated that a trace of sulphuretted hydrogen is liberated in the process of vulcanization, but the amount must be a very minute one, and I was not able to detect its odour during any of my visits through the works.

Naphtha escapes into the atmosphere in the calendering process and in the making-up process.

The greatest amount of evaporation occurs in the calender room, but its effects here are not so noticeable, as there are less people occupied in the room, the ventilation is more free, and the vapour therefore accumulated to a less extent.

In the making-up rooms, the employees are almost entirely girls, and as far as the employees are concerned, it is in the making-up rooms that the greatest risk from naphtha occurs.

Every girl has beside her a small tin of solution, consisting of naphtha containing a small portion of rubber. This solution is applied to the surfaces which are to be united. The brush has to be kept in the solution in order to prevent the bristles becoming "caked" and it is said to be impracticable to cover up the tins.

A certain amount of evaporation of the naphtha becomes inevitable.

When we endeavour to estimate the effect of the use of naphtha in these works, we have to consider them from two points of view—that of the employees and that of the occupiers of the neighbouring houses. The more efficiently the former are protected, the more numerous will the complaints be from the latter. The administration of factories is under the Home Office, and in workrooms where naphtha is used, efficient ventilation is insisted upon. But it will be evident that the more efficiently and thoroughly the naphtha is removed from the rooms, complaints will be received from the tenants of the neighbouring houses of the offensive smell. As far as I can gather, it is the smell of the naphtha which is the cause of the complaints. It is almost certain that the naphtha is so diluted that no injury or danger to health can accrue to the inhabitants of the neighbouring houses.

But apart from the offensive smells, a deeper sense of injury is felt by some, at any rate, of the inhabitants of Agnes Road, and this arises from the establishment of a factory where heavy machinery is used, within a few yards of the house.

Where night work is done, the noise of the heavy machinery does disturb the rest of the occupiers of the neighbouring houses.

I have received numerous complaints from occupiers of the neighbouring houses that it is impossible to obtain sleep at night, owing to the noise of the heavy machinery.

Some of the inhabitants are also apprehensive of fire, and with an inflamable material like naphtha used, a risk of fire must always be present.

As far as this particular industry is concerned, I understand that all these grievances will be at an end, as a site has been obained at Southall where a new factory will be erected.

But the grievance will not be entirely removed. Some of the inhabitants do, and will probably object to any kind of factory that will be established there. This remark also applies to the Factory in Stirling Road.

The objection is to a factory in the immediate vicinity of dwelling houses; as far as existing factories are concerned, this cannot now be remedied. Under the Housing & Town Planning Act of 1909, this district could have been mapped out into industrial and factory areas, and complaints will be received as long as residences and factories are erected in close proximity.

At the end of the report is found a tabular statement in which are given statistics upon the Sanitary Inspection of the District, including Common Lodging Houses, Houses let in Lodgings, &c.

Slaughter Houses.

There are two registered and one licensed slaughter house in the district. No slaughtering took place in the former, and pigs only are slaughtered in the licensed slaughter house.

Approximately 2,656 lbs. of Meat, 473 lbs. of fish and 3,457 lbs. of Fruit and Vegetables were surrendered and destroyed during the year.

There were 23 registered meat sellers in the district.

Common Lodging Houses.

There is only one Common Lodging House in the district, with accommodation for 126 men. The premises are always well kept and no complaints has been received.

Houses Let in Lodgings.

There are 80 houses let in lodgings registered under the Bye-laws.

The existing Bye-laws have been found inadequate to deal adequately with the existing conditions, and application is being made for the sanction of new bye-laws under Section 26 of the 1919 Housing Act.

General standard of housing in the district.

As there is no absolute standard by which we may grade or compare the housing conditions of a district, the answer given to the above heading must depend upon the personal views of the

writer. If we compared the conditions in the South-West Ward with those in the other wards in the district, we should consider the conditions in the former ward to be unsatisfactory. On the other hand, if the conditions in the South-West Ward be compared with some districts and areas within, say, the County of London, the comparison would be very favourable to the South-West Ward. Structurally, the general standard of housing in the district is high.

There are no courts, alleys, Back-to-back houses or cellar dwellings. There are half a dozen mews within the district. With the exception of these mews and a few houses, such as those in the Steyne, all the streets are wide and the houses have a garden or yard belonging exclusively to them. In one of the latest books on Housing, a list of the requirements necessary in a healthy dwelling is given, and most of the houses in the district conform to the majority of these.

The development of the district being a comparatively recent one, it has escaped the worst features of older districts. In 1861, the population of the district was 3,151, and in 1871, it was 8,306.

The Local Board of Health was formed in 1866. It may therefore be said that most of the district has been developed since the adoption of bye-laws, and the houses have been erected under supervision.

Probably, there are not more than 50 inhabited houses in the district which are not and cannot be made fit for human habitation.

As stated on another page, though, according to the best and most recent authorities, there is overcrowding on space in all the wards.

Besides although the general structural conditions remain the same, the standard generally is lower than it was before the war. Owing to the difficulties encountered, repairs which conduce to the health and comfort of the occupiers have not been carried out in the houses. A house-to-house inspection of a certain area is now being carried out; this area consists approximately of 3,000 houses and probably 10 per cent. of them will be found to be seriously defective. This area, of course, is a selected area, and is not representative of the whole district.

The order of frequency of defects remedied by Statutory Notices was as follows :—

1.—Rooms cleansed, (walls and ceilings).

2.—Roofs, rain water gutters, &c., and plastering, &c, repaired.

