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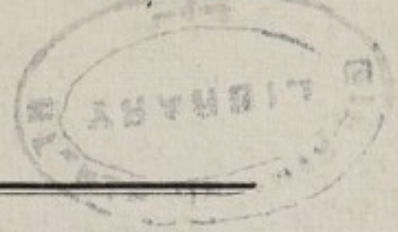
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ANNUAL REPORT

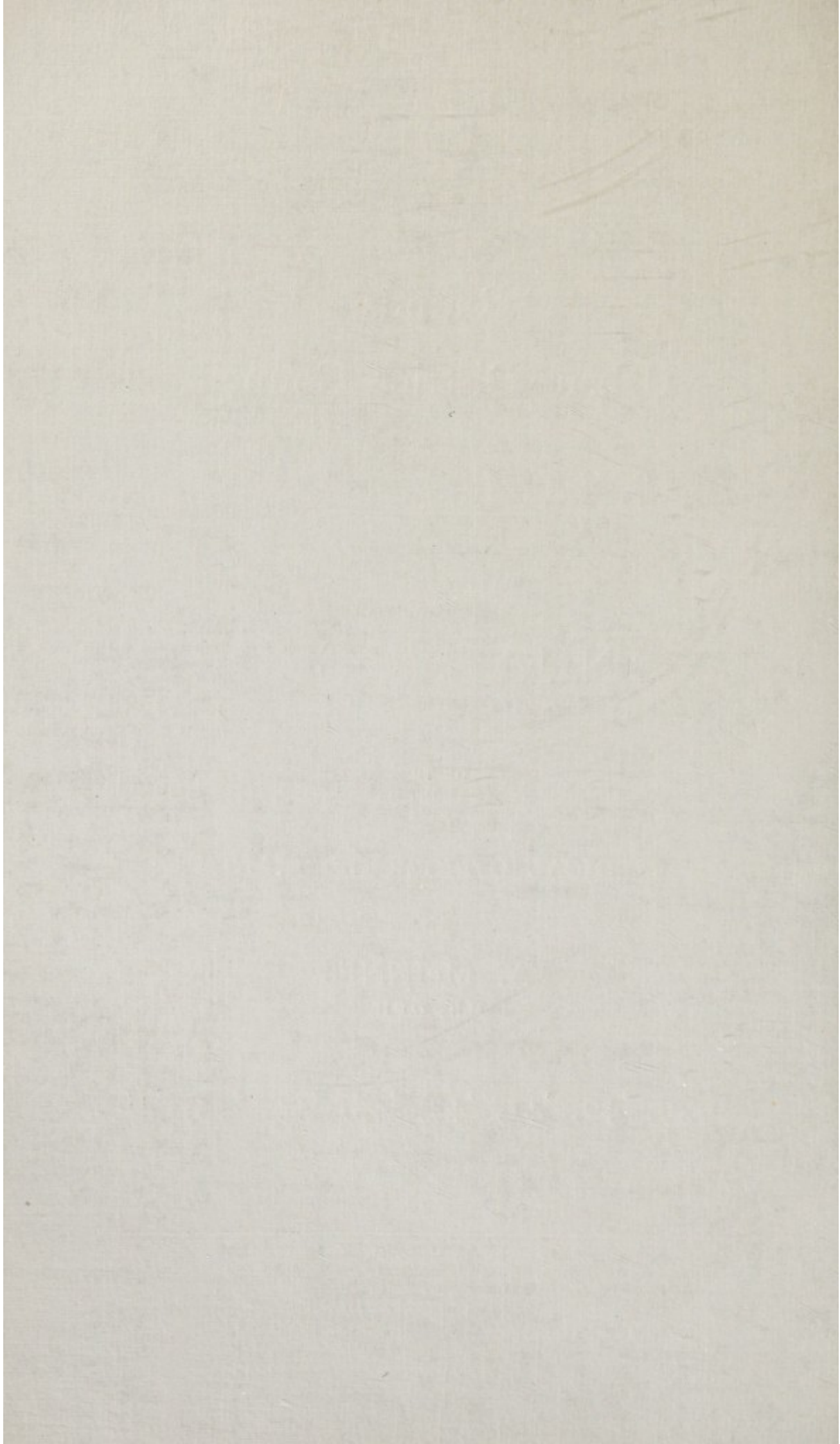
OF THE

MEDICAL OFFICER OF HEALTH

A. McINNES

M.B., D.P.H.

1939, '40, '41, '42, '43, '44, '45, '46



RAUNDS URBAN DISTRICT.

Chairman, 1939 : E. O. GATES, ESQ.
 „ 1940 : A. O. FOX, ESQ.
 „ 1941 : G. W. FROST, ESQ.
 „ 1942 : J. C. MONK, ESQ.
 „ 1943 : H. MILES, ESQ.
 „ 1944 : E. O. GATES, ESQ.
 „ 1945 : A. O. FOX, ESQ.
 „ 1946 : J. F. CHAMBERS, ESQ.

Clerk : B. M. KILLICK.

Public Health Officers.

M. O. H. : A. McINNES, M.B., D.P.H.

Sanitary Inspector.

GEO. WHITTAM.

Surveyor : GEO. WHITTAM.

Area of District : 6,483 acres.

Particulars of Separate Dwellings, Population, Rateable Value and Product of 1d. Rate.

	DWELLINGS.	POPULATION.	RATEABLE VALUE.	PENNY RATE.
1939	1,391	4,446	£17,406	£64 2 8
1940	1,390	4,562	£17,653	£67 4 0½
1941	1,395	5,392	£17,760	£67 18 0
1942	1,399	5,170	£18,100	£69 6 2½
1943	1,400	4,833	£18,072	£69 17 3¾
1944	1,399	4,256	£17,953	£68 8 11
1945	1,402	4,222	£17,989	£68 9 6
1946	1,407	4,356	£17,940	£67 14 7½

RATINGS URBAN DISTRICT

1938	E. A. Carter
1940	A. O. Fox
1941	O. W. Boyd
1942	J. C. Boyd
1943	H. M. Boyd
1944	A. O. Fox
1945	J. C. Boyd

City of Chicago

1946	J. C. Boyd
1947	J. C. Boyd
1948	J. C. Boyd
1949	J. C. Boyd
1950	J. C. Boyd
1951	J. C. Boyd
1952	J. C. Boyd
1953	J. C. Boyd
1954	J. C. Boyd
1955	J. C. Boyd
1956	J. C. Boyd
1957	J. C. Boyd
1958	J. C. Boyd
1959	J. C. Boyd
1960	J. C. Boyd
1961	J. C. Boyd
1962	J. C. Boyd
1963	J. C. Boyd
1964	J. C. Boyd
1965	J. C. Boyd
1966	J. C. Boyd
1967	J. C. Boyd
1968	J. C. Boyd
1969	J. C. Boyd
1970	J. C. Boyd
1971	J. C. Boyd
1972	J. C. Boyd
1973	J. C. Boyd
1974	J. C. Boyd
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2012	J. C. Boyd
2013	J. C. Boyd
2014	J. C. Boyd
2015	J. C. Boyd
2016	J. C. Boyd
2017	J. C. Boyd
2018	J. C. Boyd
2019	J. C. Boyd
2020	J. C. Boyd

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MR. CHAIRMAN,

Reports on the Health of the district for the years 1939, '40, 41', '42 '43, '44, '45, and '46 are given herewith. These years are war years. Air raid precautions, and the government evacuation scheme each brought its own problems. The impact of a poorer section of city dwellers on the population was most memorable in its effects. Verminous conditions are relatively rare in this District but evacuation led to a decided increase. The knowledge of food values may not be any more widespread among this population but habit, due to environment, would indicate that we feed better. The greatest trial was the relatively large number of the evacuated children who were not cleanly in their habits. Much of this was due to lack of sphincter control caused by the abnormal conditions associated with evacuation. Apart from verminous conditions, there is no evidence that evacuation has led to any abnormal increase in the incidence of the ordinary notifiable infectious diseases.

This period also saw the end of the war and its immediately associated anxieties. The good health of the District, as the health of the country as a whole, has been a remarkable feature of the war years. Those of us who have known days of abundance may regret the present scarcities, but there is no evidence that rationing and the other make-shifts inevitable in a "total" war and its aftermath have caused any deterioration of health. There has been no pandemic of disease such as in 1918 killed so many in the prime of life. At present the birth rate is on the increase, but this is a post-war phenomenon common to the first as to the second world war, and is simply a process of raising to an average the lower rates of the actual war years. The reasons for the variations are obvious enough. Below are figures for the whole of England and Wales and in part comprise the years of the beginning and the end of the first and second world wars. These figures show an increase of the birth rate after the end of the first world war reaching a maximum two years later. History, in this respect, is repeating itself. In 1918 the pandemic of Influenza caused the death rate to equal the birth rate.

