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CITY OF



CARLISLE

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1951



JAMES L. RENNIE,

M.D., F.R.F.P.S. (Glasgow), D.P.H.,
MEDICAL OFFICER OF HEALTH.



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To His Worship the Mayor, and to the Aldermen and Councillors of the City and County Borough of Carlisle.

Mr. Mayor, Ladies and Gentlemen,

I have the honour to present my fifth Annual Report on the health of the City. During the year, the Carlisle Extension Act, 1950, came into force and the area of the Borough was increased from 4,488 acres to 6,092 acres.

Section I. Vital Statistics.

In spite of the increase in the area of the Borough, there has been a decrease in the mid-year population. This decrease is due to the fact that the Census taken in 1951 enabled the Registrar-General to give a more accurate estimate of the population than had been the case in recent years. One gratifying feature is the maintained low level of the Infantile Mortality Rate; this year's figure being the lowest ever recorded for the City.

Section II. Sanitary Circumstances.

Progress has been made with the rehousing of persons in premises represented before the war, and it is hoped that within a measurable distance of time all people occupying such dwellings will have been rehoused.

During the year, Mr. S. K. Sheldon was appointed Director of Public Cleansing and took up his duties on the 16th April. In spite of great difficulties, controlled tipping has been successfully instituted. The scarcity of waste paper made salvage operations most profitable, but it is necessary to point out that the prime purpose of the Refuse Disposal Department is to maintain the City in a hygienic condition so that the other branches of the Health Service may not carry out their work in vain.

Section III. Occurrence and Control of Infectious Diseases.

There was an increase in the number of notifications of infectious diseases throughout the year, but the only prevalent disease was measles, which accounted for over 70% of all notifications. Only one case of confirmed poliomyelitis occurred in the City.

Section IV. Tuberculosis.

A separate Section has been contributed by Dr. Hugh Morton, Consultant Chest Physician. The results of the long-sustained efforts in the prevention and cure of this disease are bearing fruit, but considerable work remains to be done before this scourge can be eradicated from the community. I would appeal to patients and their relatives to carry out the instructions which they are given so that the danger of spread of the infection may be reduced to a minimum.

Section V. Services provided under Part III of the National Health Service Act.

I am pleased to report a year of progress in the Services provided under this Section. I should like to stress the advisability of all infants being vaccinated. The paucity of vaccinations, as shown in the body of the Report, proves that the number of parents having their children vaccinated in infancy is far from satisfactory. I would also like to point out to parents that, although there has not been a case of diphtheria in the City for two years, outbreaks have occurred elsewhere, and in the event of an outbreak in Carlisle it would be too late to expect benefit from immediate immunisation. Parents should endeavour to have the first immunisation carried out before the child is one year old.

Section VI. General provision of Health Services.

The general provision of health services continued this year unaltered, and the close liaison with the Public Health Laboratory Service at the Cumberland Infirmary was maintained in the investigation and control of infectious disease.

Section VII. Sanitary Inspector's Report.

In this Section is set out Mr. Boaden's first report as Chief Sanitary Inspector for the City. I would particularly draw attention to the steady increase in the throughput of animals at the Public Slaughterhouses and the Harraby Bacon Factory. Only by the thorough systematic examination of carcasses by your Sanitary Inspectors at these premises can the public be protected from animal borne diseases. The increasing amount of time necessary to do the work at both of these premises naturally puts a considerable strain on the Sanitary Inspectorate.

I desire to record my sincere thanks and appreciation for the willing service and excellent co-operation of all members of the staff of the Department. The friendly co-operation of medical practitioners and hospital staffs has gone far to make for smooth working and is very much appreciated.

To the Chairman and Members of the Health Committee I desire to express my thanks for the help, encouragement and support they have given to me throughout the year. I would also like to record my indebtedness to the Town Clerk and other Chief Officials and their staffs for willing co-operation and assistance.

I am, Mr. Mayor, Ladies and Gentlemen,


Your obedient servant,

JAMES L. RENNIE,

Medical Officer of Health.

SECTION I.

VITAL STATISTICS



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VITAL STATISTICS

Area (acres)	6,092
Population (1951), Estimate of Registrar-General ...	67,300
Rateable Value	£452,787
Sum represented by a Penny Rate	£1,875

EXTRACTS FROM VITAL STATISTICS OF THE YEAR

(Registrar-General's Returns)

Live Births—	Total.	M.	F.	
Legitimate ...	1121	573	548	
Illegitimate ...	61	32	29	
				Birth-rate, 17.56 per 1,000 popu- lation.

Birth-rate per thousand of the population as corrected by Area Comparability factor of 1.03 is 18.09.

Still-births	46	33	13	
				Rate 37.46 per 1,000 total births.
Deaths	926	447	479	
				Death-rate 13.76 per 1,000 popu- lation.

Death-rate per 1,000 of the population as corrected by Area Comparability factor of 1.09 is 14.99.

Deaths from diseases and accidents of pregnancy and childbirth—

From Sepsis	—
From other causes	—

Death-rate of Infants under one year of age per 1,000 live births—

Legitimate	24.1
Illegitimate	49.2
	Total, 25.38

Deaths from Whooping Cough (all ages)	—
„ Diarrhoea (under 2 years of age)	1

POPULATION.

The estimate of the population at mid-year 1951 supplied by the Registrar-General was 67,300. This figure has been used in making the appropriate calculations in this report.

BIRTHS

Live Births

The total number of live births credited to the City during the year was 1,182, giving a birth rate of 17.56 per thousand of the population. It should be pointed out that a certain number of these children were born to Scottish parents, but these not being transferable are included in the Carlisle figures. Their inclusion increases the birth rate of the City to a slight extent.

Illegitimate Live Births

61 of the above births were illegitimate, so that the illegitimacy rate was 51.61 per thousand of the total live births.

Still-Births

It is noted with regret that there has been an increase in the number of still-births to 46, giving a still-birth rate of 37.46 per thousand total births. Two of the still-births occurred in domiciliary practice and the remainder in hospital. This proportion is, of course, to be expected as the hospital usually takes over all abnormal cases.

DEATHS

The total number of deaths credited to the City was 926 producing a death rate of 13.76 per thousand of the population.

Table 1 shows the cause of death and the age at death of the 926 persons mentioned above.

Maternal Mortality

It is with pleasure that I can record another year without any maternal deaths.

Infantile Mortality

The total number of deaths under one year of age credited to the City was 30, giving an infantile mortality rate of 25.38 per thousand live births. This is the lowest rate ever recorded in the City. This rate includes the deaths of 4 Scottish infants and if these, as well as the Scottish births, had been transferable, the net infantile mortality rate of the City would have been 23.15 per thousand live births.

Table 2 shows the causes of the infant deaths, and indicates the age and the month in which the deaths occurred.

TABLE 1

CAUSE OF DEATH.	NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE CITY									TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESI- DENTS" IN INSTITUTIONS IN THE CITY
	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and under 75	75 and up- wards	
1.	2	3	4	5	6	7	8	9	10	11
All Causes { Certified	871	30	5	10	10	35	234	206	341	492
{ Uncertified	55	—	—	—	—	2	19	15	19	19
Tuberculosis, respiratory ...	23	—	1	—	3	6	12	1	—	5
Tuberculosis, other ...	3	—	1	2	—	—	—	—	—	10
Syphilitic Disease ...	5	—	—	—	—	—	2	2	1	4
Diphtheria ...	—	—	—	—	—	—	—	—	—	—
Whooping Cough ...	1	—	—	1	—	—	—	—	—	1
Meningococcal infections ...	—	—	—	—	—	—	—	—	—	—
Acute Poliomyelitis ...	—	—	—	—	—	—	—	—	—	1
Measles ...	1	—	—	1	—	—	—	—	—	—
Other infective and parasi- tic diseases ...	—	—	—	—	—	—	—	—	—	1
Malignant Neoplasm, stomach	28	—	—	—	—	1	6	10	1	13
" " Lung,										
bronchus	23	—	—	—	—	—	19	3	1	7
" " Breast	9	—	—	—	—	2	3	3	1	7
" " Uterus	9	—	—	—	—	—	9	—	—	6
Other malignant and lym- phatic Neoplasms ...	58	—	—	—	—	1	25	15	17	54
Leukaemia, aleukaemia ...	1	—	—	—	—	—	1	—	—	2
Diabetes ...	3	—	—	—	—	—	1	2	—	4
Vascular lesions of nervous system ...	142	—	—	—	—	1	28	41	72	47
Coronary disease, angina ...	95	—	—	—	—	—	38	26	31	25
Hypertension with heart disease ...	14	—	—	—	—	—	4	8	2	2
Other heart disease ...	269	—	—	—	1	7	31	63	67	66
Other circulatory disease ...	33	—	—	—	—	—	4	11	18	29
Influenza ...	15	1	—	—	—	—	4	3	7	4
Pneumonia ...	26	5	2	1	—	—	4	3	11	24
Bronchitis ...	39	1	—	—	—	—	14	14	12	17
Other diseases of respiratory system ...	4	—	—	—	—	—	1	2	1	1
Ulcer of the stomach and duodenum ...	8	—	—	—	—	2	6	—	—	10
Gastritis, Enteritis and Diarrhoea ...	4	1	1	—	—	1	—	1	—	6
Nephritis and Nephrosis ...	11	—	—	—	—	2	4	4	1	2
Hyperplasia of prostate ...	5	—	—	—	—	—	1	2	2	10
Pregnancy, Childbirth, Abortion ...	—	—	—	—	—	—	—	—	—	1
Congenital malformations ...	10	7	—	—	—	2	1	—	—	8
Other defined and ill-defined diseases ...	60	15	—	3	2	7	18	4	11	108
Motor vehicle accidents ...	5	—	—	—	1	1	1	1	1	11
All other accidents ...	17	—	—	2	2	—	6	4	3	24
Suicide ...	5	—	—	—	1	4	—	—	—	—
Homicide and operations of war ...	—	—	—	—	—	—	—	—	—	—
TOTALS ...	926	30	5	10	10	37	253	221	360	511

TABLE 2

CAUSE OF DEATH	AGE								MONTH												Total Deaths under one Year	
	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 Weeks	4 Wks & under 3 Months	3 Months under 6 Months	6 months & under 9 Months	9 Months & under 12 Months	January	February	March	April	May	June	July	August	September	October	November		December
All { Certified Causes { Uncertified	16	1	—	—	17	4	3	5	1	8	1	3	5	1	—	—	4	1	1	2	4	30
Prematurity	6	—	—	—	6	—	—	—	—	2	1	—	—	—	—	—	2	—	—	1	—	6
Congenital Malformations	2	—	—	—	2	2	—	2	—	1	—	—	—	1	—	—	—	—	1	1	—	6
Birth Injury	5	—	—	—	5	—	—	—	—	—	—	2	1	—	—	—	1	1	—	—	—	5
Atelectasis	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Pneumonia	—	1	—	—	1	2	2	2	—	2	—	1	1	—	—	—	1	—	—	—	2	7
Gastro-Enteritis	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1
Bronchitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Asphyxia	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Influenza	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Hydrannios	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
TOTALS	16	1	—	—	17	4	3	5	1	8	1	3	5	1	—	—	4	1	1	2	4	30

DEATHS DUE TO CANCER

Table 3 shows the age and sex distribution of the 127 persons who died from Cancer of various organs during the year under review. The mortality rate from this disease being 1.9 per 1,000 of the population.

TABLE 3

Site of Disease	AGE GROUPS.													
	Under One Year		1-25		25-35		35-45		45-55		55-65		65-75	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Buccal Cavity and Pharynx	—	—	—	—	—	—	—	—	—	—	—	—	4	—
Digestive Organs and Peritoneum	—	—	—	—	1	—	—	9	2	12	3	7	39	19
Respiratory System	—	—	—	—	—	—	—	7	1	12	1	1	23	3
Uterus	—	—	—	—	—	—	—	—	2	—	7	—	—	9
Other female genital organs	—	—	—	—	—	—	—	—	1	—	5	—	—	6
Breast	—	—	—	—	—	2	—	—	—	4	—	3	—	10
Male genital organs	—	—	—	—	—	—	—	—	—	—	—	—	2	—
Urinary organs	—	—	—	—	—	—	—	—	1	1	1	—	2	3
Skin	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brain and Nervous System	—	—	—	—	—	—	—	—	—	1	—	—	—	1
Other organs	—	—	—	—	—	1	—	1	—	—	1	2	2	4
Totals	—	—	—	—	1	3	17	7	25	23	18	13	72	55

Table 4 sets out the deaths from Cancer from 1942—1951.

TABLE 4

DEATHS FROM CANCER, 1942-51.

1942.	1943.	1944.	1945.	1946.	1947.	1948.	1949.	1950.	1951.
107 ...	104 ...	113 ...	123 ...	115 ...	111 ...	121 ...	118 ...	124 ...	127

Inquests

During the year the City Coroner held 49 inquests. Of this number 24 related to deaths of persons who resided within the City, and 25 to persons who resided in other districts but who died within the City. 5 related to children under five years of age, one of which was a City child.

Uncertified Deaths

62 deaths were registered in which no certificate was given by a medical practitioner, and in which no inquest was held. 51 of these were in respect of City residents.

During 1950, 61 such deaths were registered.

Mortuary

49 bodies were removed to the Public Mortuary, post-mortem examinations being made in 41 instances.

SANITARY CIRCUMSTANCES

WATER SUPPLY

The water supply of the city is derived from the following sources:

1. The water supply of the city is derived from the following sources:

2. The water supply of the city is derived from the following sources:

3. The water supply of the city is derived from the following sources:

4. The water supply of the city is derived from the following sources:

5. The water supply of the city is derived from the following sources:

6. The water supply of the city is derived from the following sources:

SECTION II.

SANITARY CIRCUMSTANCES

The sanitary conditions of the city are as follows:

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6. The sanitary conditions of the city are as follows:

7. The sanitary conditions of the city are as follows:

8. The sanitary conditions of the city are as follows:

9. The sanitary conditions of the city are as follows:

10. The sanitary conditions of the city are as follows:

11. The sanitary conditions of the city are as follows:

12. The sanitary conditions of the city are as follows:

SECTION II.

SANITARY CIRCUMSTANCES

SANITARY CIRCUMSTANCES

WATER SUPPLY

I am indebted to the City Water Engineer and Surveyor for the following Report:—

The Water Supply in the area has been satisfactory in quantity and quality throughout the year.

Regular bacteriological examinations have been made of the water in its various stages of treatment, from the raw water to the final supply. In all, 22 samples of the fully treated water have been examined bacteriologically, and all show the water to be highly satisfactory in this respect.

The Chemical Analyses of the water afford no evidence of pollution by undesirable drainage of any kind, and it is of good and wholesome quality for human consumption. In all, 10 samples of water were subjected to a chemical analysis during the year.

A test for plumbo-solvency is included as part of every chemical analysis, with the following results:—

Lead eroded or dissolved after 24 hours at 20°C.

Nil in 7 samples.

0.055 parts per 100,000—30th June, 1951.

0.17 parts per 100,000—24th September, 1951.

0.032 parts per 100,000—31st December, 1951.

An alkaline solution dosing plant has been installed to counter-act any future seasonal plumbo-solvency tendencies.

Water was supplied to householders as follows:—

(a) Direct to the houses:

No. of houses supplied ...	...	...	19,256
Estimated population supplied ...	...	...	65,594

(b) By means of standpipes:

No. of houses supplied ...	...	...	501
Estimated population ...	...	...	1,706

Table 5 shows the total quantity of water supplied and the quantity per head per day for the years 1950 and 1951:—

TABLE 5

			No. of Gallons.	Gallons per head per day.	
1950	...	...	1,182,692,000	...	40.50
1951	...	...	1,247,110,000	...	42.70

In addition to the regular examinations carried out by the Water Engineer's Department, periodic specimens are obtained from domestic supplies in the City and submitted to the City Analyst and Bacteriologist for appropriate examination. Tables 6 and 7 set forth the results of these tests.