3.—Drains unstopped, repaired and trapped.

4.—W.C's. repaired, supplied with water or otherwise repaired.

5.—Waste pipes, rain water pipes repaired, disconnected or trapped.

6.—Dampness of walls or ceilings remedied.

Further details as to the number of these defects will be found in the table at the end of the report.

The chief difficulty in remedying the defects has been the inability to obtain labour to carry out the repairs. This difficulty is now being removed and repairs are being carried out with less delay.

General housing conditions in the district—total number and number for the working classes.

In a previous paragraph it was stated that the district is partly industrial and partly residential. In view of the different definitions of what constitutes the working classes, it is difficult to estimate the number of houses occupied by the working classes. under the Housing of the Working Classes Act, 1903, the expression "working class" includes mechanics, artisans, labourers and others working for wages; hawkers, costermongers, persons not working for wages, but working at some trade or handicraft employing others, except members of their own family, and persons other than domestic servants whose income in any case does not exceed an average of thirty shillings a week, and the families of any such persons who may be residing with them. The latter part of the definition is clearly out of date, and when the Ministry of Health was appealed to for a definition of the words suitable for occupation by persons of the working classes, it was stated that the term working classes may be taken generally to include any persons who work for their living.

Practically all the inhabitants of Acton would be included in the category of working classes or members of the family of a person of the working classes, if this definition is accepted.

A better idea of the class of houses in the district would be had if the rateable value of the houses be taken.

At the Census of 1911, there were 9,445 inhabited dwelling houses. and 490 uninhabited or a total of 9,935. Between March 31st, 1911, and July 1st, 1914, 442 dwelling houses were built; the total number of dwelling houses in the district on July 1st, 1914, would be 10,377.

At the Census 1911, there were 12,965 seperate tenements; the number of empty tenements is not given, but if the figure 490 be taken the total would be 13,455. To this figure must be added the 442 dwellings built between March 31st, 1911, and July 1st, 1914—or a total of 13,897.

A return was prepared by the Treasurer in 1917, and from this return it is shown that 3,499 houses had a rateable value of less than £12 per annum, and 2,929 houses were assessed between £12 and £20, or a total of 6,428 dwellings were assessed under £20 per annum.

The houses asessed under £20 per annum, would contain 2 or 3 bedrooms. An inquiry was made in the autumn of 1919 into the prevailing types of working-class houses in the district and the following table gives the type of house, together with the rent at the time of the inquiry :—

	Type of House.	Weekly Rent.
(a)	Houses with living room, scullery & 2 bedrooms	6s. 6d. to 8s.
(b)	,, ,, ,, 3 ,,	10s. 6d. to 16s. 6d.
(c)	,, parlour ,, ,, 2 ,,	8s. ,, 14s.
(d)	,, ,, ,, ,, 3 ,,	14s. ,, 18s.
(e)	,, ,, ,, ,, 4 ,,	16s. ,, 20s. (usually sublet)

Population—changes during the year or anticipated in the future.

The most important changes during the year resulted from the Armistice. Towards the end of 1918, the National Filling Factory and Small Arms Inspection Works in Willesden Lane and the Munition Works at Hayes were closed down.

Although the Filling Factories in Willesden Lane were situated in Acton, the workers were recruited mainly from the Willesden Labour Exchange, and the Acton Labour Exchange supplied workers for the Hayes Munition Works. A large number of Acton residents though, did work in the Filling & Small Arms Inspection Factories. As a result of the Armistice a large reduction occurred in the number of persons employed in factories.

During the war, over 20,000 persons were employed in the engineering works, &c., in the district on munitions. The immediate result of the Armistice was a reduction in the number employed in thse factories from 20,000 in 1918 to a little over 10,000 in 1919.

Owing to the excellent transport facilities new industries are coming into the district and there are prospects of a great development especially in the Motor industry. Since the end of the war, large factories have been built or are in course of erection—existing ones are being enlarged and the erection of others is under consideration.

Temporary offices are being erected by the Ministry of Pensions and permanent ones are to be built.

Extent of shortage or excess of houses.

In connection with the rest of the kingdom there has been during the past 10 or 15 years a diminishing number of new houses erected annually. Since the commencement of the war practically no new dwelling houses have been erected and until the autumn of 1919, the erection of new dwellings had not commenced. For many years before the commencement of the war a slackening in the building of new houses had occurred.

At the Census of 1901, there were 6,086 buildings here used as dwellings; in 1911, the number was 9,445, or an average yearly increase of 336. The increase in the intercensal period was not a uniform one. The great increase occurred between 1901 and 1905, and the average number erected between these years was more than twice as much as that between 1905 and 1911.

Between March 31st, 1911 and June 30th, 1914, 442 dwellings were erected; 144 between March 31st, 1911 and June 30th,

1912, 167 between July 1st, 1912 and June 39th, 1913 and 131 between July 1st, 1913 and June 30th, 1914.

The district was certainly not overbuilt in the intercensal period 1901-1911. Apart from the direct evidence of personal observation, certain figures may be given as additional evidence.

The average number of empty houses in any district in normal times varies from 5 to 10 per cent.

At the Census of 1901, there were in Acton 454 empty houses or 7.4 per cent. in 1911, this figure was 490 or 5.2 per cent. At the present time, and for the last 3 years, an empty house of average size is unknown.

Occasionally, one sees a house of 10 to 14 rooms for sale, but not to let. During spring-cleaning, if the curtains are removed and the blinds drawn, it is necessary to put up a notice that the house is not to let, otherwise, the time of neighbours will be taken up in answering inquiries if the house is to be let.