	BIRTH RATE per 1,000 of population.	DEATH RATE per 1,000 of population.	INFANTILE MORTALITY per 1,000 Births.
1914	23.6	13.9	105
1918	17.7	17.6	97
1919	18.5	13.8	89
1920	25.4	12.4	80
1921	22.4	12.1	83
1922	20.6	12.9	77
1923	19.7	11.6	69
1939	15.0	12.1	50
1945	16.1	11.4	46
1946	19.1	11.5	43

Scabies.—So far as this country is concerned is a disease associated with war. It was common among soldiers in the last war and was carried by them to the civilian population usually when home on leave. Although evacuation from the cities began just about the beginning of the war, many of the evacuated children suffered from Scabies. In peace-time Scabies is a disease practically unknown in the District. In an ordinary intelligent and cleanly person cure of Scabies can be reasonably easy, but in another type cure cannot be so easily secured. It is this difference in the problem which makes control so difficult. The Scabies Order, 1941, gives compulsory powers for cleansing and treatment, but the application of the Scabies Order in a small independent District is not easy. Very few small Districts possess the means for cleansing or treatment. Removal and retention in hospital of evacuee children was quite easy but the problem was insurmountable in the case of an adult or of older children. The infirmary of the County P.A.C. at Oundle or Wellingborough was used for most cases requiring institutional treatment. Most cases of Scabies are treated at home, and, done intelligently, home treatment can be very satisfactory.

Birth Rate.—In the eight years of this report there has been some variation in the method of calculating rates. This has been rendered necessary by the unusual conditions caused by war. The variations, however, are intended to give a more standard picture than if these variations were not used. Numbers of births and a series of rates are given below; these in conjunction with a table at the end of the report give a fairly comprehensive picture of the birth rate trend. A still birth is defined "still born and still birth shall apply to any child which has issued forth from its mother after the 28th week of pregnancy which did not at any time after being completely expelled from its mother breathe or show any other signs of life."

Live Births.

TOTAL LIVE BIRTHS in Raunds Urban District :—

	1939		1940		1941		1942		1943		1944		1945		1946	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Legitimate ...	24	28	31	31	35	22	34	35	37	28	50	31	32	32	41	38
Illegitimate ...	0	3	1	2	1	0	1	3	4	2	3	4	7	9	7	3
TOTAL ...	24	31	32	33	36	22	35	38	41	30	53	35	39	41	48	41
Illegitimate rate per 1,000 Live Births ...	54.5	46.1	17.2	54.8	84.0	79.0	200.0	111.0								
BIRTH RATES per 1,000 of population :—																
	1939	1940	1941	1942	1943	1944	1945	1946								
Raunds U.D. ...	12.3	14.2	10.7	14.1	14.7	20.7	18.9	20.4								
England and Wales ...	15.0	14.6	14.2	15.8	16.5	17.6	16.1	19.1								
London ...	12.3	13.7	8.9	14.0	15.8	15.0	15.7	21.5								
Large County Boroughs ...	14.8	16.0	14.7	17.3	18.6	20.3	19.1	22.2								

Small Towns :															
25-50,000 ...	15.6	15.7	16.4	18.4	19.4	20.9	19.2	21.3							
Administrative County ...	15.02	13.94	13.51	16.66	17.91	20.07	18.98	19.17							
Still Births.	1939	1940	1941	1942	1943	1944	1945	1946							
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.						
Legitimate ...	2	0	3	0	1	3	2	2	1	1	1	1	0	1	1
Illegitimate ...	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0
TOTAL ...	2	0	3	0	2	4	2	2	1	1	1	2	1	0	1
Rate per 1,000 of Live and Still Births ...															
	35.0	44.1	93.7	51.9	28.1	34.1	12.5	22.0							
Rate per 1,000 of population ... RAUNDS U.D.															
	0.45	0.67	1.11	0.77	0.41	0.70	0.23	0.46							
Rate per 1,000 of population ... ENGLAND AND WALES.															
	0.54	0.55	0.51	0.54	0.51	0.5	0.46	0.53							

Death Rate.—Below are given the number of deaths and a table of death rates per 1,000 of population. For the years 1939 and 1940 a Comparability Factor has been given so that Crude Death Rate \times Comp. Factor = Standard Death Rate. The necessity of this factor for the purposes of comparison is due to an unequal distribution of age groups and also to a lesser degree of the sexes. For example: Bournemouth and Cheltenham are more likely to have a greater number in the older age groups than say Coventry or Wigan, where most are of the earning ages. Females have a greater expectation of life than males.

Non-Civilian deaths have been excluded from the returns since September, 1939.

A classification of the causes of death is given in tables at the end of the report.

Deaths.	1939	1940	1941	1942	1943	1944	1945	1946								
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.							
NUMBER ...	27	18	31	24	32	30	24	24	28	28	26	35	29	42	27	26
	45	55	62	48	56	61	71	53								
DEATH RATE :																
Raunds U.D.																
Crude ...	10.1	12.05	11.5	9.28	11.6	14.3	16.8	12.16								
Standard ...	9.2	10.3	N.K.	N.K.	N.K.	N.K.	N.K.	N.K.								
England & Wales	12.1	14.3	12.9	11.6	12.1	11.6	11.4	11.5								
London ...	11.9	17.8	16.3	13.9	15.0	15.7	13.8	12.7								
Large Boroughs	12.0	15.8	14.9	13.3	14.2	13.7	13.5	12.7								
Small Towns ...	11.2	12.8	13.0	12.1	12.7	12.4	12.3	11.7								
Administrative County ...	10.5	11.3	11.94	11.02	12.24	12.65	12.34	12.0								

Maternal Mortality.—Details are given in the tables below. The yearly number of births is too small to give a reliable figure of comparison with a populous area or of the trend when compared with the figures for the whole of England and Wales.

Birth Table at the end of this Report gives details for each year 1935–46, with an average for the 12 years.

Details for the years 1939, '40, '41, '42, '43, '44, '45, and '46 are given below :—

	1939	1940	1941	1942	1943	1944	1945	1946
PUERPERAL PYREXIA :								
Number notified	0	0	0	0	0	1	0	0
DIED ...	0	0	0	0	0	0	0	0
Notification Rate per 1,000 LIVE AND STILL BIRTHS :								
Raunds U.D.	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0
England and Wales ...	14.35	11.96	11.91	12.61	11.68	10.34	9.93	8.5
SEPSIS (including Abortion) Death Rate per 1,000 LIVE AND STILL BIRTHS :								
Raunds U.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
England and Wales ...	0.74	0.52	0.48	0.42	0.73	0.59	0.49	0.31
Number of Deaths from Other Puerperal causes ...								
	0	0	0	0	0	0	0	0
Rate per 1,000 LIVE AND STILL BIRTHS (including Abortion) Other Puerperal Causes :								
Raunds U.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
England and Wales ...	2.08	1.64	1.75	1.59	1.56	1.34	1.30	1.12
TOTAL MATERNAL MORTALITY RATES per 1,000 LIVE AND STILL BIRTHS :								
Raunds U.D.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
England and Wales ...	2.82	2.16	2.23	2.01	2.29	1.93	1.79	1.43

Infantile Mortality.—A special table at the end of this report gives rates since 1935, the year of the inclusion of Stanwick in the district.

NUMBER OF DEATHS UNDER ONE YEAR OF AGE.

	1939		1940		1941		1942		1943		1944		1945		1946	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Legitimate ...	3	0	2	0	2	1	0	0	4	1	1	1	3	1	3	0
Illegitimate ...	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
TOTAL ...	3	0	2	0	2	1	0	0	4	2	1	2	3	1	3	2
	3		2		3		0		6		3		4		5	
RATES PER 1,000																
LIVE BIRTHS :	1939	1940	1941	1942	1943	1944	1945	1946								
Raunds U.D.	59.0	30.0	51.0	0.0	84.0	36.0	50.0	56.0								
England and																
Wales ...	50.0	55.0	59.0	49.0	49.0	46.0	46.0	43.0								
London ...	48.0	50.0	68.0	60.0	58.0	61.0	53.0	41.0								
Large County																
Boroughs ...	53.0	61.0	71.0	59.0	58.0	52.0	54.0	46.0								
Towns																
25-50,000 ...	40.0	54.0	56.0	46.0	46.0	44.0	43.0	37.0								
Administrative																
County ...	40.0	40.0	48.0	34.0	40.0	38.0	39.0	37.0								
Legitimate death																
rate per 1,000																
legitimate births	57.0	32.0	53.0	0.0	77.0	24.0	62.0	38.0								
Illegitimate death																
rate per 1,000																
illegitimate																
births ...	0.0	0.0	0.0	0.0	166.0	143.0	0.0	200.0								

Cancer.—The number of deaths for the years of the report are given in the Table of causes of death for the twelve years 1935-1946. Cancer was the cause of 12.3 per cent. of the male deaths, and 16.7 per cent. of the female deaths.