TABLE 6

Results of chemical examination of samples of water :—

RESULTS SHOWN IN PARTS PER 100,000.	15th February.	6th June.	13th September.	13th December.
Chlorines as Chlorides ...	.9000	.7250	.8750	.8500
Nitrogen as Nitrates ...	.0174	None	.0237	.0494
Ammonia ... ..	.0247	Faint trace	Trace	None
Albuminoid Ammonia ...	.0174	Faint trace	.0047	.0030
Oxygen absorption ...	.0629	.0992	.3347	.2520
Injurious Metals	None	None	None	None
Total Solid Matter dried at 100° C.	12.0000	13.0000	12.0000	12.0000
Temporary Hardness ...	4.2°	4.6°	2.9°	2.0°
Permanent Hardness ...	4.1°	3.4°	4.8°	5.2°
Free Alumina	None	None	None	None
P.H. Value	7.3	7.4	7.1	7.2
Colour of Sample on Hazen Scale	19.	11.	32.	25.
Appearance in two-foot tube	Bright	Bright	Bright	Bright
Odour when heated to 50° C.	None	None	None	None
Microscopical Examina- tion	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Lead Dissolved or Eroded	None	.055 parts per 100,000	.17 parts per 100,000	.032 parts per 100,000

TABLE 7

Results of Bacteriological examination of samples of water:—

Date when sample was taken.	No. of Colonies in					
	0.1 M.L.		1 M.L.		10 M.L.	
	At 22° c.	At 37° c.	At 22° c.	At 37° c.	At 22° c.	At 37° c.
7th March ...	—	—	2	—	17	2
5th June ...	—	—	3	—	37	2
12th Sept. ...	—	—	2	—	24	3

SEWERAGE AND SEWAGE DISPOSAL

I am indebted to the City Surveyor for the following report:—

The construction of new sewers on housing estates has been completed on Belah and Strathclyde Estates and is continuing on the Harraby Estate.

Work started on the Harraby—Durranshill Trunk Sewer last November, the tender of £30,282 submitted by Messrs. John Laing & Son, Ltd., having been accepted, and it should be completed by June, 1952.

In connection with the scheme for the disposal of the liquid portion of the sewage delivered to Willow Holme Works, a tender has been accepted for portions of the civil engineering works involved, and the Ministry of Housing and Local Government has granted a starting date of 1st May, 1952.

REFUSE COLLECTION AND DISPOSAL

In 1950, after a thorough investigation into the methods of Refuse Collection and Disposal in the City, the Council decided to abandon the project of building a Refuse Destructor Works and concentrate on disposal of refuse by controlled tipping. In the past, the Chief Sanitary Inspector had to supervise the collection and disposal of refuse in addition to his many other onerous duties, and in order to free the Chief Sanitary Inspector of this work and to provide adequate control, it was decided to appoint a Director of Public Cleansing who would be responsible for this particular work under the general direction of the Medical Officer of Health, in a similar manner to the Chief Sanitary Inspector. This Officer, Mr. S. K. Sheldon, commenced on 16th April, 1951, and I am indebted to him for the following report on the work in his Section:—

Refuse and Salvage Collection

A fleet of 11 S. & D. refuse collection vehicles, together with 1 Austin general purpose lorry and 7 horse-drawn vehicles, were used in the operation of this service. Refuse was collected twice weekly from almost all residential areas and daily from the shopping area in the centre of the City.

Two new 9 cu. yard Chelsea type S. & D. vehicles, with wheel type steering, were purchased and put into operation and one old S. & D. freighter type vehicle which had been in daily service for over 25 years was disposed of as scrap.

A separate collection of salvage on one day each week was maintained from all residential properties.

Statistics relating to the quantity of house and shop refuse collected are as follows:—

Motor vehicle loads of refuse collected—

10,400 Est. Weight—15,600 tons.

Horse vehicle loads of refuse collected—

4,368 Est. Weight— 4,914 tons.

Total	14,768	20,514
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Refuse Disposal. Controlled Tipping

Refuse was disposed of by controlled tipping at Blackwell Tip and at Botcherby Tip. A number of factors, amongst which were difficulties in obtaining suitable labour and in obtaining adequate quantities of covering material, had caused the condition of the tips to fall below desirable standards during recent years, and an effort was made to regain the position. To this end, during the summer months regular daily supplies of ashes from the Electricity Works were purchased and a very considerable improvement was effected, but unfortunately during the autumn supplies of this most suitable covering material ceased. This made effective controlled tipping very difficult if not impossible, and nuisance was prevented only by the utmost attention to detail. Negotiations continued with a view to obtaining a permanent supply of ashes for tip covering, and by the end of the year an agreement for the purchase of suitable ash covering had been negotiated.

In November, the newly-appointed refuse disposal foreman spent two weeks in Bradford undergoing a thorough course of instruction in the disposal of refuse by fully controlled tipping.

Refuse Disposal. Destructor Works.

A small two-cell Heenan & Froude destructor works is operated for the burning of putrescible refuse, and the following statistics indicate the amount of material disposed of in this manner:—

Vegetables and miscellaneous ...	...	252 tons
Fish Offal ...	...	61½ „
Eggs and chickens ...	...	844 bins
Dogs ...	...	1,186 carcasses
Cats ...	...	861 „
Hens ...	...	150 „
Sheep ...	...	35 „
Calves ...	...	6 „
Other animals ...	...	13 „

Salvage Disposal

As the Mission Hall in South John Street which was used for baling and storing waste paper was proving inadequate for this purpose, a new paper baling depot was erected at Willow Holme on the advice of Mr. Hanson, the former C.S.I., and was opened in May. This depot, which is capacious and equipped with all necessary facilities for the work has proved extremely valuable during a year when the high prices pertaining for this material have encouraged maximum effort to increase the tonnage of paper collected.

The amount and nature of salvage recovered and sold during the year is as follows:—

				<i>Tons.</i>	<i>Cwts.</i>	<i>Qrs.</i>	<i>Lbs.</i>
Paper ...	...	...	...	604	10	3	0
Iron ...	...	...	...		17	2	0
Tins ...	...	...	...	27	5	0	0
Other metals ...	...	...	...			2	4
Textiles ...	...	...	...		2	6	21
Bones ...	...	...	...		11	0	14

The report on Housing and Milk Supply previously included in this Section are now incorporated in Section VII.

OCCURRENCE AND CONTROL OF INFECTIOUS DISEASES

PREFACE

This book is intended to be a guide for the student of medicine and for the physician in general. It is not intended to be a text book, but a book which will give the student a general idea of the occurrence and control of infectious diseases. It is not intended to be a book of facts, but a book which will give the student a general idea of the occurrence and control of infectious diseases.

SECTION III.

OCCURRENCE AND CONTROL OF INFECTIOUS DISEASES

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OCCURRENCE AND CONTROL OF INFECTIOUS
DISEASES

OCCURRENCE AND CONTROL OF INFECTIOUS DISEASES

INCIDENCE

There was an increase of 916 in the number of confirmed notifications of infectious diseases as compared with the figure for the previous year. This increase was principally due to the large number of measles notifications received. Details of these are given in Table 8.

TABLE 8

	Total number of cases notified.	Number of cases in- correctly notified.	Net Number of cases notified.	Number of cases notified at various ages.							Number of notified cases removed to hospital.
				Under 1 year.	1-5 years.	5-15 years.	15-25 years.	25-45 years.	45-65 years.	65 and upwards.	
Scarlet Fever	93	—	93	1	25	63	2	2	—	—	22
Whooping Cough	140	—	140	13	103	23	1	—	—	—	3
Diphtheria	—	—	—	—	—	—	—	—	—	—	—
Measles	1245	—	1245	51	743	445	5	1	—	—	7
Pneumonia	20	—	20	2	—	1	2	4	7	4	1
Acute Poliomyelitis—											
Paralytic	—	—	—	—	—	—	—	—	—	—	—
Non-Paralytic	1	—	1	—	—	1	—	—	—	—	1
Dysentery	18	—	18	—	4	5	1	5	2	1	1
Ophthalmia Neonatorum	11	1	10	10	—	—	—	—	—	—	—
Puerperal Pyrexia	51	—	51	—	—	—	28	23	—	—	8
Smallpox	—	—	—	—	—	—	—	—	—	—	—
Paratyphoid Fever	2	1	1	—	1	—	—	—	—	—	1
Typhoid Fever	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	17	—	17	—	—	—	1	—	15	1	—
Malaria	1	—	1	—	—	—	1	—	—	—	1
Pulmonary Tuberculosis	92	—	92	—	4	6	29	32	19	2	—
Other forms of Tuberculosis	22	—	22	—	5	4	5	5	2	1	—
Food Poisoning	2	—	2	—	—	1	—	1	—	—	1
Meningococcal Infection	1	—	1	1	—	—	—	—	—	—	1
Totals	1716	2	1714	78	885	549	75	73	45	9	47

A total of 1,714 confirmed notifications of infectious disease were received during the year, 114 of which related to various forms of Tuberculosis and 1,600 to other infections.

2 deaths were certified as due to zymotic diseases, equal to a zymotic death rate of 0.03 per 1,000 of the population.

SCARLET FEVER

As mentioned in last year's report, scarlet fever is not now generally a severe disease. Of the 93 cases notified, 71 were nursed at home.

DIPHTHERIA

I am pleased to be able to report another year in which there has been a complete absence of diphtheria from the City. Although the overall position regarding the immunising of children aged 1 to 15 years remains little altered, there has been a slight fall in the number of children under school age who have been immunised. It has been suggested that the parents of these young children have had no experience of this disease and, therefore, do not see the need for their children being immunised. There is no doubt that diphtheria could still break out in a severe form in this country and every effort should be made to secure the immunisation of all children by their first birthday.

SMALLPOX

No case of Smallpox was notified during the year, but notices were received from a Port Health Authority and a Local Health Authority regarding contacts of this disease. No vaccinations were undertaken during the year under the Public Health (Smallpox Prevention) Regulations, 1917.

MALARIA

One notification of this disease, which was contracted abroad, was received.

PNEUMONIA—ACUTE PRIMARY & INFLUENZAL

Of the 20 notifications of Pneumonia where the diagnosis was confirmed, 11 were of the acute influenzal type and 9 of the acute primary variety. There was one death among the cases of Acute Primary Pneumonia.

INFLUENZA

Fifteen deaths were registered as due to Influenza.

FOOD POISONING

There was no epidemic of food poisoning in the City. Two individual cases were notified, but investigation did not reveal any definite source of infection.

CEREBRO-SPINAL FEVER

No notification of Cerebro-Spinal Fever was received.

ACUTE POLIOMYELITIS

There was no epidemic prevalence of this disease during the year. One case of the non-paralytic type was notified and removed to hospital.

PUERPERAL PYREXIA

The new regulations governing the notification of puerperal pyrexia came into force on 1st August, 1951. Under these regulations notification must be made of any woman who, during the puerperium has a temperature of 100.4° or more. In the former regulations she had to have a temperature of 100.4° maintained for 24 hours or repeated twice within 24 hours.

It was to be expected that with these more stringent regulations the number of notifications would increase and, in fact, there were 51 notifications received during the year, 8 of the patients being removed to the Infectious Diseases Hospital. Only 24 of the notifications were in respect of City residents. On investigation it was found that most of the patients suffered from minor conditions which did not require specific Public Health action.

OPHTHALMIA NEONATORUM

10 cases of Ophthalmia Neonatorum were notified by medical practitioners and in each instance both eyes were affected, but in no case did permanent damage result. Seven of these cases were treated at home by the District Nurses under the supervision of the doctor in charge of the case.

The following table shows the results of treatment of cases of Ophthalmia Neonatorum.

TABLE 9

CASES.		Vision un-impaired.	Vision impaired.	Total Blindness.	Deaths during treatment.	Number still under treatment at end of the year.	Number removed from the District.
Notified.	Treated. At Home In Hospital.						
10	7 3	10	—	—	—	—	—

TYPHOID & PARA TYPHOID FEVER

No notification of typhoid fever was received, but one case of para typhoid fever was notified.

SCABIES

The Cleansing Centre at the School Clinic premises continued to be used for the treatment of Scabies and 36 cases were dealt with during the year. Of these, 1 was an adult, 31 were school children, and 4 pre-school children.

NOTIFICATION FEES

The total amount paid in fees to medical practitioners for the notification of all notifiable diseases during 1951 was £102 6s. 9d.

VENEREAL DISEASES

Arrangements for the treatment of Venereal Diseases were under the control of Dr. Herbert J. Bell. The follow-up work and contact tracing was carried out by the Head Almoner of the Cumberland Infirmary, and in cases of difficulty the senior Health Visitor was informed and she visited the patient.

The number of City residents known to have been treated during the year for Venereal Diseases was 148. The conditions treated were as follows:—

Syphilis	...	...	...	...	24
Gonorrhoea	...	...	...	...	17
Other Conditions	...	...	...	...	107

No action was taken under the Venereal Diseases Act, 1917.

SECTION IV.

TUBERCULOSIS

SECTION IV

The first part of the section is devoted to a discussion of the general principles of the theory of the subject. It is shown that the theory is based on the assumption that the subject is a system of interacting elements, each of which is subject to the same laws of behavior. This assumption is then used to derive the general principles of the theory.

SECTION V

The second part of the section is devoted to a discussion of the specific principles of the theory. It is shown that the theory is based on the assumption that the subject is a system of interacting elements, each of which is subject to the same laws of behavior. This assumption is then used to derive the specific principles of the theory.

SECTION VI

The third part of the section is devoted to a discussion of the application of the theory to the subject. It is shown that the theory is based on the assumption that the subject is a system of interacting elements, each of which is subject to the same laws of behavior. This assumption is then used to derive the application of the theory to the subject.

SECTION VII

The fourth part of the section is devoted to a discussion of the conclusion of the theory. It is shown that the theory is based on the assumption that the subject is a system of interacting elements, each of which is subject to the same laws of behavior. This assumption is then used to derive the conclusion of the theory.

SECTION VIII

The fifth part of the section is devoted to a discussion of the future of the theory. It is shown that the theory is based on the assumption that the subject is a system of interacting elements, each of which is subject to the same laws of behavior. This assumption is then used to derive the future of the theory.

TUBERCULOSIS

The new Chest Centre at the City General Hospital, Carlisle, was opened in January, 1951, and provides a complete service embracing all aspects of chest and tuberculosis work for the area covered by the East Cumberland Hospital Management Committee.

The Mass Radiography Unit allocated to the Special Area and an integral part of the modern Chest Service has been fully employed since operations commenced in April, 1951.

NOTIFICATION

Whilst the notification rates generally throughout Great Britain show a welcome decline, I am afraid the notification rate in Carlisle, for 1951, is higher. This is not unexpected, largely as a result of improved methods of case finding, such as full Chest Centre facilities and Mass Radiography surveys. One anticipates that the number of notifications will remain about the present figure for the next year or two.

Table 10 shows the number of notifications throughout Great Britain for the years 1946 to 1950.

TABLE 10

1946	...	...	...	...	61,000
1947	...	...	...	...	61,800
1948	...	...	...	...	62,600
1949	...	...	...	...	63,300
1950	...	...	...	...	59,000

Table 11 shows the number of formal notifications in Carlisle City for 1951, and the preceding 5 years.

TABLE 11

			<i>Pulmonary.</i>		<i>Non-pulmonary.</i>
1946	...	...	90	...	14
1947	...	...	82	...	22
1948	...	...	69	...	22
1949	...	...	65	...	11
1950	...	...	83	...	7
1951	...	...	92	...	22

As stated last year, once again every effort has been made to secure that the Notification Regulations are strictly followed, and in this respect one is happy to know that our co-operation with the Medical Practitioners in this area is of a very high standard.

