#### [Report 1966] / Medical Officer of Health, East Dereham U.D.C.

#### **Contributors**

East Dereham (England). Urban District Council.

#### **Publication/Creation**

1966

#### **Persistent URL**

https://wellcomecollection.org/works/a45zq2j5

#### License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



1966

# ANNUAL REPORT

of the

Medical Officer of Health

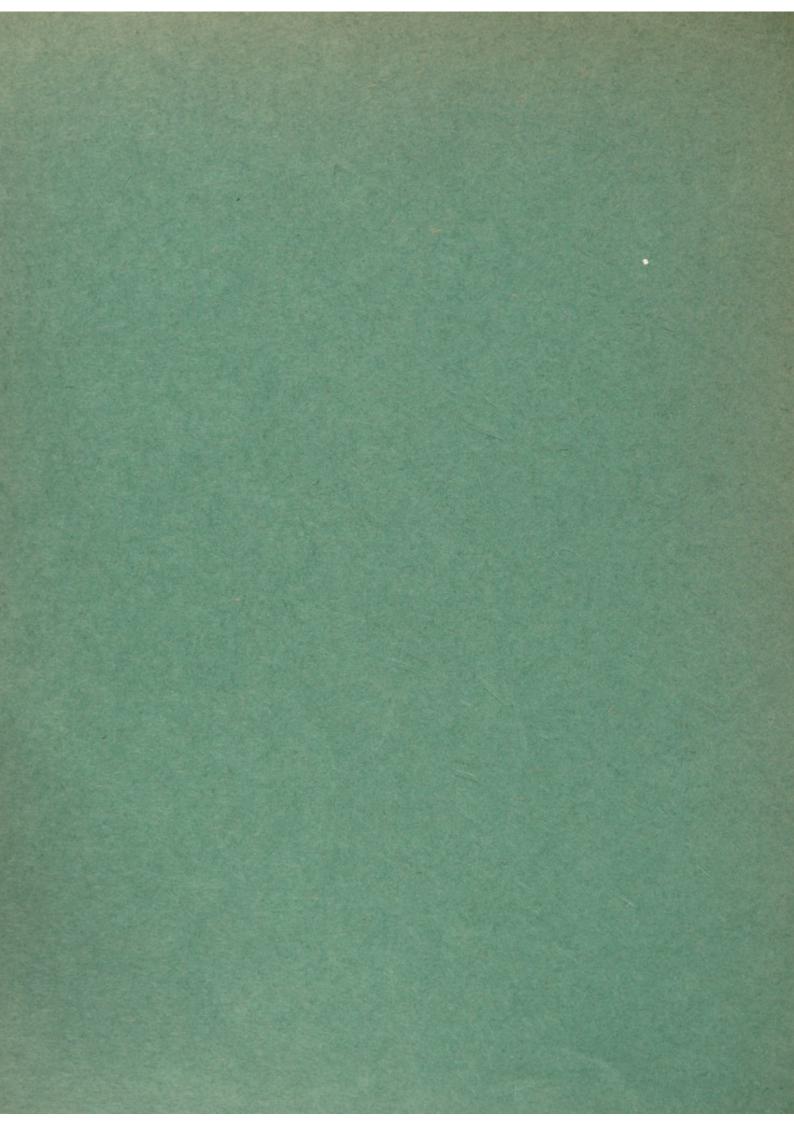
of the

East Dereham Urban District Council

of

EAST DEREHAM

Norfolk



### STAFF

### MEDICAL OFFICER OF HEALTH

Lydia McMurdo, L.R.C.P., M.R.C.S., D.P.H.

### SURVEYOR AND PUBLIC HEALTH INSPECTOR

C.McD. O'Donnell, M.B.E., M.A.P.H.I.

### ADDITIONAL PUBLIC HEALTH INSPECTOR

C. S. Napier

### WATERWORKS SUPERINTENDENT

R. R. Tye

### HOUSING OFFICER

E. A. Hildon

Digitized by the Internet Archive in 2017 with funding from Wellcome Library

#### EAST DEREHAM URBAN DISTRICT COUNCIL

### ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH, FOR 1966

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present the Annual Report for 1966.