Infectious Diseases.—An inquiry was held in January, 1939, at Wellingborough, and an order made for the formation of the East Northamptonshire Joint Isolation Hospital Board as from October, 1939. This meant the closing of the Oundle Isolation Hospital and keeping Wellingborough to serve the whole area thus formed. Wellingborough is nearer the centre of the mass of population formed by the Joint District, but that is its only merit over Oundle, otherwise the decision could have been made by the tossing of a coin instead of the formality of an inquiry. The ideal is one Isolation Hospital for the whole Administrative County and County Borough.

Diphtheria Immunisation.—By Sec. 177, P.H.A., 1936, a local authority may, with the approval of the Ministry, provide a temporary supply of medicine and medical assistance for the poorer inhabitants of their district. By circular 2230 issued December, 1940, the Ministry

gave approval to all authorities to provide Diphtheria immunisation free of charge provided the arrangements were under the general supervision of the Medical Officer of Health. The County Council is the authority for dealing with children from birth to school-leaving age by virtue of the Maternity and Child Welfare Act and by virtue of being the Education Authority. A conference was held at the County Hall on 19th December, 1940, between the County Medical Officers and the Medical Officers of the various local authorities in the County. So far as this area is concerned, I agreed to do mass immunisation at Raunds. The service of immunisation has now passed on from 1/1/46 to the County Council, the Authority administering the Maternity and Child Welfare Act. It will become an essential service under the Health Service Act, 1946. The aim is to protect children up to the age of 15 and the method suggested is—

- 1st Injection, .2 c.c. at 1 year.
- 2nd Injection, .5 c.c. a month later.
- 3rd Injection, .5 c.c. at 5 years.
- 4th Injection, .5 c.c. at 10 years.
- 5th Injection, .5 c.c. at 15 years.

The material used is alum precipitated toxoid supplied by the Emergency Public Health Laboratory Service.

Since the campaign for Immunisation was begun in 1941 the total numbers inoculated at the end of 1946 were—

At date of Immunisation under five years	398
At date of Immunisation between five and 15	704
TOTAL	1102

Particulars are given in tables at the end of the report.

Diphtheria.

	1939	1940	1941	1942	1943	1944	1945	1946
Number Notified	1	2	0	0	0	1	0	0
DIED ...	0	0	0	0	0	0	0	0
Notification rate per 1,000 of population :								
Raunds U.D.	0.22	0.43	0.0	0.0	0.0	0.23	0.0	0.0
England and Wales ...	1.14	1.16	1.25	1.05	0.88	0.58	0.46	0.28
Death rates per 1,000 of popula- tion :								
Raunds U.D.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
England and Wales ...	0.05	0.06	0.07	0.05	0.03	0.02	0.02	0.01

None of the children notified had been Immunised. The two notified in 1940 were evacuees from London. The case in 1944 was an adult who had come home from a hospital where she was in the Nursing Reserve. She had the disease before she got home.

The two notified in 1940 were two of 222 notified in the county during 1940. The epidemic affected chiefly the eastern part of the county. The origin was believed to be from eating cream buns. Both patients did have cream buns. Neither case normally lived in Raunds.

Cerebro-Spinal Fever.

	1939	1940	1941	1942	1943	1944	1945	1946
Number notified	0	1	1	0	0	0	0	0
DIED ...	0	0	1	0	0	0	0	0
Notification rate per 1,000 :								
Raunds U.D.	0.00	0.11	0.22	0.00	0.05	0.00	0.00	0.00
England and Wales ...	N.K.	0.32	0.25	0.14	0.08	0.05	0.05	0.05
DEATH RATE per 1,000 :								
Raunds U.D.	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
England and Wales ...	N.K.	N.K.	N.K.	N.K.	N.K.	N.K.	N.K.	N.K.
Measles.	1939	1940	1941	1942	1943	1944	1945	1946
TOTALS ...	0	284	7	2	16	4	90	1
DIED ...	0	1	0	0	0	0	0	0
Notification rate per 1,000 :								
Raunds U.D.	0.00	62.38	1.3	0.4	3.31	0.94	21.3	0.23
England and Wales ...	0.00	10.24	10.33	7.46	9.88	4.16	11.67	3.92
DEATH RATE per 1,000 :								
Raunds U.D.	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
England and Wales ...	0.01	0.02	0.03	0.01	0.02	0.01	0.02	0.00

Measles and Whooping Cough were made notifiable in November, 1939.

Whooping Cough.

	1939	1940	1941	1942	1943	1944	1945	1946
Number notified	0	7	30	0	8	28	0	8
DIED ...	0	0	0	0	0	2	0	0
Notification rate per 1,000 :								
Raunds U.D.	0.00	1.53	5.55	0.00	1.65	6.6	0.00	1.83
England and Wales ...	0.00	1.34	4.39	1.73	2.54	2.49	1.64	2.28
DEATH RATE per 1,000 of Population :								
Raunds U.D.	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00
England and Wales ...	0.03	0.02	0.06	0.02	0.03	0.03	0.02	0.02

Deaths from Diarrhoea and Enteritis under two years of age.

	1939	1940	1941	1942	1943	1944	1945	1946
Number of Deaths	0	0	0	0	0	1	0	3
Rate per 1,000								
Live Births :								
Raunds U.D.	0.00	0.00	0.00	0.00	0.00	11.3	0.00	33.7
England and Wales ...	4.6	4.6	5.1	5.2	5.3	4.8	5.6	4.4

Influenza.

	1939	1940	1941	1942	1943	1944	1945	1946
Number of Deaths	0	0	1	0	0	1	1	3
Rate per 1,000								
Population :								
Raunds U.D.	0.18	0.11	0.31	0.11	0.40	0.23	0.23	0.69
England and Wales ...	0.21	0.32	0.19	0.09	0.37	0.12	0.08	0.15

Laboratory Facilities.—Routine bacteriological diagnosis is now done by the Bacteriologist at the Emergency Public Health Laboratory, Northampton General Hospital. This Laboratory is worked by the Medical Research Council on behalf of the Ministry of Health. Payment is made by the Council of a fixed sum yearly, this sum being based on an average payment over a number of years before the Medical Research Council took over. The sum is actually £1 0s. 4d. Water analyses are done at Cambridge by Dr. Greenburgh. Milk examinations by the County Council Laboratory at Northampton.

Milk Supplies.—The Milk and Dairies Order, 1926, *inter alia*, demands that all County Sanitary Authorities shall keep a register of cowkeepers and dairymen, and Sec. 22, Food and Drugs Act, 1938, gives the authority power to cancel or refuse registration in cases of default. Nevertheless, a milk producer can get a retail licence from the Milk Marketing Board for the asking. It is quite possible that registration under the scheme of the Milk Marketing Board does not effect the requirements of the Milk and Dairies Order of 1926, that all persons carrying on the trade of cowkeeper and dairyman and all premises used as dairies shall be registered with the local authority.

Housing.—

See Sanitary Inspector's Report.

Meat Inspection.—The Food and Drugs Act, 1938, came into force in October, 1939. The emergencies of war, however, have caused the control of meat to pass from Local Authorities to the Ministry of Food. The system of many registered or licensed slaughter-houses is utterly to be condemned. A central abattoir would lead to more efficient inspection and, thus, to a great advance in hygiene. Moreover, there would be far better control to ensure that the animals were humanely slaughtered. It is to be hoped that the system enforced by war will remain when the war is over. Raunds gets its meat from Rushden.

Home Nursing.—Raunds has been served by two district nurses since October, 1945. The area of service includes the village of Hargrave,

of the Oundle and Thrapston R.D. The County Council bears half the total cost of the two nurses, but claims all Maternity fees. The onus for a sufficient Midwifery service is thrown on the County Council ; hence the grant less the maternity fees.

The recommendations of the Rushcliffe Committee on nurses' salaries and conditions of employment were accepted by the Nursing Association. Costs have increased, but contributions have not increased in proportion. Contribution rates vary throughout the county, although under one co-ordinating authority. The scale in Raunds is low.

Home Nursing is to pass into the control of the County Council under the National Health Service Act, 1946.

The service in Raunds is both complete and efficient.

General Hospitals.—Northampton, chiefly, and Kettering are used for ordinary surgical medical purposes. The Manfield Hospital, Northampton, serves for Orthopaedic treatment.