Statistics for different areas should obviously be comparable. Last year I called attention to the value of notification of cases of pleural effusion unless due to trauma or some condition other than tubercle, and at the same time deprecated any tendency to notification of a primary complex in a child or young adult, unless this was severe enough to cause gross symptoms and signs. The tendency of general practitioners to refer chest cases to us for an opinion and to leave notification until the diagnosis has been confirmed in consultation is therefore, in my opinion, a welcome step in the right direction.

Table 12 shows the number of primary notifications of tuberculosis by age, sex and type received during the year.

TABLE 12

Age Periods.	Number of Primary Notifications of new cases of Tuberculosis.											Total (all ages)
	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 & upwards	
Pulmonary—												
Males ...	—	2	2	1	1	3	9	8	9	5	2	42
Females...	—	2	—	3	6	19	11	4	2	3	—	50
Non-Pulmonary—												
Males ...	—	3	—	1	1	—	—	1	1	—	—	7
Females...	—	2	2	1	3	1	3	1	1	—	1	15
Totals.	—	9	4	6	11	23	23	14	13	8	3	114

Other cases of tuberculosis were brought to the knowledge of the Medical Officer of Health otherwise than by formal notification, and the distribution of these by age, sex, type and source of information, is given in Table 13.

TABLE 13

NUMBER OF CASES IN AGE GROUPS.

Source of Information.	AGE GROUPS										Total Cases
	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 & upwards
Posthumous Notifications ...	—	—	—	—	—	—	—	—	—	—	—
	—	—	1	—	—	—	—	—	—	—	1
	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—
Death Returns from Local Registrars ...	—	—	—	—	—	—	—	—	—	1	1
	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—
Transfers from other areas (excluding transferable deaths) ...	—	—	—	—	—	3	2	3	—	—	8
	—	—	—	—	—	1	2	—	—	—	3
	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—
TOTALS	—	—	1	—	—	4	4	3	—	1	13

The removal of a patient's name from the Notification Registers has become more of a problem. The normal practice is that a patient whose disease has been arrested for five years has his name removed from the Register at the end of this period. This is straightforward; the difficulties, however, are in those patients who remove to other areas without giving their new address, and are lost sight of completely. In cases where a patient has been notified and where the diagnosis has not been confirmed, there has been no difficulty, usually in consultation with the practitioner notifying the case, in removing the name from the Notification Register.

DEATHS

The number of deaths again show a decline, not only in Carlisle, but throughout the country. The appropriate figures are given in tables 14 and 15.

TABLE 14

Deaths from pulmonary tuberculosis throughout Great Britain:

1946	...	...	...	...	26,830
1947	...	...	...	...	27,640
1948	...	...	...	...	25,880
1949	...	...	...	...	23,320
1950	...	...	...	...	18,750

TABLE 15

Deaths from pulmonary and non-pulmonary tuberculosis in the City of Carlisle:

	<i>Pulmonary.</i>		<i>Non-pulmonary.</i>	
1946	...	45	...	4
1947	...	38	...	9
1948	...	30	...	2
1949	...	46	...	3
1950	...	24	...	6
1951	...	23	...	3

Table 16 shows the total tuberculosis and pulmonary tuberculosis death rate per 1,000 of the population for the last 10 years:

TABLE 16

Year.	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Total T.B. Deaths Rate	0.7	0.6	0.8	0.68	0.77	0.74	0.48	0.74	0.44	0.38
Pulm. T.B. Deaths Rate	0.58	0.56	0.79	0.53	0.71	0.60	0.45	0.69	0.35	0.34

Whilst one would like to think that modern chemotherapy has been largely responsible for this fall in the death rate, it is obvious that the fall started before the general use throughout the country of streptomycin and the other new drugs.

Complacency about the declining mortality would be quite wrong, however. The tuberculosis problem must be measured in terms of sick people. Whilst the number of notifications and deaths for one year is a definite figure, any figures for the number of people actually suffering from tuberculosis are much more involved.

TUBERCULOSIS STATISTICS

Table 17 which follows, does give the actual number of cases, both pulmonary and non-pulmonary, on the Clinic Register for the City of Carlisle for 1951. It does, despite its limitations, give an indication of the size of the problem. There must still, however, be many undiscovered cases in the area, and not always minimal cases with a good prognosis. Some of the recent new cases discovered in our Mass Radiography surveys have had advanced disease with cavitation.

There is no doubt that many more patients are now treatable, and that the prognosis in notified cases has been remarkably improved—greater than could be expected by the reduction in the proportion of severe cases, thanks to improved case finding.

I would again comment on the large number of known cases within the City who have had a positive sputum during the past six months. Unfortunately many of these are in the older age groups and are cases of chronic fibrotic disease with cavitation, and cases notoriously difficult to treat. Collapse therapy and major surgery are impracticable, and it is almost impossible for streptomycin to penetrate through the layers of fibrosis to the tubercle bacillus and reach the latter in a degree sufficient to have any effect.

Table 18 shows the number of examinations of patients carried out at the Chest Centre in Carlisle.

TABLE 17

Cases on Dispensary Register (Details of year's work)

	Respiratory.			Non. Respiratory.			Totals.			Grand Total.
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Cases on Register on 1st January, 1951	163	179	26	17	30	48	180	209	74	463
Additions to Register during 1951	36	46	14	3	6	8	39	52	22	113
	199	225	40	20	36	56	219	261	96	576
Written off during 1951 ...	45	45	10	9	17	15	54	62	25	141
Number on Register at the end of the year	154	180	30	11	19	41	165	199	71	435
Number of above known to have had positive sputum within the preceding 6 months	36	51	2	—	—	—	36	51	2	89

TABLE 18

Examinations at the Chest Centre, Carlisle

	<i>From City of Carlisle.</i>	<i>Total from Carlisle, Cumberland and Westmorland.</i>
(a) Number of cases who first attended during the year	2082	3646
(b) No. of contacts who first attended during the year	1060	1652
(c) Total attendances	4917	8691
(d) No. of A.P.; P.P.; and E.P. Refills	1380	2595

CONTACT EXAMINATIONS

The examination and supervision of contacts remains as one of the chief duties of the Chest Service. Table 19 gives the details of contact examinations for the City of Carlisle.

TABLE 19

	<i>Male.</i>	<i>Female.</i>	<i>Children.</i>	<i>Total.</i>
(a) Total number of contacts first examined during 1951	234	474	352	1060
(b) Total number diagnosed as tuberculous	2	3	3	8
B.C.G. Vaccination—				
(c) Total number vaccinated to the end of 1951 ...	<i>Males.</i> 52	<i>Females.</i> 57	<i>Total.</i> 109	

The essentials of contact examinations are X-ray examination of the chest and Mantoux Testing of those up to the age of 15 years. I would point out that the number of contacts developing evidence of active tuberculous disease is comparatively small below the age of 10—the age of puberty—thereafter during adolescence the risk of tuberculosis increases.

It has been our practice to examine young contacts below the age of 10 at four to six-monthly intervals. In view of the small number of cases arising in this early age group it would seem, at first sight, that we waste time examining these contacts so often. I feel, however, that this periodic examination over this early period of life makes the parents and contacts more Chest Centre conscious and tends to ensure that attendances will continue regularly over the age of puberty into adolescence.

Mantoux Testing is carried out, as a routine, on all persons under the age of 15 years who attend at the Chest Centre here. A vast majority of the initial and periodic X-rays are carried out by the Mass Radiography Unit from the age of 5 years upwards, thus easing the burden on the Chest Centre.

VACCINATION WITH B.C.G.

Vaccination of Mantoux negative contacts steadily continues; the vast majority of those inoculated are in the under 6 age group. Unlike a survey of the extent of tuberculin sensitivity carried out in normal age groups under 15, this survey limited to contacts of definite cases of tuberculosis, shows a much higher percentage of initial positive reactors.

It should be emphasised once more that the administrative effort required in B.C.G. vaccination is exceedingly great. It necessitates not only double preliminary intra-dermal tests, but

follow-up tests and periodic examinations over a period of years, because unfortunately, no-one knows yet the exact duration of the immunity acquired.

B.C.G. vaccination is much easier carried out on the nursing staffs in hospitals than it is in contacts who come some times long distances for their tests.

It will obviously be a long time yet before B.C.G. vaccination is made available to the general public. Not only is there a shortage of personnel, but supplies of the vaccine are limited. When these two latter conditions improve, I feel that the next group of people to be offered B.C.G. vaccination should probably be National Service recruits; this would be a procedure reasonably economic in both personnel and time, and analogous to the vaccination of nursing staffs in hospitals.

I know that various physicians have advocated a much simpler routine, e.g., by cutting out the six-weekly interval between the tests, and requiring the minimum of two attendances at the Chest Centre. The Ministry, however, have not altered their Regulations, and I do not advocate any alterations, as I feel that all steps should be taken to ensure that B.C.G. vaccination does not fall into disrepute.

One must emphasise again that in tuberculosis the relationship of immunity to hypersensitivity is unknown and that the extent of immunity cannot be accurately determined by the Mantoux Test. There are also many facts regarding B.C.G. vaccination still unknown to us. One of the most useful observations recently has been that the vaccine can be kept at ordinary room temperature for some weeks, and when used will still result in satisfactory hypersensitivity. Originally, it was recommended that the vaccine be kept cold and used very soon after preparation.

INSTITUTIONAL TREATMENT

As before, treatment of patients is still handicapped by shortage of beds, and we are nowhere near the ideal of 350 beds for the whole of the Special Area. At the end of 1951 the beds available showed a small, but welcome increase, as shown in Table 20.

TABLE 20

Beds available to Special Area and those occupied by Carlisle patients on 31st December, 1951:—

	<i>Total beds.</i>	<i>Carlisle patients.</i>
Blencathra Sanatorium ...	100	19
Meathop Sanatorium ...	20	4
Stannington Sanatorium ...	5	1
Ormside Sanatorium ...	20	8
Longtown Sanatorium ...	*14	5
Ellerbeck I.D.H. ...	7	—
City General Hospital ...	14	7
Cumberland Infirmary ...	10	7
<hr/>		<hr/>
Total	190	51
<hr/>		<hr/>

* This number now increased to 23.

The number of beds at both Longtown Sanatorium and Ormside Sanatorium are now the maximum possible, and no further increase can be expected at either of these two sanatoria. Full use was made of the available beds and Table 21 shows the number of City patients admitted to the various hospitals, while Table 22 summarises the work for 1951 in the beds available and relates to all patients admitted from the Special Area as a whole.

TABLE 21

Total number of Carlisle City Patients admitted to institutions for treatment during 1951.

	<i>Adults.</i>	<i>Children.</i>
Blencathra ...	36	—
Meathop ...	5	—
Stannington ...	—	1
Longtown ...	7	—
Cumberland Infirmary ...	12	—
City General Hospital ...	17	2
Ellerbeck I.D. Hospital...	1	—
Ormside Sanatorium ...	10	—

TABLE 22
SUMMARY OF HOSPITAL RETURNS FOR THE YEAR 1951

	Blencathra.	Ormside.	City General Hospital.	C.I.C.	Longtown.	Ellerbeck.
Beds available as at 31/12/51	100	20	14	10	14	7
Beds occupied on 31/12/51	93	20	14	10	14	*3
No. of patients on—						
(a) Streptomycin	—	—	—	—	—	—
(b) P.A.S.	16	6	—	1	2	—
(c) Both (a) and (b)	14	9	6	4	8	—
Number of patients given—						
Artificial Pneumothorax inductions ...	26	—	11	—	—	—
Pneumo Peritoneum inductions	11	—	9	—	—	—
Phrenicclasis	—	—	17	—	1	—
Adhesion Section	—	—	19	—	—	—
Number of patients discharged during the year 1951—						
R.A. cases (Negative sputum)	68	18	24	4	3	13
R.B. cases (Positive sputum at some time)	48	—	32	13	10	—

* NOTE—Admissions to Ellerbeck had to be curtailed at the end of 1951 to allow of necessary repairs to the building.

Chemotherapy with paramisan and streptomycin continues to play a most important role in hospitals—but I must emphasise that this is only one form of treatment, and is often complementary. A well-established artificial pneumothorax results in a higher conversion rate from sputum positive to sputum negative than any other single procedure, and there is no doubt that artificial pneumothorax together with other forms of collapse therapy, both minor and major, should be carried out on all suitable cases despite the use of chemotherapy.

There has been during the past year an increasing number of phrenic crush operations done and pneumoperitoneums induced. Whilst the conversion rates in this procedure are much lower than in artificial pneumothorax followed by adhesion section, there is no doubt but that they are useful not only in resulting in conversion in a small proportion of cases, but in controlling the disease in the remainder and making patients fit later for major surgery such as thoracoplasty.

Unfortunately, the waiting lists for major surgery are large, and are in fact now almost a bigger problem than the ordinary waiting lists for admission to sanatoria. At the end of 1951 our waiting list for major surgery, for the whole of the Special Area, was 52 cases, while our sanatorium waiting list was not much larger. Patients waiting for admission to a sanatorium can be treated well at home during this preliminary waiting time, but the patient who has already had sanatorium treatment, and is deemed suitable for major surgery, should obviously not have to wait approximately two years, as they do at present.

During this two years wait many people frankly deteriorate to such an extent that major surgery is no longer a possibility. Again, even if the patient is still suitable at the end of this period for surgery, it is essential that he should first be admitted to a sanatorium bed for final assessment for six to eight weeks before going to the Thoracic Surgery Centre. This makes a demand on our sanatorium beds, which would not obtain if we had no thoracic surgery waiting list.

So far as minor collapse therapy goes, the services of a surgeon are required for adhesion section approximately four weeks after the induction of an artificial pneumothorax, and also for a phrenic crush operation, with or without, the induction of a pneumoperitoneum later. The increased number of these inductions has led to a marked increase in the phrenic crush and adhesion section operations required, and I feel that the question of providing a definite Thoracic Surgery Unit in the Special Area will have to be tackled sooner or later.

Apart from streptomycin and paramisan, which are extensively used, both at home and in hospital, we have just commenced to use a new drug which has recently received considerable publicity, viz., Isonicotinic Acid Hydrazide. It is impossible to assess the results yet. It is stated that the drug results in the disappearance of pyrexia, the lowering of the erythrocyte sedimentation rate and the general increased well-being of the patient. From preliminary reports the most striking result would appear to be the comparatively large number of cases converted from positive to negative and yet still showing radiologically large ring shadows (cavities).

In tuberculosis, assessment of a new drug in treatment is notoriously difficult and one is naturally very cautious. If, however, further results substantiate the claim for this drug that it results in sputum conversion in many cases in spite of the persistence of apparent cavities, then it will undoubtedly be very valuable. Such a drug would result in a welcome reduction of the volume of infectivity in the general community.

The increasing number of cases on whom minor forms of collapse therapy are carried out, and who are discharged home before their period of bed rest and graduated exercise has been entirely completed, entails an increasing demand on the Ambulance Service of the City of Carlisle. On one day alone per week we have no less than 8 patients coming into the Chest Centre here by ambulance or sitting case car. If these latter services were not available to us, all these patients would require to be in-patients for at least another eight weeks or longer.

BRONCHIECTASIS

In bronchiectasis, as in any other non-tuberculous condition, we work in close association with the Thoracic Surgeon.

Complete investigation is possible at Carlisle; treatment consists, chiefly, in postural coughing and exercises.

In contra-distinction to tuberculosis, the waiting list for bronchiectasis cases waiting either investigation or operative treatment is negligible. As I pointed out previously, there is no harm in waiting in these cases, as the time can be profitably spent in further physiotherapy. We are fortunate in having the services of a Physiotherapist seconded from the Rehabilitation Department of the Cumberland Infirmary to the Chest Centre for part-time duty.