The Urban District of Dereham occupies an area of some 5313 acres in mid Norfolk. The main industries are engineering and the making of furniture and clocks.

The first Medical Officer of Health was appointed to the Urban District of East Dereham in 1877. There have been many changes since that time but there are still many buildings that the first Medical Officer of Health would have known. Far too many of these old buildings are dwellings which have out-lived their useful life. gratifying to know that in 1966 the Housing programme proceeded at a slightly increased pace but there is a growing demand for houses in Dereham and while it is proper to wish to preserve examples of earlier domestic architecture, it is often very costly to bring these properties up to the present accepted standard and to maintain them at these standards. This does not mean that all old property should be demolished. It is necessary to take a careful look at the property, the layout and the economics of the restoration, before embarking on an expensive programme of modernisation. There are those properties which can, at reasonable cost, be brought up to modern standards and this is being done with success and the results can be very pleasing.

The proposed development of 28 flats for disabled and elderly persons will ease the shortage of adequate housing for this group of the population. Central heating of these dwellings will provide not only comfort but prevent the condition of hypothermia.

It is known that continued exposure to lowered temperature can be fatal. In rooms heated by an open fire much heat is lost via the chimney, add to this, cold air entering because of badly fitting doors and windows and in winter time, such rooms may have a temperature little above freezing point. In an elderly person that may mean a body temperature of 95°F or below, and this can be dangerous. This condition of hypothermia affects babies as well as the elderly. It was first described in babies in the pre war years. Cold rooms are no longer indicative of a Spartan way of living.

#### General Statistics

Area in acres
Population mid 1966
Population mid 1965
Rateable value April 1st 1966
Estimated Product of Penny Rate 1966

5313 acres 7880 7680 £274,374 £1,094

The estimated mid year population of 7880 is an increase of 200 over the 1965 population.

There were 112 live births of which 10 were illegitimate, that is 8.93%. This is an increase of 2% on 1965 and 3% on 1964. These are sad figures and it is to be hoped that the small rise is not significant.

There were 105 deaths during 1966. This gives a natural increase (birth-deaths) of 7. This means 193 new residents came to Dereham in 1966. Hence in two years there has been an increase of 390 in the population of this Urban District.

The appalling infant death rate shows the fallacy of small figures. In 1965 there was one infant death in 116 live births; in 1966 there were five infant deaths in 112 live births. There were 4 fewer births, 4 more deaths and the infant death rate rose by more than five times that of the previous year. The commonest cause of death was prematurity and congenital abnormality. Three of the five infant deaths occurred in the first week of life hence with the addition of the two still births this gives a perinatal mortality rate of 26.79. That for England and Wales is 26.3.

This perinatal period i.e. just before and just after birth is a critical time and every effort must be made to reduce the risks associated with this time. Many babies are now born alive who ten years ago would not have survived the birth process. It is only by increasingly good ante natal and neonatal care that it can be ensured that the infant has a firm grasp of the slender thread of life.

As already stated there were 2 still births, giving a rate of 17.54 per 1000 births. The still birth rate for England and Wales is 15.4. Once again I am happy to record no maternal deaths.

The death rate of 10.4 is lower that that for England and Wales (11.7) and as shown in the analysis only 9 deaths occurred below the age of 55 years, this includes the five infant deaths. Hence only 4 deaths occurred between 1 year of age and 55 years of age. 57% of all deaths occurred in the 75 years and over age group. It would appear that Dereham is a very healthy locality.

## Vital Statistics

LotoT stamt sint	1966	1965	England
Live Births -	112	116	& Wales
Live Birth Rate per 1000 population (adjusted)		16.3	17.7
Illegitimate live births per cent of total live births	8.93%	6.03%	
Still births	2	202	
Total still and live births	114	118	
Infant Deaths (deaths under 1 year)	5	100	
Infant Mortality Rates			
Total infant deaths per 1000 live births	44.65	8,62	19.0
Legitimate infant deaths per 1000 legitimate live births	39.22	8.77	
Illegitimate infant deaths per 1000 illegitimate live births	100	am#_10 t	Other Messes
Neonatal mortality rate (deaths under 4 weeks per 1000 live births)	26.79	-	12.9
Early neonatal mortality rate (deaths under 1 week per 1000 live births)			fell1.1.lmogno0
Perinatal mortality rate (still births and deaths under 1 week) per 1000			
total births	26.79		26.3
Maternal Mortality	-	daob;	
Deaths all ages	105	98	
Death rate (adjusted)	10.4	9.69	11.7

drawn to secure

#### Causes of Death

The following table shows the causes of death as supplied by the Registrar General for 1966.

