[Report 1923] / Medical Officer of Health, Torquay Borough.

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BOROUGH OF TORQUAY.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR 1923,

BY

THOMAS DUNLOP, M.B., C.M., D.P.H.,

TOGETHER WITH SUMMARY OF

Reports of the Sanitary Inspectors

AND

Meteorological Observer.

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INDEX.

To His Worship the Mayor, Aldermen, and Councillors of the Borough of Torquay.

LADIES AND GENTLEMEN,

I have the honour to present to you my Annual Report on the Sanitary circumstances of the Borough and the Health of the inhabitants during the year 1923.

The report is drafted on similar lines to that of last year, and gives full details of the climate and physical circumstances of the town.

I have to thank my colleagues and members of the Sanitary department for their assistance and hearty co-operation.

I have also to express my appreciation of the cordial support afforded to me by the Council, and especially the Members of the Sanitary Committee.

I am, Ladies and Gentlemen,

Your obedient Servant,

THOMAS DUNLOP.

BOROUGH OF TORQUAY.

Area of the Borough, 3,996 acres.

Assessable value, £221,093.

Population—Census (1911), 38,772.

„ „ (1921), 39,432.

„ Registrar-General's Estimate for Statistical Purposes for 1922, 34,100.

Number of separate occupiers—Census (1921), 8,882.

Density of population, 10·1 persons per acre.

Corrected death rate (1923), 15·1 per 1,000. Average for previous five years 16·6 per 1,000.

Birth rate, 14·3 per 1,000. Average for previous five years, 15·3 per 1,000.

Infantile mortality (1922), 49. Average for previous five years, 60.

Death rate from zymotic disease, ·35 per 1,000.

Mean annual temperature, 52·0.

Hours of bright sunshine recorded, 1827·59.

Total rainfall, 31·47 inches.

BOROUGH OF TORQUAY.

Population.

Full details of the 1921 Census are now available. The figure given for the Borough was 39,432 persons. The Registrar-General points out, that owing to the time of year the census was taken, the above figure includes a considerable number of visitors, estimated by him as 5,772, or 14·6% excess of census over estimated residential population. As the deaths of visitors are transferred to their own areas for statistical purposes, it is necessary for us to calculate our death-rates, etc., on the residential population, and the Registrar-General gives an estimate of 34,100 as that for Torquay in 1923. This figure has therefore been used in calculating the various rates.

Although this lower population is used for purely statistical purposes, there is no doubt our normal population is well over 40,000, and one would be safe in saying that it was probably doubled during the summer season.

The following table shows the populations in the various Wards compared with those obtained in the 1911 census. It also shows the density of the population in those Wards. The density for the whole Borough was 10·1 persons per acre. This has an important bearing on control of infectious diseases, but does not provide a definite index to overcrowding from the housing point of view, A better criterion of this is the average number of rooms per person. This was found to be 1·44.

	Area in Statute Acres (Land and Inland Water).	Families or Separate Occupiers.		Population.				Persons per Acre.
		1911.	1921.	1911.	1921.			
				Persons.	Persons.	Males.	Females.	
Torquay Borough.	3906	8459	8882	38771	39431	15936	23495	10·1
Torre ...	379	919	909	4199	4631	1824	2807	12·2
Waldon ...	122	753	606	3495	3709	1444	2265	30·4
Upton ...	199	1207	1352	4898	5306	2209	3097	26·7
Ellacombe ...	185	1695	1843	6557	7068	3181	3887	38·2
Strand ...	129	699	672	3326	3119	1361	1758	24·2
Torwood ...	495	666	616	6107	3552	1158	2394	7·2
St. Mary-Church	1322	909	1038	3628	4192	1766	2426	3·2
Babbacombe ..	728	942	1137	3754	4836	1857	2979	6·6
Chelston ...	347	669	709	2807	3018	1136	1882	8·7

Other points of interest obtained from the census returns are :—

(1) Ninety per cent. of structurally separate dwellings are returned as private houses.

(2) Rooms per dwelling equalled 6·29.

(3) Families per dwelling ,, 1·14.

(4) Persons per family ,, 3·81 in 1921 against 4·03 in 1911.

(5) Rooms per family ,, 1·44.

(6) During the intercensal period there has been an increase of 642 dwellings, and an increase of 660 private families.

(7) Surplus of 3,978 rooms in 1921 on basis of England and Wales standard 1911, equalling 11·1% of standard number.

(8) The population living more than two persons to a room was 805 in 1921 and 893 in 1911, and the percentage of total private families population was 2·4 in 1921 and 2·7 in 1911.

(9) Sex distribution.—As in past intercensal periods, the proportion of females to males in Torquay is high, viz.: 1,474 females to every 1,000 males. A similar condition is found to exist in all purely residential and health resorts in the County.

Physical Features and General Character of the District.

The town is situated on a promontory, being practically surrounded by the sea on three sides. This promontory is formed by hilly ridges, running N.E. and S.W. The principal heights—the Warberry Hill, 448 feet, and the Lincombe Hill, 372 feet—are composed of Lower Devonion grits and slates. The lesser heights, such as the Braddons, Waldon Hill, and Chapel Hill, are formed of Middle Devonian Limestone, which rests above the grits and slates mentioned.

On each side of this central area, viz., at St. Mary-Church and Chelston, rocks higher in the Geological scale for the most part prevail. These rocks belong to the Permian formation, and consist of beds of Breccia—a kind of conglomerate—and sand stone of a deep red colour.

There is very little clay in any portion of the area, and what does occur is of the nature of marl, and is confined to the lower levels of certain valleys or depressions, so that rain is not detained on the surface, as it rapidly disappears through these rather pervious rocks and soils.

It is on the sides of these hills or ridges that most of the houses are built, the main roads and streets following the lines of the valleys. Thus the largest portion of the district is afforded protection from the cold winds of the North and East, a fact that is strikingly proved by the luxuriant growth of semi-tropical shrubs and plants in both public and private gardens.

Torquay is essentially a residential town and health resort; consequently a large proportion of its inhabitants are

villa residents, while the remaining portion may be said to obtain a livelihood by catering for them. There are numerous large hotels and many up-to-date boarding houses for the accommodation of visitors. There are no manufactories in the district.

During the summer and early autumn there is a very large influx of visitors, who are catered for by the inhabitants of the smaller houses.

CLIMATE.

The position of the town, built as it is on a promontory, surrounded on two sides by the sea, accounts to some extent for the mild and equable temperature experienced during winter. The meteorological records show that we enjoy a large proportion of sunshine at this period of the year. There is also an almost complete absence of fog.

The benefit of living under such climatic conditions must be apparent to all, but it is inestimable to those who are asthmatical or who are sufferers from chronic bronchitis. To the aged and infirm, who are extremely sensitive to every change of temperature, life under such conditions is prolonged and made worth living.

The bright sunshine and the possibility of being constantly in the open air, is most advantageous to children, and those who are delicate have every chance of growing up strong and healthy.

The Summer Climate.—Year by year the town becomes more popular as a holiday resort. It is unquestionable that, during the hottest days, the maximum temperature here is five to ten degrees lower than that recorded in London and the Midlands. It stands to reason, if one considers the position of Torquay, flanked by the sea and with Dartmoor in the rear, it is constantly fanned by cool breezes from one or other directions. It seems difficult to imagine a more delightful spot to spend a holiday in. Boating, bathing and fishing of the best, whilst in the neighbourhood are innumerable places of beauty and interest, which are easily accessible by sea, coach or rail. These facts are amply proved by the constantly increasing number of visitors who, year after year, spend their summer holidays here.

METEOROLOGY.

Full details of the Meteorology of the Borough will be seen in the appended Annual Report of the Borough Meteorologist, but the following resumé of the climatic conditions may be of interest :—

	1918	1919	1920	1921	1922	1923
Highest Maximum Temperature ..	78·1	80·4	73·9	85·8	75·1	87·0
Lowest Minimum ,, ..	24·6	25·9	25·3	29·1	30·3	28·1
Mean Maximum ,, ..	57·8	56·7	57·4	59·9	56·4	57·7
Mean Minimum ,, ..	47·1	45·3	47·4	48·6	45·9	46·3
Mean of Maximum and Minimum ..	52·5	51·0	52·4	54·3	51·1	52·0
Difference from Average ..	+1·2	—2·6	+1·1	+3·4	—0·7	+0·7
Number of Days on which rain fell..	212	178	189	120	181	188
Total fall in Inches ..	29·9	30·08	33·59	20·8	36·9	31·47
Number of Hours of Bright Sunshine	1856	1860·3	1595	2016	1771·5	1827·59

MEDICAL BATHS.

The Torquay Corporation Medical, Electrical and Turkish Baths, recently reconstructed, comprise one of the best Spa establishments of its kind in England. The bathrooms and fittings are all of the latest type, and the most efficient British and Continental methods of balneological and hydrological treatments are administered by highly skilled and certificated staff.

The bath dressing rooms are very comfortably furnished and equipped. There is plenty of light, and every room in the building is well ventilated and kept scrupulously clean. No expense has been spared to ensure absolute comfort for the weakest invalid requiring the greatest care and attention, as well as for those who undergo the treatment to keep them continually fit and well. Between the two blocks dividing the ladies' and gentlemen's baths is a lofty and beautifully furnished cooling lounge, where light refreshments can be had at a reasonable tariff. It is, without doubt, the finest Spa lounge in the kingdom, and the view of Torbay from the large windows cannot be surpassed. The baths and treatments arranged for are those in general demand, and proved after years of experience to be the most efficacious.

The Swimming Bath is 90ft. long by 30ft. wide, and the walls are lined with glazed bricks, whilst the floor is graduated from 4ft. in depth to 7ft. 6in. at the diving stage end. Arranged round the bath are 47 comfortable dressing boxes,

with two cold water showers, and foot baths, and the necessary lavatory accommodation for the use of that bath by ladies and gentlemen. A fine water chute and other excellent equipment is installed.

VITAL STATISTICS.

Deaths.

The total deaths registered during 1923 was 532, of whom 67 were non-residents, and whose deaths were transferable to their own sanitary areas, whilst the deaths of 52 residents dying outside the borough have to be added. The net total is therefore 516, of whom 256 were males and 260 females.

The death rate is equal to 15·1 per 1,000 per annum, compared with 17·5 in 1922. The average rate for the previous five years was 16·6. The death rate for England and Wales in 1923 was 11·6, and that for the 157 small towns 10·6.

In order to render it possible to compare the death rate here with that of the country as a whole, it has to be corrected for age and sex distribution. The Registrar-General supplies a factor, ·8730, by which the Torquay rate has to be multiplied. This gives us a rate corrected for age and sex distribution equal to 13·1 per 1,000.

Of the 516 deaths

		Percentage or Total Deaths.
24	were under 1 year of age	equals 4·65
9	were 1 year and under 2 years ...	,, 1·74
13	were 2 years and under 5 years ...	,, 2·52
6	were 5 years and under 15 years ...	,, 1·17
13	were 15 years and under 25 years ...	,, 2·52
38	were 25 years and under 45 years ...	,, 7·76
114	were 45 years and under 65 years ...	,, 22·10
299	were 65 years and over	,, 57·94
516	at all ages	100·00

It will thus be seen that 299, or 58 per cent., were persons aged 65 and upwards.

There were 22 inquests; and 7 uncertified deaths were recorded.

Ward Distribution of Deaths.

Ward.	Deaths at all ages.	Under 1 year.
Torre	50	—
Waldon	49	—
Upton	73	5
Ellacombe ..	106	9
Strand	48	5
Torwood	34	1
St. Mary-Church ..	60	4
Babbacombe ..	61	—
Chelston	35	—
Totals ..	516	24

Death from Zymotic Diseases.

The zymotic death rate is calculated from the seven principal zymotic diseases. The following table enumerates them and the number of deaths recorded from each :—

Small-pox	... ...	0
Measles	... ...	9
Whooping Cough	... ...	0
Scarlet Fever	... ...	2
Diphtheria	... ...	0
Fevers — Typhus	... ...	0
Fevers — Enteric	... ...	0
Fevers — Continued	... ...	0
Diarrhœa	... ...	1
		12

The zymotic death rate is therefore equal to ·35 per 1,000 against ·12 per 1,000 in 1922.

Births.

The total number of births registered was 503—males 263, females 240. Of these 25, or 5%, were illegitimate :—

	Males.	Females.	Illegitimate.
First Quarter ...	69	73	8
Second Quarter ...	58	66	8
Third Quarter ...	78	54	5
Fourth Quarter ...	58	47	4
Totals ...	263	240	25

Of the above total 15 births were transferable to other sanitary areas, giving a net total of 488. Besides the above 23 still-births were notified.

Ward Distribution.

	Males	Females	Illegitimate
Torre	27	22	4
Waldon	20	23	4
Upton	43	36	3
Ellacombe ...	58	60	6
Strand	20	23	5
Torwood... ...	14	10	0
St. Mary-Church ...	44	33	2
Babbacombe ...	24	22	1
Chelston ..	13	11	0
Totals ...	263	240	25

The birth rate for the Borough is equal to 14·3 per 1,000 per annum, against 14·5 in 1922. The average of the previous five years was 15·3 per 1,000. The rate for England and Wales in 1923 was 19·7, and that for the 157 small towns 19·8.

In comparing our birth rate with that of the country as a whole or those of other districts, the age and sex constitution of the population must be borne in mind. In Torquay we have a high proportion of females to males (1,474 females per 1,000 males), and of the female population some 40 to 50 per cent. are spinsters and are above or below the child bearing age; hence it is unreasonable to expect anything but a low birth rate.

Infantile Mortality.

There were 24 deaths of children under one year of age. This gives an infantile mortality rate of 49 per 1,000 births. That for 1922 was 47, and the average of the previous five years 60. The rate for England and Wales in 1923 was 92, and that for the 157 small towns 92·6.