PULMONARY NEOPLASM

The number of cases of pulmonary neoplasm found in Carlisle City has again been small. Investigation is automatic in any discovered, and there has again been no delay in treatment.

MASS RADIOGRAPHY

Groups Examined

During 1951 the Unit operated continuously throughout the Special Area, and in addition to carrying out surveys at works and factories, surveys of the general public were carried out on 3 occasions in the City.

It was decided early on that during the first year, at any rate, work should, as far as possible, be concentrated in the three largest centres of population in the Special Area, namely—Carlisle, Whitehaven and Workington. This decision was further influenced by the extreme shortage of films necessitating the passage of practically all contact work at the Chest Centres through the Mass Radiography Unit. In all 1,502 contact cases from the whole of the Special Area were X-rayed by the Unit.

During the year we also received instructions to arrange for the X-ray examination of National Service recruits. In the Special Area the only centre for this work is at Carlisle, and we have arranged to pass through all National Service recruits at Carlisle on four occasions in the year. 303 men were examined during 1951.

Facilities for chest X-ray examination were made available in our public surveys to school children of 14 years and over. Close contact was maintained with the City Medical Officer and full advantage was taken of the service as 3,212 children of these age groups, again from the whole of the Special Area, passed through the Unit. It is to be noted that examination of school children is only carried out after receiving the consent of the parents.

Full co-operation of the General Practitioners in the City was invited during each survey, and many persons were referred directly in 1951 by the doctors themselves. The public surveys necessitated no prior appointment and were well attended, no less than 15,486 persons from the Special Area having passed through the Unit.

Results

During the period 32,387 persons were examined by the Unit. These include 849 inmates of Dovenby Hall and Garlands Hospitals. Excluding the mental patients, 31,538 civilians were examined, of which 16,022 were males and 15,516 females. These are set out in the Ministry of Health age groups in Table 23.

TABLE 23

Age.	14 & Under.	15-24.	25-34.	35-44.	45-59.	60 & over.	Total all ages.
Male	1305	3441	3554	3158	3652	912	16022
Females	1339	5362	3129	2543	2673	470	15516
Totals	2644	8803	6683	5701	6325	1382	31538

Number re-called for full sized X-ray films—

1,512 (4.67 % of the total examined).

Number referred for clinical examination—

423 (1.30 % of the total examined).

Number failing to attend for full-sized X-ray film—

69 (4.56 % of those recalled).

Comments

In commenting on the results of the Mass Radiography Unit for 1951 one would say, most emphatically, that the operation of the Unit in the Special Area has been more than justified. Whilst emphasis has been laid on the number of abnormalities found, and especially on the number of new cases of active pulmonary tuberculosis with its consequent benefit, both to the individual concerned and to the public at large, yet it must not be forgotten that the assurance that a person has a normal X-ray is—within limits—of great benefit to that particular individual. One must emphasise that even in spite of a normal X-ray report, should chest symptoms develop later, the person concerned should seek a further examination, preferably through his own doctor.

The Special Area has a population of approximately 300,000 and whilst the Utopia would be for every person to be examined every six months, this is quite beyond the limits of practical politics at present. One Unit in a widely scattered area such as ours can hope to carry out approximately 40,000-45,000 examinations per year, and it is unlikely that more Units can be allotted throughout the country in present circumstances. Obviously our Unit must be used, therefore, to its best advantage. We must continue to examine the school leavers and we welcome the opportunity of examining National Service recruits. It is a pity that the examination at the age of 18 for National Service recruits does not extend to the whole of this age group, and that it does not include females.

Again, most cases of active pulmonary tuberculosis come to us normally via the general practitioners. I feel that the Mass Radio-

graphy Unit could be of greater value if the general practitioners referred more of their patients to the Unit whilst it was in their areas. Only 262 cases were referred in this way during 1951.

The detailed results of the X-ray examinations are shown in Table 24.

TABLE 24

	Males.	Females.	Total.	Percentage of total examined.
ABNORMALITIES REVEALED.				
(i) Non-tuberculosis conditions:				
(1) Abnormalities of ribs, etc.	201	194	395	1.22
(2) Bronchitis and Emphysema	15	—	15	.05
(3) Bronchiectasis	68	34	102	.31
(4) Pneumoconiosis	126	—	126	.39
(5) Pleural thickening	140	62	202	.62
(6) Intrathoracic Neoplasms	9	3	12	.04
(7) Cardiovascular lesions ...				
(a) congenital	3	7	10	.03
(b) acquired	90	159	249	.77
(8) Miscellaneous	96	56	152	.47
(ii) Suspected pulmonary tuber- culosis—				
Previously known—				
1. Active	6	11	17	.05
2. Inactive	6	8	14	.04
Newly discovered—				
1. Active	67	47	114	.35
2. Inactive primary ...	194	209	403	1.24
3. Inactive post-primary ...	419	296	715	2.21

The examination of contacts has also proved of great value and has eased the burden at the Chest Centre and the West Cumberland Hospital X-ray Departments. As these are members of the community most liable to develop disease in adolescence, this method of case finding must obviously continue to be employed in this group. The public surveys held at the Mass Radiography base at the Warwick Hotel throughout 1951 were well-attended. The percentage of employees volunteering to pass through the Unit during the factory surveys in Carlisle was the highest in the Special Area.

FURTHER DEVELOPMENTS

I have already briefly mentioned the need for Thoracic Surgery beds in this area, both for minor and major work. My own

opinion is that taking chest conditions all over the Special Area there is sufficient work for a full-time Thoracic Surgeon for this area.

The need for more beds for tuberculosis in the Special Area is again stressed. Even the provision of "hostel" beds for the chronic ambulant infectious case would help to ease our problem in the Special Area. At present we have a considerable proportion of our sanatorium beds occupied by such cases, and I am continuously being pressed to admit others. Whilst I fully appreciate the need for isolation in the chronic infectious case, I feel that we cannot further increase the numbers of those persons in sanatorium without grossly impairing our ability to admit treatable cases.

ACKNOWLEDGMENTS

It is a pleasure to acknowledge the valuable help received in the Chest Service work from the staff of the Public Health Department and I would especially thank the Health Visitors who have undertaken the home visiting (in many cases more than one visit) in connection with the environmental survey which we started during the year.

Finally, I would express my sincere thanks to Dr. Rennie, the Medical Officer of Health, not only for his valuable co-operation in all aspects of this work, but for his ready help and advice, so freely given, in many of the problems which have arisen during the year under review.

W. HUGH MORTON,

Consultant Chest Physician.

SECTION V.

**SERVICES PROVIDED UNDER PART III OF THE
NATIONAL HEALTH SERVICE ACT, 1946**

THE NATIONAL HEALTH SERVICE ACT, 1948
PART II
SERVICES PROVIDED UNDER PART II OF THE
NATIONAL HEALTH SERVICE ACT, 1948

SECTION 1

1. The National Health Service shall be provided
under Part II of the National Health Service Act, 1948
in accordance with the provisions of this Act.

SERVICES PROVIDED UNDER PART II OF THE NATIONAL HEALTH SERVICE ACT, 1946

HEALTH CENTRES

No action was taken regarding the provision of Health Centres.

CARE OF MOTHERS AND YOUNG CHILDREN

The lack of an Assistant Dental Surgeon has restricted the development of priority dental services. In the absence of a complete priority dental service the Council wisely decided that the Dental Officer should devote his attention to the conservative dentistry of children. It is hoped that eventually when the staffing position is less acute, a full priority service will be provided. The health visiting service has been maintained although the expansion visualised in the proposals made in accordance with the Act has not materialised on account of the difficulty of recruiting Health Visitors.

There were 1,830 births notified during the year, which is an increase of 93 over the figure for 1950. Of this number 1,753 were live births and 77 still-births. One notification was received from a medical practitioner, and the remainder were notified by midwives.

Ante-Natal Clinics

Ante-natal clinics were held at Eildon Lodge for those expectant mothers who had arranged to have their confinement at home, while patients who had arranged for a hospital confinement received their ante-natal supervision at the City Maternity Hospital.

The number of patients who attended the ante-natal clinic was 282; of this number 236 attended for the first time. The total number of attendances by expectant mothers was 823.

Facilities are provided and arrangements have been made for every expectant mother to have her blood grouped and the presence or absence of the Rh factor determined. When all tests are completed the mother is given a card showing her blood group, etc., and this information is thus available at her confinement or in the event of an emergency. If Rh antibodies develop the patient is immediately referred to the City Maternity Hospital.

Post-Natal Clinics

A combined ante-natal and post-natal clinic was held each week, and during the year 8 mothers attended for post-natal examination. No advice was given at this Clinic on contraceptive measures.

The Voluntary Clinic, which is run under the auspices of the Family Planning Association, continued its work in the City. During the year the Association was afforded accommodation in Eildon Lodge and held a Clinic each fortnight.

Provision of Maternity Outfits

During the year 195 maternity outfits were issued, free of charge, to expectant mothers whose confinements took place at home. In each case the application for the outfit was accompanied by a certificate from a doctor or midwife.

Additional dressings when necessary were provided by the Council.

Care of Premature Babies

All infants whose birth weight is $5\frac{1}{2}$ lbs. or less are included under this heading, and the number of notifications of these infants received during the year was 69. This figure includes 9 babies born at home, and 60 born in hospitals or nursing homes. The children born at home are kept under close observation by the Midwives and Health Visitors from the time notification is received, and where the home conditions are good and the parents are capable of caring for the child, the baby is allowed to remain at home. In cases where the home conditions are considered to be unsuitable or other circumstances render it advisable the child is immediately taken to hospital. Close liaison between the hospital authorities and this department continues, and the Health Visitor visits all premature children discharged from hospital and makes the necessary arrangements for the proper care of the child.

Child Welfare Clinics

Welfare clinics continued to be well attended by the mothers who took their children of pre-school age for medical examination, diphtheria immunisation and advice on the care of infants.

The following sessions were held during the year:—

- | | |
|---------------------------------|---|
| I. At Eildon Lodge Clinic | Monday afternoons
Thursday afternoons. |
| II. At Currock Community Centre | Tuesday afternoons. |
| III. At Etterby Mission Hall | |
| IV. At Raffles Community Centre | Wednesday afternoons. |

At Etterby and Raffles a clinic was held on alternate Wednesdays, and a doctor was present at each session.

The following is a summary of the attendances of children at the above Clinics:—

No. of children who attended Centres during the year ... 1,942

No. of children who first attended, and on the date of their first attendance were:—

Under one year of age ...	...	...	760
Over one year of age ...	...	...	171
Total ...			931

No. of children who attended the Centres and at the end of the year were:—

Under one year of age ...	...	...	639
Over one year of age ...	...	...	1,303

Total number of attendances made by children who attended the Centres 9,951.

Supplies of Welfare Foods

Facilities were available at the main permanent clinic at Eildon Lodge and at the peripheral clinics at Currock, Etterby and Raffles, for the purchase of orange juice, cod liver oil, National Dried Milk and vitamin products. The foods were distributed by the clerk on duty, together with a member of the staff of the Food Office, or a member of the W.V.S.

Dental Treatment Provided for Expectant and Nursing Mothers and Pre-School Children

Report by Dr. T. W. GREGORY, Senior Dental Surgeon

Only five expectant or nursing mothers requested or were referred for treatment during the year. This is in part due to the fact that a decision was reached that free dental care at the clinic should be restricted to those women coming under the domiciliary scheme. All five mothers were made dentally fit, but, of course, it will be realised that shortage of staff makes it impossible to extend the scheme as is desirable at the present time.

It will be noted that 190 pre-school children were examined as compared with 124 the previous year, and this year 148 received treatment, as compared with 112 last year.

Treatment consisted mainly of extractions under a general anæsthetic, following a complaint of severe toothache.

64 fillings were inserted, as compared with 45 the previous year. The complete figures, however, can be seen in tabular form on page 50.

(a) Numbers provided with dental care.

	Examined.	Needing Treatment.	Treated.	Made Dentally Fit.
Expectant and Nursing Mothers ...	5	5	5	5
Children under Five ...	190	155	148	84

(b) Forms of dental treatment provided.

	Extractions.	Anæsth.		Fillings.	Scalings or Scaling & Gum Treatment.	Silver Nitr. Treatment.	Dressings	Radio-graphs.	Dentures Provided.	
		L.	G.						Comp.	Part.
Expectant and Nursing Mothers ...	24	—	4	4	2	3	—	—	1 upper	3 uppers
Children under Five ...	227	—	124	64	1	5	—	—	—	—

Day Nurseries

The two Day Nurseries in the City provided accommodation for 10 children under 2 years of age, and 80 children between the ages of 2 and 5 years. The general running of the Nurseries continued as in previous years.

Mother and Baby Homes

The arrangements with the Voluntary Organisations for the care of unmarried mothers and their children were continued as in previous years.

During the year the City Council paid for the 12 weeks' maintenance of one City unmarried mother in Coledale Hall.

Provision is also made for contributing to the maintenance of illegitimate children as previously, where the mother has had to have a preliminary period on her own to establish herself.

Mrs. Bush, the Superintendent of Coledale Hall, continued to act as Welfare Worker on behalf of the Council for the care and protection of illegitimate children.

During the year she has dealt with the following cases:—

Married women expecting illegitimate children ...	1
Unmarried women expecting illegitimate children ...	6
Couples advised re adoption	3
Problems concerning illegitimate children ...	2
Matrimonial problems	3

MIDWIFERY SERVICES

Domiciliary Midwifery

On the 1st January, 1951, the Local Authority took over from the Carlisle District Nursing Association and from that date all domiciliary midwives were employed directly by the Council.

Ante-natal and post-natal clinics were held at Eildon Lodge as already reported on page 47.

During the year the domiciliary midwives attended 189 women in childbirth; 156 as midwives and 33 as maternity nurses. In 67 instances the midwives summoned medical aid under Section 14 (1) of the Midwives' Act, 1918.

Supervision of Midwives

The Superintendent of the District Nurses and Midwives has acted as Non-Medical Supervisor of Midwives, while Dr. Christine Anderson (Assistant Medical Officer of Health) has undertaken the duties of Supervisor of Midwives.

The following is a summary of the number of midwives who notified their intention to practise in the City.

In Domiciliary Practice.

No. who notified intention to practise as Midwives	5
No. „ „ „ „ Maternity Nurses	5

In Nursing Homes.

No. who notified intention to practise as Midwives	5
No. „ „ „ „ Maternity Nurses	7

In Hospitals.

No. who notified intention to practise as Midwives	35
No. „ „ „ „ Maternity Nurses	7

Midwifery Training

The City Council continued to operate the Part II Training School, but on account of the small number of confinements did so at a financial loss. At the time of writing training continues, but it has been decided in view of the small number of confinements and consequent difficulty in offering adequate experience to students to discontinue the school in the near future.

General Practitioner Obstetricians

At the end of the year 21 local practitioners were on the list of General Practitioner Obstetricians of the Carlisle Executive Council.

HEALTH VISITING

It was not possible to increase the number of Health Visitors nor to recruit Student Health Visitors.