	Male	Female	Total
Syphilitic Disease	-	1	1
Malignant Neoplasm, Stomach	1	li-se- etal	1
Malignant Neoplasm, Lung, Bronchus	2	-	2
Other Malignant and Lymphatic Neoplasms	7	3	10
Vascular Lesions of the Nervous System	5	11	16
Coronary Disease, Angina	11	8	19
Other Heart Disease	6	10	16
Other Circulatory Disease	6	1	7
Hypertension with Heart Disease	2	1	3
Pneumonia	6	5	11
Bronchitis	1	3	4
Other Diseases of Respiratory System	- 11	. 1	1
Gastritis, Enteritis, and Diarrhoea	-	1	1
Hyperplasia of Prostate	1	_	1
Congenital Malformations	1	0891- pag	1
Other Defined and Ill Defined Diseases	2	6	8
Motor Vehicle Accidents	-	1	1
All other Accidents	1	1	2
100 300 300 300 300	52	53	105
	-		

Of the 105 deaths 60 occurred in the 75 years and over, age group, that is 57% of the deaths. Only 9 deaths (8.5%) occurred under the age of 55 years. Of these 9 deaths, two were due to cancer, one case of lung cancer, five were infant deaths.

### Malignant Diseases

There were 13 deaths due to cancer. (12% of the total deaths). Cancer of the lung accounted for 2 male deaths. In 1965 there were 14 deaths due to cancer (14% of the total deaths) and there were 5 deaths due to cancer of the lung (3 male and 2 female).

### Coronary Disease

Coronary heart disease caused 19 deaths, all over age 55 years. This is again the commonest disease affecting any one organ.

Infectious Diseases	1966	1965	1964	1963	
Scarlet Fever	4	1	4	7	.cancelb alir fortnoo
Scarletina	2	-	05-12	-	
Erysipelas	1	-	1	-	Proteonics senior
Measles	126	. 175	- 44	. 126	
Whooping Cough	18	ond lot	16	3	
Pneumonia	1 1	1	HOUSE T	o abadi	introduction of new me aware of the andiscove
Dysentery	3	-	-	13	*drosf ege
Food Poisoning	1 140E	er4ta	y 3 a	1 9945	
Infectious Hepatitis	1	-	-	2	lie neral kie to resput
Puerperal Pyrexia	_	-	-	-	menantena in redauli
Acute Encephalitis	-	-	1 6	97.034 1	
Meningitis	-	-	1	-	

### Measles

There were 126 cases of measles, an unusually high number for the "aiternate" year.

The incidence of measles usually shows a peak in alternate years.

The relatively high incidence in 1966 may be due to an increased number of susceptibles in the community.

#### TUBERCULOSIS

		1966		1965			
	Male	Female	Total	Male	Female	Total	
Pulmonary	15	10	25	15	10	25	
Non Pulmonary	3	4	7	1	4	5	
Total	18	14	32	16	14	30	

There were 3 new cases of tuberculosis one pulmonary (male aged 21) and two non pulmonary (2 males aged 23 years and 64 years). One case of tuberculosis recovered during the year. Once again there were no deaths due to tuberculosis. The better living conditions and improved methods of detection and treatment have combined to control this disease.

#### B.C.G. Vaccination

Protection against Tuberculosis is offered by Norfolk County
Council in the form of B.C.G. vaccination. Vaccination is offered
to children in the 13 year old age group. Though "the white scourge"
is no longer the danger it was, due to the measures taken by the
Local Authorities to prevent the spread of infection, as well as by the
introduction of new methods of treatment it is still necessary to be
aware of the undiscovered case especially in the over 50 years of
age group.