The following tables are of interest :—

Table A. *Showing the Births, Infantile Deaths, and Infantile Mortality for a series of seven years as compared with those of the country as a whole.*

Year.	Total Births recorded.	Deaths of Infants under 1 year.	Infantile Mortality for the Borough.	Infantile Mortality for England and Wales.
1915	490	41	84	110
1916	459	43	94	90
1917	401	26	65	97
1918	412	31	75	97
1919	531	25	47	89
1920	643	34	51	80
1921	542	44	81	83
1922	490	23	47	77
1923	488	24	49	92

Table B. *Showing the principal Causes of Deaths among Infants, 1915—1923.*

Causes	1923	1922	1921	1920	1919	1918	1917	1916	1915
Measles ...	1	—	—	—	—	3	—	1	3
Whooping Cough ...	—	—	3	—	—	1	—	2	1
Diarrhœa ...	1	1	8	4	1	2	2	2	3
Tubercular Diseases ...	—	—	1	—	—	—	2	—	1
Bronchitis ...	2	1	6	2	5	7	2	2	8
Pneumonia ...	1	2	4	2	1	3	4	5	6
Premature Birth / Congenital Defects	11	14	13	16	10	6	8	18	10
Accidents ...	—	—	2	1	—	—	—	—	—
All other causes ...	8	5	7	9	8	9	8	13	9
Totals ...	24	23	44	34	25	31	26	43	41

The infantile mortality figure of 49 per 1,000 births compares very favourably with that of 92 for England and Wales. An examination of the above table shows that premature birth and congenital defects were responsible for the large proportion of infant death. As these are causes over which the Sanitary Authority have no control, and are in a large number of instances due directly or indirectly to the results of venereal disease in the parents, improvement can only be looked for through the enlightenment and more careful supervision of the expectant mothers.

Full particulars, giving exact details of the causes of death, the age stated in weeks and months under one year, are given in Table IV., page 55.

MATERNITY AND INFANT WELFARE.

The Devon County Council is the supervising authority under the Midwives' Act. There are six midwives registered as practising in the Borough. Four of these belong to the Q.V.J.N. Association, and the other two to the St. Mary-Church District Nursing Association. There is no doubt that they provide a most efficient midwifery service for women of the working classes. The Town Council make an annual grant to these Associations to cover the loss sustained on the attendance of midwives on necessitous cases.

Any irregularities in carrying out the rules of the Central Midwives' Board which come to our notice are reported to the County Medical Officer of Health. Here I would like to record my opinion, that it is essential to efficiency that the Sanitary Authority administrating the Maternity and Child Welfare Act should also be the supervising authority for the inspection of midwives and carrying out the provisions of the Midwives' Act. There cannot be that close intimate knowledge of local circumstances by an authority situated at Exeter, and whose inspections are only periodical, as there would be if the local authority and their officials were responsible.

For many years past it has been the aim of supervising authorities to remove from the register, either by persuasion or on account of neglect of the rules of the Central Midwives' Board, women who, when the Midwives' Act came into force, were put on the register as having been in active practise previously. Such women then took up the role of maternity nurses, ostensibly working under the supervision of various doctors. This, however, seemed to make very little difference in their mode of action, as they apparently take sole charge of the cases, make P.V. examinations, and only send for medical assistance when they think they will—in many cases, if they consider things proceeding straightforwardly, not till after the child's birth. They thus maintain a certain reputation, and evidently consider that the only benefit of having a doctor is in cases of difficulty and to furnish a certificate of birth for insurance purposes. There is no doubt that such a state of things has received direct encouragement from various medical men.

In the old days these women, their bags and records, etc., were periodically inspected; now they are a law to themselves. To a considerable extent doctors are to blame; they should absolutely refuse to attend patients whose nurses make such examinations. I am quite aware that if they make such stipulations patients will be encouraged to get less scrupulous medical attendants, but I believe it would repay them in the end.

Conservation of Infant Life.

The Notification of Births Act renders it compulsory for the parents, etc., to notify the birth of a child to the Medical Officer of Health within 36 hours of its occurrence. There is apparently still an absence of knowledge on this requirement, as 15 births were not notified.

There were 506 notifications of births received: (1) live births, 488; (2) still births, 23.

Of these, midwives notified 312 live births and 15 still births; parents and doctors, 186 live births and 8 still births.

A circular letter is sent to the mother, pointing out the benefits of the Welfare Centres, when and where they are held, and cordially inviting her on her recovery to make use of them.

About 10 days after the birth the Health Visitor calls and obtains such particulars as are necessary to enable her to judge as to whether the infant will be properly looked after. Where considered necessary, she gives helpful advice to the mother regarding the feeding and general management of her infant. The visits are repeated at increasing intervals, and in some cases, until the child goes to school and comes under the supervision of the School Medical Department.

She also reports upon sanitary defects, investigates cases of still births, and assists the Medical Officer in the work of the Infant Welfare Centres.

This is a most valuable work and withal a difficult one, which calls for much tact, a wide knowledge of working-class conditions and great personal sympathy on the part of the worker for its efficient administration.

A booklet, entitled "To Wives and Mothers," is distributed gratis to all mothers, and gives much useful information on the care and management of infants and young children.

Every care is taken to ensure that visits are only paid to mothers who are likely to benefit from or appreciate advice on the rearing of their infants. There is quite enough work to do without making unnecessary visits. Occasionally a call is made where everything is apparently satisfactory, but it is not here that objections are raised; indeed, in such instances the Health Visitor is frequently asked to call again. Our experience is that it is usually where there is something to hide that the persons interested object. I would appeal to Medical Practitioners, that if they cannot see their way to give us active co-operation, not to raise objections. How often does the fear of expense deter a mother from consulting her own doctor for what she may consider trivial matters, but which to a trained observer indicate the necessity for early treatment. It is also a common occurrence for mothers to try suggestions of friends and neighbours, so that when she is forced to seek medical assistance the case may be such as to cause serious trouble and anxiety to the doctor. It is unfortunately common for deaths to occur among infants which might have been prevented had they received treatment early. Cases such as these coming to our knowledge are invariably advised to consult their own doctors. It is absolutely essential to the success of our work that we should render loyal support to the private medical attendant.

Health Visitor's Report for 1923.

Expectant mothers	First visits	53	Total visits	85
Infants under 1 year	,,	493	,,	2078
Children 1—5 years	Total individuals	706	,,	1720
Still births investigated	——		——	20
Ophthalmia neonatorum	First visits	3	Total visits	11
Tuberculosis	,,	14	,,	55
Miscellaneous visits	——		——	41
Cases out when visited	——		——	305
,, removed	——		——	82
			Total visits	4397

Attendances at Welfare Centres 98.

In cases of removals particulars of case are transferred to the Medical Officer of Health of the district where the parents have gone.

Insanitary conditions found in 37 instances were referred to the Sanitary Inspectors.

Cases not considered necessary to visit	42
Visits considered unnecessary after first visit ...	6
,, ,, ,, subsequent visits ...	9
Objections raised to visits	12

There can be no doubt as to the value of this work, and it is evident, from the fewness of objections, that the visits of the Health Visitor are appreciated.

Provision of Milk to Necessitous Mothers and Infants.

Applications for a free supply of milk under the Milk (Mothers and Children) Order, 1919, are in all cases made direct to the Medical Officer of Health. Care is taken to supply only necessitous cases in which lack of a proper supply of milk is likely to prove prejudicial to health. The great majority of the cases were personally investigated by the Health Visitor. There is no doubt such assistance is of inestimable value in saving the lives of infants in times of stress.

During 1923, 51 families were helped in this way, and 2,568 pints of milk were provided at a total cost of £23 12s. 5d.

Infant Welfare Centres.

The whole of the work is controlled by the Infant Welfare Sub-Committee of the Town Council, and the following three Centres have now been established :—

(1) Ellacombe Centre meets in the Primitive Methodist Hall, Market Street, on Fridays, from 2.30 to 4.30 p.m.

(2) Market Street Centre meets as above on Mondays from 2.30 to 4.30 p.m.

(3) St. Mary-Church and Babbacombe Centres meet in the Furrough Cross Congregational Hall on Thursdays from 2.30 to 4.30 p.m.

Each Centre is managed by a Committee of Voluntary Workers, which meets at regular intervals, and makes all arrangements for carrying on the work. Much of the success of the work must be attributed to their efforts.

Tea is provided at the nominal charge of 1½d. per head, and the programmes include health talks, instruction in home nursing and the care of infants, and demonstrations of sewing, cutting out, etc.

The Assistant Medical Officer of Health attends each Centre, and is responsible for the medical arrangements. He is always assisted by either the Health Visitor, the Matron of the Q.V.J.N. Institution, or one of the St. Mary-Church District Nurses.

Some idea of the scope of the work may be seen from the following figures for the three Centres combined :—

Admissions for the year	172
Age on Admission—	
Under 1 month	52
From 1 month to 3 months	57
,, 3 months to 6 ,, ...	15
,, 6 ,, 12 ,, ...	10
Over 12 months	38
Condition of Health on admission—	
Good	123
Fair (under average)	33
Delicate	16
Method of Feeding on admission—	
Breast	79
Partly breast	15
Artificially fed entirely	78
Artificial Method adopted by Mother on admission—	
Cow's milk	38
Dried milk	3
Condensed milk	4
Patent foods	7
Ordinary food	41
Treatment given during year to cases admitted during year—	
Advisory	97
Minor ailments	41
Referred to Medical Practitioners Hospitals, etc.	19
Total Attendances for year	4429
Attendances under 1 year	1764
,, from 1 year to 5 years	2665
Average attendance of children per session ...	31
Number of Sessions (three Centres)	139

When investigating each birth the Health Visitor makes a note of the cases which might reasonably be expected to attend a Welfare Centre, excluding cases living very far from a Centre, mothers working from home, mothers with special home ties, etc. During 1923, 172 children were brought to

the Centres, being 44·2% of the 389 considered "to be in a position to attend and likely to benefit." Similar figures for 1922 were: 142 brought to Centres, 38·3% of 371 considered suitable.

The total attendances continue to show an increase year by year. Thus in 1921 they equalled 3,027; in 1922, 4,050; while in the year under consideration they were 4,429.

The majority of the babies are seen by the Medical Officer at each visit, any defects are pointed out to the mother, and instructions given *re* diet and infant management in general. Emphasis is laid on the preventive nature of this work, and all cases requiring treatment for other than simple disorders—such as indiscretions of diet, etc.—are referred to private practitioners.

Ante-Natal Cases.—Only 11 expectant mothers attended for advice. The importance of ante-natal supervision does not yet seem to be fully realised, or greater advantage would be taken of the facilities provided for this work. Many of the risks to which the expectant mother is exposed can be minimised or avoided entirely by routine examination and treatment.

Summary of Nursing Arrangements.

Professional Nursing in the Home. (*a*) General.—Nurses of the Queen Victoria Nursing Association and St. Mary-Church District Nursing Association are available for this purpose, independently of the Local Authority. (*b*) For Infectious Diseases.—The Town Council utilises the services of the Q.V.J.N.A. for nursing cases of Ophthalmia Neonatorum and Measles when necessary, on the instructions of the Medical Officer of Health. A retaining fee of £10 per annum is paid and 1s. per visit.

Midwives.—The Council makes a subsidy to the Jubilee Nursing Association of ¼ the deficit of the cost of their midwives, less the amount obtained in fees. This is in addition to the grant received by them direct from the Ministry of Health. Similarly to the St. Mary-Church Nursing Association a subsidy is given of ¾ of the deficit between cost of of midwife and fees obtained. The reason for this is that no grant is received direct by that Association from the Government.

A grant is also made to the Committee of the Door of Hope for Friendless Girls towards the expenses of running that Institution. The babies here are regularly seen by the Corporation Health Visitor.

Lying-in Accommodation.—There is no Institution in the Borough where mothers of the working classes can be received for ordinary confinement. The authorities of the Torbay Hospital will, however, always receive cases of complication. In view of the proposal to build a new general Hospital, it is to be hoped that provision will be made for the reception of maternity cases.

Puerperal Fever.

No cases were notified.

Ophthalmia Neonatorum.

One case was notified and two other suspicious cases discovered. All were kept under observation and recovered, the sight being unimpaired. It is most important that cases or suspected cases should be notified with as little delay as possible, so that supervision may be exercised to see that the prescribed treatment is properly carried out. As a matter of routine, all these cases are at once visited by the Health Visitor, who obtains particulars ; she also re-visits to ascertain the ultimate result.

The Council have an arrangement with the Queen Victoria Jubilee Nursing Association to treat all the cases in which the Medical Attendant considers it desirable.

Non-Notifiable Infectious Diseases.

In the early part of the year measles was present in almost epidemic form. It was responsible for nine deaths, all of children under five years of age. Most of these occurred in the Strand Ward.

The Borough was comparatively free from other non-notifiable infectious diseases.

Infantile Diarrhœa.

Remarkably few cases of diarrhœa came to our knowledge. There was only one death, an infant under one year of age.

NOTIFIABLE DISEASES DURING THE YEAR 1923.

Disease	Total Cases Notified	Cases Admitted to Hospital	Total Deaths
Diphtheria	11	10	—
Scarlet Fever	110	102	2
Enteric Fever (including para-Typhoid)	1	1	1
Puerperal Fever	—	—	—
Pneumonia	7	—	25
*Chicken Pox	105	—	—
Tuberculosis—			
(*a*) Pulmonary	98	—	34
(*b*) Non-Pulmonary	19	—	7

* Made notifiable in June, 1923.

HOSPITALS AND OTHER INSTITUTIONS AVAILABLE FOR THE DISTRICT.