The Treasurer has kindly supplied me with the percentage of rate irrecoverable since 1909. Most of the irrecoverable rate in Acton is due to empty houses. The following table gives the percentage irrecoverable on the district rate :—

Year ending March 31st.	Percentage Amount
1909	8.41
1910	7.40
1911	6.40
1912	5.34
1913	4.54
1914	4.23
1915	3.20
1916	3.14
1917	2.83
1918	2.60
1919	1.81
1920	1.44

Apart from overcrowding, the absence of empty houses is a matter of great importance to the community, for without a certain percentage of empty houses, it is impossible to remove to another house, because the existing one is unsuitable or because the existing one required such substanctial repair as to entail removal of the tenant.

Another result which has accrued from the want of empty houses has been the crowding of more than one family into one house. In some instances this has produced nothing more than inconvenience ; in others, the results have been more serious.

This process has been proceeding in this district for some considerable time.

At the Census of 1901, there were 8326 separate occupiers, and in 1911, the number was 12,956, an increase of 4,630, compared with 3,359 new houses built. At the present time more than one half of the houses in the district are occupied by more than one family. These houses were originally intended for one family and the amount of work carried out varies considerably, but in only a few instances have the flats been made self-contained.

Another set of figures may be given to show the extent of the scarcity of houses in the district. Last autumn the Surveyor sent out a circular letter to the firms in the district asking them to furnish the number of their employees who desired to obtain houses within the district ; from the returns received and from applications which were received at the Council Offices, it was estimated that over 3,500 houses were required. Before a single house was ready for occupation nearly 2,500 applications had been received from prospective tenants. About 400 of these, though, were from persons residing outside the district.

Overcrowding.

When we refer to overcrowding, we generally mean the number of individuals which occupy a dwelling house, or in other words the overcrowding of rooms, but overcrowding on space, or the erection of an excessive number of houses on any given area may be quite as important. It is generally found that the two conditions are found together.

By overcrowding of space is meant the number of houses per acre of land. It is now recognised by most authorities that there ought not to be more than 12 houses to the gross acre. In the Housing Scheme which the Council is now carrying out, there are only 12 houses to the gross acre.

If 12 houses per acre is taken as a minimum and 5 persons per house are allowed, we have 60 persons per acre. On a previous page it was shown that in the North-East Ward there were 15 per-

sons to the acre, in the North-West Ward 17, in the South-East 63, and in the South-West Ward 82 persons to the acre..These figures of course, include open spaces, factories, &c.

Based upon the standard of overcrowding of houses adopted by the Registrar General, the number of overcrowded dwellings in the different wards was as follows :—North-East 16, ~~South~~ North-West, 30, South-East 40, South-West 157.

It is very difficult to formulate a standard for overcrowding of rooms. A Royal Commission laid down as the standard for soldiers in barracks in peace time 60 square feet of floor space per man, and 600 cubic feet of air space. This floor space is reduced to 40 square feet in war time. Another standard of overcrowding often used is that contained in the bye-laws regulating houses let in lodgings. It is usually 500 cubic feet per adult and 250 cubic feet per child under 10 years of age.

These standards are excellent and are not vitiated by such errors as the varying size of rooms, &c. But they are impossible of adoption unless a house-to-house inspection be made of every house in the district. The standard of overcrowding adopted by the Registrar General has been in existence and adopted for many years. Under this standard it is assumed that a house is overcrowded, if occupied on an average by more than two persons per inhabited room. It is a standard easy of adoption, and in the main is as useful as well as a fairly accurate one. It is open to the criticism that it does not take into consideration the size of the rooms or the use made of them.

Adopting this standard, at the end of 1918, it was found that 238 houses were overcrowded in Acton and it may be interesting to give the streets in which overcrowding occurred, together with the number of houses overcrowded. The figures were as follows:—

Acton Lane	9	Mill Hill Road ..	1
Avenue Road ..	1	Mill Hill Grove ..	2
Beaconsfield Road ..	1	Mill Hill Terrace ..	2
Berrymead Gardens ..	3	Mills Row	1
Berrymead Road ..	3	Meon Road	1
Bollo Bridge Road ..	11	Midland Terrace ..	1
Bollo Lane	9	Old Oak Lane ..	3
Bridgman Road ..	4	Orchard Place ..	1
Burlington Mews ..	2	Oldhams Terrace ..	1
Church Path ..	2	Osborne Road ..	7

Church Road	1	Packington Road	4
Chiswick Road	1	Palmerston Road	4
Colville Road	11	Park Road North	4
East Acton Green	1	Petersfield Road	15
Enfield Road	1	Princess Terrace	3
Fletcher Road	2	Priory Road ..	2
Florence Road	1	Ramsey Road	1
Gladstone Road	1	Richard's Cottages	2
Gloucester Road	2	Roslin Road ..	1
Goodhall Street	1	Roslin Terrace	1
Graham Road	1	Rothschild Road	3
Grove Road ..	1	St. Alban's Avenue	1
Hanbury Road	2	Saville Road ..	2
Holland Terrace	8	Seymour Road	10
Junction Road	8	Shaftesbury Road	4
Kent Road ..	5	Somerset Road	8
Kingswood Road	4	Southfield Road	5
Leythe Road	3	Spencer Road ..	1
Stanley Gardens	1	Stanley Road	11
Steele Road ..	1	The Steyne (including Steyne	
Stirling Road	16	Road, East Row Narrow	
Strafford Road	1	Street and Nelson Place	9
Temple Road	1	Valetta Road	2
Willesden Lane	1	Winchester Street	3
Wolseley Road	1	York Road ..	2

The distribution of the overcrowding amongst the different classes of houses was as follows :—

2 roomed houses	2 over-crowded.
3 roomed houses	27 over-crowded.
4 roomed houses	42 over-crowded
5 roomed houses	24 over-crowded.
6 roomed houses	117 over-crowded.
7 roomed houses	11 over-crowded.
8 roomed houses	11 over-crowded.
9 roomed houses	1 over-crowded.
10 roomed houses	3 over-crowded.