In 1966 the work done in/preventive field is given below:-

		P= 0.0	 	2.011	
Number of childr	en eligible			50	
Number of accept	ances			48	
Number of childr	en heaf tested			45	
Number of tests	read			42	
Number of tests	positive			12	
Tuberculin index				28.6%	
Number vaccinate	d			30	

The tuberculin index is the percentage positive readings of the total readings. The numbers are small because one school was not visited.

### Immunisation Schemes

The schedule of immunisations was changed in 1966. Oral poliomyelitis vaccine was given at the same time as the triple antigen (whooping cough, diphtheria and tetanus). Primary immunisation with triple antigen and oral poliomyelitis vaccine is commenced in the third month of life and completed in the fifth month. A reinforcing dose of triple antigen is given at 18 months i.e. thirteen months after the primary course.

The level of immunity to diphtheria and tetanus is boosted again at 5 years of age and at 10 years of age. In the penultimate term school leavers are given a reinforcing dose of tetanus toxoid. In an agricultural area it is most important that a high immunity to tetanus infection be maintained.

The following tables show the work done by the general practitioners and the Assistant County Medical Officer in 1966.

Type of C	ourse				Year	r of B	irth		
	odi na	966	1965	1964		1959-		Others over 16	Total
Whooping- cough		56	56	3	10-0	1	9 -12 00	1	117
Diphtheria & Tetanus		-	6	26	8	7	1	2	50
Diphtheria			1	0110		3	1	_	5
& Tetanus	forcing	(8-1 V 01	12.2	00127		68	90	eriil ide	158
Diphtheria	Primary Re-in	142	130 Le	0.0000	loods	1	V V TO	out to	1
	forcing	P-10			med at	8	20	ta Type I	28
Tetanus	Primary Re-in	-	10 - 6.	2.0	10 200 act to	4	2	- 3	9
100							132		
Poliomyeli	tis	Lagra	ode		Yes	ar of	Birth	Lak II	Janu SE I
Type of Vaccine		1966	1965	196	4 196	1959	9- Other 2 under 16		3 Total
Sabin (Oral vaccine)	Primary Re-in forcing		70		6 :		1 - 5 13	27	149 100

Smallpox

Age when vaccinated							5-16 Yrs	Over 16	Total	
Primary Vaccination		4	1	2	43	5	2	1	81	
Re- Vaccination	0.50		-	-	-	-	. 3	24	27	
Total	23	4	1	2	43	5	5	25	108	

I am pleased to note that 1.5 times as many children received a primary course of whooping cough/diphtheria/tetanus antigen in 1966 as in 1965. The number of vaccinations against smallpox also showed an increase - 73 children under 2 years of age were vaccinated compared with 57 in 1965. Though the figures show that there has been a better response to the prophylaxis o fered there is still need for continued effort.

The 24 re-vaccinations were required by people going abroad for holidays at a time when cases of mild smallpox had occurred in the Midlands. These cases emphasised again the need for vaccination in infancy. Primary vaccination in adult life can produce a very uncomfortable state, hence in these days of air transport it behoves all parents to ensure that their children are vaccinated in childhood.

### The School Health Service and Handicapped Pupils Regulations 1953

All school children have, at present, three medical inspections during their school years; on entry, at approximately 10 years of age and in the penultimate year of school attendance. This means that each school is visited yearly by the School Medical Officer to examine these age groups. Any defects found are referred to the general practitioners for investigation and treatment.

There is now routine screening test of hearing of all six year old children. This provision by the School Health Service of the County Council to detect the child with the minor hearing loss is a very important service. The child who does not hear over the full hearing range can so easily misunderstand and fail to make the usual progress.

Provision is made for special inspections of all handicapped pupils.

Dental inspection and treatment is provided for all school children.

### NATIONAL HEALTH SERVICE ACT 1946

S. 22-S. 25

Under these sections are provided:-

### S. 22.

The care, including dental care, of expectant and nursing mothers and children under 5 years of age not attending primary schools. This section also includes the provision of child welfare centres. An Infant Welfare Clinic is held on the first and third Friday of each month from 2 p.m. to 4 p.m. at the Health Office, High Street.

S.23. Domiciliary midwives.