The following is a summary of the work done by the Health Visitors during the year:—

Primary visits in connection with the notification of births	...	...	...	1131
Re-visits to children between				
0-1 year	...	...	...	7203
1-5 years	...	...	...	12998
Total number of routine visits to children	...	...	...	21332
Visits to expectant mothers:—				
Primary	...	...	...	212
Re-visits	...	...	...	449
Visits in connection with:—				
Deaths of children under 1 year	...	...	...	23
Ophthalmia Neonatorum	...	...	...	21
Pemphigus Neonatorum	...	...	...	—

Measles :—				
Under 5 years	...	...	...	532
Over 5 years	...	...	...	216
Whooping Cough :—				
Under 5 years	...	...	...	96
Over 5 years	...	...	...	13
Pneumonia	...	...	...	27
Chicken Pox	...	...	...	5
Mumps	...	...	...	7
V.D. Cases (at request of Almoner,				
Cumberland Infirmary)	...	...	...	3
Hospital Follow-up (at request of Almoner,				
Cumberland Infirmary)	...	...	...	75
Home Help Service	...	...	...	1
Paratyphoid Contacts	...	...	...	1
Housing Problems	...	...	...	16
Requests for Part III Accommodation	...	...	...	8
Visits to Child Welfare Centres	...	...	...	413
„ „ Day Nurseries	...	...	...	5
Attendance at Immunisation Clinic	...	...	...	26

Health Visitors also undertake a considerable amount of visiting in respect of old persons for their welfare and admission to Eventide Homes. It was decided, in consultation with the Housing Management and Children's Committees, that where problem families were re-housed the Senior Health Visitor would be the principal visitor and throughout the year she made regular visits to such families who have been accommodated in Council houses. It is gratifying to report that the joint efforts in rehabilitating such families have been successful, although progress has been slow.

HOME NURSING

On the 1st January the City Council took over the Home Nursing Service from the Carlisle District Nursing Association, which had done such good work over many years.

The work is carried on in the same manner as in the past and the City Council is affiliated to the Queen's Institute. During the year a full-time male nurse was engaged and has proved his worth in attending to male patients, particularly where there is any heavy lifting. At the end of the year there were six full-time (including the male) and four part-time nurses employed, equivalent to a total of eight full-time nurses.

The following is a summary of the work undertaken during 1951 :—

Number of cases attended	...	...	...	1024
Number of visits paid	...	...	...	25895

VACCINATION AND IMMUNISATION

Vaccination

The scheme of vaccination continued to operate as in previous years. The work done at the School Clinic and by the 25 medical practitioners participating in the scheme is summarised below:—

By Private Practitioners

Primary Vaccinations	...	...	...	459
Re-Vaccinations	...	...	...	134

At School Clinic

Primary Vaccinations	...	...	...	309
Re-Vaccinations	...	...	...	40

Total Primary ... 768

Total Re-Vaccinations ... 174

Once again I have to point out that far too few children are being vaccinated. This is evident when the number of primary vaccinations is compared with the number of live births. Such a poor response means that many children are growing up unvaccinated. Smallpox can and will gain entry into this country in spite of the most efficient Port Health Services, and vaccination is the only known protection against this dreaded disease. It is also important to remember that primary vaccination in later life may be associated with the severe reactions not met with in infant vaccination or re-vaccination of adults. While vaccination in the presence of an outbreak of Smallpox may be highly desirable, it cannot replace systematic infant vaccination. The Health Department ensures that the parents of all infants within the City receive a letter from the Medical Officer of Health pointing out the advantages of vaccination and giving the names and addresses of all medical practitioners taking part in the scheme. For the convenience of those who wish the child vaccinated at the Council's Clinic a form of application is appended. The Health Visitors also use their best endeavours to encourage infant vaccination. At least no parent can claim ignorance of the facilities for vaccination provided by the City Council.

Diphtheria Immunisation

The scheme for Diphtheria Immunisation was operated in a similar manner, 27 local practitioners taking part.

The following is a summary of work done:—

<i>By private practitioners</i>		<i>Under 5 years</i>	<i>Five years and over.</i>
Complete Course	...	329	4
Re-inforcing dose	...	—	32

<i>At Clinics</i>		<i>Under 5 years</i>	<i>Five years and over.</i>
Complete Course	... ..	631	66
Partial Course	... ..	—	19
Re-inforcing dose	... ..	—	1574

At the end of the year 66.1 per cent. of children under 5 years and 92.0 per cent. of children of school age had been immunised.

Table 25 shows the number of children known to have completed a full course of immunisation at any time up to 31st December, 1951.

TABLE 25

Age at 31/12/51 i.e. Born in Year ...	Under 1 1951.	1 1950.	2 1949.	3 1948.	4 1947.	5 to 9 1942- 1946.	10 to 14 1937- 1941.	Total under 15.
Number Immunised	87	765	899	921	1114	4228	3920	11934
Estimated mid-year child population 1951 ...	Children under five 5730					Children 5-14 8856		14586

AMBULANCE SERVICE

This Service continued to operate as a combined Fire and Ambulance Service. The number of vehicles used in the running of the Service was 6 Ambulances, 2 sitting case cars and 1 sitting case coach.

The calls attended, journeys completed and patients conveyed, together with the mileage recorded is shown in Table 26.

TABLE 26

	<i>Patients.</i>	<i>Journeys.</i>	<i>Mileage.</i>
City Removals to Local Hospitals...	7147	7147	21511
City Cases to distant locations ...	382	360	19222
Other Cases „ „ ...	200	187	5886
Hospitals to Home (City) ...	6552	6557	18663
City Hospitals to County Areas ...	328	284	18381
County to Local Hospitals ...	13	12	379
Hospital Transfers :—			
(a) City Patients ...	671	597	1964
(b) Non-City Patients ...	240	211	996
Schools ...	2278	446	4524
Other Journeys ...	233	872	3886
Emergencies ...	624	624	2253
Totals ...	18668	17297	97665

PREVENTION OF ILLNESS, CARE AND AFTER CARE

Tuberculosis

Visiting was undertaken by Health Visitors and State Registered Nurses approved by the Ministry of Health for the purpose.

The number of home visits made by these Visitors during the year was 1,191. Other information relating to Tuberculosis is given on pages 29-44.

The Tuberculosis After-Care Sub-Committee met at quarterly intervals. Through its agency one suitable patient was placed in Papworth Settlement for training, but he left the Centre on obtaining work in Carlisle.

Extra nourishment was provided in six cases and nursing requisites in sixteen cases.

The number of persons who were given special relief in respect of payments to the Home Help Service was 10.

Mental Health and Defectiveness

The work under this Section is described on pages 57-60.

Other Types of Illness

The Health Visitors co-operated with Hospital Staffs and General Practitioners and other appropriate individuals in dealing with persons who required their services, but the amount of work undertaken was necessarily limited. The District Nursing service made provision for after care and treatment when so requested by the practitioner in charge or hospital.

The follow up of V.D. cases in the City was undertaken by Miss Buck, Almoner of the Cumberland Infirmary. Close liaison was maintained between her and the Health Visitors, who gave assistance with cases of special difficulty.

Provision of Nursing Equipment and Apparatus

The number of applications for nursing requisites increased during the year. These articles are stored at the Health Department and are issued to the public on the production of a note from a doctor, nurse or midwife. On each of these articles a small loan charge is made, the amount varying with the value of the article.

The number of articles loaned from the Department was 505.

Convalescent Treatment

During the year 20 patients who were recommended by their private practitioners were sent for periods of convalescence. Each case was assessed by the Home Help Organiser and a proportion of the cost was recovered. The City Council does not accept liability for convalescent treatment of patients receiving treatment under Part II of the Act.

Health Education

The City Council contributes to the funds of the Central Council for Health Education, who provide posters, literature, etc., for circulation in the clinics, welfare centres, etc. It must be pointed out, however, that the personal approach is of most value. The Health Visitors and Sanitary Inspectors in their daily work are really health educationalists. They can see what the housewife or food handler is doing wrong and put them on the right lines. I am not greatly in favour of health lectures; these have a very definite place where the Sanitary Inspector gives talks to a group of food handlers, e.g., Butchers' Association, but as regards the general public, it is very difficult to get those most needing instruction to attend lectures.

HOME HELP SERVICE

The Home Help Service continued to provide assistance in the homes of many people who would otherwise have had to seek hospital or institutional care. The staff were always fully occupied and it was not always possible to provide all the help recipients would like. The need of the patient was always taken as the governing factor in allocating the amount of assistance.

At the end of the year 5 full-time and 41 part-time, equivalent to a total of 27 full-time Home Helps were employed. Help was given in 209 homes.

The special Sub-Committee dealing with cases where there was hardship, etc., in meeting the assessed charges continued to meet prior to the monthly meeting of the Health Committee. In 7 cases the charges were reduced or remitted.

MENTAL HEALTH SERVICES

The Mental Health Sub-Committee, consisting of eight members of the Council, one with special experience in Mental Deficiency, two co-opted members and three representative members, including two doctors, meet each quarter.

The general direction of the Service was in the hands of the Medical Officer of Health, who was assisted by:—

One Psychiatrist (Mental Illness) M.B., Ch.B., D.P.M. Part-time.	}	From Regional Hospital Board
One Psychiatrist (Mental Deficiency) L.R.C.P.E., etc., Part-time.		
One Psychiatric Social Worker, Part-time.		
One Assistant Medical Officer of Health, M.B., Ch.B., D.P.H.		
One Educational Psychologist, M.A., Ed. B.		
One Mental Health Worker — M.A., Social Science Diploma. This Officer also acted as Duly Authorised Officer.		
One Supervisor for Occupation Centre—at present employed as home teacher.		
Three selected men from Ambulance Service continued to act as Duly Authorised Officers.		

As indicated above, the Psychiatrists and Psychiatric Social Worker are Regional Hospital Board personnel. Close liaison existed between the staffs and the follow up of patients on licence was undertaken. No duties are undertaken by voluntary associations.

At present there are no arrangements for the training of Mental Health Workers.

Mental Illness

During the year the duly authorised officers dealt with 103 patients as shown in Table 27.

TABLE 27

(1) No. who consented to go as voluntary patients ...	62
(2) No. who were admitted on a Three Day Order ...	4
(3) No. dealt with by Summary Reception Orders (including 3 cases shown in (2) above) ...	32
(4) No. who were admitted as temporary patients ...	2
(5) No. considered unsuitable for admission to a Mental Hospital ...	6

Mental Deficiency

Table 28 shows details of cases reported during 1951 and the action taken.

TABLE 28

1. ASCERTAINMENT.	Male.	Female.	Total.
(a) Cases reported by Local Education Authority under Section 57 Education Act, 1944.			
(1) Subsection 3—Ineducable Children	1	1	2
(2) Subsection 5—In need of Supervision on leaving School	4	9	13
(b) Other defectives found to be "subject to be dealt with"	1	1	2
TOTAL NUMBER OF CASES REPORTED	6	11	17

2. DISPOSAL OF CASES REPORTED DURING YEAR.

(a) Ascertained defectives found to be "subject to be dealt with"—			
(1) Admitted to Hospitals...	—	—	—
(2) Placed under Guardianship	—	—	—
(3) Placed under Statutory Supervision	3	7	10
(4) Action not yet taken ...	3	4	7
	6	11	17

Table 29 gives particulars of the total ascertained mental defectives as at the 31st December, 1951:

TABLE 29

	Male.	Female.	Total.
(1) In Hospitals (including cases on licence therefrom)			
Under 16 years of age ...	10	5	15
Aged 16 years and over ...	39	41	80

	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
(2) Under Guardianship.			
Under 16 years of age ...	—	—	—
Aged 16 years and over ...	3	6	9
(3) Under Statutory Supervision			
Under 16 years of age ...	4	8	12
Aged 16 years and over ...	39	21	60
(4) Action not yet taken ...	3	4	7
TOTAL	98	85	183

No. of cases included in (2) to (4) above awaiting hospital treatment	2	5	7
--	---	---	---

No. of Mental Defectives not at present subject to be dealt with but over whom some form of voluntary supervision is maintained

Under 16 years of age ...	3	1	4
Aged 16 years and over ...	8	18	26
	11	19	30

The Mental Health Worker paid 245 visits during the year and 84 home circumstances reports were supplied to Hospital Authorities in respect of patients on licence, contemplated licence or holiday.

Occupational Treatment

Towards the end of the year, work was commenced on the adaptations of the building at Kingstown which is to be used as the Occupation Centre. The Supervisor continued to act as Home Teacher and has given instruction to 19 patients. At the time of writing the Centre is in operation.

SECTION VI.

GENERAL PROVISION OF HEALTH SERVICES, ETC.

SECTION VII.

CENTRAL PROVISION OF HEALTH SERVICES, ETC.

GENERAL PROVISION OF HEALTH SERVICES, ETC.

HOSPITALS

The hospitals used by the inhabitants of the area were:—

General Hospitals.

Cumberland Infirmary.

City General Hospital.

Maternity Hospitals.

City Maternity Hospital.

City Maternity Home.

Infectious Diseases Hospitals.

Isolation Block, Cumberland Infirmary, Carlisle.

Tuberculosis.

Blencathra Sanatorium, Threlkeld.

Pavilions, City General Hospital, Carlisle.

Isolation Block, Cumberland Infirmary, Carlisle.

Robert Jones and Agnes Hunt Orthopaedic Hospital,
Oswestry.

Stannington Sanatorium.

Shotley Bridge Hospital.

Ellerbeck I.D.H.

Meathop Sanatorium.

Ormside Sanatorium.

Longtown Sanatorium.

Mental Hospitals.

Garlands Mental Hospital (Mental Illness).

Dovenby Hall Hospital (Mental Defectives).

Other Hospitals for the Sick and Convalescent.

Border Counties Home for Incurables, Strathclyde House.

Cumberland & Westmorland Convalescent Institution,
Silloth.

In special circumstances patients are taken to Hospitals in Newcastle, Edinburgh or Glasgow for treatment.

The position regarding beds for the chronic sick did not improve throughout the year.

PUBLIC HEALTH LABORATORY SERVICE

The work was carried out at the Laboratory of the Cumberland Infirmary under the direction of Dr. J. Steven Faulds and close liaison is maintained with the Laboratory especially in the investigation and control of epidemic disease.

PUBLIC ANALYST SERVICE

Cyril J. H. Stock, Esq., B.Sc., F.I.C., etc., of Darlington, is Public Analyst to the Council, and samples of water, foods, etc., were examined at his laboratory.

REGISTRATION OF NURSING HOMES

There were no new registrations during the year. The number of homes at the end of the year was 3, and these were periodically inspected and conditions generally were found to be satisfactory.

NATIONAL ASSISTANCE ACT, 1948

A separate Committee, the Welfare Services Committee is responsible for the provision of services under this Act. The Medical Officer of Health is the chief officer of the Welfare Services Committee and is assisted by a part-time Administrative Assistant (Welfare Services) Mr. Davidson, who also holds the post of Superintendent Registrar. During the year under review still greater calls on the services of the Health Department staff had to be made in order to facilitate the working of the Welfare Section. It is obvious that in the near future a closer integration of the two staffs will be necessary in the interests of efficiency and possibly economy.

During the year no action was taken under Section 47 of the National Assistance Act (this section deals with the compulsory removal of persons incapable of looking after themselves).

The Committee maintains Barn Close, Stanwix, an Eventide Home which can accommodate 23 ladies. During the year Lime House, Wetheral, which can accommodate a total of 39 aged and handicapped persons (male and female) was opened. The Council still maintains some persons in Part III Accommodation provided by other Authorities.

SECTION VII.

ANNUAL REPORT OF THE CHIEF SANITARY INSPECTOR

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ANNUAL REPORT
OF THE
CHIEF SANITARY INSPECTOR,
ERNEST BOADEN, A.M.I.San.E.

GENERAL OBSERVATIONS.

In presenting this, my first annual report upon the sanitary inspection of the City for the year 1951, I wish to emphasise that the information contained therein illustrates the work carried out, not by an individual, but by the combined efforts of a team consisting of Assistant Inspectors, Food Inspectors, Abattoir and Lodging House Managers and other staff, both technical and clerical, by whose loyalty and industry, supported by the encouragement and advice of the Medical Officer of Health, I am able to record a year of satisfactory progress.