The extent of the overcrowding in the different houses is shown in the following table :—

Rooms in Houses.	Persons per House.																			
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	26	27
2	...	...	2	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
3	5	8	8	3	2	...	...	1	...	...	...		...	...	...	...	...	...	...	...
4	...	...	22	7	10	3	...	...	...	...	..	...	..	...	...	...	.	...	...	...
5	..	...	...	..	8	3	4	3	1	4	1	...	...	...	...	...	...	...	...	...
6		...	...	...	...	...	38	35	22	14	5	8	8	1	...	1	1	...	...	...
7	.	...	...	...	...	...	...	...	5	...	3	2	...	...	1	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	3	2	2	...	1	...	1	...	1	1
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...

It is unnecessary to explain the table in detail. If the second line be taken as an example, the table will be made clear. This line refers to 3 roomed houses and it will be seen that 27 3-roomed houses were overcrowded ; in 5 of these there were 7 persons to each house, in 8 there were 8 persons each, in 8 there were 9 each, in 3 there were 10 persons in each house, and in 1 there were 14 persons living in it. In one of the six roomed houses there were 22 persons living there, and in another 6-roomed house there were 23 persons living in it.

Causes of and Measures taken or contemplated to deal with overcrowding.

The primary and immediate cause of the overcrowding undoubtedly is the shortage of houses, and the measures contemplated to meet that shortage will alleviate the difficulty experienced in dealing with overcrowding.

The Surveyor has very kindly supplied me with the following particulars of the Acton Housing Schemes.

The estimated number of new houses required to meet the immediate needs of the District, is 1,700.

Two sites have been purchased for the erection of houses viz.: Acton Wells (60 acres) and land around North Acton Public Playing Fields (18 acres). These sites have already been developed and a about three miles of new roads and sewers constructed.

To meet very urgent cases, Army Huts have been purchased and erected as houses at Acton Wells, eight of which have been occupied for some time, one is nearly completed and two others will be erected shortly. These houses comprise a large living room, scullery, three bedrooms, bathroom. W.C., coalstore and larder. Hot and cold water is laid on to both Bath, Lavatory Basin and Sink.

Contracts have been placed for the erection at Acton Wells of 320 houses. At the end of May, 60 had been commenced the contract time for completion being six months from date of commencement for each unit of 20 houses, and the first 20 houses should be ready for occupation by the end of August, the remainder following at short intervals.

Twenty houses are being erected by direct labour at Acton Wells, the first 8 of which should be ready for occupation by the end of July.

A further 44 houses are to be erected immediately at Acton Wells for the Ministry of Health to demonstrate the various new types of construction which have recently been evolved.

All these houses contain Parlour, Living Room, Scullery, three bedrooms, bathroom, W.C., larder and Coal Cellar. Hot and Cold water is laid on to bath, lavatory basin and sink.

Around the Playing Fields at North Acton, the Victory Construction Co., Ltd., are erecting 70 bungalows for Mr. Selfridge, 20 of these should be ready by July, and Acton residents are to be given the option to purchase at £700 per bungalow. The accommodation is a living room, kitchen and scullery combined, three bedrooms, bath room and W.C.

Forty-nine bungalows of a somewhat similar, though improved type, will be commenced either by Direct Labour or Contract.

The Council made an application to the Ministry of Health for the conversion of 11 old houses into 33 flats. The Ministry however, only sanctioned those at 144 Bollo Bridge Road. The work

is in hand, and three flats should be ready for occupation about the middle of July.

From the above it will be seen that, providing the necessary materials and labour are available ,514 houses should be completed this year.

Arrangements are being made for the purchase of additional sites for both houses and flats in various parts of the district, and providing the necessary money is forthcoming, the work will be pushed forward without delay.

Five houses were represented as unfit for human habitation during the year.

Section 28 of the Housing Act, 1919, was not put into operation last year.

Your obedient servant,

D. J. THOMAS.

TABLE 1.

BIRTH-RATE, DEATH-RATE, AND ANALYSIS OF MORTALITY DURING THE YEAR 1919.

(Provisional Figures. Populations estimated to the middle of 1919 have been used for the purposes of this Table).

	Birth Rate per 1,000 Total Population.	Annual Death Rate per 1,000 Civilian Population.								Rate per 1,000 Births.		Percentage of Total Deaths. *			
		All Causes.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Violence.	Diarrhœa and Enteritis under 2 years.	Total Deaths under 1 year.	Deaths in Public Institutions.	Certified Causes.	Inquest Cases.	Uncertified Causes of Death.
England and Wales	18.5	13.8	0.01	0.00	0.10	0.03	0.07	0.13	0.47	9.59	89	23.9	92.5	6.2	1.3
96 Great Towns, including London (Census Populations exceeding 50,000)	19.0	13.8	0.01	0.00	0.13	0.04	0.07	0.14	0.45	12.24	93	29.2	92.3	6.9	0.8
148 Smaller Towns (Census Populations 20,000—50,000)	18.3	12.6	0.01	0.00	0.10	0.03	0.08	0.12	0.39	8.67	90	16.6	93.6	4.9	1.5
London	18.3	13.4	0.01	0.00	0,08	0.03	0.05	0.13	0.47	16.22	85	44.7	91.2	8.6	0.2
Acton	17.0	10.4	0.016	0.00	0.00	0.00	0.03	0.08	0.18	13.6	65	30.3	94.4	5.6	0.0

1919

TABLE 2.