S. 24. Health Visitors.

S. 25. Home Nurses.

S. 28:

Care and after care of persons suffering from mental illness; short term care of mental defectives. There were 17 persons registered as subnormal - most of these handicapped people attended either a Social Club or a Training Centre.

### S. 29. Home Help Service.

This service continues its valuable work. 18 cases were assisted continuesly throughout the year and 45 cases, including 40 aged and infirm and 1 blind person received the necessary help as required.

### Mental Health Act 1958

Nineteen patients (5 males and 14 females) were admitted to mental hospitals during the year. Seven were admitted under compulsory provisions and seven were informal admissions.

### National Assistance Act 1948

Thirteen persons were admitted to Homes for the Elderly. There are those families who have an aged relative living with them. In some of these cases the aged relative was cared for in temporary accommodation while the family had their annual holiday.

There are two Old Peoples Clubs in the area - both are well supported. The Meals-on-Wheels Service continue to provide a dinner once a week for a number of elderly people. These voluntary services, the Old Peoples Club and the "Meals-on-Wheels" give a wonderful service in the community and show our "Senior Citizens" that they are not forgetten.

# HOUSING

#### Council House Development

In 1965 work began on Phase II of the Moorgate Development.
This was completed in 1966 giving:-

36 houses - 3 bedroom 5 persons type

16 bungalows - 2 bedroom 3 persons type

Stage 11 of this development was commenced and this when completed will provide another 36 houses and 14 bungalows on this estate.

The preparation of plans and specifications for development of 28 flats for disabled and aged persons at Banyard's Yard was commenced.

#### Private Development

In 1966 forty five private dwellings were completed:-

23 2 bedroom dwellings

21 3 bedroom dwellings

1 4 bedroom dwelling

#### Prefabricated Bungalows

The first six of twenty aluminimum prefabricated bungalows have been demolished after the tenants were rehoused.

#### Improvement Grants

16 Standard Grants were approved in 1966 and work was completed on 17 private dwellings for which Standard Grants had been approved, the following units have been installed:-

Baths	-	16
Wash Basins		16
Hot Water Installations	-	16
W.C's	200	16
Larders		8

The amount paid in respect of Standard Grants was £2,390.

#### WATER SUPPLY

The average daily consumption was 309,290 gallons compared with 301,761 in the previous year. The total yearly consumption was 112,891,000 gallons, this includes 39,333,000 gallons from the Bradenham bulk supply. No restrictions on the use of hose pipes or car washing were adopted during the year.

Own Source	73,558,000
Bulk Supply	39,333,000
TOTAL YEARLY CONSUMPTION	112,891,000
Increase over preceeding year	2,748,000
1956/57 Total yearly consumption	65,009,000
1966/67 " " "	112,891,000
Percentage of increase over 10 years	42%
Total Yearly Domestic Used	87,455,000
" " Industrial Used	25,436,000
Total number of Metered Supplies	177
Average Daily Consumption	309,290
Average Gallons per head per day less industrial	31
Number of houses with Town Water	2,891
Estimated population served	7,764

### New Connections and Supplies

163 new connections and supplies have been added to the distribution system during the year.

### Mains and Extensions

1,240 yards of 4" P.V.C. water main have been extended to Etling Green. This has improved the supply in the area which previously had been supplied from a deep bore and a pressure set system.

- 230 yards of 3" water main have been installed at Sheldrick Place Toftwood to accommodate a further 22 new dwellings.
- 1,315 yards of 4" water main have been installed to Northall Green. The previous source of supply to most of the cottages in this area was from three farms.

#### Headworks

To increase efficiency at the headworks, a new 3"/4" Booster
Pump has been installed. Previously the only means of replenishing
the new tower was by one pump. This new pump gives duplication
in case of breakdown.

### Number of samples taken:-

Bacteriological

14

Chemical

2 One - Dereham Town Supply
One - Bradenham Bulk Supply
(copies attached)

#### SANITARY CIRCUMSTANCES OF THE AREA

### 1. Sewage Disposal

A smell nuisance continues to exist as an unavoidable side effect of the method of treatment employed. The quality of the effluent discharged to the stream has been greatly improved on that of previous years by restricting the flow through the treatment works to design capacity and by passing the excess to a land irrigation system. This arrangement ensures compliance with the Royal Commission Standards for Sewage effluents and, it is hoped, will allow estate development to continue uninterrupted until a new treatment works is completed in the course of the next years.