Hospitals provided or subsidised by the Local Authority or by the Devon County Council—(1) Tuberculosis, "Whitecliffe." This is the old Western Hospital, taken over by the County Council. It accommodates 45 patients. (2) There is no special Maternity Hospital, but the Authorities of the Torbay Hospital will admit urgent cases requiring operative treatment. (3) Rosehill Children's Hospital. The Maternity and Child Welfare Committee subsidise one bed, and if vacant can obtain the use of a second, at a cost of one guinea per week. This Hospital is situated on the Lower Warberry Road, and accommodates 30 patients.

The Borough Sanatorium, Newton Abbot Road, consists of the Administrative Building—Scarlet Fever ward block, consisting of two wards, with four beds in each; and a Diphtheria ward block, two wards with four beds in each. There is also a private ward for one patient, with Nurse's room attached.

The financial statement for the year, April 1st, 1922, to March 31st, 1923, shows that the cost amounted to £1,235 19s. 9d. The number of patients treated in the same period was 119. These consisted of 5 cases of Diphtheria and 114 of Scarlet fever.

ENTERIC FEVER.

When there is accommodation, the Authorities of the Torbay Hospital admit cases of this disease.

Cockington Sanatorium.

Taken over from the Cockington Urban District at the time of the amalgamation. This Hospital is considerably more than half-a-mile from any inhabitated building, and is kept in readiness for the reception of small-pox, should any arise.

The cost of the Cockington Sanatorium, which was empty during the year, was £98, consisting of rent, rates, etc.

Bacteriological Examination.

Specimens from suspected cases are examined at the expense of the Town Council by Mr. Quant, of the South Devon Chemical and Bacteriological Laboratory, who reports that during the year he examined the following :—

Diphtheria -	69	{	Positive - - -		3
		{	Negative - - -		66
Tubercular Sputum	37	examinations	{	Positive -	6
			{	Negative -	31
Enteric - -	1				
Total - -	107				

In the Laboratory attached to the Health Department we have examined 63 specimens from inflamed or suspicious throats of children attending the elementary schools. Some 25 specimens for other pathological conditions were examined.

Ambulance Facilities.

There are two motor ambulances belonging to the Corporation and under the supervision of the Medical Officer of Health—(1) A covered Ford Ambulance, and (2) a Daimler Ambulance. The former has been utilised for the removal of infectious cases, and the latter for medical and surgical. The ambulances are garaged at the Town Hall, and during office hours can be obtained by communicating with the Medical Officer of Health at his office, Telephone No. 1010. When the offices are closed, application should be made to the ambulance driver at his house, Telephone No. 504.

Two trained members of the St. John Ambulance Brigade always accompany the ambulance as attendants.

Disinfection.

Free disinfection is carried out in all cases of notifiable infectious disease, and also after the removal or death of consumptive patients. Rooms are first fumigated with formaline,

and then the bedding is removed to the disinfecting station at the Isolation Hospital and subjected to steam sterilisation. The disinfector is a "Thresh" Current Steam Disinfector.

Full advantage is taken of the facilities, all cases where notifiable disease occurs being fully disinfected, and a very large proportion of non-notifiable cases.

Small-pox and Vaccination.

No cases were notified. No vaccinations, either primary or re-vaccinations, were performed by the Medical Officer of Health. The accompanying table indicates the position of the district as regards vaccination.

Through the courtesy of Mr. Edwards, the Vaccination Officer, I am able to give the average results of primary vaccination for the years from 1900 to 1922 :—

Years.	Total births registered	Successfully vaccinated	Insusceptible of Vaccination	Had Small-pox	Number of Certificates from Conscientious Objectors	Died Unvaccinated	Postponed by Medical Certificate	Removed to other districts the Vaccination Officer of which has been apprised	Removed Address unknown	Percentage successfully Vaccinated	Excluding those who died Unvaccinated. Percentage
10 Years' Average 1900—1909	578	468	1	—	39	4	6	3	10	82	87
10 Years' Average 1910—1919	522	219	1	—	235	33	9	3	15	41	44
1920	686	271	2	—	340	35	11	2	20	40	41
1921	561	179	3	—	314	34	6	6	10	32	34
1922	526	215	—	—	277	22	2	5	2	40	42

From the above it will be seen that about 52 per cent. of children born are unprotected by vaccination. A very precarious position for such a town as Torquay to be in, should small-pox be introduced.

In consequence of the continuance of small-pox in the Midlands and the North of England, many individuals have made enquiries at this office as to facilities for being vaccinated. These have been referred to the Public Vaccinators, and I believe a considerable number of adult vaccination has been done.

Also in view of the above facts, and the mild nature of many of the cases of small-pox, it was deemed advisable to make chicken-pox notifiable. This was done in June, 1923, and as a result 107 cases were notified. A large percentage were visited, and although some were severe in type, nothing indicative of small-pox was discovered.

As stated on page 23, the Cockington Isolation Hospital is kept in readiness for the reception of small-pox cases.

Enteric Fever.

One case was notified. The patient was a domestic servant. Her home was outside Torquay, and there was a history that a brother had recently died from enteric and another member of the family was then suffering from the disease. She was removed to the Torbay Hospital. The case proved fatal.

Scarlet Fever.

One hundred and ten cases were notified against 51 the previous year. It was present in mild epidemic form throughout the whole year, and cases occurred in every Ward of the Borough. There is no doubt that its prevalence was due to unrecognised cases—in no less than nine instances were children discovered desquamating while in attendance at school. On the whole the disease was of a mild type, but two cases proved fatal from complications. Of the 110 cases 102, or 92%, were removed to hospital for treatment. This naturally taxed our resources to the utmost, and emphasised the necessity for more accommodation, and such as would be suitable for the size of the Borough and to meet modern requirements.

Diphtheria.

The town was remarkably free from this disease; only 11 cases were notified. All were of a mild character, no deaths occurring. Ten were removed to the Hospital for treatment.

Erysipelas.

There were 11 notifications received, and two proved fatal.

Tuberculosis.

During the year 98 notifications of Pulmonary Tuberculosis were received, and 19 for other forms of Tuberculosis.

Thirty-four deaths were registered from Pulmonary Tuberculosis among Torquay residents, besides which there were 23 deaths among visitors, whose deaths were transferred to other sanitary areas.

The death rate is equal to 1·0 per 1,000 per annum.

The following table gives the sex and age at death :—

Age period		5—15	15—25	25—45	45—65	Over 65	Totals
Residents	Males	1	1	5	7	3	17
	Females	—	2	9	6	—	17
Totals		1	3	14	13	3	34

Besides the above there were seven deaths from other forms of Tubercular disease.

Notifications of this disease are forwarded weekly to the Devon County Council, and there is close co-operation between the County Tuberculosis Officer and myself in dealing with Tubercular cases.

The Devon County Council utilise "Whitecliffe" as a hospital for the reception of cases of tuberculosis which are not suitable for treatment at the County Sanatorium. Many of the transferable deaths occur at this Institution.

Free disinfection of rooms and bedding is carried out after death or removal of patients from houses in the Borough.

Under section 63 of the Torquay Corporation Act, 1923, where the Medical Officer certifies that the cleansing and disinfection of a building would tend to prevent or check Tuberculosis, the Town Clerk shall give notice to the owner or occupier of such building, that the same will be cleansed and disinfected by and at the cost of the Corporation, unless the owner or occupier does the work to the satisfaction of the Medical Officer within a specified time.

It also empowers the Medical Officer to require the owner of any household, or other articles, books, things, bedding, or clothing, which have been exposed to Tuberculosis with discharges, to deliver such articles to the Corporation for the purpose of disinfection free of cost by the Corporation.

The last sub-section places an obligation upon any persons having the charge, management, or control of any building used as an hotel, boarding-house, or lodging-house in which there is, or has been, any person suffering from Tuberculosis, to give notice to the Medical Officer as soon as he becomes aware of it.

Section 75 (Power to prohibit persons in advanced stages of Tuberculosis from handling, &c., food.)

This section enables the Corporation upon the certificate of the Medical Officer to prevent persons in an advanced stage of Tuberculosis from being employed in the cooking, preparation, or handling of food intended for consumption by persons other than himself and members of his household, and also enables the Corporation to make compensation if they think fit to any such person for loss sustained.

Cancer, Malignant Disease.

There were 64 deaths registered from the above cause, four more than in 1922. The age and sex distribution is as follows :—

Age period	Under 30	30—35	35—45	45—55	55—65	65—75	Over 75	Totals
Males	—	—	—	3	5	8	8	24
Females	—	—	1	7	9	13	10	40
Totals	—	—	1	10	14	21	18	64

The death-rate from cancer is equal to 1·8 per 1,000 per annum.

It must be remembered that in Torquay the population contains a larger proportion of persons of advanced years and of females over males than the country as a whole, hence it is only to be expected that the death rate from Cancer would be high.

Parts affected.	Carcinoma.	Epithelioma.	Sarcoma.
Stomach	13	—	—
Liver	4	—	—
Oesophagus	3	—	—
Intestines	8	—	—
Rectum	5	—	—
Peretoneum	—	—	1
Tongue	—	2	—
Breast	11	—	—
Uterus	1	—	—
Ovaries	2	—	—
Bladder	1	1	—
Prostate	2	—	—
Lungs	—	—	1
Bones	—	—	4
Face	—	1	—
Not defined	3	—	1
Totals ...	53	4	7

From a Memorandum prepared by the Departmental Committee on research into the causation of Cancer, and issued by the Ministry of Health, the following points summarise our present knowledge :—

1. The root causes on which the occurence of Cancer depends remains obscure.

2. There is no specific means of producing immunity against the disease, nor have we any specific means of curing the disease.

3. The death rate for England and Wales in 1921 from Cancer was 1·21 per 1,000. In the 20 years, 1901 to 1921, Cancer has increased 20%, while the general death rate fell 32%, and that from Tuberculosis 38%.

4. In a broad sense, liability to Cancer is not an attribute of any particular social class, profession, or occupation. Hereditary predispositions has not at present been proved. It cannot be asserted that any particular article of food increases liability to Cancer, and that any known drug will prevent or cure it if present; that no danger of Cancer has been proved to result from inhabiting houses or district in which Cancer happens to be exceptionally common. There is no evidence to show that Cancer is an infectious or contagious disease.

5. One certain fact about Cancer is that it frequently follows on chronic or prolonged irritation, and it occurs more commonly in certain sites such as the lip, tongue, breast, etc., hence it is prudent to notice and remove causes of chronic irritation in these positions.

6. Cancer in its early stages is usually painless, so that it is advisable for persons in whom there exists any abnormal conditions that are common precursors of Cancer to seek Medical advice. Especially so where a tumour or lump is found in the breast, or if an ulcerated condition exists on the tongue, lips, or skin which does not heal in a few days. Should the case be one of Cancer the earlier the treatment the more likely it is to be successful, and less likely to recur, and if an operation is essential, it is generally not so extensive if the glands are not involved.

The Memorandum emphasises that "The essential point is that the patient should not postpone or delay seeking competent Medical advice, and above all, should not waste time or money, by trying quack remedies, which at best are useless, and at worst aggravate the disease. In any condition in which Cancer is suspected, immediate and decisive action is necessary.

Venereal Disease.

The treatment of this disease is supervised by the County Council. Although that Authority gives every facility for patients to attend the centres at Exeter, even to advancing the cost of railway fare in necessitous cases, yet the want of a local centre militates against successful action in combating this complaint. As mentioned under the paragraph dealing with provision of Maternity beds at the proposed new General Hospital, it is hoped that a department will be allotted to the treatment of Venereal diseases.

WATER SUPPLY.

The town supply is derived from upland surface gathering ground on the borders of Dartmoor, about 15 miles from Torquay. The area of the gathering ground is 2,241 acres, and belongs to the Corporation. All inhabited houses and farms have been cleared from the area, thus preventing any menace to the purity of the water. The water is also, as a further precaution, passed through mechanical filters. In this way all suspended material is removed ; it is clarified, and the appearance considerably improved.

The total amount supplied was 667,907,000 gallons, or 30·49 gallons per head for a population of 60,000. This includes Newton Abbot and a few villages on the line of the mains.

The total rainfall on the catchment area during the year was 46·43 inches.

In times of continued drought, when large quantities of the water are being used for gardening purposes, some difficulty has been experienced in keeping the home supply reservoirs filled. In order to overcome this trouble, and also to obviate any stoppage through a burst main, &c., it was decided to lay a 14-inch main from Newton Abbot (the main being duplicate to this point) to Great Hill, where a service reservoir is to be constructed capable of containing 1½ million gallons. The water from here will supplement the supply to the town service reservoirs, and also supply water to houses at the highest levels. Sanction has now been obtained for a loan to carry this out, and when completed will do away with the anxiety felt by the authorities and of the necessity of putting the inhabitants on short commons.

Quality of the Water.

It possesses all the qualities of a good upland surface water. The watershed has been so protected as to make the possibility of pollution infinitesimal. It is also subjected to mechanical filtration, rendering it doubly safe, and removing any suspended peaty matter. It is extremely soft, yet contains sufficient lime and magnesia salts to prevent any solvent action on lead. It is in all respects one of the best domestic supplies in the Kingdom.

Regular monthly analyses of the water are made, samples being taken from different areas in the Borough. The results vary very slightly ; the following is a typical result.

Results of Chemical Analysis.

Physical Characters—Very pale straw colour, clear, no odour or deposit.

Chemical Constituents	Expressed in parts per 100,000.
Total Solids	7·0
Chlorides	1·6
Hardness	1·5
Nitrites	nil
Nitrates	·13
Free Ammonia	trace
Organic Ammonia	·007
Oxygen absorbed in 4 hours	·083

SEWERAGE.

The sewage of the whole district, and most of the storm-water, is conveyed to the main sewer in Fleet Street ; that of the Strand, Torbay Road, Vaughan Parade, Victoria Parade, Beacon Hill, George Street, and Swan Street, being pumped into the main sewer. The main sewer is seven feet in diameter, and runs from Fleet Street to Hope's Nose, a distance of about two miles. The outfall is at such a level that the sewage is discharged at all states of the tide. No method of treatment is adopted, as the flow of current is out towards mid-channel beyond Berry Head, and does not under any circumstances return towards the bay.