VITAL STATISTICS FOR WHOLE DISTRICT DURING 1919 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of Age.		At all Ages.	
			Number	Rate	Number	Rate	of Non-Residents Registered in the District.	of Residents Registered outside District	Number	Rate per 1,000 Births.	Number	Rate per 1,000 Inhabitants.
1914	61,000	1474	1504	24.6	518	8.5	16	191	128	91	693	11.3
1915	62,000 for b'th rate. 58,238 for d'th rate.	1390	1414	22.8	587	9 6	11	204	148	104	780	13.3
1916	63,010 for b'th rate. 57,913 for d'th rate.	1288	1324	21.0	504	8.7	21	204	102	77	687	11.8
1917	65,219 for b'th rate. 58,507 for d'th rate.	936	972	14.9	480	8.2	13	225	94	96	687	11.7
1918	66,000 for b'th rate. 59,000 for d'th rate.	923	954	14 5	611	10.3	16	277	76	78	872	14.7
1919	64,306 for b'th rate. 61,732 for d'th rate.	950	1096	17.1	436	7	12	222	72	65	646	10.4

TABLE 3.

BIRTHS.

Births Notified during Year :—1,035. Males ... 525 Females ... 510

WARDS.

North East.	North West.	South East.	South West.	Total.
281	154	199	401	1,035

Births Registered but not Notified :—116. Males ... 64 Females ... 52

WARDS.

North East.	North West.	South East.	South West,	Total.
33	13	55	15	116

Still Births :—33.

WARDS.

North East.	North West.	South East.	South West.	Total.
5	10	9	9	33

TABLE 4.

REGISTERED BIRTHS.	Male.	Female.
Legitimate	515	517
Illegitimate	32	32
Total	547	549
Rate per 1,000 Inhabitants ...	17.1.	

TABLE 5.

CAUSES OF, AND AGES AT, DEATH DURING YEAR, 1919.

Causes of Death.	Causes of and Ages at Death, 1919.									Public Institutions in District, Resident and Non-Resident
	All Ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	
Measles	...	...	...	...	...	...	...	...	...	...
Whooping Cough	2	1	1	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	2
Diphtheria	2	...	...	...	2	...	...	...	...	3
Enteric Fever	1	...	...	...	1	...	...	...	...	...
Influenza	41	1	2	1	1	10	15	7	4	...
Phthisis (Pulmonary Tuberculosis)	58	...	...	...	5	10	22	19	2	...
Tuberculous Meningitis ...	9	...	...	1	4	3	1	...	...	1
Other Tuberculous Diseases ...	5	...	...	1	1	1	...	2	...	...
Cancer, Malignant Disease	61	...	...	...	1	1	4	29	26	2
Rheumatic Fever ...	2	...	...	...	...	...	2	...	...	2
Meningitis	1	...	...	...	1	...	...	...	...	...
Organic Heart Disease	77	...	...	1	2	1	14	33	26	6
Bronchitis	55	2	3	...	...	...	1	14	35	...
Pneumonia (all forms)	51	9	3	7	1	3	8	11	9	2
Other Respiratory Diseases	9	1		...	...	...	1	4	3	...
Diarrhoea and Enteritis	15	15	...	...	...	...	...	...	...	...
Appendicitis and Typhlitis	1	...	...	...	...	...	1	...	...	..
Cirrhosis of Liver ...	3	...	...	...	...	...	1	2	...	...
Nephritis and Bright's Disease	17	...	...	...	1	1	1	10	4	...
Syphilis	1	1	...	...	...	...	...	...	...	...
Puerperal Fever	4	...	...	...	...	2	2	...	...	...
Other Accidents and Diseases of Pregnancy and Parturition ...	3	...	...	...	...	...	3	...	...	3
Congenital Debility and Malformation, including Premature Birth	33	23	...	...	...	...	...	...	...	...
Violent Deaths, excluding Suicide	11	...	1	2	...	...	...	3	5	3
Suicide	4	...	...	...	...	...	2	1	1	...
Other Defined Diseases ...	180	9	5	...	2	3	17	40	104	8
Totals	646	72	15	13	22	35	95	175	219	32

TABLE 6.

TOTAL DEATHS—WARD DISTRIBUTION, 1919.