### 2. Public Cleansing

House refuse is collected weekly in the built-up area of the town and fortnightly elsewhere. The purchase of a new, larger capacity vehicle should allow for the inclusion of new housing estates in this schedule for several years to come.

Similarly, street scavenging increases from year to year and it is becoming obvious that mechanical sweepers must be employed if a satisfactory standard is to be maintained.

### 3. Clean Air

Nuisance from smoking chimneys gave rise for no concern during the year,

### 4. Camping and Caravan Sites

Six individual caravans are licensed to stand in private gardens and there is one site of six caravans.

### 5. PUBLIC HEALTH INSPECTIONS OF THE DISTRICT

Description	Inspections	Informal Notices	Statutory Notices
Drainage	282	TOPIC	_
Factories, workshops, and Bakehouses	35	ius I <u>f</u> ees A	- 10.70
Food shops and stalls	160	b Jacobin	edit 'to
Dairies	4	angra_ plant	acoud!
Verminous and filthy premi	ses -		entrans
Housing	215	en ol_faceq	oloveb estrou
Nuisances	205	-	g. Penne
Rats and mice	123	-	-
Refuse Collection	10	d then this	10 To
Water Supply	2	res suitsed	und Tar
Offices and Shops	117	10	-
Clean Air Act	6	a broger of	ti tos
Caravans	1	-	
Animal Boarding Establishments	No soblem s	20 0 <u>-</u> 000 Em	_
Food Poisoning	2	-	a bound)

### 6. Milk Supply

Informal action was sufficient in the only case notified of an infringement of the normally high standard in milk production and distribution.

### 7. Ice Cream etc.

Ten routine samples were taken and found to be satisfactory.

### 8. Food Hygiene

Regular inspection of food premises in the town reveals a generally high standard.

# 9. THE FOLLOWING TINNED AND BOTTLED FOODS WERE VOLUNTARILY SURRENDERED AND DESTROYED

	lbs.	Ox Tongue	Other	foods:-	15	lbs.	Suet
32	11	Pork			70	11	Salt
22	11	Jollied Veal			14	11	Bisto
12	11	Pork Luncheon Meat			5		Beef Sausages
18	11	Corned Boof			51	11	Pork "
16	"	Peaches.			3	11	Beans
7	11	Raspberry Jam			8	11	Peas
7	11	Apricot Jam			10	11	Chicken portions
8	11	Strawberry Jam			8	11	Beefburgers -
10	11	Cherry Jam			1	11	Cheesebergers
					1	11	Steak & Kidney Pies
					6	11	Beef Dinners
					8	11	'Dinners for One'

### 10. Meat Inspection

Regular visits to butcher's shops are included in Food Hygiene inspections when information is exchanged and advice given where required.

### 11. Agricultural Act, 1956

Gang labour as such was not operating in the District during the year.

### 12. Offices, Shops and Railways Premises Act 1963

A total of 124 premises have been registered and of these 81 received an initial inspection during the course of the year, while others were revisited on a number of occasions. The overall standard remains satisfactory and in the relatively few cases where contraventions were found, informal action was sufficient to obtain compliance with the requirements of the Act.

### FACTORIES ACT, 1961

### Part 1 of the Act

Number

Number

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

encities notable	on Register	Inspections		Occupiers Prosecuted
(i) Factories in which Sections 1,2,3,4 and 6 are to be enforced by Local Authorities	2	2	no live	
(ii) Factories not included in (i) in which Section 7 is enforced by the Local Authority	45	35	area las	mericoland
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding out- workers' premises)	page and synd	en energy to		of A sykone IS site-Alde
wor the 19 bles ods	47	37	erzane e alde al	rode poets I malo i Ture

#### 2. Cases in which defects were found:-

Particulars	Number of Cases in which defects were found				
	Found	Remedied		Referred by H.M. Inspector	
Want of cleanliness (	5.1) -	-		-	_
Overcrowding (S.2)	-	-	_	-	-
Unreasonable temperature (S. 3)	-	_	-	-	-
Inadequate ventilation (S.4)	_	-	_	_	-
Ineffective drainage of floors (S.6)	-	-	-	-	-
Sanitary Conveniences (a) Insufficient (b) Unsuitable or	(S.7)	_		_	_
defective (c) Not separate	1	1	-	1	-
for sexes	-	-	-	_	-
Other offences against the Act (not inclusing offences relating to Outwork)		_			
Total	1	1	-	1	-1

### Part VIII of the Act

Section 133 (1) (c)

There are two outworkers making wearing apparel.