During the year about 2,000 feet of 6" sewers, and 4,000 feet of 9" sewers were laid to serve for new buildings being erected in Clennon Lane, Teignmouth Road, Wheat-

ridge Lane, Old Mill Road, Lincombe Drive, Ilsham Road, and Ilsham Drive. That laid in Lincombe Drive has obviated a serious difficulty, as many houses and bungalows had previously been erected and their drains connected to cesspools. These have now been connected to the new sewers.

Drainage of Houses.

Most of the houses, especially villa residences and large boarding houses, have the best modern sanitary arrangements, including water closets of good type with waste water preventers. In every case where possible the drains are connected with the sewers, but in some exceptional cases, where the levels prevent, cesspools have been constructed.

Collection and Disposal of House Refuse.

House refuse is moved by the employees of the Corporation under the Surveyor's Department. In most parts of the town it is removed once a week, but in certain parts twice. It is carted to the destructor works in Upton Valley, and there consumed, 11,462 tons being dealt with annually. The destructor is a " Warner Perfectus " of six cells. The boilers are heated from the furnaces, and the steam generated can be used to drive donkey engine, vertical engine for running blower, 25-horse-power engine for running mortar mill and electrical installation. The clinker produced is ground and used for mortar.

Sanitary Ashbins.

The Torquay Corporation Act, 1923, sec. 64, empowers the Sanitary Authority to compel owners or occupiers of dwelling-houses, warehouses, or shops, to provide portable covered galvanised iron ashbins. Where suitable ashbins have been so provided, the owner shall, if so required by the Corporation, pay to them a sum not exceeding 5/- annually, and thereafter the Corporation shall maintain, repair or renew such ashbins. This will prevent the use of those miscellaneous insanitary and objectionable receptacles at present used by many householders.

The Staff.

The Medical Officer of Health is responsible to the Sanitary Committee for the proper working of the department. He is also the Administrative School Medical Officer, in which

capacity he is responsible for the medical inspection and treatment of elementary school children to the Education Authority, thus co-ordinating the two offices.

For the efficient carrying out of these duties he has the assistance of the following :—

An Assistant and Deputy Medical Officer of Health, whose principal duties are the medical inspection and treatment of school children. In this connection may be included the *School Nurse.* The Deputy Medical Officer of Health also carries out the duties of Medical Officer to the Infant Welfare Centres, where he is assisted by the lady *Health Visitor*, who possesses the C.M.B. certificate.

The Staff of the Sanitary Department is as follows :—

Mr. C. MacMahon, Cert. San. Inst., Senior Inspector.

Mr. G. Body, Cert. San. Inst., Meat and Food Inspector, Port Sanitary Officer, and Meteorological Observer.

Mr. Loveless, Cert. San. Inst.

Mr. A. Jump, Cert. San. Inst.

FOOD.

Inspection of Food and Places where it is prepared.

The various Slaughter-houses, Butchers' Shops, Market Hall, and Fish Quay, have been regularly supervised during the year, the number of visits to these places being above the average.

Our standard of food inspection has been well maintained, the principal governing the condemnation of diseased carcases and organs is that scheduled in the Report of the Departmental Committee on Meat Inspection, and to which we closely adhere.

The diseases met with in practice were those fairly common throughout the country, but owing to the high grade of cattle handled by the traders of the town, and the beneficent climate under which the animals live, the quantity of diseased carcases and organs destroyed is probably less than in many other towns of a similar size. Nevertheless, there has been an

increase in the amount of food condemned, the total for the year being 11,604 lbs. compared with 10,622 lbs. during the year 1922. This weight, however, does not include the animals slaughtered owing to the outbreak of Foot and Mouth Disease, which numbered 19 cows, 80 pigs, and 1 bull. In addition to which, at a farm at Chelston, a few yards over the Borough boundary, 1 cow and 6 young bullocks were destroyed.

In my last Report, I referred to the Corporation Bill then being promoted by the Corporation; this Bill with only a few amendments by the Standing Bills Committee received the Royal Assent and is now law. Among the important powers conferred on the Corporation are the following:—

> power to establish a public abbatoir; to close insanitary slaughterhouses; to make regulations governing the preparation of sausages, ice cream, and other articles of food; the prohibition of inflating of carcases by the mouth; preventing rag and bone hawkers dealing in articles of food; the use of sleeping rooms for storage of food; preventing persons in advanced stages of tuberculosis from the handling, dealing, or preparation of food for human consumption; persons dealing in shell fish to furnish source of supply, to amend the law so that the original vendor of unsound food shall be held liable and thus bring the Public Health Act into line with the Public Health (London) Act, 1891; to authorise the making of bye-laws to prevent meat (other than foreign) being offered for sale until after inspection by an officer of the Corporation; to require notice of the slaughter of any animal suffering from accidental injury or illness, and to authorise the inspection in any slaughter-house, within a radius of six miles of the Borough, of any carcase or part thereof intended for sale in the Borough; and to make regulations respecting the conveyance of meat through the streets.

At the time of writing bye-laws have not been prepared, as the Ministry of Health contemplate issuing Regulations dealing with the transport, preparation and exposure for sale of foods, hence it has been thought desirable in the interests of the various trades and the public in general, that our Regulations should conform as nearly as possible with those issued by the Ministry.

The provision of a public abbatoir is a sanitary reform long overdue. In view of the power conferred to inspect all meat and internal organs at a central depot prior to its being offered for sale, the want of an abbatoir is intensified.

The erection of this abbatoir would eventually lead to the closure of many private slaughterhouses, as the facilities offered in a well-equipped slaughterhouse, with cooling rooms attached, would prove a boon to many butchers. At the same time by having one centre for slaughtering and inspection a considerable amount of time and travelling would be obviated.

In a health resort of the eminence of Torquay the supervision of the preparation and storage of meat is of as much importance as a pure water supply; all add to the advantage of the town, and create a feeling of confidence and security among the many visitors that sojourn here.

The same remarks apply to premises where food is prepared and offered for sale, especially tea rooms, restaurants and hotels, &c., and with the powers conferred on us under the aforesaid Act it is essential that Regulations should be drawn up dealing with the various matters associated with cleanliness, &c. These important and unique powers will add considerably to the work of the department.

SLAUGHTERHOUSES.

These number five, four being subject to annual licensing and the so-called public slaughterhouse is registered. The premises are visited daily, and on the whole are kept in a satisfactory condition, the quarterly lime-washing and the periodic cleansing of the slaughtering cradles giving most trouble.

The lack of cooling accommodation necessitating the slaughter of animals in close proximity to those hanging up, is a great drawback and a strong argument in favour of the provision of a public abbatoir. Other points are the keeping of pigs and the storage of pig-wash in close proximity to the slaughterhouse.

Regular visits of inspection are made to all butchers' shops, market, railway siding and fish quay.

The following tables summarise the amount of unsound food condemned, and the number of animals inspected and examined.

TABLE A.

DISEASED OR UNSOUND FOOD DESTROYED.

Organs, etc. Destroyed.		Diseases.												
		Tuberculosis.	Flukes.	Cirrhosis.	Abscess.	Cysts	Strongyli.	Inflammation.	Pleurisy.	Injury.	Actinomycosis	Unsound.	Others.	Totals.
Beasts :	Lungs ..	—	—	—	3	2	—	1	—	—	—	—	—	6
	Livers ..	—	42	19	2	—	—	2	—	—	—	—	—	66
	Tongues ..	—	—	—	—	—	—	—	—	—	—	—	—	—
	Heads.. ..	—	—	—	—	—	—	—	—	—	—	—	—	—
	Carcases ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Cows :	Lungs ..	4	—	2	—	—	—	—	—	—	—	—	1	7
	Livers.. ..	5	26	14	2	—	—	—	—	—	—	—	2	49
	Tongues ..	—	—	—	—	—	—	—	—	—	—	—	1	1
	Heads ..	—	—	—	—	—	—	—	—	—	2	—	1	3
	Carcases ..	—	—	—	—	—	—	—	—	—	—	—	1	1
Heifers :	Lungs ..	1	—	—	—	—	—	1	—	—	—	—	—	2
	Livers ..	1	24	3	4	—	—	—	—	—	—	—	2	34
	Tongues ..	1	—	—	—	—	—	—	—	—	1	—	—	2
	Heads ..	1	—	—	—	—	—	—	—	—	—	—	—	1
	Carcases ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Sheep :	Lungs ..	—	—	—	15	1	364	16	4	—	—	—	—	400
	Livers.. ..	—	138	16	142	10	—	—	2	—	—	—	—	308
	Heads ..	—	—	—	—	—	—	—	—	—	—	—	—	—
	Carcases ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Pigs :	Lungs ..	10	—	—	2	—	10	11	—	—	—	—	—	33
	Livers ..	9	—	2	1	2	—	3	—	—	—	—	—	17
	Heads ..	95	—	—	—	—	—	—	—	—	—	—	—	95
	Carcases ..	4	—	—	—	—	—	2	—	1	—	—	2	9
Other Organs :														
	Mesenteries ..	11	—	—	—	—	—	—	—	—	—	—	—	11
	Spleens ..	1	—	—	—	—	—	1	—	—	—	—	—	2
	Stomachs ..	3	—	—	—	—	—	1	—	—	—	—	—	4
	Miscellaneous	5	—	—	3	—	—	10	—	1	—	8	—	27
Other Foods		4	—	—	3	—	—	2	2	3	—	18	9	41
Frozen Meat		2	—	—	—	—	—	—	—	14	—	34	44	94
Totals ..		157	230	56	177	15	374	50	8	19	3	60	64	1213

TABLE B.

Carcases Examined.

1922.		1923.
408	Bullocks	532
431	Cows	372
338	Heifers	604
5198	Sheep	5989
2410	Pigs	2496
934	Calves	1187
197	Lambs	35
9916		11215

TABLE C.

Carcases Destroyed.

1 Cow	...	Johne's disease.
11 Pigs	...	Tuberculosis, 7 ; Swine fever, 2 ; Inflammation, 2.
1 Sheep	...	Pleurisy.

TABLE D.

Number of Carcases Examined in the different Slaughter-houses in the Borough.

No.	Bullocks.	Cows.	Heifers.	Sheep.	Pigs.	Calves.	Lambs.	Total.
1	—	—	—	—	27	—	—	27
2	13	12	36	35	16	4	—	116
3	3	12	—	26	51	—	—	92
4	22	57	49	355	43	2	3	531
Abattoir	118	52	189	2420	835	804	24	4442
Totals	156	133	274	2836	972	810	27	5208

NOTE.—The difference between the total of Table D and the figure given in Table E (*i.e.*, 327) is accounted for as follows :—These animals were inspected in slaughter-houses in Cockington District, at the Railway Siding, and in Swine Fever infected areas.

TABLE E.

Total number of Carcases Examined in different Slaughter-houses and Shops.

Slaughter-houses	5607
Shops	5609
	11216

TABLE F.

Diseased or Unsound Food Destroyed.

1922.					1923.*			
Tons.	cwts.	qrs.	lbs.		Tons.	cwts.	qrs.	lbs.
2	17	1	15¾	Voluntarily surrendered ...	2	4	3	23
1	16	1	22¼	Surrendered (after inspection)	2	13	3	5½
—	1	0	0	Seized	0	4	3	11½
4	14	3	10	Totals	5	3	2	12

* This does not include animals destroyed under the Foot and Mouth Disease Orders.

TABLE G.

Percentage of Animals Inspected found affected with Tuberculosis.

Bullocks	0 in 532	=	0·000 %
Cows	2 in 372	=	0·537 %
Heifers	1 in 664	=	0·165 %
Calves	1 in 1187	=	0·084 %
Pigs	86 in 2496	=	3.445 %

DAIRIES, COWSHEDS AND MILKSHOPS.

Registered dairymen and cowkeepers in the Borough number 85. These premises are visited at least twice annually, but the majority are inspected quarterly. On the whole we have little to complain of. Cleanliness is generally well maintained, but the use of old vessels that are badly dented and devoid of tinning, and with lids that retain dust and rain, are matters requiring reform. These we hope to deal with under the Milk and Dairies' (Amendment) Act, 1922.

There is a very large quantity of milk supplied to Torquay from farms outside the Borough, and as in former years, I or the Sanitary Inspector, have inspected approximately 110 farms. In every instance the dairies, both as regards position and cleanliness, were all one could desire, but one would like to see greater care and interest taken in the cleanliness of the cows, farm yards and cowsheds.

The idiosyncrasy of the average dairy farmer in this matter is, to say the least, peculiar, and his faith in the strainer is immovable. Whilst his dairy and milk vessels are beyond reproach, the condition of the majority of his animals and condition of milking is more in keeping with the dark ages.

In my last Report I drew attention to the Dairies' (Special Designations) Order, which dealt with the production of graded milk. After a considerable amount of trouble, one dairyman with more initiative and foresight than his fellow traders, took up the distribution of Grade A (Tuberculin tested) milk, and obtained the contract to supply the Council's Pavilion, Beach Café, and Medical Baths. Since then five other distributors have been licenced, whilst a local producer has gone to considerable expense in re-modelling his farm, and

installing a sterilising plant with the intention of producing "Certified" milk, so it is to be hoped that in the very near future the production and sale of this special grade milk will be as common in the Borough as Devonshire scald cream.

Unfortunately the public do not yet realise the advantage of a pure, uncontaminated milk supply, but with a suitable propaganda on the part of dairymen, and the assistance of the Health Department and Medical men, progress has been steady and sure.

The Milk and Dairies' (Amendment) Act, 1922, although a step in the right direction, does not go to the root of the trouble, as the farmer, referred to under the Act as the producer, appears to be exempt from its provisions. The Act gives the Local Authority power to refuse registration or remove from the register a retail purveyor if he fail to comply with the regulations, but the same power is not given with regard to producers. He is still at liberty to produce milk in cowsheds ankle deep in manure from cows coated with mud and filth, and to place on the market milk more often suitable for the pig than the infant and invalid.