Causes of Death.	North East	North West	South East	South West	Total.
Measles	...	...	...	...	...
Whooping Cough	...	1	...	1	2
Diphtheria	1	...	...	1	2
Enteric Fever	1	...	...	...	1
Influenza	14	5	14	8	41
Phthisis (Pulmonary Tuberculosis ..	9	15	16	18	58
Tuberculous Meningitis	1	1	2	5	9
Other Tuberculous Diseases ...	1	...	1	3	5
Cancer (Malignant Disease) ...	23	14	15	9	61
Rheumatic Fever	1	...	...	1	2
Meningitis	1	...	...	...	1
Organic Heart Disease	23	16	19	19	77
Bronchitis	14	9	12	20	55
Pneumonia (All forms)	12	9	15	15	51
Other Respiratory Diseases ...	3	1	3	2	9
Diarrhœa and Enteritis	4	1	5	5	15
Appendicitis and Typhilitis ...	1	...	...	...	1
Cirrhosis of Liver	1	1	1	...	3
Nephritis and Bright's Disease ...	3	2	8	4	17
Syphilis	...	1	...	...	1
Puerperal Fever	1	1	...	2	4
Other Accidents and Diseases of Pregnancy and Parturition ...	1	...	1	1	3
Congenital Debility and Malformation, including Premature Birth...	4	4	12	13	33
Violent Deaths (excluding Suicide)	4	1	2	4	11
Suicide	...	2	2	...	4
Other Defined Diseases	55	46	30	49	180
Totals	178	130	158	180	646

TABLE 7.

INFANTILE MORTALITY DURING THE YEAR, 1919.

Deaths from stated causes in Weeks and Months under One Year of Age.

Causes of Death.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	1-3 months	3-6 months	6-9 months	9-12 mnths	Total deaths under 1 year.
Whooping Cough	...	...	...	...	...	...	...	...	1	1
Tuberculous Meningitis ...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases ...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)...	...	...	...	...	...	..	...	...	...	...
Convulsions	2	...	1	...	3	...	1	1	...	5
Influenza	...	...	...	...	...	...	...	1	...	1
Bronchitis	...	...	...	...	...	...	1	1	...	2
Pneumonia (All forms) ...	...	...	1	1	2	1	...	2	4	9
Diarrhoea	...	...	...	...	...	3	3	1	...	7
Enteritis	...	2	3	...	5	2	...	1	...	8
Overlaying, Suffocation ...	...	...	...	...	...	...	...	...	...	...
Syphillis	...	...	...	...	...	...	...	1	...	1
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Congenital Malformation ...	1	...	...	...	1	...	...	...	...	1
Premature Birth	20	...	...	1	21	...	...	...	...	21
Atrophy, Debility and Marasmus	4	1	...	3	8	1	2	...	...	11
Other Causes	2	...	...	...	2	2	1	...	...	5
Totals	29	3	5	5	42	9	8	8	5	72

TABLE 8.

INFANTILE MORTALITY—WARD DISTRIBUTION, 1919.

Causes of Death.	North East.	North West.	South East.	South West.	Total.
Whooping Cough	...	...	...	1	1
Tuberculous Meningitis	...	...	...	...	...
Other Tuberculous Diseases ...	...	...	...	...	...
Meningitis (not Tuberculous) ...	...	...	...	...	...
Convulsions	1	...	...	4	5
Influenza	...	...	1	...	1
Bronchitis	...	...	...	2	2
Pneumonia (all forms)	...	...	4	5	9
Diarrhœa	1	1	2	3	7
Enteritis	2	1	4	1	8
Suffocation, Overlaying	...	...	...	...	...
Syphillis	...	1	...	...	1
Injury at Birth	...	...	...	...	...
Congenital Malformations	...	...	1	...	1
Premature Birth	2	...	6	13	21
Atrophy, Debility and Marasmus ...	2	4	2	3	11
Other Causes	1	1	1	2	5
Total	9	8	21	34	72

TABLE 9.

CASES OF INFECTIOUS DISEASES NOTIFIED DURING THE YEAR, 1919.

Notifiable Disease.	Cases notified in whole District. At Ages—Years.								Total cases notified in each ward.			
	At all Ages.	Under 1.	1 to 5.	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards.	North-East.	North-West	South-East.	South-West
Measles and German Measles	365	4	96	231	16	17	1	...	110	93	65	97
Scarlet Fever	95	2	16	64	8	5	...	...	31	13	23	28
Diphtheria	54	...	9	30	6	9	...	...	27	8	6	13
Enteric Fever	5	...	...	2	2	...	1	...	1	1	1	2
Puerperal Fever	6	...	...	...	1	5	...	...	2	2	1	1
Encephalitis Lethargica ...	1	...	...	...	1	...	...	...	...	...	...	1
Erysipelas	17	...	2	2	2	3	7	1	5	1	4	7
Ophthalmia Neonatorum ...	11	11	...	...	..	...	...	...	2	...	4	5
Tuberculosis, Pulmonary ...	128	...	...	11	27	63	25	2	28	28	38	34
Tuberculosis, (Other Forms)	14	...	1	6	3	1	3	...	6	2	2	4
Pneumonia	26	1	1	2	1	11	6	4	6	5	5	10
Malaria	31	...	...	...	5	25	1	...	8	8	6	9
Totals	753	18	125	348	72	139	44	7	226	161	155	211

TABLE 10.

CASES OF NOTIFIABLE DISEASES REMOVED TO HOSPITAL DURING 1919.

Measles and German Measles	1
Scarlet Fever	78
Diphtheria	43
Enteric Fever	3
Puerperal Fever	5
Erysipelas	4
Ophthalmia Neonatorum	1
Tuberculosis (Pulmonary)	72
Tuberclosis (Other)	10
Pneumonia	2
Malaria	2

TABLE 11.

OUTSIDE DEATHS AND PLACES OF OCCURRENCE.