Water Supplies.—The supply is filtered and chlorinated. Samples taken over a long period of time and at frequent intervals give very uniform chemical and bacteriological analyses. All are uniformly good, indicating a water of a high standard of purity. Appended are analyses : (1) crude water, (2) water after treatment. These are typical of the results throughout the years of the report. The amount of oxygen absorbed in 3 hrs. at 37° C. may be taken as an indication of the amount of organic matter in the water. This is fairly high in most samples. In the two analyses appended the amount of organic matter is very similar in the filtered as in the crude water. This may indicate some inefficiency of the filters or that the filters need more frequent cleansing.

CERTIFICATE OF ANALYSIS.

Sample of Water labelled "Town's Water Supply *after* filtration and chlorination. Taken from a tap in Brook Street, Raunds" received on the 18th February, 1946.

Physical Characters	...	...	...	...	...	Good
Reaction	...	...	...	...	...	pH 7.5
The sample contained :—						Parts per 100,000
Chlorine	...	...	...	...	...	7.15
Ammonia (Free and Saline)	...	...	...	...	...	0.0048
Ammonia (Albuminoid)	...	...	...	...	...	0.0042
Oxygen absorbed in 3 hours at 37° C.	...	...	...	...	...	0.0610
Nitrates (expressed as Nitrogen)	...	...	...	...	...	0.15
Nitrites	...	...	...	...	...	Absent
Poisonous Metals	...	...	...	...	...	Absent

Bacteriological Examination.

Coliform organisms absent in 100 mls.

Number of micro-organisms per ml. developing on Agar at 37° C. = *nil*

Number of micro-organisms per ml. developing on Agar at 21° C. = 9

Microscopical Examination of Deposit. None.

Total Hardness. 22.78 degrees (grains per gallon).

Inference.—The results obtained on the analysis of this sample indicate a hard water slightly contaminated with organic matter which however does not appear to be of a harmful nature.

I am of opinion that this water, as evidenced by the sample, is fit for drinking purposes and suitable for a public supply.

S. GREENBURGH,

25th February, 1946.

Public Analyst.

CERTIFICATE OF ANALYSIS.

Sample of Water labelled "Town's Water Supply before filtration and sterilisation. Taken from tap at Raunds Pumping Station" received on the 18th February, 1946.

Physical Characters	... ..	Very slight deposit, otherwise good
Reaction	... ..	pH 7.4
The sample contained:—		Parts per 100,000
Chlorine	... ..	7.10
Ammonia (Free and Saline)	... ..	0.0108
Ammonia (Albuminoid)	... ..	0.0062
Oxygen absorbed in 3 hours at 37° C.	... ..	0.066!
Nitrates (expressed as Nitrogen)	... ..	0.10
Nitrites	... ..	Faint trace
Poisonous Metals	... ..	Absent

Bacteriological Examination.

Coliform organisms absent in 100 mls.

Number of micro-organisms per ml. developing on Agar at 37° C. = *nil*

Number of micro-organisms per ml. developing on Agar at 21° C. = 650

Microscopical Examination of Deposit.

Mineral matter and a little organic debris.

Total Hardness. 22.78 degrees (grains per gallon).

Inference.—The results obtained on the analysis of this sample indicate a hard water slightly contaminated with organic matter and contaminated to some extent with micro-organisms capable of development at the temperature of the "cool" incubator. Coliform organisms however could not be detected in 100 mls. of the sample.

Whilst this water cannot be regarded as being unfit for drinking, it is not up to the standard expected of a public water supply. Automatic chlorination of the supply is therefore to be recommended.

S. GREENBURGH,

25th February, 1946.

Public Analyst.

Sewerage.—There is nothing new to report, but activity in extensions is likely to occur *pari passu* with house building activity.

Ambulance.—An ambulance service was initiated 28/10/44 under the auspices of Raunds and Stanwick Ambulance Committee. The ambulance itself is a converted 24-h.p. Humber Snipe and carries two stretchers. The area of service includes the villages of Hargrave and Ringstead, of the Oundle and Thrapston R.D. During the 14 months 28/10/44–31/12/45, 59 patients were carried and a running distance of 2,425 miles. In the year 1946, 50 patients were carried and a running distance of 1,825 miles.

First Aid Post.—Although not strictly Public Health, the service at its inception, its training and its continuation was the responsibility of the County Public Health Department. The staff was mostly members of the St. John Ambulance under Mrs. Arthur Miles and Mr. Geo. Whittam with Nurse L. Fitzjohn and myself for training and advice. Fortunately there was no call from war casualties, but the work done was good and keenness remained throughout the period of the war. The nursing training went far beyond the St. John syllabus and the nursing staff did, and did well, all the sterilisation necessary for mass Diphtheria Immunisation at the Post in 1941. They attended for 6 sessions of first injections and 6 sessions of second injections, or a total of 1,148 injections.

A. McINNES.

STATISTICAL TABLES, 1939-46.

TABLE NO. 1.

CAUSES OF DEATH, 1939.

<i>Causes of Death</i>		<i>Total</i>	<i>Male</i>	<i>Female</i>
1.	Typhoid and paratyphoid fever ...	0	0	0
2.	Measles	0	0	0
3.	Scarlet fever	0	0	0
4.	Whooping cough	0	0	0
5.	Diphtheria... ..	0	0	0
6.	Influenza	0	0	0
7.	Encephalitis Lethargica	0	0	0
8.	Cerebro-spinal fever	0	0	0
9.	Tuberculosis of respiratory system ...	0	0	0
10.	Other tuberculous diseases ...	0	0	0
11.	Syphilis	0	0	0
12.	General paralysis of the insane, tabes dorsalis	0	0	0
13.	Cancer, malignant disease	7	3	4
14.	Diabetes	0	0	0
15.	Cerebral haemorrhage, &c.	5	3	2
16.	Heart Disease	8	7	1
17.	Aneurysm	0	0	0
18.	Other circulatory diseases	1	1	0
19.	Bronchitis	0	0	0
20.	Pneumonia ((all forms)	0	0	0
21.	Other respiratory diseases	1	0	1
22.	Peptic ulcer	1	1	0
23.	Diarrhoea (under two years)	0	0	0
24.	Appendicitis	0	0	0
25.	Cirrhosis of liver	0	0	0
26.	Other diseases of liver, &c.	0	0	0
27.	Other digestive diseases	1	0	1
28.	Acute and chronic nephritis	2	1	1
29.	Puerperal sepsis	0	0	0
30.	Other puerperal causes	0	0	0
31.	Congenital debility, premature birth, malformations, &c.	3	3	0
32.	Senility	7	4	3
33.	Suicide	0	0	0
34.	Other violence	2	0	2
35.	Other defined diseases	4	3	1
36.	Causes ill-defined, or unknown	3	1	2
ALL CAUSES		45	27	18

This table is given separately from the years 1940, '41, '42, '43, '44, '45, and '46 by reason of a variation in the system of classification of diseases.

[See next page.]

TABLE NO. 2.

CAUSES OF DEATH, 1940, '41, '42, '43, '44, '45, and '46.