Such a condition of affairs is not fair or just, as it means one standard of cleanliness for the dairyman, and another for the farmer, without improving the purity of the milk supply.

In a Borough where nine-tenths of the milk supply is sent in from outside producers and who are exempt from interference either, shows a lack of practical knowledge on the part of the Ministry of Health, or is a sop to the agricultural community, but public opinion should be educated in the interests of public health to compel producers to comply with similar regulations.

Milk and Cream Regulations.

Sale of Food and Drugs' Act.

These Regulations are enforced by the County Police, who also take samples. Through the courtesy of Superintendent Eddy I am enabled to give the following results :—

Sample taken.	No.	Result of Analysis.		Result of Proceedings (if any).
		Genuine	Not Genuine.	
Milk	25	19	15% added water	Fined 21/- and 16/6 costs
			9% ,, ,,	Fined 21/-
			12% ,, ,,	Fined £10
			12% deficient in fat	Ordered to pay 14/6 costs
			2% added water	Vendor informed of poor quality of milk & cautioned
			2% added water	Ditto
Butter	4	—		
Margarine	1	—		
Cream	4	3	Contained boric acid in proportion not less than 0·1%, or 7 grains per lb.	No action
Sponge Cake	1	—	Contains boric acid in proportion of 0·5%, or 35 grains of boric acid per lb. of sponge cake	

SANITARY INSPECTION OF THE DISTRICT.

Summary of Sanitary Inspectors' Work.

Houses inspected	280
Houses visited	593
Dirty premises limewashed and cleansed	143
Rooms disinfected	317
Cases of overcrowding abated	13
Defective floors repaired	49
Water supply laid direct from main to tap over sink	7
Defective yards re-paved	59
Lighted and ventilated rooms	6

R.W.P.'s and gutters repaired	53
Nuisances from keeping fowls and animals	31
Ashbins provided for house refuse	127
Roofs repaired	102
Handrails fixed	21
Doors and door frames repaired or renewed	21
Windows repaired or renewed	47
Yards and outbuildings cleansed	8
Smoke tests applied	327
Water ,, ,,	90
New sets of house drains laid	80
Defective house drains repaired	17
Intercepting traps with fresh-air inlets fixed	50
Old "Mason's" and other old type of traps abolished	55
Inspection chamber to drains built	93
Drains ventilated at head of system	40
New sanitary conveniences with water supply fixed	93
Soil pipes fixed outside buildings and ventilated	22
Iron and brick traps removed and earthenware gullies fixed	95
Waste pipes from baths, lavatories and sinks trapped	31
Choked drains cleared	34
Defective w.c. cisterns repaired or new provided	81
W.C.'s repaired and cleansed	8
Glazed sinks fixed	35
Houses closed as unfit for human habitation	—
Workshops visited	157
Workshop notices	10
Houses repaired	282
Sanitary certificates granted	28
Visits to piggeries	31
,, stables	16
Visits to common lodging-houses	25
Visits to public elementary schools	72
Offensive accumulations removed	45
Nuisances from stables and manure pits abated	13
Miscellaneous repairs	5
Re-visits in connection with above work	1357
Legal notices	34
Preliminary notices served	268
Letters and communications in connection with the work of the department	840
Verbal notices	136
Written complaints	104
Verbal complaints	150
Slaughter-houses visited	947
Butchers' shops ,,	1620
Butchers' carts ,,	90
Fish Quay ,,	143
Railway siding ,,	61
Market ,,	58
Other shops ,,	214
Carcases inspected	11,215
Weight of food destroyed	11,604 lbs.
Number of vessels inspected	45
Visits to dairies and cowsheds	153
Disinfectants supplied	1500

CONTAGIOUS DISEASES (ANIMALS) ACTS.

The diseases scheduled under this Act are Foot and Mouth Disease, Swine Fever, Epizootic Abortion, &c., &c.

During the year we have examined bacteriologically several cases of Epizootic Abortion, Anthrax, Mange, &c., submitted by local Veterinary Surgeons, but all proved negative.

Swine Fever.

Two outbreaks were notified, but were not confirmed by the Ministry of Agriculture and Fisheries.

Foot and Mouth Disease.

An outbreak of this disease occurred at a farm on the Borough boundary, and also at a farm at Ilsham, the disease no doubt having been conveyed from one farm to the other. This involved the slaughter of the whole of the animsls on these farms, totalling altogether 19 cows, 80 pigs, and 1 bullock. Naturally this caused considerable inconvenience to trade, and reduced the number of animals slaughtered at the various slaughterhouses.

Sheep Scab.

With a view of uniformity in carrying out this Order, the Devon County Council called a meeting of Local Authorities to discuss and draw up Regulations. Your Meat Inspector attended as your representative, and in due course regulations were issued. These deal with the movement and times of dipping of animals, and as they are similar to those adopted by adjoining County Councils, a good deal of trouble and friction is obviated.

INSECTS PESTS ACTS.

The various Orders issued under these Acts relate to Silver Leaf Disease, Wart Disease, and Corky Scab of Potatoes, &c.

One or two suspicious cases of Silver Leaf and Wart Disease have been investigated, but all proved to be negative.

The continual issuing of Acts and Orders by the Ministry of Agriculture and Fisheries entails a considerable increase in the normal correspondence of the Health Department, besides requiring numerous special inspections and the recording of the necessary information.

RATS AND MICE (DESTRUCTION) ACT, 1920.

The powers under this Act were transferred by the Devon County Council to the Town Council, and were put into operation towards the end of the year.

Prior to Rat Week, the assistance of the Editors of the local Press was enlisted, who kindly inserted in their respective papers articles dealing with the "Rat and its Dangers to Health." The Proprietors of the various Picture Houses likewise assisted by the throwing on the screen suitable paragraphs, thus contributing to the success of the scheme.

With a view of concerted action in the campaign of rat repression, a known infested area was mapped out and notices pointing out the resposibilities of occupiers under the Act, and instructions in the use of suitable poisons were distributed to every occupier of premises in this area.

During Rat Week poison was supplied free to persons residing in the Borough on the express condition that the persons receiving it accepted full responsibility for its custody. The poisons used were barium carbonate and oatmeal, barium carbonate biscuit, and red squills. In all 61 persons availed themselves of the free supply, and 11 premises were treated by your officer.

The results obtained appeared fairly satisfactory, all except one, reported a disappearance of rats, and in the one case the rats were said to have been considerably reduced in numbers.

It must not, however, be assumed that where the pests had disappeared the trouble is finished for all time, as experience has shown that rats from other areas eventually find their way into unprotected premises, and unless vigilance is exercised the number eventually become as numerous as ever.

Unfortunately there are a large number of persons who will make no effort to destroy rats and mice, but look upon them as a necessary evil, from which there is no escape. These people require sterner treatment than can be administered under the Rats and Mice (Destruction) Act, 1920. It is only by continuous propaganda that benefit will arise.

FISH AND CHIP SHOPS.

This business, so far as the Borough is concerned, is almost a new and certainly growing industry, there having been six premises licenced during the year. At all newly established premises the most up-to-date frying apparatus has been installed, and our suggestions as regards lighting and ventilation carried out; but in a few of the older established premises these conditions leave much to be desired, and owing to their confined position and accommodation for the storage of fat, flour, &c., are far from satisfactory.

In considering the granting of a licence for newly-established business of this description, due regard should be given to the type of property in the neighbourhood, and it should be made a condition that intended applicants for licences should produce evidence that the occupiers or owners of adjoining property concur in the establishment of the business, for there is little doubt that the continued smell of fish and potatoes frying depreciates the value of the property and lowers the tone of the neighbourhood.

As producers of food, such places are frequently and regularly inspected.

SANITARY CERTIFICATES.

As this is a very important branch of our work, I think it desirable to comment on the subject. For many years it has been the practice, when desired and on payment of recognised fees, to test the drains and sanitary fittings, and issue reports as to their condition. By this means supervision of the work is assured, as a certificate is not granted unless the fittings and workmanship meet the requirements laid down by the Health Committee.

During the year 30 premises were inspected and drains tested, while 28 certificates have been granted. These inspections and tests, and the preparation of reports, require care, judgment, skill and time, but in view of the benefit to the town it is time and money well spent.

I might mention here that in the past we had no power to call upon a person when altering or repairing sanitary fittings of any description to notify us of such work, with the

result that many appliances were fixed and drains altered contrary to modern requirements. But now, under section 47 of the Torquay Corporation Act, due notice will have to be given us before repairs or alterations can be carried out; this will be an advantage to everyone concerned, and will prevent the use of shoddy material and workmanship.

PORT SANITARY WORK.

As far as possible all vessels are boarded and inspected on arrival, special attention being paid to those from foreign ports.

During the year 1923 the amount of shipping entering the Harbour was as follows :—

Foreign—

Steamers ...	2	Tonnage ...	7,111
Sailing ...	54	,, ...	2,359
Motor ...	4	,, ...	221
Total Ships	60	Tonnage	3,291

Inspected—

Steamer ...	1	Sailing and Motor Ships ...	20
Defects found	1		

Coastwise—

Steamers ...	941	Tonnage ...	68,241
Sailing ...	22	,, ...	1,491
Motor ...	132	,, ...	4,091
Total Ships	1,095	Tonnage	73,823

Inspected—

Steamers ...	14	Sailing and Motor Ships ...	10
Defects found Nil.			

Coastwise ships include pleasure steamers, sand and cement barges. The former enter the Harbour several times a day during the summer season, and the latter several times weekly throughout the year, so that occasional inspection only is required.

On the whole the vessels inspected have been found in a satisfactory condition; most defects were of a minor nature, being at once attended to when brought to the notice of the Master.

No cases of illness have been reported during the year, and no trouble with rats has been experienced.

FACTORIES AND WORKSHOPS.

During the year 157 Workshops and Factories were inspected, but owing to pressure of other work, the Sanitary Inspectors could not find the time to make a periodical inspection of the whole of these premises in the Borough, in fact, a large number of workshops, &c., established during the year have not yet been visited.

As regards those inspected, it has been found necessary in a few instances to call the attention of the occupiers to the need of lime-washing or improvement in light and ventilation, or provision of sanitary accommodation.

Among the above are included 38 bakehouses, of which 5 are registered as underground bakehouses. In only a few instances was it found necessary to request the occupiers to give greater attention to cleanliness.

LOCAL AND ADOPTIVE ACTS IN FORCE IN THE AREA.

Practically all the Adoptive Acts and Regulations have been put in force by the Council, and where necessary bye-laws framed.

The Torquay Corporation Act, 1923, being the most recent and up-to-date sanitary measure granted by Parliament to a Local Authority, it may be of interest to quote a few of the most important sections.

The Corporation has been given power to require:—

1. The paving of any yard, court, or passage, and the periodical lime-washing of the walls of courts, yards, passages and outbuildings, and the cleansing of sanitary conveniences used in common.

2. The provision of fire escapes to buildings used as flats, hotels, boarding houses, shops and restaurants at which sleeping accommodation is provided.
3. The provision of pantries to dwelling houses.
4. Sanitary conveniences to be provided for workmen engaged on buildings.
5. Drainage of sinks, baths and lavatory basins.
6. The height of soil pipes.
7. Construction of combined drains.
8. Repeals section 19 of the Public Health Amendment Act, 1890.
9. The re-construction of drainage if laid in contravention of section 25 of the Public Health Act, 1875.
10. Requires persons repairing drains, soil pipes or sinks, to give twenty-four hours' notice, in writing, to the Medical Officer of Health.
11. Authorises the Medical Officer of Health, or Sanitary Inspector, to remove the stoppage of any drain, water-closet or soil pipe, if the person in default, after 24 hours' notice, fails to do the work.
12. The cleansing of verminous dwelling houses and other premises.
13. Defines the establishment and dis-continuance of offensive trades.
14. The provision of portable covered galvanised-iron dustbins to premises.

HOUSING.

The total number of houses which have been completed and passed for habitation during the year was 76.

The provision of houses is a question which has received the close and constant attention of the Housing and Health Committees throughout the year. Many points of difficulty which arose were discussed with the Ministry of Health by the Council's officials; a much quicker and more satisfactory plan than by correspondence.

As regards the Corporation's Housing Estate on West Hill, the position of things is now as follows :—

The 48 houses erected by the Council under the sanction of the Ministry, and reported on last year as nearing completion, were quickly occupied. In order to encourage building by private enterprise, the Council have sold all the available building sites on the West Hill Estate at an average of £50 per site. This, however, is only useful for those who can raise the money to build houses for themselves; the provision of houses for those who are only able to rent, still shows a very arid prospect. When disposing of certain areas to an enterprising builder the Council laid down the stipulation that half of the houses erected must be available for renting at the same rental as those already erected by the Council. He originally intended building 36, but owing to workmen demanding and obtaining an increased wage, he has decided to build 12. On the whole we may say that up to the present very few houses have been erected which an ordinary working man could afford to rent. Indeed, many so occupied are dependent on the ability of occupiers to let rooms to summer visitors to pay the rent required. The great bulk of the 76 houses built and occupied are small detached villas and bungalows built for private individuals, either by contract or built as a speculation and sold on completion. The erection of such houses has had no appreciable effect on overcrowding, or enabled us to close unfit houses. The opening up of the Daison and the Ellacombe Estates for building may ease the situation in the near future.

Pimlico Insanitary Area.

One hardly knows how to describe the present position of this scheme. The main essential being the provision of houses suitable for those dispossessed. Much consideration was given by the Health Committee to this point, and they eventually decided that 25 houses should be erected on the Stentiford's Hill sites, and that sites for 25 others should be reserved on the West Hill Estate to accommodate the remaining families living in this area.