ISLEWORTH INFIRMARY	106
GENERAL HOSPITALS.	
West London Hospital	11
Queen Charlotte's	4
St. George's	3
St. Columbus	2
Gt. Ormond Street	2
St. Mary's	1
Middlesex	1
Paddington Green	1
German	1
Royal Free	1
Westminster	1
Homeopathic	1
Ducane Road Military	1
National, Queen's Square	1
Dollis Hill House	1
St. Monica's	1
St. Thomas'	1
CONSUMPTIVE HOSPITALS.	
Clare Hall	3
St. George's Home	2
Mount Vernon	1
Northern Hospital	1
MENTAL HOSPITALS.	
Springfield	26
Camberwell House	2
Hanwell	1
Darenth	1
Bethnal House	1
Leavesden	1
Private	2
INFIRMARIES.	
Kensington	1
Stepney Sick Asylum	1
Lambeth	1
Marylebone	1
NURSING HOMES	14
PRIVATE HOUSES	15
MISCELLANEOUS	8

1919

INQUESTS.

HELD IN THE DISTRICT 26

CAUSES OF DEATH.

Fracturred Skull	2	Toxæmia following Inhalation of Poison Gas	1
Fractured Ribbs	1	Heart Disease	7
Accidental Burns	1	Cerebral Hæmorrage	2
Accidental Drowning ...	1	Pneumonia	2
Knocked down by Cyclist ...	1	Congestion of Lungs	1
Fall from Ladder	1	Cancer	1
Knocked down by Motor Lorry	1	Enlarged Thymus	1
Struck by Aeroplane Propeller	1	Chronic Gastritis	1
Suicide	1		

DEATHS OUTSIDE THE DISTRICT ... 13.

CAUSES OF DEATH.

Suicide	3
Knocked down by Steam Waggon	1
Knocked down by Motor Lorry	1
Knocked down by Cycle	1
Accidental Fall	1
Fall from Ladder	1
Electrocuted on Railway	1
Heart Disease	2
Ruptured Ameurysm	1
Tuberculous Meningitis	1

TABLE I2.

NOTIFICATIONS OF TUBERCULOSIS.

Pulmonary	128
Other forms of Tuberculosis	14

The Notifications received were from the following :—

Infirmaries	35
Private Doctors	46
Sanatoria	49
Hospitals	32
Military Authorities	4
Other Institutions	10

Insured Cases ... 74 Non-Insured Cases ... 54

	INSURED.	NON-INSURED.
Sanatoria	22	8
Hospital	12	7
Infirmary	13	12
Applying for Sanatorium ...	4	2
Discharged from Sanatorium ...	4	—
Nursed at Home	17	21
Removed from District ...	2	2
Removed to County Asylum ...	—	2

Occupations Prior to Illness.

Males.		Females.	
Discharged Soldiers ...	26	Household Duties ...	24
Labourer	10	School Girl	5
School Boy	4	Clerk	4
Railwaymen	2	Factory Girl	3
Errand Boy	2	Domestic Servant ...	4
Munitions	2	Laundress	2
Caretaker	1	Munitions	1
Musician...	1	Upholsterer	1
Printer	1	Telephonist	1
Compositor	1	Porter	1
Fencing Master	1	Shop Assistant	1
Manager	1	Dispenser	1
Tailor	1	Tailoress...	1
Boot Repairer	1	Not Known	1
Potman	1		
Accountant	1		
Engineer's Apprentice ...	1		
Ebonite Worker	1		
Gardener	1		
Photographer	1		
Engineer...	2		
Traveller	1		
Coal Porter	1		
Motor Mechanic	1		
Stage Hand	1		
Not Known	2		

TABLE 13.

	Priory Schools.	Palmerston Mission.
Health Visitors Attendances ...	100	100
Number of Children who attended ...	458	369
Number of attendances by children ...	3,643	3,026
Children under 1 year of age ...	213	186
Children over 1 year of age	245	183

Age of Children who commenced attendance in 1919 :—

	Priory Schools.	Palmerston Mission.
Under 3 months ...	132	100
Between 3 and 6 months ...	47	30
,, 6 and 9 months ...	19	17
,, 9 and 12 months ...	15	9
,, 1 and 2 years ...	25	19
,, 2 and 3 years ...	19	17
,, 3 and 4 years ...	22	17
,, 4 and 5 years ...	6	19

Of the above Children

2	had attended for the first time in	1914.
16	,, ,,	1915.
51	,, ,,	1916.
95	,, ,,	1917.
138	,, ,,	1918.
505	,, ,,	1919.

ANTE-NATAL CLINIC.

Number of times the Clinic was held	24
Number of expectant mothers who attended ...	57
Number of attendances made by expectant mothers	103
Number of cases admitted to Acton Hospital ...	4

ANTE-NATAL VISITS.

Number of mothers visited	153
Number of visits paid to mothers	447

Notifications were received from :—

Doctors	...	489	Nurses	...	32
Midwives	...	473	Parents	...	36
Number of Births visited			...	...	738
Number of visits paid to houses of Infants			...	...	4,493

TABLE 14.

ISOLATION HOSPITAL.

Remaining in Hospital, January 1st, 1919	12
Remaining in Hospital, January 1st, 1920	50

ADMITTED DURING YEAR :—

	Residents.	Non-Residents.	Total.
Scarlet Fever ...	79	51	130
Diphtheria ...	43	34	77
Measles ...	4	—	4
Influenza ...	1	—	1
Totals ...	127	85	212

DEATHS.

Scarlet Fever	2	
Diphtheria	3	

ACTON URBAN DISTRICT.

COUNTY OF MIDDLESEX.—SANITARY WORK, 1919.

TABLE XV.