This has been a year of taking stock preparatory to introducing such changes as it is thought will lead to improved efficiency in the Department, and in order to cope first with the extra work which will result from the Boundary Extensions, and second, the additional demands on the service resulting from the rapid changes that are taking place in our way of living. Authority was obtained to increase, by one, the establishment of Sanitary Inspectors. This new appointment will be made during 1952, and at the same time the district system of inspection will be introduced whereby it is expected, inter alia, that a lot of the unproductive travelling time, unavoidable under the present system, will be eliminated.

Whilst the number of solicited calls on the Sanitary Inspectors has remained fairly high, some effort has been made to clear up the arrears of unabated notices. A hardening of the Department's attitude towards outstanding notices was called for, with satisfactory results.

The problem of unsewered houses, which has been virtually non-existent for this Authority for many years, re-appeared in April, when a number of such premises were added to the City as a result of the Boundary Extensions. Negotiations have already been opened up in respect of some of these dwellings in order to effect an improvement to the existing conditions.

It is unfortunate that, owing to the shortage of suitable alternative housing accommodation, the Public Health Act is having to be used as a palliative to secure the abatement of nuisances in insanitary properties which should more properly be dealt with under the provisions of the Housing Acts. The aim of

this Department is to secure, as far as is practicable, the maximum of comfort for the tenant, together with the minimum of hardship for the owner. This has necessitated a good deal of personal contact between my staff and the persons concerned, but in these times of low incomes and high costs of repair, something more than the cold, inflexible official approach is called for, and it is thought to be time well spent. As a result, it has not been found necessary to institute any prosecution for non-abatement of sanitary nuisances, nor to carry out any work in default during the year.

Renewal of registration for two common lodging-houses was refused at the beginning of the year, and there are now only two such houses in the City, one of which is municipally owned and controlled.

Some special attention has been given to premises in which food is handled, but it must be remembered that whilst increased publicity has been given to such work in recent years, these duties constitute only one of the many aspects of environmental hygiene. Neither this, nor any other, for the time being, popular facet of public health work should be allowed unduly to upset the aim of the sanitarian which is not to jump from one fancied emergency to the next, but rather to pursue a properly balanced, progressively steady aim towards generally improved conditions. Credit must be given to a number of traders who have voluntarily improved their premises, and patience extended towards those who, though wishing to do so, are temporarily prevented because of shortages in certain preferred materials.

There has been a considerable increase in the number of registered retailers of ice-cream and iced lollies. Although there may be a little additional handling involved in the wrapping of ice-cream it is usual for it to be done under the best of conditions, and consequently applicants have been encouraged to sell the pre-wrapped article. Some 78 per cent. of the total number of registered vendors in the City deal exclusively in pre-wrapped ice-cream.

The bacterial standard of some locally manufactured ice-cream was for a time somewhat disappointing. This was confined to two manufacturers. It would appear that the installation of elaborate plant is by no means the complete answer to cleanliness, there being a tendency for some operators to be misled by the attractive appearance of the stainless steel into becoming less thorough in their work. In the two cases above mentioned, much trouble was experienced until it was found that the owners were unaware that certain parts of the apparatus could be dismantled. Since

this has been demonstrated to them there has been no further trouble. It would be well for the manufacturers of such plant to explain these details to their customers.

Two successful prosecutions were brought under the Food and Drugs Act during the year.

There has been an improvement in the standard of Tuberculin Tested milk examined for cleanliness, a class of milk which has never been particularly noteworthy for its keeping quality. This improvement is attributed largely to the fact that the two largest dairies in the City now pasteurise all milk passing through their hands with the exception of a very small quantity from Channel Island cows. This is not the proper solution to the problem which still remains at the place and time of production. It cannot, therefore, be said that the transfer of the responsibility for the supervision of the producer, from local authorities to the Ministry of Agriculture and Fisheries has, in this respect, been a successful move.

The total number of animals slaughtered at the Public Abattoir remains fairly constant whilst the number of pigs slaughtered at the Bacon Factory has now reached the record figure of over 104,000. It is felt that the throughput at the Bacon Factory has now come to the stage where an additional Inspector will have to be employed if a satisfactory standard of meat inspection is to be maintained. Apparently it is impracticable to spread the load evenly throughout the week and at the peak periods the resources and energy of the Inspector on duty must indeed be strained. This increased demand on the time of the two Meat Inspectors has confined them to their own particular duties and they cannot therefore be considered available for general sanitary work even in times of emergency.

Conversely to switch Inspectors away from their routine duties to undertake relief work at the Bacon Factory upsets the whole rhythm of the Department.

A good deal of indiscriminate tipping on waste land and particularly in some of the small streams and water ditches in the area has been observed during the year. This consists largely of garden refuse and discarded metal such as bed ends, cycle frames, perambulator chassis, etc. There appears to be a common belief that such articles will not be collected along with more usual refuse. If this idea could be dispelled and the public encouraged to place everything out for collection in the normal way, it would not only promote greater tidiness throughout the town, but would probably be less expensive in the long run. As it is, special clearing up has to be organised from

time to time on these unofficial dumps, at a cost far greater than would obtain in the normal course of routine collection.

It is a matter for regret that adequate hand washing facilities, with running hot and cold water is not provided for the children in all of our schools. These children are the food handlers of the future and it is at this age, when the mind is young and receptive, that lasting good habits are developed. Talks to the children on the subject of personal hygiene have been considered, but it would be pointless to do so, so long as the essential facilities are absent.

The work of the sanitarian becomes less straightforward as the years pass. No longer are the dangers to public health obvious dangers capable of easy demonstration. The open sewer, the privy midden, the filth and squalor so often associated with ignorance and abject poverty are, in the main, things of the past. We are now campaigning against the unseen rather than the seen.

There is no house, for example, in Carlisle, the condition of which is likely seriously to affect the health of its occupants in a matter of weeks or months or even in a year. There are, however, houses the effect of which upon the physical and mental well being of the tenants is such as to represent a real danger to health over a number of years. This fact would be of less immediate importance were the problem in its infancy, but houses of this type were occupied in 1939 and before, and they are still occupied to-day, very often by the same families—a period of more than thirteen years. This must surely be approaching the breaking point in both the physical resistance and the patience of these occupants.

On the matter of food handling, a greater degree of subtlety is now required in the approach to the problem. It is again becoming a question of the unseen rather than the seen. There are very few, if any, food premises in which dirty conditions are obvious either in the public or private parts of the establishment. Nevertheless, it is by no means certain that as yet a sufficient number of food handlers appreciate the significance between clean food and safe food. There are still too many instances apparent to the trained and experienced eye of practices being carried out which constitute a real danger to health even in premises which to all intents and purposes, appear impeccable.

The fight is now against the individual who considers the cry "danger of food poisoning," and the need for something better than visual cleanliness to be a bogey existing only in the mind of the Sanitary Inspector or mere frills thought up by him in order to inflate his own importance.

WATER SUPPLY.

During the year 11 samples of water were obtained for chemical analysis and bacteriological examination. Eight were taken from the City's mains and 3 from private sources.

Three samples were taken from a private well attached to a house in the Harraby Green district. The Bacteriologist reported adversely in each case. This house had been on the list under fairly high priority for future slum clearance action. The position was explained to the owner who agreed to put the house out of use for human habitation. The tenant was forthwith re-housed.

RIVER POLLUTION.

Inspections of the water courses in the district were carried out from time to time by the Sanitary Inspectors. The majority of nuisances arose as a result of improper dumping of refuse by the public. In a number of cases, streams and ditches were found to be overgrown, but as this is a matter of interference with the natural flow of the stream and consequent drainage of the surrounding land, it could more properly be dealt with under the Land Drainage Act, and such cases were referred to the City Engineer.

One factory on a new industrial site, as yet unsewered, consulted this Department regarding the discharge of its trade waste into an open ditch. After discussions with the works chemist, a suggested treatment of the effluent was agreed and tried for an experimental period of three months. Modifications were then made to the method of treating the waste and a further experimental period of three months is now in progress.

DRAINAGE AND SEWERAGE.

There have been 418 inspections in respect of drainage defects and reconstruction. New drainage was provided at 76 premises and reconstructed at 34 premises. Seven new sinks were provided in dwelling-houses.

CLOSET ACCOMMODATION.

The question of the conversion of dry types of closets to water closets is one which has not arisen in Carlisle for many years as, with the exception of a mere handful of houses so sited as to be impossible of connection to the sewers, the whole of the City is on the water carriage system. These very few houses are mostly scheduled for future action under the Housing Acts. With the extension of the City Boundaries in April, a number of houses with dry closets came into the area. Most of them are isolated buildings which would be impracticable to connect to a sewer, and for these the best possible conservancy system is all that can be done. Wherever there is any possibility of premises being connected to the water carriage system, the matter is being investigated.

STORAGE OF HOUSEHOLD REFUSE.

The control on the use of zinc continues and until galvanised dustbins are once more available in quantity, the Council's scheme for providing bins under Section 75 (3), Public Health Act, 1936, as a public service chargeable to the general rate fund, will probably remain in abeyance. One midden ashpit has been abolished and a pail closet and ashbin provided.

COMMON LODGING HOUSES.

During the year two common lodging houses were refused re-registration and the number in the City consequently fell to two, one of which, Lowther House, is municipally owned and managed. Regular visits are made by members of the Health Committee. Radio has recently been installed and recreational games provided, whilst considerable purchases of bedding have replenished a stock which had become depleted owing to the supply position.

The one private lodging house is well conducted and caters more for residents of long standing than for casual visitors. Twenty-three inspections were made of these premises.

The available accommodation is as follows:—

<i>Situation.</i>	<i>No. of Beds.</i>	<i>Accommodation available for.</i>
Lowther House	84	Males only.
Lindisfarne Street	17	Males only.
Total No. of beds	101	

TENTS, VANS AND SHEDS.

There is no permanent problem regarding mobile dwellings in the City. Very occasionally one appears for a few days and then passes on. There are, however, several temporary dwellings at Greymoorhill which should be demolished at the earliest practicable time.

The four licensed living-vans at the Sands are occupied by show people and are structurally, and in their maintenance, of a very high standard.

STABLE PREMISES.

Eight stables were inspected during the year. There are still several small stables situated in congested areas just off the City centre, and in fairly close proximity to dwelling-houses. The tendency is for these to decrease in number as the horse is sup-

planted by the motor car. The employment of horses is now almost exclusive to the retail milk delivery business and the itinerant dealer in rags, sacks, and other readily salvageable materials. Regular inspections are made for cleanliness and to ensure the frequent removal of manure.

RODENT CONTROL.

Two full-time Rodent Operators were appointed in June of this year. Their first task was an investigation to ascertain the situation and extent of any rat infestations which might exist within the City. Only one major infestation was revealed. The building up of an efficient organisation has been pursued with vigour, properly organised sewer and surface treatments have regularly taken place on Corporation owned property.

The service has been introduced to a good number of the business houses in the City and has had a good reception. With very few exceptions and only then when the firm is already under contract with one of the private rat extermination organisations, the services of this Department have been readily sought and much satisfaction at the results has been expressed.

Rarely are individual premises treated, the block system or a modification thereof usually being employed. Ten such areas comprising 326 separate premises were dealt with during the six months in which the service has operated. One major and 42 minor infestations by rats and 15 small infestations by mice were discovered and treated.

Surface Treatments.

Complaints or reports received and investigated 189

	<i>Dwelling Houses.</i>	<i>Business Premises.</i>	<i>Local Authority Premises.</i>	<i>Agri- cultural Properties.</i>
Premises inspected for presence of rats or mice	323	208	18	3
Premises in which evidence of the presence of rats or mice was found.	153	83	18	3
Visits of inspection and treatment.	1009	913	211	15

Number of pre-bait, test and post baits laid 7,241

Number of poison baits laid ... 1,886

Total baits laid, sewer and surface ... 11,886

No attempt has been made to estimate the number of rats destroyed. To give a figure would be purely speculative and would have no real value.

Sewer Treatments.

Two maintenance treatments concentrating on the older portions of the City's sewers were carried out, the first during the months of July and August, and the second in November. A percentage of test baiting of the outlying sewers was also undertaken to ascertain the movements, if any, of the colonies.

Number of pre-baits laid	...	...	2029
Number of poison baits laid	...	...	730

SMOKE ABATEMENT.

Whilst Carlisle does not suffer from a smoke laden atmosphere to the extent of the more highly industrialised towns, there is still room for improvement. It would seem to be more than ever necessary for industrial users of solid fuels to adapt their existing boiler plants and train their firemen so as to be able to handle the inferior fuels which are now apparently their main source of supply, in an economic and efficient manner.

Domestic chimneys are still by far the main cause of atmospheric pollution and the present policy of installing approved smokeless firegrates in all Council houses is a definite step forward in the right direction.

It is hoped, with the appointment of an additional Sanitary Inspector in 1952, to commence routine observations into atmospheric pollution in the City.

OFFENSIVE TRADES.

At the end of the year there were 6 registered offensive trades within the City, and these have been conducted satisfactorily. Several dealers, taking advantage of the shortage of various articles set up from time to time as collectors of bags, rags, scrap metal, etc., and whilst their methods of conducting their business falls not far short of the offensive on occasions, they are not scheduled offensive trades and can only be dealt with under the Nuisance sections of the Public Health Act.

Number of inspections	...	...	45
Number of notices served	...	...	1

INFECTIOUS DISEASES.

One hundred and fifty-four visits were made by the Sanitary Inspectors for the purpose of inquiring into and control of, cases of infectious diseases. Disinfection is carried out by the Ambulance Officer.

CINEMAS, THEATRES, DANCE HALLS, ETC.

During the year 51 inspections were made of cinemas, etc., in the City. Close liaison has been established between this

Department and that of the Magistrates' Clerk, whereby any serious infringement of the regulations may be brought to the notice of the Magistrates at the time of application for renewal of licences.

No. of premises decorated	...	...	2
No. of premises modernised	...	...	2

PUBLIC CONVENIENCES.

The usual high standard of cleanliness in the public conveniences in Carlisle has been maintained. New types of soap dispensers were introduced in the underground lavatories as an experiment and have proved very satisfactory. Permission was obtained to erect signs indicating the location of the public conveniences in the vicinity of historical and other sites likely to be of interest to tourists and other visitors. Despite the increased cost of maintaining this service, it has not been thought good policy to advise any increases in the charges to the public. Personal hygiene is to be encouraged and very often the public lavatories are the only means open to street traders and those engaged in the delivery of foodstuffs to preserve the desired standard of cleanliness.

It has been observed that, in certain towns, one hand basin with cold water supply and paper towels is provided for public use free of charge. This is in addition to the usual facilities under the control of the attendant and is intended to encourage the habit of washing the hands after using the toilet.

SHOPS INSPECTED.

Eighty-four inspections were made under the provisions of the Shops Act, 1950, relating to hours of closing and welfare of the assistants. Three contraventions of the Act were found, which were the subject of three notices served.

FERTILISERS AND FEEDING STUFFS.

Eleven samples (7 fertilisers and 4 feeding stuffs) were taken during the year under the provisions of the Act of 1926. All these samples were certified by the Public Analyst to be genuine. The statutory statements in respect of 2 fertilisers were not readily available at one vendor's premises, nor had advantage been taken of the alternative provided by the Act that the articles may be marked in a prescribed manner and a register of such marks kept. A warning letter was sent, resulting in the immediate correction of the offence.

SANITARY INSPECTION OF THE DISTRICT.

1. Number and Nature of Inspections.

During the year 1951, the following inspections were made by the Sanitary Inspectors to the premises detailed:—

DWELLING HOUSES—Total Visits	...	1,458
Re Courts and Yards	...	64
„ Dustbins	...	5
„ Drain Inspections and Repairs	...	418
„ Drain Tests	...	8
„ Waterclosets	...	145
„ Sewers	...	12
„ Water Supply	...	13
„ Other structural defects	...	1,015
„ Dirty houses	...	66
Animals—poultry, etc.	...	28
Accumulations—offensive	...	69
Re Bugs (private houses)	...	26
„ Others (private houses)	...	48
Houses let in lodgings	...	12
Other nuisances	...	86

MISCELLANEOUS PREMISES.