The Borough Surveyor prepared plans for this purpose, and they were adopted by the Committee. Your officials presented them to the Ministry of Health, and with slight

modifications received informal approval. So far, so good; but before sanction can be obtained it is necessary as part of an "Improvement Scheme," that details shall be presented to the Ministry showing what the Council propose doing with the cleared area. This involved matters of great future moment to the welfare of the town, and is receiving the earnest consideration of the Council. However, in order not to delay the provision of houses, it has been decided to issue tenders for the erection of the first 25 houses on Stentiford's Hill.

I. Unfit Dwelling Houses.

Inspection—

(1)	Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts) ...	280
(2)	Number of dwelling houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	104
(3)	Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	1
(4)	Number of dwelling houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation ...	59

The difficulties associated with the structural repairs of dwelling-houses is not so intense as in former years, as the majority of owners appear to realise that our requirements are as much in the interests of the property as for the benefit of the tenants. Of course there are still a few owners who will not comply with our notices until proceedings are threatened, and many have not the capital. In these cases we endeavour to meet the owners by an extension of time. On the other hand, there are many houses in such a bad structural state of repair that little can be done, closure being useless for the reason that there is no alternative accommodation, consequently we can only wait for the development of the schemes for the provision of houses.

But, notwithstanding the many difficulties much has been done in the way of repairs. The most common defects met with are defective roofs, eaves guttering, grates and stoves, broken sash-cords and frames, want of handrails to staircases, doors off hinges, and want of latches, internal and external plastering, and want of ashbins and food storage accommodation.

With a view of dealing with these defects in a more expeditious manner, the Health Committee inserted a clause in the Torquay Corporation Act with the idea of including such items as nuisances within the meaning of section 91 of the Public Health Act, 1875, but unfortunately the Parliamentary Bills Committee rejected it. Considering its importance to the public health, it is much to be regretted, and the action of the Ministry of Health in opposing the clause is not clear, as under their own schedule of repairs issued in connection with the Housing and Town Planning, etc., Acts, these defects are specifically mentioned, and suggestions made as to their remedy, but only in a more protracted manner.

II. Remedy of Defects without Service of Formal Notice.

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers 258

III. Action under Statutory Powers.

a. Proceedings under Section 28 of the Housing, Town Planning, &c., Act, 1919 .—

(1) Number of dwelling houses in respect of which notices were served requiring repairs 24

(2) Number of dwelling houses which were rendered fit—
(*a*) by owners 18
(*b*) by Local Authority in default of owner ... —

(3) Number of dwelling houses in respect of which closing orders became operative in pursuance of declarations of owners of intention to close ... ... —

b. Proceedings under Public Health Acts :—

(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied ... 7

(2) Number of dwelling houses in which defects were remedied—
(*a*) by owners 6
(*b*) by Local Authority in default of owner ... —

c. Proceedings under Sections 17 and 18 of the Housing, Town Planning, &c., Act, 1909 :—

(1) Number of representations made with a view to the making of Closing Orders 1

(2) Number of dwelling houses in respect of which Closing Orders were made ... ... —

(3) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit ... ... —

(4) Number of dwelling houses in respect of which Demolition Orders were made ... ... —

(5) Number of dwelling houses demolished in pursuance of Demolition Orders ... ... —

VITAL STATISTICS OF WHOLE DISTRICT DURING 1923 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of age		At all ages.	
			Number	Rate.	Number.	Rate.	of Non-Residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1912	39000	560	571	14·6	485	12·4	58	52	52	91	479	12·2
1913	39250	530	535	13·6	495	12·6	45	71	58	108	521	13·2
1914	39440	533	542	13·1	482	12·2	44	54	45	83	492	2·4
1915	32520	482	490	12·4	543	16·6	59	92	41	83·6	576	17·7
1916	31540	449	459	13·3	554	17·2	65	53	43	93·7	542	17·2
1917	30685	389	401	11·7	562	18·3	88	80	26	64·8	554	18·0
1918	30710	407	412	12·0	597	19·4	85	110	31	75	622	20·2
1919	33374	517	531	15·2	501	15·0	60	63	25	47	501	15·1
1920	34703	643	657	18·6	505	14·5	57	62	34	53	510	14·7
1921	33600	533	542	16·1	529	15·7	73	69	44	81	533	15·8
1922	33690	495	490	14·5	581	17·2	66	77	23	47	592	17·5
1923	34100	503	488	14·3	532	15·6	68	52	24	49	516	15·1

TABLE II.

CASES NOTIFIED DURING THE YEAR 1923.

NOTIFIABLE DISEASE.	Number of Cases notified.								Total cases notified in each locality.									Total cases removed to hospital.
	At all ages.	At Ages—Years.																
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	Torre	Waldon	Upton	Ellac'mbe	Strand	Torwood	St. M'C'h.	Babbac'be	Chelston	
Small-pox ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Cholera ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Diphtheria.incl'd'g Membranous croup	11	—	1	8	1	1	—	—	-	-	3	2	-	-	1	2	3	10
Erysipelas ..	11	1	—	—	1	2	5	2	2	-	1	2	-	-	2	4	-	—
Scarlet fever ..	110	—	18	78	7	5	2	—	6	1	11	27	5	4	13	42	1	102
Enteric fever ..	1	—	—	—	1	—	—	—	-	-	1	-	-	-	-	-	-	1
Typhus fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Relapsing fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Continued fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Puerperal fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Cerebro-spinal Meningitis ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Poliomyelitis ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Opthalmia Neonatorum	1	1	—	—	—	—	—	—	-	1	-	-	-	-	-	-	-	—
Encephalitis Lethargica ..	2	—	1	—	—	1	—	—	-	-	1	-	-	-	-	1	-	—
Pulmonary Tuberculosis ..	98	—	—	6	21	39	26	6	12	10	13	21	7	18	8	8	1	—
Other forms of Tuberculosis ..	19	—	2	4	5	6	2	—	-	-	9	-	7	1	2	-	-	—
Pneumonia ..	7	—	—	—	1	1	4	1	-	-	-	5	1	-	-	1	-	—
Malaria ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Totals ..	260	2	22	96	37	55	39	9	20	12	39	57	20	23	26	58	5	113

TABLE III. CAUSES OF, AND AGES AT DEATH DURING THE YEAR 1923. (see Notes next page).

CAUSES OF DEATH.		Net deaths at the subjoined ages of Residents whether occurring within or without the District (*a*. All ages	under 1	1 and under 2	2 and under 5	5 and under 15.	15 & under 25.	25 & under 45.	45 & under 65.	65 & upwards	Total Deaths whether of Residents or non Residents in Institutions in the District
All causes	(Certified (*c*)	505	24	8	12	6	12	38	111	294	76
	(Uncertified	11	—	1	1	—	—	1	3	5	2
Enteric Fever ..		1	—	—	—	—	1	—	—	—	1
Small-pox		—	—	—	—	—	—	—	—	—	—
Measles		9	1	3	5	—	—	—	—	—	—
Scarlet Fever ..		2	—	—	2	—	—	—	—	—	—
Whooping-cough ..		—	—	—	—	—	—	—	—	—	—
Diphtheria ..		—	—	—	—	—	—	—	—	—	—
Influenza		5	—	—	—	—	—	1	—	4	1
Erysipelas ..		2	1	—	—	—	—	—	—	1	—
Encephalitis Lethargica ..		2	—	1	—	—	—	1	—	—	1
Meningococcal Meningitis ..		1	—	—	—	—	—	—	1	—	1
Tuberculosis of Respiratory System		34	—	—	—	1	3	14	13	3	26
Other tuberculous diseases		7	—	1	1	1	2	1	—	1	6
Cancer, malignant disease ..		64	—	—	—	—	—	1	24	39	9
Rheumatic Fever ..		1	—	—	—	—	—	—	1	—	—
Diabetes		2	—	—	—	—	—	—	1	1	—
Cerebral Hæmorrhage ..		45	—	—	—	—	—	2	4	39	3
Heart Disease ..		83	—	—	—	—	1	2	25	55	6
Arterio-Sclerosis ..		40	—	—	—	—	—	—	4	36	—
Bronchitis ..		35	2	1	2	—	—	—	3	27	—
Pneumonia, all forms		25	1	—	—	—	—	1	8	15	4
Other Respiratory Diseases ..		11	—	—	—	—	1	—	1	9	—
Ulcer of Stomach or Duodenum ..		—	—	—	—	—	—	—	—	—	—
Diarrhœa, etc. (under 2 years) ..		1	1	—	—	—	—	—	—	—	—
Appendicitis and Typhlitis ..		1	—	—	—	1	—	—	—	—	3
Cirrhosis of liver ..		—	—	—	—	—	—	—	—	—	—
Acute and Chronic Nephritis ..		14	—	—	—	2	2	1	2	7	2
Puerperal Sepsis ..		—	—	—	—	—	—	—	—	—	—
Other accidents and diseases of Pregnancy and Parturition		2	1	—	—	—	—	1	—	—	—
Congenital Debility and Malformation, Premature Birth ..		11	10	1	—	—	—	—	—	—	1
Suicide		4	—	—	—	—	—	1	2	1	2
Other Deaths from Violence ..		13	—	1	1	1	—	3	3	4	4
Other Defined Diseases		101	7	1	2	—	2	10	22	57	8
Causes ill-defined or unknown ..		—	—	—	—	—	—	—	—	—	—
		516	24	9	13	6	12	39	114	299	78

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death.

(*a*) All "transferable deaths" of residents, *i.e.*, of persons resident in the district who have died outside it, are *included* with the other deaths in columns 2—10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who have died in the district are in like manner *excluded* from these columns.

The total deaths in column 2 of Table III. should equal the figures for the year in column 12 of Table I.

(*b*) All deaths occurring in institutions for the sick and infirm situated in the district, whether of residents or non-residents, are to be entered in the last column of Table III.

(*c*) All deaths certified by registered medical practitioners, and all inquest cases, are to be classed as "Certified;" all other deaths are to be regarded as "Uncertified."

(*d*) Exclusive of "Tuberculous Meningitis" (10), but inclusive of Cerebro Spinal Meningitis.

(*e*) Title 19 should be used for deaths from Diarrhœa and Enteritis at all ages. (In the "Short List" deaths from Diarrhœa and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28).

TABLE IV.

INFANT MORTALITY DURING THE YEAR 1923.

NETT DEATHS FROM STATED CAUSES AT VARIOUS AGES UNDER ONE YEAR OF AGE.

CAUSES OF DEATH.		Under 1 Week.	1—2 Weeks.	2—3 Weeks.	3—4 Weeks.	Total under 1 Month.	1—3 Months.	3—6 Months.	6—9 Months.	9—12 Months.	Total Deaths under One Year.
ALL CAUSES.	Certified ..	10	2	1	1	14	4	-	2	4	24
	Uncertified ..	-	-	-	-	-	-	-	-	-	—
Small-pox		-	-	-	-	—	-	-	-	-	—
Chicken-pox		-	-	-	-	—	-	-	-	-	—
Measles		-	-	-	-	—	-	-	-	1	1
Scarlet Fever		-	-	-	-	—	-	-	-	-	—
Whooping Cough		-	-	-	-	—	-	-	-	-	—
Diphtheria and Croup ..		-	-	-	-	—	-	-	-	-	—
Erysipelas		-	-	-	-	—	1	-	-	-	1
Tuberculosis Meningitis ..		-	-	-	-	—	-	-	-	-	—
Abdominal Tuberculosis ..		-	-	-	-	—	-	-	-	-	—
Other Tuberculosis Diseases		-	-	-	-	—	-	-	-	-	—
Meningitis *(not Tuberculous)*		-	-	-	-	—	-	-	-	-	—
Convulsions		-	2	-	-	2	-	-	1	-	3
Laryngitis		-	-	-	-	—	-	-	-	-	—
Bronchitis		-	-	-	-	—	-	-	1	1	2
Pneumonia (all forms) ..		-	-	1	-	1	-	-	-	-	1
Diarrhœa		-	-	-	-	—	-	-	-	-	—
Enteritis		-	-	-	-	—	1	-	-	-	1
Gastritis		-	-	-	-	—	-	-	-	1	1
Syphilis		-	-	-	-	—	-	-	-	-	—
Rickets		-	-	-	-	—	-	-	-	-	—
Suffocation, overlying ..		-	-	-	-	—	-	-	-	-	—
Injury at Birth		1	-	-	-	1	-	-	-	-	1
Atelectasis		1	-	-	-	1	-	-	-	-	1
Congenital Malformations ..		1	-	-	1	2	1	-	-	-	3
Premature Birth		5	-	-	-	5	1	-	-	-	6
Debility, Atrophy, and Marasmus		-	-	-	-	—	-	-	-	-	—
Other Causes		2	-	-	-	2	-	-	-	1	3
		10	2	1	1	14	4	-	2	4	24

Nett Births in the year	Legitimate	464
	Illegitimate	24
Nett Deaths in the year	Legitimate	24
	Illegitimate	—

BOROUGH OF TORQUAY.

Meteorological Report

FOR THE YEAR 1923.

WITH EXTREMES AND COMPARISON WITH AVERAGES OF PRECEDING YEARS.

BY

GEO. E. BODY, FR., Met. Soc.

Borough Meteorologist.

February 1st, 1924.

BOROUGH OBSERVATORY,

PRINCESS PIER,

TORQUAY.

To His Worship the Mayor, Aldermen and Councillors of the Borough of Torquay.

GENTLEMEN,

I beg to submit the following Meteorological Report for the year 1923.

Observations have been taken twice daily throughout the year, at 9 a.m. and 5 p.m. (Local Time), and 10 a.m., and 6 p.m. during Summer Time. The Readings at 9 a.m. have been posted each morning at the Observatory, Princess Pier, and various stations in the town ; also at St. Marychurch Town Hall. The Evening Readings have been telegraphed, as usual, in code to the Meteorological Office, London, from whence they are distributed to the various Press Agencies for publication in the morning papers. During the Summer Season, morning telegrams were also sent to the Meteorological Office, at their request, giving particulars of the weather at 9 a.m. This information was published in several of the Evening Newspapers.