Causes of Death	1940			1941			1942			1943			1944			1945			1946					
	Ttl.	M.	F.	Ttl.	M.	F.	Ttl.	M.	F.	Ttl.	M.	F.	Ttl.	M.	F.	Ttl.	M.	F.	Ttl.	M.	F.			
1 Typhoid and paratyphoid fevers ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Cerebro-spinal fever ...	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Scarlet fever ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Whooping cough ...	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0
5 Diphtheria ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Tuberculosis of respiratory system ...	1	0	1	2	2	0	4	3	1	2	0	2	1	1	0	2	1	1	1	1	0	1	1	0
7 Other forms of tuberculosis ...	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
8 Syphilitic diseases ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Influenza ...	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	1	0	1	3	1	2	3	1	2
10 Measles ...	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Acute polio-myelitis & polio-encephalitis ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Acute infective encephalitis ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Cancer of buccal cavity and oesophagus (M.) uterus (F.) ...	0	0	0	1	0	1	2	1	1	0	0	0	0	0	0	2	0	2	1	1	0	1	1	0
14 Cancer of stomach and duodenum ...	2	1	1	2	1	1	1	1	0	3	2	1	6	4	2	2	1	1	0	0	0	0	0	0
15 Cancer of breast ...	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2
16 Cancer of all other sites ...	0	0	0	4	3	1	2	0	2	6	4	2	6	1	5	5	3	2	4	2	2	4	2	2
17 Diabetes ...	3	2	1	1	1	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1
18 Intra-cranial vascular lesions ...	10	5	5	8	3	5	4	0	4	9	4	5	10	4	6	11	3	8	9	4	5	9	4	5
19 Heart disease ...	12	5	7	8	4	4	12	8	4	12	4	8	12	3	9	15	7	8	11	6	5	11	6	5
20 Other diseases of circulatory system ...	3	1	2	4	2	2	1	1	0	2	1	1	3	1	2	0	0	0	2	2	0	2	2	0
21 Bronchitis ...	2	1	1	2	0	2	3	3	0	2	1	1	1	0	1	4	3	1	3	1	2	3	1	2
22 Pneumonia ...	1	0	1	6	4	2	1	1	0	1	0	1	1	0	1	4	2	2	1	1	0	1	1	0
23 Other respiratory diseases ...	2	2	0	2	1	1	1	0	1	1	1	0	1	0	1	0	0	0	1	1	0	1	1	0
24 Ulcer of stomach or duodenum ...	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 Diarrhoea under 2 years ...	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3	1	2	3	1	2
26 Appendicitis ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 Other digestive diseases ...	1	1	0	3	2	1	1	0	1	1	0	1	1	0	1	1	1	0	2	0	2	2	0	2
28 Nephritis ...	1	0	1	1	0	1	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	0
29 Puerperal and post-abortive sepsis ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 Other maternal causes...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Premature birth ...	1	1	0	2	2	0	0	0	0	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0
32 Congenital malformations, birth injury & infantile diseases ...	2	2	0	0	0	0	0	0	0	3	3	0	0	0	0	2	1	1	3	2	1	3	2	1
33 Suicide ...	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0
34 Road traffic accidents...	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
35 Other violent causes ...	0	0	0	2	2	0	1	0	1	0	0	0	1	1	0	2	1	1	1	1	0	1	1	0
36 All other causes ...	11	8	3	9	1	8	9	4	5	11	6	5	12	7	5	17	5	12	4	2	2	4	2	2
ALL CAUSES ...	55	31	24	62	32	30	48	24	24	57	28	29	61	26	35	71	29	42	53	27	26	53	27	26

TABLE No. 3.

A TABLE OF BIRTH RATES AND DEATH RATES FROM SPECIAL CAUSES SINCE THE
FORMATION OF THE DISTRICT ON APRIL 1st, 1935.

ESTIMATED POPULATION.	BIRTHS.						DEATHS.						MATERNAL MORTALITY.			
	All Ages.		Under 1.		Pulm. Tubercu.		Non-Pulm. Tubercu.		Cancer.		Sepsis.		Other.		All Causes.	
	No.	Rate per 1000 Pop.	No.	Rate per 1000 Births.	No.	Rate per 1000 Pop.	No.	Rate per 1000 Pop.	No.	Rate per 1000 Pop.	No.	Rate per 1000 Births. Live & Still.	No.	Rate per 1000 Births.	No.	Rate per 1000 Births.
1935 ...	4440	10.6	45	22.0	1	0.22	0	0.00	6	1.4	0	0.00	0	0.00	0	0.00
1936 ...	4425	14.0	62	48.0	4	0.90	0	0.00	12	2.7	0	0.00	0	0.00	0	0.00
1937 ...	4423	14.7	65	15.0	4	0.90	0	0.00	12	2.7	0	0.00	0	0.00	0	0.00
1938 ...	4427	14.2	63	16.0	4	0.90	0	0.00	5	1.1	0	0.00	0	0.00	0	0.00
1939 ...	*4443	12.3	45	9.2	0	0.00	0	0.00	7	1.6	0	0.00	0	0.00	0	0.00
	†4446															
1940 ...	4562	14.21	55	30.0	1	0.22	0	0.00	2	0.4	0	0.00	0	0.00	0	0.00
1941 ...	5392	10.7	62	11.5	2	0.37	1	0.18	7	1.3	0	0.00	0	0.00	0	0.00
1942 ...	5170	14.1	48	9.8	0	0.00	0	0.00	9	1.7	0	0.00	0	0.00	0	0.00
1943 ...	4833	14.7	56	11.6	2	0.41	0	0.00	9	1.8	0	0.00	0	0.00	0	0.00
1944 ...	4256	20.7	61	14.3	1	0.23	1	0.23	12	2.8	0	0.00	0	0.00	0	0.00
1945 ...	4222	18.9	71	16.8	2	0.47	0	0.00	9	2.1	0	0.00	0	0.00	0	0.00
1946 ...	4356	20.4	53	12.16	1	0.23	0	0.00	7	1.6	0	0.00	0	0.00	0	0.00
AVERAGE FOR 12 YEARS: 1935-46																
Raunds U.D. ...	814	14.8	672	12.2	32	0.47	1	0.02	97	1.8	—	0.00	—	0.00	—	0.00
England & Wales. ...	—	15.7	—	12.1	—	N.K.	—	N.K.	—	N.K.	—	.75	—	1.77	—	2.52

* For Birth Rates.

† For Death Rates and Notifiable Diseases.

Death Rate is Standard Death Rate except for years 1941, 1942, 1943, 1944, 1945, and 1946.

TABLE No. 6.

NEW CASES OF TUBERCULOSIS, 1939-46.

AGE GROUPS.	RESPIRATORY.						NON-RESPIRATORY.									
	1939	1940	1941	1942	1943	1944	1945	1946	1939	1940	1941	1942	1943	1944	1945	1946
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
-25	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
-35	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	2	0	0	1	1	2	1	0	0	1	1	1	1	1	3

DEATHS.

AGE GROUPS.	RESPIRATORY.						NON-RESPIRATORY.									
	1939	1940	1941	1942	1943	1944	1945	1946	1939	1940	1941	1942	1943	1944	1945	1946
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
-25	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
-35	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	1	2	1	0	0	1	1	1	1	1	1	1	1	1

At the end of 1946 the numbers on the Register were 9 Respiratory and 11 Non-Respiratory.

TABLE No. 7.
**SUMMARY OF WATER SUPPLY AND SANITARY ACCOMMODATION IN DWELLING-HOUSES,
 MAY, 1946.**

PARISH.	WATER SUPPLY.			SANITARY ACCOMMODATION.*			Number of Houses in the Ward.
	Direct to the House.	Number of Houses :— External Standpipes.	Wells.	Water-closets shared.	Number of Houses :— Non Water-closets.	Insufficient sink.	
RAUNDS ...	837	285	28	106	95	237	1150
STANWICK ...	306	23	21	—	69	23	350
TOTAL ...	1143	308	49	106	164	260	1500

* Within the terms of Sections 39 and 90, P.H.A., 1936.

SANITARY INSPECTOR'S REPORT.

Difficulties arising as a result of the war considerably restricted the extent to which housing improvement work could be carried out during the years 1939-1946.

Statutory action with regard to housing repairs and abatement of sanitary defects did not have to be resorted to, the necessary improvements being secured on the part of the officers by informal action.

Where houses were found to be quite unfit for occupation, however, statutory action was taken to have them closed or to the extreme extent of making Demolition Orders under section 11 of the Housing Act, 1936.

Particulars of these houses are given in the following statement, which also summarizes the position at the end of 1946 of houses dealt with before 1939 in Clearance Areas or as individually unfit, and which had not been completely cleared up at the beginning of that year.

Unfortunately, owing to the impossibility of rehousing during the war, many of these condemned houses had to remain occupied. Some, empty when the war broke out or which became vacant after, had to be used for housing families rendered homeless by enemy action in London and elsewhere. A number were still being occupied at the end of 1946, as the statement shows.

Unfit Houses in Clearance Areas.

Area No. 5.—Five houses, Nos. 2, 4, 6, 8 and 10 Titty Ho, Raunds.

3 houses vacant at December 31st, 1938, demolished in 1942.

1 house became vacant in 1939, demolished in 1942.

1 house still occupied at end of 1946.

Area No. 2 (Stanwick). Two houses, Brookside, Stanwick.

2 houses vacant at end of 1938, demolished in 1942.

Area No. 3.—18 houses, Swincroft Place, Raunds.

3 houses vacant at end of 1938, demolished in 1939.

13 houses became vacant in 1939, 12 demolished in 1939,
1 re-occupied in 1941.

1 house became vacant in 1944.

2 houses occupied and 1 vacant at end of 1946.

Area No. 20.—13 houses at Newtown Row, Raunds.

2 houses became vacant at end of 1938.

4 houses became vacant in 1939, 1 demolished in 1939.

3 houses became vacant in 1946.

2 houses were reconditioned to a wartime standard of habitation and let under licence in 1941.

1 house was re-occupied in 1942 without being reconditioned.

1 house was requisitioned and let in 1945.

6 houses occupied at end of 1946 and 6 vacant.

Area No. 21.—Three houses, Nos. 33, 35 and 37, Grove Street, Raunds.