Inspections :—	
Number of Premises Inspected on Complaint	998
Number of Premises Inspected in connection with Infectious Disease	139
Number of Premises under Periodical Inspection	398
Houses Inspected from House-to-House (H. and T.P. Act, Sec. 17)	239
Total Number of Inspections and Re-Inspections made	9,847
Dwelling Houses and Action under H. and T.P. Act, 1909 :—	
Number of Houses dealt with under Sec. 15	nil.
Number of Houses found to be in a state Dangerous or Injurious to Health (Sec. 17)	5
Number of Representations made to the local authority by M.O.H. with a view to the making of Closing Orders (Sec. 17)	5
Number of Closing Orders made by L.A. (Sec. 17)	5
Number of Houses made Habitable without closing Orders	nil.
Number of Houses closed Voluntarily	nil.
Number of Closing Orders determined after Repairs (Sec. 17)	nil.
Number of Houses Demolished (*a*) by order of L.A. (Sec. 17)	nil.
(*b*) Voluntarily	nil.
Illegal Underground Rooms Vacated	nil.
Action Taken (Other than under H. and T.P. Act) :—	
Cautionary or Intimation Notices given	1,270
Statutory Orders Issued	892
Summonses Served	nil.
Convictions Obtained	nil.
Houses Let in Lodgings (Tenement Houses) :—	
Number Registered under Bye-Laws	83
Number of Contraventions	39
Common Lodging Houses :—	
Number Registered under Bye-Laws	1
Accommodation : Male	126
Female	nil.
Children	nil.
Number of Inspections Made	47
Number of Contraventions	nil.
Canal Boats used as Dwellings :—	
Number Registered under the Acts	nil.
Number of Contraventions of Regulations	nil.
Movable Dwellings Caravans, Tents, &c.	
Number observed during the Year	11
Number of Nuisances therefrom Abated	2
Number Removed from District	3
Bakehouses :—	
Number in District	25
Contraventions of Factory Acts	11
Slaughter Houses :—	
Number on Register	3
Number of Inspections made	72
Frequency of Inspection	Fortnightly.
Contraventions of Bye-Laws	nil.

COWSHEDS :—

Number on Register	nil.
Number of Inspections made	—
Frequency of Inspection	—
Contraventions of Regulations	—
Number of Milch Cows in District	—

DAIRIES AND MILKSHOPS :—

Number on Register (includes small "General Shops"	75
Number of Inspections made (of Dairy Shops only)	346
Frequency of Inspection	Quarterly.
Contraventions of Regulations	3

*UNSOUND FOOD :—

Meat (including organs) seized and surrendered. Approximate weight in pounds)	2,656
Poultry and Game seized and surrendered. Approximate weight in pounds)	nil.
Fish seized and surrendered. (Approximate weight in pounds	473
Fruit and Vegetables seized and surrendered. (Approximate weight in pounds)	3,457
Other Articles seized and surrendered. Approximate weight in pounds	486

*All voluntarily surrendered.

Method of disposal : Part destroyed and part disposed of so as not to be used for human food.

OFFENSIVE TRADES :—

Number of Premises in District	1
Nature of Trades	Fat Extractor.
Number of Inspections made	10
Contraventions of Bye-Laws	—

WATER SUPPLY AND WATER SERVICE :—

WELLS :—

New Sunk	nil.
Cleansed, Repaired, &c.	nil.
Closed as Polluted	nil.
Percentage of Houses supplied from Public Water Service	100%

CISTERNS :—

New Provided	8
Cleansed, Repaired, Covered, &c.	54
Draw-Taps placed on Mains	28
Percentage of Houses supplied on Constant System	100%

NUMBER OF SAMPLES OBTAINED FOR ANALYSIS :—

From Local Wells	nil.
From Public Supply	nil.

DRAINAGE AND SEWERAGE OF EXISTING BUILDINGS :—

WATER CLOSETS :

Numberof Water Closets substituted for Dry Receptacles	nil.
Repaired, Supplied with Water, or otherwise Improved	301
Percentage of Houses provided with Water Closets	100%

DRAINS :

Examined, Tested, Exposed, &c.	26
Unstopped, Repaired, Trapped, &c.	279
Waste Pipes, Rain Water Pipes Disconnected, Repaired, &c.	268
New Soil Pipes or Ventilating Shafts fixed	11
Existing Soil Pipes or Ventilating Shafts repaired	109
Disconnecting Traps or Chambers Inserted	37
Reconstructed	8

CESSPOOLS :	
Rendered Impervious, Emptied, Cleansed, &c.	nil.
Abolished, and Drain connected to Sewer	nil.
Percentage of Houses Draining into Sewers	100%
DISINFECTION :—	
ROOMS DISINFECTED :	
Ordinary Infectious Diseases	239
Phthisis	47
Rooms Stripped and Cleansed	780
ARTICLES DISINFECTED OR DESTROYED :	
Ordinary Infectious Diseases	86
Phthisis	
No separate record kept for Phthisis.	
DUST :—	
New Bins provided	318
How frequently is dust removed from each house ..	Weekly.
Number of Complaints of Non-Removal received	nil.
METHOD OF DISPOSAL :	
Destructor	all.
By Tipping	nil.
Other, state method	nil.
SUNDRY NUISANCES ABATED :	
Overcrowding	14
Smoke	3
Accumulation of Refuse	7
Foul Ditches, Ponds, &c., and Stagnant Water	nil.
Foul Pigs and other Animals	1
Dampness	981
Yards repaved or repaired	96
Other Nuisances	456

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