In conclusion I would like to thank all members of Staff of the District Council and local Health Office for their help in producing this Report and all members of the Council for their continued support.

I have the honour to be
Your obedient Servant,
Lydia McMurdo
L.R.C.P., M.R.C.S., D.P.H.

2. Oznak ža vinjak dejtovis vere found:-(1.8) soltafillesv Report one all caretone of the Council for their continued assertion

### LINCOLNE SUTTON AND WOOD LTD.

Analytical and Consulting Chemists

Eric C. Wood, Ph.D., A.R.C.S., F.R.I.C.

Clarence House, 6 Clarence Road, Norwich

Cert No. S.1248 Lab No. 1704/W

29th July, 1966

### CERTIFICATE OF ANALYSIS OF WATER

Sample received 13th July 1966 from East Dereham Urban District Council.

Marked Bradenham Bulk Supply - Hyd Stand Pipe.

Appearance when received Slightly opalescent with trace of white deposit

Nature of Deposit Iron and carbonate compounds.

Colour Nil

Odour Nil

Reaction Alkaline pH. 8.4

Taste Satisfactory.

# RESULTS OF CHEMICAL ANALYSIS IN PARTS PER MILLION

Ammoniacal nitrogen neg. trace

Hardness as CaCO

Albuminoid nitrogen neg. trace

Total 215

Nitrate nitrogen 0.1

Carbonate (temporary) 170

Nitrate nitrogen nil

Non-carbonate (permanent) 45

Chloride as Cl 30

Alkalinity as CaCO 170

Permanganate Value (4 hr.) 0.3

Free carbon dioxide nil

Fluorine as F 0.35

Total solids (at 180°C) 340

Iron (total) 0.26

Metals in solution nil

### OPINION

This water is of very good organic quality and there is no evidence of pollution. This water was last analysed in September 1965 (our Cert. R.1305) and little alteration has taken place since then. The iron present gives rise to a slight deposit on standing. In our opinion this water is suitable for drinking and general purposes.

for Lincolne Sutton and Wood Ltd.,

ERIC C. WOOD.

### LINCOLNE SUTTON AND WOOD LTD.

Analytical and Consulting Chemists.

Eric C. Wood, Ph.D., A.R.C.S., F.R.I.C. M.W. Wood.

Cert No. S1248 Lab No. 1705/W Clarence House, 6, Clarence Road, Norwich.

29th July, 1966

### CERTIFICATE OF ANALYSIS OF WATER.

Sample received 13th July 1966 from East Dereham Urban District Council
Marked Dereham Town Supply - Stand pipe in grounds.

Appearance when received Clear

Nature of Deposit Nil

Colour Nil

Odour Nil

Reaction Faintly alkaline pH 7.5. Taste Satisfactory.

### RESULTS OF CHEMICAL ANALYSIS IN PARTS PER MILLION.

Ammoniacal nitrogen 0.01 Hardness as CaCO3

Albuminiod nitrogen neg. trace Total 285

Nitrate nitrogen 0.2 Carbonate (temporary) 240

Nitrate nitrogen mil Non-carbonate (permanent) 45...

Chloride as Cl 24 Alkalinity as CaCO<sub>3</sub> 240

Permanganate Value (4hr) 0.06 Free Carbon dioxide 12

Fluorine as F 0.45 Total solids (at 180°C) 395

Iron (total) 0.10

Metals in solution nil

### OPINION

This water is of very good organic quality and there is no chemical evidence of pollution. As compared with the last analysis (our Cert. R.1386) only minor changes without significance have occurred. In our opinion this water is suitable for drinking and general purposes.

for Lincolne Sutton and Wood Ltd.,

-10RIC WOOD.