2 houses vacant at end of 1938.

1 house became vacant in 1939.

3 houses vacant at end of 1946.

- Area No. 22.—Five houses in Streather's Yard, Raunds.
 2 houses became vacant in 1939.
 1 house re-occupied in 1940.
 1 house requisitioned, repaired and let in 1945.
 5 houses occupied at end of 1946.
- Area No. 23.—Two houses, Nos. 20 and 22, Brook Street, Raunds.
 Both houses became vacant in 1940.
 1 house let to evacuees in 1941.
 1 house requisitioned, repaired and let in 1945.
 2 houses occupied at end of 1946.
- Area No. 24.—Two houses, Nos. 1 and 3, Bass's Yard, Raunds.
 2 houses still occupied at end of 1946.
- Area No. 25.—12 houses, Westbourne Grove, Raunds.
 12 houses became vacant and demolished in 1939.
- Area No. 26.—Four houses in Rooksby's Yard, Raunds.
 2 houses became vacant in 1939.
 1 house let to evacuees in 1941, but vacant again in 1945.
 2 houses still occupied and 2 vacant at end of 1946.
- Area No. 27.—Three houses, Nos. 9, 11 and 13, Midland Road, Raunds.
 1 house became vacant, but re-occupied in 1939.
 3 houses still occupied at end of 1946.
- Area No. 28.—Three houses, Nos. 34, 36 and 38, Midland Road, Raunds.
 3 houses became empty in 1939, but reconditioned to a wartime standard of fitness and let under licence to evacuees in 1941 and still occupied at end of 1946.
- Area No. 30.—Two houses in Brooks Road, Raunds.
 1 house became vacant and was demolished in 1939.
 1 house became vacant, but was re-occupied without sanction in 1939.
 Tenant moved by Council's action to requisitioned house in Area No. 13 in 1945 and house demolished.
- Area No. 31.—Three houses, Nos. 9, 11 and 13, North Street, Raunds.
 1 house became vacant in 1940, but let to evacuees in 1941 and became vacant again in 1945.
 2 houses became vacant in 1946 and all three demolished.

Individual Unfit Houses.

- No. 4, Bass's Yard, Raunds.—Closed at end of 1938 by owner's undertaking, but reconditioned to war-time standard of fitness and let under licence to evacuees during war period, but vacant and closed at end of 1946.
- No. 39, Rotton Row, Raunds.—Closed at end of 1938, but re-occupied during war and still occupied at end of 1946.
- Nos. 37 and 39, Midland Road, Raunds.—Owner's undertaking to make fit by converting two houses into one. Both houses became empty, but one was re-occupied during the war and was still occupied at end of 1946.
- House at High Street, Stanwick, formerly owned by Mrs. Wilson.—Vacant in 1939 and demolished in 1945.
- No. 86b, High Street, Raunds.—Undertaking to close given in 1938, but occupied at end of that year. Became vacant and was re-occupied during war and still occupied at end of 1946.

- House in Brooks Road, Raunds, owned by Mr. F. Bugby.—Demolished after informal action in 1940.
- 4 houses, East Street, Stanwick, owned by Mrs. Patenall.—Converted into two in 1940 after informal action.
- 1 house, High Street, Stanwick, owned by Mr. W. Neal.—Closed in 1939 after undertaking given in 1938.
- 7 houses, The Hollow, Stanwick.—Outstanding at end of 1938, but owner's undertaking to recondition obtained in 1939 and work carried out in 1940, as a result of which two of the houses were made into one and the other five thoroughly repaired.
- 4 houses, East Street, Stanwick, owned by Mr. A. Gates.—A reconstruction scheme for these houses was accepted in 1939 which provided for the demolition of one house and the complete reconditioning of the other three. The war came before the scheme could be carried out and the house which was to be demolished and had become vacant was let to an evacuee family during the war. This house became vacant again in 1946 and was vacant at the end of 1946 with the undertaking to reconstruct undischarged.
- 2 houses in Church Street, Stanwick.—Action taken with regard to these two houses owned by Mr. J. R. Bettles resulted in an undertaking being accepted and carried out under which the two houses were reconstructed by doing away with one house, part of which was added to the other and part since made into a lock-up shop. This took place in 1939.
- 1 house at Thorpe Farm, Raunds.—Preliminary action in this case resulted in the owners anticipating statutory action and agreeing to demolish the house and erect another farmhouse in its place. This was done in 1940.
- 1 house in Villa Lane, Stanwick, owned by Mr. F. C. Spring.—This house was the subject of an undertaking to close until made fit given by the owner in 1938, but when the house became vacant in 1939 the owner allowed it to be re-occupied. Proceedings were taken by the Council against the owner under section 14 of the Housing Act, 1936, and Mr. Spring was fined £3 with costs at Thrapston on November 5th, 1940. It was occupied later in the war by an evacuee family, but was vacant again at the end of 1946 and has since been acquired and turned into a leather store by the owners of an adjacent factory.
- 1 house in Park Road, Raunds, owner Mr. E. K. K. Whitney.—This house was closed for human habitation on the owner's undertaking as a result of formal action under section 11 of the Housing Act, 1936, taken in 1945.
- 1 house at High Street, Stanwick, owned by Mr. E. S. Shelton.—Action was taken under section 11 of the Housing Act, 1936, in regard to this house, occupied by Mrs. Ellen Robinson, but the owner did not respond to the formal "time and place" notice and the Council made a Demolition Order in July, 1946. The house was still occupied at the end of 1946 and the order could not be determined.

- 1 house, Rose Cottage, The Hollow, Stanwick, owner Mr. J. Britchford.— Formal action under section 11 of the Housing Act, 1936, was taken in respect of this house, which became vacant in 1945. The owner answered the "time and place" notice with an undertaking thoroughly to recondition the house, which was done in 1946.
- 1 house, Swincroft Place, Raunds, was partly reconstructed and thoroughly reconditioned as a result of preliminary action under section 11.
- 1 house, High Street, Stanwick, owned by Mr. A. F. Clark, became empty in 1946 and the owner, who wished to live in the house himself, accepted and carried out a reconstruction scheme involving considerable additions suggested to him in informal action.
- 1 house, High Street, Stanwick, owned by Mr. S. Morris.—The owner of this house also accepted and carried out a reconstruction scheme involving a relatively large addition as suggested in informal action.

New Housing.

33 Council houses in Raunds and 7 in Stanwick were completed and occupied in 1939.

27 private enterprise houses were built in 1939, one of which was a farm-house attached to the farm.

In addition five houses were erected in 1939 under the Housing (Financial Provisions) Act, 1938. Each of these houses attracts a grant of £10 a year for forty years.

In 1940 one house was erected in Raunds as a farm-house.

A new house was erected in 1944 in High Street, Stanwick, on the foundations of a demolished condemned house formerly owned by Mrs. Wilson and dealt with by the Council under section 11 of the Housing Act of 1936.

A disused furniture store in Harcourt Street, Raunds, was converted into two houses in 1945.

Post-War Housing.

In 1945 the Council considered their post-war housing requirements after reports by the Medical Officer and the writer, and decided that 230 houses, 198 in Raunds and 32 in Stanwick, would be required to meet the needs of the district. In reaching this total account was taken of the number of houses condemned but still occupied, the number of very low standard houses not yet dealt with formally, the number of known cases of overcrowding; and an estimate of the general needs of the area for new families and for other circumstances which might normally have been met either by Council or private enterprise building had there been no war.

At the Government's request the Council gave practical expression to their post-war housing policy and acquired a site at London Road, Raunds, which, with the Windmill Lane site already belonging to the Council, provided sufficient land for the Raunds ward requirements, and a site for 32 houses, more if necessary, was acquired in Stanwick.

The Council joined with the boroughs of Kettering and Higham Ferrers, the councils of the Burton Latimer, Corby, Irthlingborough and Rushden Urban Districts in an area group scheme for the advance preparation of housing sites. A contract was given out under which the necessary street works, sewers, surface-water drains, water mains and

gas mains, electricity and telephone ducts on the three sites were constructed in 1946. It happened during the progress of the contract that enough British labour to carry out the work was not available and the work on several sites in the area scheme was actually done by German prisoners of war with a few British key men. All the work on the Raunds and Stanwick sites was done by German labour.

In 1945 the Council decided to erect some temporary houses and were allocated ten of the Uni-Seco type. These were erected by Ministry of Works' contractors on a portion of the Windmill Lane site. The first pre-fab. was occupied on March 2nd, 1946, the last in June of the same year.

Contracts were let in July, 1946, for the first 24 permanent houses and these were in course of erection on the Windmill Lane site at the end of the year.