Common lodging-houses	...	23
Tents, vans, sheds, fairs, etc.	...	31
Schools	...	18
Infectious diseases	...	154
Food poisoning (suspected)	...	17
Factories (mechanical)	...	110
Factories (non-mechanical)	...	104
Workplaces	...	24
Smoke observations	...	25
Visits to boiler plants	...	12
Cinemas and theatres	...	40
Premises licensed for singing and dancing	...	11
Dangerous structures	...	4
Other drainage inspections and repairs	...	36
Cowsheds	...	5
Dairies	...	61
Stables	...	8
Piggeries	...	15
Slaughterhouses	...	87
Bacon factory	...	12
Offensive trades	...	45
Public conveniences, etc.	...	129
Open spaces—tips, etc.	...	41
Swimming baths and pools	...	2
Watercourses	...	36

FOOD HANDLING AND PREPARATION PREMISES.

Re Ice-cream	...	92
Bakehouses	...	73
Fried fish shops	...	20

Butchers	...	...	...	227
Market stalls	...	...	...	301
Restaurants and cafes	...	...	...	151
Public houses, etc.	...	...	...	21
Street vendors, barrows, etc.	...	...	...	38
Other food premises	...	...	...	158
Meat preparation premises	...	...	...	88
Fertilisers and feeding stuffs	...	...	...	17
Agricultural produce—grading and marking	...	...	...	14
Pharmacy and Poisons Act	...	...	...	15
Shops Act, 1950	...	...	...	84
Merchandise Marks Act	...	...	...	101

SAMPLING.

Milk (bacteriological)	...	...	...	191
„ (chemical)	...	...	...	22
Water sampling (bacteriological)	...	...	...	6
„ „ (chemical)	...	...	...	5
Other sampling (bacteriological)	...	...	...	106
„ „ (chemical)	...	...	...	29
Food and Drugs Act sampling	...	...	...	35

MEAT AND FOOD INSPECTION.

At Slaughterhouse	...	...	...	824
„ Bacon Factory	...	...	...	360
„ Shops, etc.	...	...	...	357

HOUSING ACT, 1936.

Re Houses inspected and recorded	...	...	...	49
„ Repairs (Secs. 9, 10 and 16)	...	...	...	13
„ Demolitions (Secs. 11 and 13)	...	...	...	79
„ Closing (Sec. 12)	...	...	...	27
„ Visits in connection with Permitted Numbers	...	...	...	22
„ Overcrowding	...	...	...	18
„ Land Charges Forms	...	...	...	18

RODENT CONTROL—PESTS ACT, 1949.

At Dwelling-houses	...	...	...	109
„ Other premises	...	...	...	102
„ Tips, open spaces, etc.	...	...	...	7
„ Sewers, etc.	...	...	...	4
Rent Restriction Acts	...	...	...	1
Disinfestation (other than dwelling-houses)	...	...	...	3
Miscellaneous	...	...	...	374
Interviews	...	...	...	1,173
Cleansing Department	...	...	...	57
Tips, etc.	...	...	...	30
Salvage	...	...	...	8

2. Number of Notices Served.

To secure the abatement of nuisances and the removal of conditions prejudicial to health, the following action was taken:—

Number of Nuisances and Defects found	...	...	508
Number of Informal Notices served	...	...	302
Number of Informal Notices complied with	...	...	270
Number of Statutory Notices served	...	...	54
Number of Statutory Notices complied with	...	...	46

3. Complaints Received.

During the year 492 complaints were received relating to the following matters:—

Nature of Complaint.		Number.
General Disrepair—		
Defective	Fireplaces ...	6
„	Rainwater pipes ...	14
„	Windows ...	5
„	Chimneys ...	5
„	Doors ...	5
„	Plasterwork ...	21
„	Floors ...	9
„	Roofs ...	42
„	Eaves, Gutters ...	8
„	Sinks ...	8
Burst water pipes ...	...	2
Dampness ...	...	50
Defective waterclosets ...	...	21
Choked waterclosets ...	...	3
Choked drains ...	...	49
Flooding ...	...	8
Insufficient ashes accommodation	...	1
Defective ashbins ...	...	1
Accumulations ...	...	21
Dirty premises ...	...	12
Vermin ...	...	8
Foul and obnoxious odours	...	21
Water supply ...	...	2
Dangerous buildings ...	...	3
Smoke nuisances ...	...	8
Surface drainage ...	...	5
Overcrowding ...	...	3
Rats and mice ...	...	71
Factories ...	...	1
Housing ...	...	3
Insects, etc. ...	...	40
Miscellaneous ...	...	36

The following complaints were referred to other Corporation Departments:—

Miscellaneous	...	...	...	...	2
Removal of refuse	...	...	...	...	7
Choked drains	...	...	...	...	13
Choked street gullies	...	...	...	...	5
Dangerous structures	...	...	...	...	4
Defects to Corporation property	...	...	...	...	8
Offensive smells	...	...	...	...	5
Rats	...	...	...	...	3
Water supply	...	...	...	...	2
Housing	...	...	...	...	2
Vermin and insects	...	...	...	...	1
					<hr/> 52

4. Record of Nuisances Abated and Work Done.

During the year the total number of nuisances abated or defects remedied either as a result of informal or statutory action, was as follows:—

1. As a result of informal notice	...	...	270
2. As a result of statutory notice	...	...	46
			<hr/> 316

HOUSING.

The need for more housing accommodation is demonstrated daily. In some cases of occupation of houses by more than one family, the discontent must be extremely acute, as evidenced by the number of appeals received from families begging to be allowed to occupy condemned properties.

Along with the ever present problem of the further deterioration of near unfit dwelling-houses a new situation is being created in certain houses of good structure and position but which, by reason of their size, expense, or the fact that they are old fashioned in design and consequently more difficult to work and organise, are being let off in lodgings or converted so as to offer accommodation for certain types of mobile workers. These houses were originally designed for one family and are not suitable for multiple occupation. Probably the best solution for the future of such streets of houses would be for them to be converted into flats in a properly organised and planned manner. But, whilst they remain in the hands of many owners and until alternative accommodation would be available for the occupants during such alterations, the best method of dealing with them would appear to be to exercise some measure of control by means of byelaws in respect of houses let in lodgings as provided for by Section 6, Housing Act, 1936.

Overcrowding.

The acute housing shortage has prevented the strict application of the overcrowding provisions of the Housing Act. Without carrying out a complete survey it is impossible to compile statistics of overcrowding. The Housing Department have a list of applicants who are overcrowded, and to carry out a census would be a wasted effort owing to the fact that, as new houses are being built, overcrowded families are being re-housed under a system of priorities.

The Health Statistics relative to housing are as follows:—

Number of new houses erected in the Borough during the year:—

1.	Erected by the Local Authority.	Temporary	...	Nil
		Permanent	...	352
2.	Erected by other Persons, or bodies	...	...	29
3.	Houses Demolished	...	...	7

HOUSING STATISTICS.**Inspection of Dwelling-houses during the Year.**

1.	(a) Total number of dwelling-houses inspected for housing defects (under the Public Health or Housing Acts)	...	...	...	442
	(b) Number of inspections made for the purpose	...	...	...	1,627
2.	(a) Number of dwelling-houses (included under Sub-head 1 (a) above) which were inspected and recorded under the Housing Consolidated Regulations, 1926	...	...	...	12
	(b) Number of inspections made for the purpose	...	...	...	40
3.	Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	...	12
4.	Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	...	...	...	120

Remedy of Defects during the Year without Service of Formal Notices.

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers	...	...	...	94
Number of back-to-back houses made into through houses	...	...	...	Nil
Number of houses demolished	...	...	...	Nil

Action under Statutory Powers during the Year.**A. Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936:—**

- | | | | |
|--|-----|-----|-----|
| 1. Number of dwelling-houses in respect of which notices were served requiring repairs | ... | ... | Nil |
| 2. Number of dwelling-houses which were rendered fit after service of formal notices:— | | | |
| (a) by owners | ... | ... | Nil |
| (b) by Local Authority in default of owners | ... | ... | Nil |

B. Proceedings under Public Health Acts:—

- | | | |
|---|-----|-----|
| 1. Number of dwelling-houses in respect of which notices were served requiring defects to be remedied | ... | 54 |
| 2. Number of dwelling-houses in which defects were remedied after service of formal notices:— | | |
| (a) by owners | ... | 46 |
| (b) by Local Authority in default of owners | ... | Nil |

C. Proceedings under Sections 11 and 13 of the Housing Act, 1936:—

- | | | |
|--|-----|---|
| 1. Number of dwelling-houses in respect of which Demolition Orders were made | ... | 8 |
| 2. Number of dwelling-houses demolished in pursuance of Demolition Orders | ... | 7 |
| 3. Number of dwelling-houses in respect of which an undertaking was accepted under Sub-Section (2) of Section 11 | ... | 2 |

D. Proceedings under Section 12 of the Housing Act, 1936:—

- | | | |
|--|-----|----|
| 1. Number of separate tenements or underground rooms in respect of which Closing Orders were made | ... | 3 |
| 2. Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit | ... | 10 |

FACTORIES ACTS, 1937 and 1948.

1. Inspections for purposes of provisions as to health (including inspections made by Sanitary Inspectors).

PREMISES.	Number on Register.	NUMBER OF		Occupiers Prosecuted.
		Inspections.	Written Notices.	
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authority.	109	83	8	—
(ii) Factories not included in (i) in which Sec. 7 is enforced by the Local Authority.	322	109	4	—
(iii) Other Premises in which Section 7 is enforced by the Local Authority.	6	2	2	—
TOTAL	437	194	14	—

2. Cases in which defects were found.

PARTICULARS.	Number of cases in which defects were found.				Number of cases in which prosecutions were Instituted.
	Found.	Remedied.	Referred		
			to H.M. Inspec.	by H.M. Inspec.	
Want of Cleanliness (Sec. 1)	4	3	—	1	—
Overcrowding (Sec. 2) ...	—	—	—	—	—
Unreasonable Temp. (Sec. 3)	2	2	—	1	—
Inadequate Ventilation (Sec. 4)	—	—	—	—	—
Insufficient Drainage (Sec. 6)	—	—	—	—	—
Sanitary Conveniences (Sec. 7)					
(a) Insufficient ...	2	2	—	—	—
(b) Unsuitable or defective	4	2	—	4	—
(c) Not separate for sexes	1	1	—	2	—
Other offences against Act (not including offences relating to Outwork)	1	1	3	—	—
TOTAL	14	11	3	8	—

OUTWORKERS.

There was 1 outworker registered within the City engaged in the making of knitwear.

INSPECTION AND SUPERVISION OF FOOD.**MILK SUPPLY.**

Carlisle is relatively fortunate in its retail milk supply insofar that almost the entire distribution is in the hands of two large dairies, both of which are modern in design, extremely well equipped and satisfactorily managed. Supplies come to them from innumerable producers by way of a complicated system involving the Ministry of Food and the Milk Marketing Board. All producers are not of the same standard either in the cleanliness or quality of their milk and as the dairy is responsible for the milk on both these counts, once it has been bulked, it will be realised that they carry a great responsibility. For their own protection these dairies have set up laboratories wherein regular daily tests are carried out in order to weed out, so far as is possible, milk which is below standard in either butter fat content or keeping quality. The souring of milk is very often accelerated by the conditions under which it is kept by the purchaser. All milk passing through these dairies is pasteurised with the exception of a very small quantity produced from Channel Island cows. There are, in addition to the above, 3 retailers of Tuberculin Tested Milk and 2 retailers of Undesignated Milk in the City.

Milk and Dairies Regulations, 1949.

No. of milk distributors on the Register ...	...	10
No. of Dairies on the Register ...	...	5

The Milk (Special Designations) (Raw Milk) Regulations, 1949.

No. of Dealers licensed to use the designation		
“ Tuberculin Tested ” ...	...	9

The Milk (Special Designations) (Pasteurised and Sterilised) Regulations, 1949.

No. of Dealers (Pasteurisers) licences ...	...	5
No. of Dealers licensed to use the designation		
Pasteurised ...	...	18

400 samples of milk were submitted for bacteriological examination. 388 were samples of designated milk, and of these 70 failed to pass the tests prescribed by the Milk (Special Designations) Regulations 1936-49. Twelve undesignated milks were also submitted and 6 were found to be unsatisfactory.

The following tables give the information in detail:—

HEAT TREATED MILK.

DESIGNATION.	No. of Samples.	PASSED.		FAILED.		Unsatis. Samples Percentage.	
		Meth. Blue.	Phos.	Meth. Blue.	Phos.	Meth. Blue.	Phos.
T.T. Pasteurised	92	86	90	6	2	6.5%	2.1%
T.T. Pasteurised (School)	27	27	27	—	—	—	—
Pasteurised	119	110	114	9	5	7.5%	4.2%
Pasteurised (School)	26	26	25	—	1	—	3.8%
TOTAL	317	249	256	15	8	4.7%	2.5%

All the samples taken were not submitted to both the Methylene Blue and Phosphatase Tests as in some instances the overnight atmospheric shade temperature exceeded 65° F.

MILK OTHER THAN HEAT TREATED.

DESIGNATION.	No. of Samples.	PASSED. Meth. Blue.	FAILED. Meth. Blue.	Unsatisfactory Samples Percentage.
Tuberculin Tested	101	68	33	32%
Accredited ...	23	9	14	60%
Undesignated ...	12	6	6	50%
TOTALS	136	83	53	39%

Of the number of unsatisfactory samples of unpasteurised milks, 43 were from 4 producers whose place of production was outside the City. Notification of these results and requests for investigation were made to the County Milk Production Officer.

Examination for Tubercle Bacilli.

Thirty-one samples of milk were submitted for biological examination. None was positive.

The yearly quantities of milk dealt with and sold in the City are as follows:—

	<i>Dealt With.</i>		<i>Sold.</i>	
	<i>Gallons.</i>		<i>Gallons.</i>	
Tuberculin Tested	...	2,358,801	...	127,076
T.T. (Pasteurised)	...	689,128	...	122,554
Pasteurised	...	2,941,842	...	1,435,513
Undesignated	...	9,439,268	...	2,392
TOTAL		15,429,039		1,687,535

61,250 gallons of Pasteurised Milk included in the above are supplied to Schools and School Canteens.

92.3% of all milk consumed is Heat Treated.

INSPECTION OF FOOD PREMISES.

During the year 227 inspections were made of meat shops, 259 of food preparing premises, 459 of general food premises, and 73 of bakehouses.

Three hundred and fifty-eight informal notices were served and 135 complied with. Two formal notices served were both complied with.

In approaching the problem of raising the standard of hygiene in food handling, it was decided to start a campaign from the very rock bottom. Staffs of the School Meals Service and industrial canteens were given talks and film displays dealing with the various aspects of their work. The local food traders' organisations were approached and arrangements made for members of the staff of this Department to give lectures and talks in which was explained the growing public demand for better food handling, the modern techniques to be employed, the equipment now available and the standard that would be expected of them when the systematic inspection of their premises commenced in the fairly near future. Contact was established with the specialist firms of shopfitters, refrigeration and cooking equipment so that recommendations could be made of approved materials of which supplies were available.

Recommendations were made to other Departments of the Corporation having control of premises in which food handling takes place, and considerable improvements have been approved for the covered market, whilst the standard of cleanliness at the school canteens remains commendably high.

One unsatisfactory cafe was closed, and the sale of ice-cream from street barrows has ceased.

Towards the end of the year the systematic inspection of all food handling premises was commenced, and the results should begin to show early in 1952. One meat preparing room was re-constructed in what was virtually a derelict building, and is being used with considerable effect as a practical illustration to other butchers as to what can be done from a very humble beginning.