Press telegrams are forwarded to the "Western Morning News and Mercury" and "Torbay Express" every morning. The Weekly Report besides being sent to the Meteorological Office are also forwarded to the "Torquay Times" and "Torquay Directory" as well as several private individuals.

A weekly and monthly review of the type of weather experienced is published in the "Torquay Directory," "Torquay Times," "Torbay Express," and "Evening Herald."

As in past years, the Monthly Report, which shews comparison with previous years, is published in the local papers, also posted up at the Observatory and other places in the town. Copies are also forwarded to the Royal Meteorological Society, British Rainfall Organisation, and the Torquay Natural History Society. A separate Monthly Report giving our twenty-seven instrumental and other readings twice daily is sent to the Meteorological Office, London.

The daily, weekly and monthly records exhibited at the Observatory with the self-recording Thermograph and Barograph are a source of considerable interest to visitors, for it is quite a common sight during the summer months to see fifteen to twenty persons reading the records displayed and commenting on the amount of sunshine and temperature experienced here compared with other places. Many visitors before planning their daily itinerary wait for the daily forecast to be posted.

The scheme of insurance initiated by the Pluvias Insurance Company and various newspapers and journals leads to a careful study of the daily rainfall, and many applications have been received for copies of our rainfall statistics.

The observations are also published with others relating to the County of Devon in the Annual "Climate of Devon" Report by the Devonshire Association.

Numerous private enquiries, newspaper articles, etc., concerning the climate here have also been replied to during the year.

Considerably over a thousand telegrams, reports and communications have been despatched.

I am, Gentlemen,

Yours obediently,

GEORGE E. BODY.

OBSERVATORY AND INSTRUMENTS.

Torquay is situated in North Latitude, 50°28, and West Longitude 3°31. The town faces south-west, being situated on the shores of Torbay. Many parts of the town lie on hills 200 to 250 feet above sea level, from which magnificent views of Torbay and Dartmoor can be obtained.

The geographical position of these hills are so situated as to protect the town from the cold winds of the north and east, whilst the River Dart to the west and south-west, the River Teign to the north, and the Bay to the south, have such a steadying effect on the climate that extremes of temperature are rare.

The Observatory is organised and maintained by the Town Council and is under the supervision of the Meteorological Office, Air Ministry, London.

The several Barometers, Thermometers, and Rain Guages have been verified at Kew Observatory, and are regularly examined by an Inspector on the staff of the Meteorological Office. Readings are all corrected for instrumental errors.

The Hygrometrical Results are deduced from the daily morning readings of the Dry and Wet Bulb Thermometers by means of Glaisher's Tables.

The averages for Sunshine are the result of 24 years, for Temperature and Rainfall of 46 years, and for Pressure of 38 years' observations.

The following are the instruments and appliances in regular use, those being marked by an asterisk being the property of the Torquay Natural History Society, and lent by them to the town :—

*The **Barometer** is a Fortin Standard, and is read twice daily. All readings are corrected for Temperature and reduced to sea level.

Two **Barographs,** one is placed in the window of the Observatory and the one presented by the late Sir Thomas Bazley, Bart., is exhibited at the entrance to the Pavilion.

Two sets of **Stevenson's Screens,** each containing **Dry** and **Wet Bulb,** and **Maximum** and **Minimum Thermometers.** One of these sets is at Cary Green, where the official Temperatures for the Meteorological Office have been taken.

Rain Guages are of the Snowdon pattern. They are placed, one on Cary Green, where official records are taken, and one in the Princess Gardens.

Grass Minimum Thermometer placed in Princess Gardens.

Sunshine Recorder is a Curtis Improved Campbell-Stokes instrument This is situated on the cover shelter at the Southern end of the Princess Pier deck. The Sunshine Cards are forwarded at month ends to the Meteorological Office for examination and verification.

4ft. earth Thermometer is placed in the Princess Gardens Station.

Meteorological Annual Report, 1923

JANUARY.

The weather was very mild and dry, with a high barometric reading and sunshine above normal. Humidity was low, and gales, frost and snow entirely absent.

The Mean Maximum Temperature was 50.4°F., Mean Minimum, 40.7°F., giving a Mean Temperature of 45.5°F. This is 2.9°F above the average. The highest Day Temperature was 58.6°F on the 30th, and the lowest Minimum Temperature 32.4°F. on the 13th. The Mean Daily Range is 9.7°F. When other South coast resorts had a Maximum Reading of 54°F. to 56°F., ours was as high as 59°F., thus being the highest throughout the Kingdom.

Six ground frosts were registered. Light fog, mist or haze was recorded on six occasions. Humidity was below the average by 5%, and the month was free of gales

Rainfall was much below the normal, showing a deficiency of 2.06 inches over a period of 47 years. Precipitation was recorded on twelve days, whilst the heaviest fall occurred during the night of the 5th and amounted to 0.53 inches.

The total duration of sunshine was 83.5 hours. This was 21.5 hours above the average, and 25.7 hours above the Mean of ten years. The 23rd was the sunniest day when 6.45 hours were registered.

The Meteorological Office described the weather throughout the country as mild sunny weather in the south and frequent gales in the north. The Mean Temperatures were above the normal, and a milder January in Scotland has only twice been experienced during the past 60 years. Rainfall was below the average in all districts. While sunshine was above normal in Scotland and the South-east and the Midlands, it was below normal in Western England.

FEBRUARY.

Unlike its predecessor, the month was exceptionally rough and wet, in fact it is doubtful if such a wet and mild February has been experienced for the past thirty years ; on the other hand the temperatures were unusually high and generally above normal.

The Mean Maximum Temperature of 52.0°F, and Mean Minimum of 43.1°F., exceeded the average of 47 years by 2.1°F. and 4 4°F. respectively. Whilst the Mean Temperature exceeded the average by 3.2°F. The highest Day Temperature was 57.0°F., and the lowest 34.4°F. The Mean Daily Range of Temperature was 8.8°F., compared with the ten years Mean of 10.8°F. Only one ground frost was registered.

Barometric pressure was low and most unsteady. The Mean pressure at sea level was 29.593 or 0.396 inches below the average of 10 years.

Rainfall for the month was more than double the normal, the total of 7.37 inches exceeding the average of 47 years by 4.46 inches.

Wind was mainly from the West and unusually strong, reaching gale force on no less than nine occasions.

Sunshine exceeded the average of 24 years by 0.9 hours and the Mean of ten years by 13.0 hours, whilst the total of 86.1 hours was only 6.5 hours below last February, which was one of the sunniest Februarys on record.

No thunder, fog, or snow was recorded, yet the Midlands and the North of England experienced blizzards of unsurpassed severity.

The Meteorological Office characterised the month as mild and very wet, with gales on many parts of the coast. In all districts rainfall was excessive and in many places was the highest ever known. Whilst snow lay on the ground in Yorkshire and Derbyshire to a depth of 8 to 12 inches for at least six days. Sunshine was appreciably below normal.

MARCH.

The month came in fine and sunny with a gale at night which was really the only rough weather experienced during the month, for it was only on six occasions that the wind became fresh to strong.

March was one of the mildest and most pleasant winter months on record ; the Mean Maximum Temperature of 52.2°F., Mean Minimum of 42.5°F., giving a Mean of 47.3°F., were exceptional, even for Torquay's mild winter climate. These Temperatures were 1.9°F., 3.0°F., and 2.3°F. respectively above the Means for ten years. The highest Maximum Temperature was 60°F., and the absolute Minimum Night Temperature was 37.1°F. Only one ground frost was recorded.

The barometer throughout the month was very steady and high. The Mean pressure at sea level was 30 035 inches or 0.104 inches above the average of 39 years.

Rainfall and sunshine were below normal, the latter being below the average of 24 years by 2.3 hours. Wind was generally easterly and humidity was low. Fog was recorded on the 26th. This lasted from daylight to late evening, a most unusual occurrence for the time of the year. Another unusual occurrence was the appearance of a heavy black cloud at 8 a.m. to 9 a.m., causing almost complete darkness and necessitating the use of artificial light. However this soon passed away, giving place to bright sunshine.

The Meteorological Office's summary for the month was mild and dry. The Mean Temperature in all districts being above the normal. Rainfall was above the average in Gloucestershire, the London area and Sussex, whilst most other districts were below the normal. Sunshine in almost all districts were appreciably deficient except in North Scotland and North Ireland.

APRIL.

The climatic conditions were typically April in character, showers of rain alternating with sunny periods. Sunshine however was below the average, in fact it was one of the cloudiest Aprils during the past 23 years. Previous dull Aprils were 1905 with 107.8 hours and 1913 with a total of 112.4 hours. The total for the month was only 114.5 hours, compared with the Mean of 187 9 hours for 24 years.

The Mean Maximum Temperature was 3.3°F. above, and the Mean Minimum Temperature 0 4°F. below the average.

Barometric pressure was steady but unusually low. The Mean Reading for the month was 29.741 inches compared with the average of 39 years of 29.923 inches.

Rainfall was above the average of 47 years. No hail or snow fell. Humidity was 2% above normal. The wind was mainly East, but free from keenness.

The Air Ministry summarised the month as warm during the first half followed by Day Temperatures generally below 55°F. Whilst at night the temperature fell repeatedly below freezing point. Snow fell in many places including London. Rainfall was above normal and some northern and western districts sunshine was generally poor and in some instances only amounted to above three-quarters of the average.

MAY.

The month was generally unsettled and exceptionally cool throughout, with a deficiency of sunshine, absence of warmth, unusually cold northerly winds, low barometer pressure, good visibility and humidity slightly below the average.

The Mean Maximum Temperature of 58.4°F. was the lowest recorded since 1909. The Mean Minimum was also unusually low, and with a Mean Temperature of 52 4°F., it was the coldest May on record.

Hours of sunshine amounted to only 209.1, so the month showed a departure below the average of 24 years of 21.6 hours. Previous low sunshine records were 1916 with 200.9 hours, and 1919 with 203.1 hours, consequently the month did not establish a precedent for deficiency of sunshine.

The prevailing wind was north, strong and unseasonably cold. Humidity at times was very low, readings of 56% to 60% being fairly common. Visibility was exceptionally clear. Far distant objects, notably towards evening standing out remarkably clear and distinct.

The Air Ministry summarised the weather as decidedly cool and almost a wintry month. On the 16th snow was recorded as lying an inch deep at Buxton, whilst showers of hail and sleet were common throughout Great Britain. Sunshine was 35 to 40 hours below the average in London, Falmouth and Aberdeen.

JUNE.

The cool, cloudy weather that prevailed during most of May continued throughout the greater part of June, the last few days of the month being the first summerlike weather. Other unusual features were the persistently cold northerly winds, high and steady barometric pressure, exceptionally small rainfall, low percentage of humidity and clear visability.

The Mean Temperature was only 0.1°F. lower than the average of 47 years, but there have been many Junes with lower Mean Readings, for instance, 1898, 1900-1-2-3-9-13 and 16, the latter year having the lowest on record, viz. : 55.0°F.

Only once since 1892 has the total rainfall in June been below 0.22 inches, and this was during the extremely dry summer of 1921. Previous dry Junes occurred in the years 1908 with 0.31 inches, 1913 with 0.51 inches, and 1914 with 0.78 inches.

The month had a deficiency of sunshine of 14.3 hours below the average of 24 years. Although abnormal for the month it is not unprecedented, as in June. 1912 the total fell to 191.1 hours, following by June, 1916, with 200 hours, 1915 with 203 hours, and 1913 with 212 hours.

No fogs, gales or thunderstorms were recorded.

The Air Ministry's notes for the month were :—"Such dull cold weather, although certainly abnormal for June was not unprecedented, June, 1916, was even slightly colder, but not quite so dull.

JULY.

The month was consistently warm and dry throughout, and although sunshine was below the average, the days were generally sunny and free from heavy cloud. Maximum Temperatures were high, and with a reading of 87.0°F. on the 12th, the highest temperature ever recorded here was experienced. The Mean Temperature of 65.0°F. was not exceptional, as this was exceeded in 1921 by 6.4°F.

Barometric Readings were steady and high, exceeding the average of 39 years by 0.41 inches. Rainfall amounted to only 0.66 inches or 1.57 inches below the average of 47 years.

Hours of sunshine exceeded last July by 17.8 hours, but was below the average of 24 years by 30.1 hours.

Humidity was below the normal. Wind was mainly west but light in character. Three thunderstorms were experienced, one during the early morning of the 7th, one at 4 a.m., and another at 10 a.m. on the 13th, a most unusual occurrence for Torquay.

The Air Ministry summarised the weather as dull and rather cool at first, then warmer. Thunderstorms were fairly general, heavy rain causing floods in many districts. Duration of sunshine was above the normal in S.E., E., and North-east England, but below the average in other districts. The highest temperature recorded during the month was 95.0°F. at Isleworth on the 12th and 13th. Rainfall was in excess in England E., N.W., and the Midlands. In all other districts there was a deficit.

AUGUST.

The fine warm weather that characterised the whole of July continued without a break to the 20th. From the 21st to the end of the month conditions became less settled, but temperatures remained fairly high to the 28th, when a cooler spell set in. Rain during this period was rather heavy, thus making up the deficiency of the three previous weeks.

The Mean Temperature of 62.4°F. exceeded the average of 47 years by 0.8°F. Rainfall was below the normal showing a deficiency of 0·81 inches.

This was the sunniest August on record, the total of 260.8 hours exceeded last year by 122.3 hours. 1909 had the sunniest August when 273.3 hours were registered.

Humidity was below the average to the extent of 7%. The prevailing winds were West to North-West, fresh to strong with a gale on the 29th. Thunder was recorded on the 27th, and sea fogs on the 8th, 9th and 14th, otherwise visibility was very good.