Water Supply.

The distribution water mains in London Road and Cartrill Street were linked up in 1946 by a new system of 4-inch diameter pipes laid about the new, and as yet unnamed, streets which will give frontage to the 120 projected permanent Council houses to be built there, and a new 4" diameter main was laid along the new housing site streets off West Street at Stanwick.

In 1946 a branch was taken off the hitherto untapped main on the Windmill Lane housing site to provide water supplies to the ten pre-fabricated houses at Windmill Grove. In addition, new connections to the water mains were made during the period under review for 32 new houses, 22 existing houses, 8 farm supplies, 3 allotment or small-holding supplies, 5 industrial or business premises, and 13 supplies were connected to military establishments and one to a civil defence establishment in the district.

Besides these new supplies, a very long service extension for agricultural purposes along the Higham Road at Stanwick was carried out by the consumers themselves. This service was later extended to a searchlight station by the Military authorities and since the war has been used for agricultural purposes. Farmers in the New England area of the district, at their own expense with the aid of a grant from the Ministry of Agriculture and Fisheries, laid a very long length of service main along the Mere Road and Shelton Road from which three connections for domestic purposes and ten for agricultural purposes were made. Two of the three farm properties supplied from this extension are in the area of the Oundle and Thrapston Rural District Council and we supply the water under a fringe agreement with that authority.

There were considerable extensions of the distribution system on the bulk-supply scheme under which we supply water to the St. Neots R.D.C. In this scheme water is lifted from our service reservoir on the Hargrave Road by duplicate electrically driven pumps into an elevated steel tank some 75 feet high and of some 23,000 gallons capacity. From this tank the water gravitates to Kimbolton by way of Hargrave and Tilbrook and branch supplies are taken off for Covington and Catworth. Hargrave,

which parish is in the area of the Oundle and Thrapston R.D.C., also takes a supply from this main.

Early in the period the St. Neots R.D.C. extended their mains for about a mile beyond Kimbolton to supply the village of Stonely and later laid a very long extension to the parish of Stow, but the major extensions took place in 1941 and 1942 when a Royal Air Force Station was established on the high ground between Catworth, Kimbolton and Stow. A 3" main was laid from Kimbolton to the landing ground to supply water for constructional purposes, but this main was proved to be inadequate when the airfield came into service.

In January, 1939, we were supplying about 11,000 gallons a day to the rural district and we were asked by the Air Ministry in February, 1942, if we could arrange to supply an additional quantity up to 100,000 gallons per day for the air station requirements. The Council agreed to co-operate with the Air Ministry to the fullest extent and after technical questions had been discussed between the Air Ministry's Consulting Engineers and the writer as Surveyor and Water Engineer to the Council, a conference took place at Kimbolton on May 14th, 1942, attended by representatives of the Air Ministry, the St. Neots R.D.C., the Oundle and Thrapston R.D.C., and the Raunds U.D.C. As a result of this conference an agreement was reached under which we undertook to supply any extra pumping labour required and for our plant and source of supply to be used to the limits of their capacity in providing as much water as possible at 1/- per thousand gallons for the St. Neots R.D.C., to supply in their turn to the aerodrome. On their side the Air Ministry undertook to carry out any works required to augment the supply and pumping plant and, if the need arose, to supplement the rising main so as to increase the pumping capacity beyond the 10,000 gallons an hour which the writer prescribed as the flow producing the maximum permissible velocity in the 40-years-old steel tubes.

At that time we were drawing our water principally from the main pumping well at the Meadow Lane pumping station. This well goes about 22 feet into the valley gravels alongside the river Nene and is about 2,000 feet from the river. The yield of this well was not quite sufficient at all times of the year to meet the demand, then about 85,000 gallons per day for our own district and, until the air station was established, about 11,000 gallons a day for the rural district. The yield was supplemented by water pumped from another well, known as the auxiliary well, sunk in 1929 in a field off the Cotton Lane and about 1,100 feet nearer the river. This well is 22 feet deep and 16 feet in diameter. A few hours' pumping a day from the auxiliary well at certain times in the year was all that was required to meet the demand until the Kimbolton aerodrome began to be staffed. Then the consumption quickly rose to over 200,000 gallons a day and regular 24 hours a day pumping had to be put into operation. The wells were not able to yield the required water and at the end of 1942 the Air Ministry sank a new well not far from the auxiliary well. The yield of the latter was thereby reduced somewhat, but the combined delivery of the two more than compensated for this and, as events turned out, was sufficient to meet all demands. Water was drawn from the two

wells by a common suction and transferred to the main pumping well at Meadow Lane by new electrical pumps installed by the Air Ministry. These new pumps replaced an old paraffin engine at the auxiliary well which wore itself out and broke down completely when, after working for only a few hours a day at occasional periods, it was suddenly called upon to work 24 hours a day and every day.

The airfield was taken over by the U.S. Army Air Force in 1943 and it was during their occupation that the maximum consumption took place. The demands for water fluctuated between surprisingly wide limits and a period of quite low consumption would be followed by a sudden call up to the maximum capacity of our resources, plant and mains. The consumption, by our standards, was probably unduly excessive at times and the variations were perhaps not always called for by ordinary usage, but sudden demands for increased supplies could not always be controlled. There were frequent fires and frequent bursts in mains and pipe systems designed for much lower pressures than they had to withstand.

The inadequacy of the service main to the airfield from Kimbolton was soon discovered and the Americans had a new 6" diameter main laid across country from Tilbrook giving a direct feed to elevated tanks on the site. Our little electric pumps lifting water from the reservoir to the elevated tank at Hargrave Road were also inadequate for the duty now required of them. They were put down before the war and although by running continuously they can lift 72,000 gallons a day, they were never expected to raise more than the 40,000 gallons per day maximum provided for in the bulk-supply agreement with the St. Neots R.D.C. when the scheme was done in 1935. The output of these pumps was augmented by new electrical plant installed by the Air Ministry at the base of the elevated tank to boost water direct into the mains from a new connection through the reservoir wall.

About this time a new pumping main was being laid through our district from the Oundle and Thrapston Rural District Council's waterworks at Woodford to supply another airfield occupied by the U.S. Army Air Force at Chelveston, and in order to provide mutual assistance in the event of either Council's waterworks being put out of action, inter-connections were made between this main and our rising main where they cross at the junction of Marshalls Road with London Road. Happily the connections have never been used.

In the early part of 1944 demands for water at the aerodrome were increased and there were several technical discussions between engineers of the Air Ministry, the U.S. Army and the writer about new and larger pumps at Meadow Lane waterworks and a new and larger rising main, but they came to nothing.

There was a drought in 1944 and the American Engineers became rather worried at the end of the summer as to its effects on our supply, which did actually diminish to about 215,000 gallons a day when they would have liked more. As an emergency measure the Air Ministry requisitioned a portion of an adjoining field off Cotton Lane and the Americans dug into the gravel as deep as the water would allow and opened up a reservoir trench about 100 feet long and 40 feet wide. A

diesel-oil pumping set with a Stella filtration and chlorination unit was set up in a Nissen hut on the edge of the trench and an overland main laid into the auxiliary well. American soldiers were stationed there for several weeks to work the plant, but except for the initial testing it was never used. It was completely abandoned in the autumn of 1944 and nothing has happened to it since except that some of the pumping plant was removed by the Air Ministry and the remainder has been either stolen or smashed beyond repair, and the Nissen hut, which is a long way and out of sight from our pumping station, has also been badly and wilfully damaged. From enquiries recently made (1947) it appears that the Ministry of Works have the question of this and other redundant plant in hand.

With the end of the war and the withdrawal of the U.S. forces from the area the demand for water fell rapidly, but not to the extent anticipated. Whereas before the war the St. Neots rural district took a steady 11,000 gallons per day, their consumption since has been an equally steady 55,000 to 60,000 gallons a day. Similarly in our own district the consumption has risen from 80,000 to 90,000 gallons a day before the war to an average of about 105,000 gallons since. This increase is partly due to more domestic consumption, but chiefly to increased usage for industrial and agricultural purposes, especially the latter in connection with dairying, where water consumption is and should be, considerable.

It is now understood that little if any water will be required again at the air station and some of the works done during the war have become redundant. Besides the pumping trench and plant referred to above as redundant there is now no further use for the boosters at the Hargrave Road reservoir which were disconnected at the end of the war. But the new well off Cotton Lane and the new electric pumps drawing water from it are still in use and must remain. They were put there in replacement of our paraffin engine which wore itself out raising the increased supply required for the aerodrome.

Treatment of Water.