MERCHANDISE MARKS ACT.

The suspension of the provisions of the various Orders made under the above Acts which has obtained since the beginning of the war were in the main removed during the early part of the year. The attention of shopkeepers is being drawn to this during the routine visits paid to food shops. Special attention is paid to greengrocers, for example, during the transition from imported to home-grown produce in the spring.

ICE-CREAM PREMISES.

There would appear to be a tendency for the smaller manufacturer of ice-cream to drop out of business in favour of the larger producer, and for the retailer to deal in the pre-packed article in preference to the bulked supply. On the whole this is a move in the right direction, for whilst it is not impossible for the more humble manufacturer to produce an article of first-class quality in every way, the greater resources of the larger organisations enable them to set up laboratories and employ technicians outside the capacity of the smaller concern. The itinerant dealer has disappeared from the streets of Carlisle. There has been a considerable increase in the manufacture of iced lollies, and anyone with a freezer, a quantity of flavouring and a water supply can produce this confection. Grave warnings have been expressed from time to time of the possible consequence which might arise from this industry over which there is so little control.

The following table indicates the number of ice-cream premises registered at December, 1951.

Number of Wholesale Manufacturers...	6
Number of Manufacturing Retailers ...	19
Number of Retail Vendors ...	126

In the case of retailers, 99 or 78% deal exclusively in the pre-packed article.

92 visits were made to premises concerned.

Details of samples taken during the year are as follows:—

BACTERIOLOGICAL RESULTS.

No. of Samples of Ice-cream.	Methylene Blue.		B. Coli.		Ministry of Health Provisional Grades.			
	Sat.	Unsat.	Sat.	Unsat.	1	2	3	4
101	58	43	56	45	46	12	11	32

CHEMICAL ANALYSIS.

Twenty-five samples of ice-cream, 3 formal and 22 informal, were submitted to the Public Analyst. Of the informal samples, fifteen were certified as genuine, and seven as having fat content below the minimum standard. Two formal samples were found to be genuine and one below the minimum in fat content.

The fat content varied from 1.13% to 11.61%, the average being 6.35%.

INSPECTION OF OTHER FOODS.

The following table shows the amount of food declared to be unfit for human consumption during 1951.

	T.	C.	Q.	lbs.	T.	C.	Q.	lbs.
Meat and Meat Products	—	4	2	16				
Fish and Poultry ...	—	6	—	2				
Canned Meat ...	1	14	3	7				
Flour and Cereals ...	—	8	1	23				
Vegetables ...	2	15	3	—				
Miscellaneous ...	1	17	1	2				
TOTAL					7	6	3	22

Other Canned Foods: 4,001 cans.

MEAT INSPECTION.

The following tables give the number of animals killed annually during the past three years:—

PUBLIC ABATTOIR.

Year.	Cattle.	Sheep and Lambs.	Calves.	Pigs.	Total.
1949	3,983	17,573	2,456	187	24,199
1950	5,060	17,282	3,106	398	25,846
1951	5,600	14,954	2,332	904	23,790

HARRABY BACON FACTORY.

1949	—	—	—	88,053	88,053
1950	—	—	—	98,479	98,479
1951	—	—	—	104,120	104,120

Amount of Imported Meat received at W.M.S.A. Depot at the Abattoir during 1951:—

Meat Cases.	Quarters of Beef.	Carcases of Mutton and Lamb.	Carcases of Pork.	Boxes and Bags of Offal.	Calves.	Bags of Meat.
2,881	2,371	16,933	917 sides	820	5	220

Number of carcasses examined at the Abattoir requiring special attention: 2672, of which number 750 were affected with tuberculosis in varying degree.

Fifteen cases were suspected to be affected with localised cysticercus bovis. These carcasses were subjected to cold storage treatment under the direction of the Ministry of Food after the infected organs had been condemned as being unfit for human consumption.

PUBLIC SLAUGHTERHOUSES.

Carcasses Inspected including those Condemned.

	Cattle excluding Cows.	Cows.	Calves.	Sheep and Lambs.	Pigs.
Number killed	3173	2427	2332	14954	904
Number inspected ...	3173	2427	2332	14954	904
ALL DISEASES EXCEPT TUBERCULOSIS.					
Whole carcasses con- demned ...	28	109	368	196	12
Carcase of which some part or organ was con- demned ...	1474	1760	16	1855	184
Percentage of the num- ber inspected affected with disease other than tuberculosis ...	47.3	76.5	16.4	13.7	21.6
TUBERCULOSIS ONLY.					
Whole carcase con- demned ...	16	50	6	—	2
Carcase of which some part or organ was con- demned ...	202	421	—	—	46
Percentage of the num- ber inspected affected with tuberculosis ...	6.8	19.4	.25	—	5.3

Table showing number of Carcases and Part Carcases condemned for diseases other than Tuberculosis.

DISEASE OR CONDITION	Unfit for Food.							
	Whole Carcases.				Part Carcases.			
	Cattle.	Sheep.	Pigs.	Calves.	Cattle.	Sheep.	Pigs.	Calves.
Abscesses and Suppurative Conditions	4	1	—	—	6	12	2	1
Actinomycosis	2	—	—	—	3	—	—	—
Arthritis, Atrophy	3	15	3	—	3	43	9	—
Cancer	—	1	—	1	—	—	—	—
Enteritis	1	—	—	2	—	—	—	—
Emaciation	35	25	1	—	12	—	—	5
Extensive Injuries	8	12	—	—	138	—	—	—
Fevered and Ill-Set	11	22	—	5	—	1	—	—
Gangrene	2	4	—	—	—	—	—	—
Immaturity	—	—	—	123	—	—	—	—
Inflammatory diseases:—								
Pneumonia, Pleurisy, etc.	1	7	1	7	6	30	1	—
Jaundice	2	—	—	9	—	—	—	—
Johne's Disease	19	—	—	—	—	—	—	—
Malnutrition	12	30	3	180	—	—	—	—
Mastitis	—	—	—	—	10	5	4	—
Moribund	3	10	—	2	—	—	—	—
Nephritis	—	1	—	2	—	—	—	—
Oedema	14	35	—	9	4	13	—	—
Parasitic Mange	—	—	—	1	—	—	—	—
Post-mortem putrefaction ...	1	25	—	—	—	3	1	—
Pyæmia, Joint Ill, Navel Ill	—	—	1	23	—	—	—	—
Sæpraemia	2	—	—	—	—	—	—	—
Septic Pericarditis	5	—	—	—	—	—	—	—
Septic Metritis	3	1	—	—	—	—	—	—
Septic Peritonitis	7	4	2	1	—	—	—	—
Septicæmia	1	—	—	—	—	—	—	—
Traumatic Pericarditis	1	—	—	1	—	—	—	—
Toxaemia	—	3	—	—	—	—	—	—
Uraemia	—	—	1	—	—	—	—	—
Urticaria	—	—	—	—	—	—	1	—
White Scour	—	—	—	2	—	—	—	—
Whole Carcases	137	196	12	368				
Part Carcases					182	107	18	6

DISEASED AND UNSOUND FOOD

The following table shows the amount of food declared to be unfit for human consumption during 1951.

PUBLIC SLAUGHTERHOUSES.

			T.	C.	Qrs.	lbs.				
Beef	...	...	38	7	—	1				
„	Offals	...	39	17	3	6				
Mutton	...	...	3	16	1	1				
„	Offals	...	2	14	—	13				
Veal	...	...	5	16	—	4				
„	Offals	...	2	7	—	26				
Pork	...	...	1	2	1	25				
„	Offals	...	—	10	2	10				
Imported Meat	...	...	—	—	2	13				
„	Offals	...	—	—	—	—				
Corned Beef	...	...	—	1	2	7	T.	C.	Q.	lbs.
							94	13	2	22

HARRABY BACON FACTORY.

Pork	...	...	9	13	1	7				
Offals	...	...	8	11	—	—				
							18	4	1	7

Tuberculosis Order.

One cow and 4 heifers notified by Veterinary Officers of the Ministry of Agriculture and Fisheries under the provisions of the Order were slaughtered at the Public Abattoir.

One was found to be affected with localised tuberculosis and portions of the offal and carcase were condemned. In 4 cases the disease was found to be generalised and the carcasses and offal condemned as unfit for human consumption.

FOOD AND DRUGS ACT—ADULTERATION.

During the year 60 formal and 48 informal samples of foods and drugs, purchased under the provisions of the Food and Drugs Act, 1938, were submitted to the Public Analyst.

Table 30 shows the number and results of the analyses of samples obtained.

Table 31 shows the average composition of milk examined during the year.

Table 32 shows the action taken in respect of samples reported by the Public Analyst as not being genuine or otherwise irregular.

TABLE 30

ARTICLES.	No. of Samples.		No. Genuine.		No. Adulterated.	
	Formal.	Informal.	Formal.	Informal.	Formal.	Informal.
Aspirin ...	—	1	—	1	—	—
Castor Oil ...	—	1	—	1	—	—
Coffee Essence	—	1	—	1	—	—
Condiments, Colourings, Flavourings, etc. ...	—	6	—	6	—	—
Gelatine ...	—	2	—	2	—	—
Ice Cream ...	3	22	2	15	1	7
Meat & Fish Products ...	4	1	4	1	—	—
Milk ...	34	—	30	—	4	—
Miscellaneous	—	5	—	5	—	—
Patent Flour Mixtures ...	—	3	—	3	—	—
Quinine ...	—	1	—	1	—	—
Sausage ...	16	—	13	—	3	—
Seidlitz Powder ...	—	1	—	1	—	—
Sugar Con- fectionery ...	—	4	—	4	—	—
TOTALS	57	48	49	41	8	7

TABLE 31

Average Percentage Composition of Milk examined during the year.

PERIOD.	No. of Samples.	Milk Fat %	Solids not Fat %
1st Quarter	7	3.58%	8.46%
2nd Quarter	10	3.20%	9.92%
3rd Quarter	12	3.52%	8.75%
4th Quarter	5	3.90%	9.06%
Year ending 31st December, 1951	34	3.49%	8.77%

TABLE 32

Action taken in respect of samples reported by the Public Analyst not to be genuine or otherwise irregular.

<i>Sample No.</i>		<i>Article.</i>	<i>Nature of Adulteration.</i>	<i>Action Taken.</i>
<i>Informal</i>	<i>Formal.</i>			
	13	Pork Sausage	Deficient of 2.4% of its Meat.	Reported to Health Committee. Warning letter sent to vendor.
	16	Beef Sausage	Deficient of 16.8% of its Meat.	Reported to Health Committee. Warning letter sent to vendor.
	29	Milk	Deficient of 6.7% of its Fat.	Further sample No. 36 taken. Found genuine.
	35	Milk	Deficient of 21.7% of its Fat.	"Appeal to Cow" Sample No. 48 taken. Deficient of 19% of its Fat. Reported to Health Committee.
37		Ice-cream	Deficient of 11% of its Fat.	Reported to Health Committee. Warning letter sent to vendor.
41		Ice-cream	Deficient of 18.4% of its Fat.	Reported to Health Committee. Warning letter sent to vendor.
42		Ice-cream	Deficient of 19.2% of its Fat.	Reported to Health Committee. Warning letter sent to vendor.
43		Ice-cream	Deficient of 24.6% of its Fat.	Reported to Health Committee. Warning letter sent to vendor.
46		Ice-cream	Deficient of 39.2% of its Fat.	Reported to Health Committee. Warning letter sent to vendor.
	48	Milk	Deficient of 19% of its Fat.	See Sample No. 35 above. Referred to County Milk Production Officer.
51		Ice-cream	Deficient of 77% of its Fat.	Reported to Health Committee. See Formal Sample No. 102.
56		Ice-cream	Deficient of 19.6% of its Fat.	Reported to Health Committee. Warning letter sent to vendor.
	69	Pork Sausage	Deficient of 30% of its Meat.	Vendor prosecuted and convicted. Fine of £10 and costs.
	99	Milk	Deficient in non-fatty solids. Contained not less than 8.4% added water.	Vendor cautioned. "Appeal to Cow" sample No. 100 taken. This reported to be genuine.
	102	Ice-cream	Deficient of 77.4% of its Fat.	Vendor prosecuted and convicted. Fine of £10 and 5 gns. costs.



Name of the Ship	Tonnage	Date of Departure	Destination
Albatross	100	1st Jan	London
Andromeda	120	15th Jan	London
Antares	110	20th Jan	London
Argo	130	25th Jan	London
Arcturus	140	30th Jan	London
Aurora	150	1st Feb	London
Bellerophon	160	5th Feb	London
Bellerophon	170	10th Feb	London
Bellerophon	180	15th Feb	London
Bellerophon	190	20th Feb	London
Bellerophon	200	25th Feb	London
Bellerophon	210	30th Feb	London
Bellerophon	220	1st Mar	London
Bellerophon	230	5th Mar	London
Bellerophon	240	10th Mar	London
Bellerophon	250	15th Mar	London
Bellerophon	260	20th Mar	London
Bellerophon	270	25th Mar	London
Bellerophon	280	30th Mar	London
Bellerophon	290	1st Apr	London
Bellerophon	300	5th Apr	London
Bellerophon	310	10th Apr	London
Bellerophon	320	15th Apr	London
Bellerophon	330	20th Apr	London
Bellerophon	340	25th Apr	London
Bellerophon	350	30th Apr	London
Bellerophon	360	1st May	London
Bellerophon	370	5th May	London
Bellerophon	380	10th May	London
Bellerophon	390	15th May	London
Bellerophon	400	20th May	London
Bellerophon	410	25th May	London
Bellerophon	420	30th May	London
Bellerophon	430	1st Jun	London
Bellerophon	440	5th Jun	London
Bellerophon	450	10th Jun	London
Bellerophon	460	15th Jun	London
Bellerophon	470	20th Jun	London
Bellerophon	480	25th Jun	London
Bellerophon	490	30th Jun	London
Bellerophon	500	1st Jul	London
Bellerophon	510	5th Jul	London
Bellerophon	520	10th Jul	London
Bellerophon	530	15th Jul	London
Bellerophon	540	20th Jul	London
Bellerophon	550	25th Jul	London
Bellerophon	560	30th Jul	London
Bellerophon	570	1st Aug	London
Bellerophon	580	5th Aug	London
Bellerophon	590	10th Aug	London
Bellerophon	600	15th Aug	London
Bellerophon	610	20th Aug	London
Bellerophon	620	25th Aug	London
Bellerophon	630	30th Aug	London
Bellerophon	640	1st Sep	London
Bellerophon	650	5th Sep	London
Bellerophon	660	10th Sep	London
Bellerophon	670	15th Sep	London
Bellerophon	680	20th Sep	London
Bellerophon	690	25th Sep	London
Bellerophon	700	30th Sep	London
Bellerophon	710	1st Oct	London
Bellerophon	720	5th Oct	London
Bellerophon	730	10th Oct	London
Bellerophon	740	15th Oct	London
Bellerophon	750	20th Oct	London
Bellerophon	760	25th Oct	London
Bellerophon	770	30th Oct	London
Bellerophon	780	1st Nov	London
Bellerophon	790	5th Nov	London
Bellerophon	800	10th Nov	London
Bellerophon	810	15th Nov	London
Bellerophon	820	20th Nov	London
Bellerophon	830	25th Nov	London
Bellerophon	840	30th Nov	London
Bellerophon	850	1st Dec	London
Bellerophon	860	5th Dec	London
Bellerophon	870	10th Dec	London
Bellerophon	880	15th Dec	London
Bellerophon	890	20th Dec	London
Bellerophon	900	25th Dec	London
Bellerophon	910	30th Dec	London
Bellerophon	920	1st Jan	London

TIGHT
GUTTERS