The report for 1938 contains a reference to the Minister's approval to a scheme for the installation of filtration and chlorination plant at the Meadow Lane Pumping Station. This scheme was put in hand in 1939. New buildings were erected in which the treatment plant, supplied and fixed by Silical Water Softeners (Industrial) Ltd., was installed. The outbreak of war interfered with deliveries of essential parts, several long delays occurred during the erection of the filters, and it was not until August 1st, 1941, that the plant began to operate.

The equipment is designed to treat up to 11,000 gallons of water per hour and consists of three vertical pressure filters, each 7 feet 6 inches in diameter with a rotary air blower for scouring the sand bed to supplement back-wash cleansing. Alumina, injected into the raw water main by a pressure shunt feed apparatus, is used as a coagulant.

Sterilisation is by the Chloramine process, sodium hypochlorite and sulphate of ammonia solutions being injected into the filtered water by pressure-operated Autominor shunt feed pumps.

The flow of water through the plant is indicated and measured by a

Kent recorder and integrator, and a float-operated device charts a continuous record of chlorine solution injections.

Results from the plant have been very good and except for routine overhauls and occasional replacements of wearing parts, now gives very little trouble, but during the war, when pumping never ceased even for a few minutes, for months on end it broke down often. At these times chlorination was done by a portable apparatus which drips the chlorine solution into the well.

From the preceding paragraphs it will be seen that our waterworks resources were strained to the utmost during the war so as to supply the aerodrome. For a long time we worked with little or no margin at all and it was not without some anxiety and no small trouble that the supply was maintained, as it was, without any break whatsoever.

Sewerage and Sewage Disposal.

The only extensions of the sewerage system carried out during 1939-1946 were those to the ten temporary houses in Windmill Grove and in connection with advance preparation of housing sites at Windmill Lane, London Road and Stanwick.

The report for 1938 records that the Sewage Disposal Works at Raunds and Stanwick were not able to cope with the volume of sewage and that the Council were being advised to consider an enlargement scheme. This was done and in 1939 the Council appointed Messrs. Willcox, Raikes & Marshall, Consulting Engineers, of Birmingham, to advise them and prepare the necessary scheme. The scheme was in course of preparation when the war broke out in September, 1939, and as for reasons of national economy it has not been possible for work of this nature to be carried out, the scheme has not yet been submitted to the Council.

In 1944, however, a considerable improvement was effected at the Raunds works when the old tractum distributors were taken off the percolating filters and replaced by new Cressett air-lock type distributors supplied by Adams Hydraulics Ltd., of York. New dosing siphons were installed to operate them. The settling tanks were altered and the flow through them reversed and new sludge lagoons were excavated. An area of land formerly used for broad irrigation and which had become thoroughly sewage-sick was turned over for cultivation and is still being cultivated. This improvement was carried out by direct labour out of revenue.

House Refuse Collection.

A regular weekly collection of house refuse is made throughout the district by means of a low-loading vehicle specially designed for the work. Collections are disposed of by tipping. Prior to 1939 a site in Brooks Road was used for this purpose, but in that year it became full and was afterwards levelled off and sold. In its place the Council secured a lease with the Stanton Ironworks Company for a tip in disused limestone workings off the Higham Road at Stanwick. These workings are extensive in area and there is room for many years' disposals.

As part of the national effort during the war and since, the collection of salvage was combined with that of house refuse. Principal collections up to the end of 1946 were :

Paper	...	...	...	282 tons.
Metals	...	...	...	110 tons.
Bones	...	...	...	7 tons.
Rags, &c.	...	...	...	52 tons.

In addition, large numbers of glass bottles, jars and other miscellaneous articles and scrap were collected and disposed of, but the collection of kitchen waste for animal feeding-stuffs, started in the early days of the salvage scheme, had to be abandoned because no outlet for the collected material could be found.

Rodent Control.

Before the period of this report the Council used to pay twopence for each rat destroyed in the area by the ratcatcher and one penny for each tail of rats destroyed in the area by any other person. This practice was discontinued in 1939 and when during the war the control of rats and mice was dealt with on a national basis as part of the effort to maintain food supplies, the Council accepted the recommendations of the Minister of Food and treated infestations by methods advocated by them. The writer took a course arranged by the Infestation Branch of the Ministry of Food at which these methods were explained and demonstrated.

A survey of the area carried out in 1943 revealed 24 minor infestations at domestic and industrial premises and major infestations at the two sewage works and at the Stanwick refuse tip. These were dealt with by poison baiting, spoon gassing or machine gassing according to circumstances, and similar methods have been used for the occasional minor infestations which have arisen since. After the major infestation at the Stanwick tip had been cleared up the Council entered into an agreement with the County War Agricultural Executive Committee whereby in return for an annual payment of £5 the Committee accepts the liability for keeping the tip free from rats.

In 1946 a detailed inspection and test baiting of all the surface and foul-water sewers in the district was carried out. None of the baits was taken from either the foul sewers or the surface-water drains in the Raunds ward, but there were complete takes from two manholes and partial takes from three manholes on the foul sewers at Stanwick. This was reported to the Ministry of Food and resulted in a Direction dated December 20th, 1946, being served on the Council by the Ministry requiring the treatment of the Stanwick sewers against rat infestation by appropriate methods. The Direction was outstanding at the end of the year, but has since been cleared up.

Milk Supply.

Regular inspections of cowsheds and dairies were made and despite difficulties of the times all round improvements were secured in the structural condition of cowsheds and dairies, in equipment and in methods of production. As a result of pressure from this office and the necessity for increasing milk production, new cowsheds were constructed at Grange Farm, Raunds, and at Grange Farm, Stanwick. Existing sheds and dairies at Manor Farm, Stanwick and at Sheep Pen Farm, Raunds, were reconstructed.

Samples of milk were taken at regular intervals and sent to the County Council's laboratory for bacteriological examination. The following results were returned in the period :—

424 samples of raw milk were marked " good " after the Methylene Blue Test.

101 samples were marked " moderate " after the Methylene Blue test.

73 samples of raw milk were marked " bad " after the Methylene Blue test.

29 samples of Pasteurised milk were marked " satisfactory " after the Phosphatase test.

1 sample of Pasteurised milk failed under the Phosphatase test.

8 samples of Pasteurised milk were marked " satisfactory " after Plate Counts for Coliform content.

Total number of samples, 639.

As a result of improvements carried out on their premises four producers were successful in obtaining Tuberculin Tested licences, but one was lost owing to the presence of reactors in the herd.

Unsatisfactory response to pressure put on one producer led to preliminary action being taken, intended to be followed by prosecution, in respect of unsuitable and dirty premises, but this was not necessary as the producer concerned gave up the dairying side of his farming.

Factories and Workshops.

Action taken in connection with the administration of the Factories and Workshops Act, 1937, may be summarised as follows :—

3 cases of sanitary accommodation not being kept in a cleanly state were dealt with.

10 cases of sanitary accommodation being unsuitable or defective were cleared up.

1 case of sanitary accommodation being insufficient was dealt with.

3 cases of inadequate means of escape in case of fire were remedied.

1 breach of the Petroleum Regulations was cleared up.

There was one prosecution in the period in respect of a nuisance caused by smoke arising from leather waste being burnt in a factory heating apparatus. The action was successful and the Magistrates imposed a fine of £3 with 12/- costs.

General.

The district was fortunate in escaping damage by enemy action and although a number of bombs fell in the area and one or two plane crashes occurred within the boundaries, none did any damage to the district.

A group of light anti-personnel bombs fell harmlessly in a field off the Higham Road at Stanwick, a number of incendiary bombs fell on farmland near to Raunds railway station, but they were far enough away from buildings and no fires were caused.

There was some anxiety when a stick of heavy calibre high-explosive bombs fell across the Hargrave Road. One dropped near the reservoir and had it gone off two houses would have been damaged and almost certainly the reservoir and elevated tank would have been affected. It

did not explode, however, nor did the other nine, and the whole stick was eventually safely dealt with by the Bomb Disposal Squad.

Troops were stationed in the town during the war, beginning with units of the Canadian Army who only stayed a few days. They were followed by the Inns of Court Regiment, the Duke of Wellingtons, who in turn were succeeded by an armoured unit of the Czechoslovakian Army.

The district was used as a Reception Area for evacuees and altogether close on a thousand people were found accommodation, for longer or shorter periods.

Many were allowed to live in condemned houses that ought to have been pulled down long ago and which at best only provided an incomplete protection against the weather, but very acceptable at that time to those whose homes had been destroyed. Some, who have no home to go to elsewhere, or who for other reasons have chosen to remain in the district, are still occupying these old houses, aggravating an already difficult problem and one which, as in every other district, was the most pressing at the end of 1946, namely Housing.

G. WHITTAM,

Sanitary Inspector and Surveyor.