The Ministry's notes on the weather were :—Early in the month unsettled conditions in the North and West, but fine warm weather prevailed in the South-East for nearly a fortnight. Temperatures rose well above the average and exceeded 80.0°F. in many places. Gales or high winds occurred frequently on the coast, but were particularly severe on the 29th and 30th. Local thunderstorms occurred in South-East England on the 18th, but were more general about the 22nd to the 24th and again on the 27th.

SEPTEMBER.

The weather was dry, sunny and warm from the 2nd to the 12th, then a fall in Temperature and a fair amount of rain, but generally sunny to the 20th, followed by a period of squally unsettled weather to the 25th, then an improvement with a decided rise in Temperature and a fair amount of sunshine to the end of the month.

The Mean Temperature of 57.6°F. is 0.3°F above 1922, but 0.7°F. below the Mean of 47 years. Rainfall was above the average to the extent of 0.41 inches, but 0.31 inches less than the previous September. Rain was recorded on fourteen days with a Mean Rainfall per day of 0.09 inches.

This was the sunniest September since 1906 when 229 hours were registered, thus exceeding the present month by 31 hours.

Humidity was low, the Mean for the month was 73% compared with the average Mean of 80%. The prevailing winds were West and North-West. No thunder, lightning or hail was recorded, but mist or sea fogs occurred on the 9th and 30th, except for this the visibility was good.

The Air Ministry's Report for the month on the weather throughout the British Isles showed that conditions here were distinctly better than elsewhere. Most districts had a temperature below normal, whilst rainfall and sunshine were above the average.

OCTOBER.

The outstanding features of the month were the abundance of rain, high winds, exceptional period of sunshine and temperatures above normal.

Rain fell on 23 days and amounted to 5.7 inches, thus exceeding the average of 47 years by 1.84 inches. This, however, was not the wettest October, for in 1909 6.64 inches, and in 1916 6.16 inches were registered. The greatest amount recorded on one day was 1.44 inches on the 11th. This heavy rain, however, was not confined to Torquay, for on the same date Falmouth registered 1.85 inches.

The Mean Temperature was 2.2°F. above last October, and 0.6°F. above the average. The total duration of Sunshine exceeded the average of 24 years by 10.10 hours, and with only four sunless days, we had a Mean of 4 hours bright sunshine per day.

The prevailing wind was West and exceptionally strong reaching gale force on many occasions. Humidity was below the average ; thunder and lightning was registered on the 27th, and sea mists on a few mornings and evenings.

The Air Ministry summarised the weather for the month as :—Rough, unsettled weather prevailed through the greater part of the month, there was also considerable bright periods with the result that some districts experienced an excess of sunshine as well as of rain. Quieter weather obtained for a few days near the middle of the month, and ground frost occurred at many inland places. On the 18th, however, the winds freshened again and gales or high winds were experienced on more exposed parts of the coast until the 30th.

NOVEMBER.

Only one equally cold November has occurred in the past 33 years, viz. :—1919, when the Mean Maximum Temperature was 4.7°F. and Mean Minimum 37.1°F., whilst during the month the Mean Maximum Temperature was 47.7°F., and the Mean Minimum, 36.8°F. These Temperatures are 6.4°F., and 5 3°F. below the Means for ten years.

Ground frosts are frequent, 13 white frosts being recorded. Rainfall was light in character, the total of 2.34 inches being 0.70 inches below the average of 47 years.

The month established a record for sunshine, the total of 124.1 hours exceeded the average of 24 years by 44.5 hours. Previous sunny Novembers occurred in 1905 with 103.3 hours, 1909 with 115.8 hours, and 1915 with 104 5 hours.

Humidity was below the average by 4%. Prevailing winds were Northerly and light in character, only one gale being experienced. Visibility was good, there being an entire absence of fog and snow, although these prevailed throughout the country.

The Air Ministry's notes on the weather are as follows :— Apart from one or two days at the beginning and again near the middle of the month, cold weather prevailed with much frost at night, but many sunny days, showers of hail, sleet or snow fell repeately in the Northern and Western districts, while thunder and lightning were also experienced in the West. A notable feature of the month was the intensely cold, foggy weather about the 25th. Snow or sleet occurred in London and the South-Easterly counties on the 28th.

DECEMBER.

Unsettled conditions and rapid changes of Temperature, sunshine above normal, and rainfall below the average were the outstanding features of the month. A few cold spells were experienced, but they were of short duration and mostly confined to the early hours of the morning.

The Mean Temperature of 44.2°F. was 0.1°F higher than the average, while the Daily Mean Range was 9.8°F. Six ground frosts were registered. Showers of sleet occurred on the 3rd and 19th, and a few flakes of snow on the 21st.

Sunshine records showed an excess of 17.4 hours above normal and with only four sunless days, the month was exceptionally bright throughout. Previous sunny Decembers were 1911 when 89.3 hours were registered, and 1917 with a total of 88 hours.

The month was unusually dry, but not exceptional. Past dry Decembers were 1913 with 2.07 inches, 1917 with 1.19 inches and 1921 with only 1.53 inches compared with 2.40 inches this year.

The barometer was fairly high and steady. Humidity was slightly below the average to the extent of 4%. Fogs were absent but mist developed on a few occasions. Wind was mainly Westerly, light and free from keenness.

The Air Ministry's remarks on the weather were :—" The average temperature for the first week was below normal in all districts. During the second week the temperature rose, and from the 11th to the 13th there was a general absence of frosts, but on the whole, rather cold weather predominated in the

Eastern half of the Kingdom. Snow fell in Scotland in the early part of the month, and from the 19th to the 28th, snow or sleet was of daily occurrence in some part or other of Great Britain. On the 19th, 21st and 26th, snow fell in the London area, and lay on the ground for some hours.

SUMMARY OF YEAR.

The first three winter months were mild and sunny, January and March were dry, but February was very wet. However, there was an entire absence of snow and keen frosts.

The Spring was cold and unsettled. Early summer was cool and unsettled, with cold northerly winds and a deficiency of sunshine, but late June, July and most of August was dry and warm with sunshine up to the average.

Autumn at first was sunny and warm, with a fair amount of rain, later becoming very cold and wet, but sunshine and temperatures were above the average. Early winter was cold, dry and sunny, later becoming unsettled, but with a normal temperature. Rainfall was below and sunshine above the average.

The Mean Temperatures for the year were above those recorded during 1922, but showed no departure from the average. The rainfall was below the average, but drier years have occurred in the past, viz. :—1892, with only 24.13 inches ; 1893, 25.83 inches ; 1896, 26.82 inches ; 1898, 27.62 inches ; 1905, 27.88 inches ; 1908, 25.24 inches ; 1911, 29.57 inches ; 1917, 25.50 inches ; 1918, 29.98 inches ; and 1921 with 20.80 inches.

The deficiency of sunshine during the Spring and early Summer was counterbalanced by the excess of the following months with the result that the total for the year exceeds the Mean for ten years by 93.59 hours, and the average of 24 years by 33.90 hours. Previous sunny years were 1899, with 2038.55 hours ; 1900, 1857.88 hours ; 1901, 1876.5 hours ; 1909, 1938.7 hours ; 1911, 2111.9 hours ; 1918, 1856.6 hours ; 1919, 1860.3 hours ; and 1921 with 2016.2 hours.

From a climatological point of view there was very little out of the ordinary, the only matters of note were the exceptionally cold Northerly winds during May and June, the record temperature of 87.0°F. on July the 12th, the two thunderstorms on the 13th July, and the heavy and almost continuous rain during October.

BAROMETRIC PRESSURE

Taken at 9 a.m. (Local Time).

In inches and thousandths.

Reduced to 32° F. and Sea Level.

1923.	*Mean* of Month.	Difference from *Mean* of Month.	Highest Reading.	Date.	Lowest Reading.	Date.	Extreme Range of Pressure.
anuary ...	30·443	+0·383	30·754	25th	29·620	5th	1·134
ebruary ...	29·593	−0·396	30·227	1st	28·862	22nd	1·365
larch	30·035	+0·104	30·314	29th	29·400	2nd	0·914
pril	29·741	−0·182	30·194	2nd	29·292	13th	0·902
lay	29·982	−0·002	30·280	2nd	29·544	11th	0·736
une.....	30·027	+0·180	30·552	12th	29·990	4th	0·562
uly	30·046	−0·041	30·464	22nd	29·440	31st	1·024
ugust.....	29·994	+0·018	30·410	4th	29·536	24th	0·874
eptember .	30·030	−0·010	30·508	29th	29·484	23rd	1·024
ctober ...	29·803	−0·158	30·254	1st	29·048	23rd	1·206
ovember ..	29·842	−0·156	30·338	11th	29·248	15th	1·090
ecember ..	30·060	−0·119	30·578	14th	29·250	5th	1·328
Year	29·966	−0·020	30·754	Jan. 25th	29·048	Oct. 23rd	1·706

SHADE TEMPERATURES

Taken at 9 a.m. (Local Time)

At Cary Green.

1923.	Maximum *mean.*	Minimum *mean.*	Max. & Min. *mean.*	Difference from Average.	Range *mean.*	Highest.	Date.	Lowest.	Date.	Grass.
	°	°	°	°	°	°		°		°
Jan. ...	50·4	40·7	45·5	+2·9	9·7	58.6	8th	32·4	13th	27.5
Feb. ...	52·0	43·1	47·5	+4·2	8·8	57·0	25th	34·4	20th	30.0
March .	52·2	42·5	47·3	+3·0	9·7	60·0	25th	37·1	5th	31.5
April . .	53·2	44·0	48·6	+0·3	9·3	58·9	2nd	36·6	23rd	32.6
May ...	58·4	46·4	52·4	−1·2	12·0	67·0	3rd	39·0	12th	36·0
June...	65·0	51·9	58·4	−0·1	13·1	75·3	23rd	46·1	3rd	43·5
July ...	71·7	58·7	65·2	+3·0	12·8	87·0	12th	50·4	2nd	47·6
Aug....	69·4	55·7	62·5	+0·8	13·7	77·5	13th	50·2	30th	43·7
Sept. . .	64·7	50·7	57·7	+1·0	13·9	74·0	12th	43·3	3rd	38·2
Oct. ...	58·2	48·0	53·1	+0·6	10·2	67·1	1st	38·6	15th	35·8
Nov....	47·7	36·9	42·3	−5·1	10·9	57·8	3rd	28·1	28th	26·2
Dec. ...	49·2	39·4	44·3	+0·2	9·8	54·9	17th	30·0	21st	26·0
Year	57·7	46·2	52·0	+0·7	11·1	87·0	July 12th	28·1	Nov. 28th	34·8

DURATION OF BRIGHT SUNSHINE

In hours and tenths of an hour,

As recorded by the Campbell-Stokes' Standard Instrument.

1923.	Total Bright Sunshine.	Difference from Average.	Greatest Amount in one day.	Date.	Sunless Days.
	Hours.	Hours.	Hours.		
January	83·5	+21·5	7·45	23rd	4
February	86·1	+ 0·9	9·00	19th	6
March	132·7	− 2·3	8·30	18th, 19th	4
April	114.5	−73·4	10·6	26th	4
May	209·1	−21·6	12·10	17th	1
June.....	214·5	−14·3	15·0	29th	3
July.....	205·9	−30·1	14·8	20th	2
August.....	260·8	+50·4	13·95	4th	0
September.....	198·1	+33·7	11·90	6th, 8th	1
October	126·2	+10·1	10·35	4th	4
November.....	124·1	+44·5	8·45	2nd	5
December.....	74·9	+17·4	5·90	23rd	4
Year.....	1830·4	+36·7	15·0	June 29th	38

HUMIDITY, CLOUD, OZONE, AND WIND.

1923.	Humidity.			Cloud	Ozone. Percentage of possible.	Wind.	Grass Temperatures.		
	Dry Bulb *mean.*	Wet Bulb *mean.*	Relative Humidity.	Cloud *mean* 1 to 10.	*Mean* Daily Amount.	Prevailing Quarters.	Mean.	Lowest.	No. of days at or below 30°
January	44·5	42·6	86	5	50	W., N., NW.	36·3	27·5	6
February	47·4	45·3	85	7	45	W., SW., N.	39·8	30·0	1
March ...	47·7	42·7	77	6	61	E., N., W.	39·6	31·5	0
April ...	48·8	45·9	80	7	70	E., W., S.	41·1	32·6	0
May	52·6	47·8	72	6	80	N., WNW., W.	43·1	36·0	0
June.....	58·6	53·5	71	6	51	N., NE., W.	49·5	43·5	0
July	65·3	60·0	71	6	50	W., N., S.	56·5	47·6	0
August...	62·7	58·1	73	5	50	W., N., SE.	52·3	43·7	0
Sept. ...	58·3	54·2	75	5	40	W., N., NW.	46·5	38·2	0
October	55·2	51·7	78	6	50	W., N., NW.	45·1	35·8	0
Nov.....	42·8	40·0	79	4	40	W. N., NNE.	34·2	26·2	9
Dec.	44·1	42·1	85	5	60	W., N., NW.	36·3	26·0	5
Year...	52·3	48·6	77%	5	54	W., N., NW.	44·3	34·9	21

RAINFALL

(In inches and hundredths)

Taken at CARY GREEN STATION.

1923.	Total Amount.	Difference from Average.	Rainy Days		Greatest fall in 24 hours.	Date
			Days of 0·01 and upwards	Days of 0·04 and upwards		
January ...	1·23	−2·06	5	7	0·53	5th
February ...	7·46	+4·46	3	20	1·13	6th
March	1·93	−0·83	6	6	0·48	2nd
April	3·02	−0·83	7	14	0·64	10th
May	1·90	+0·04	6	13	0·27	26th
June.....	0·22	−1·75	2	2	0·13	15th
July	0·66	−1·57	6	5	0·15	31st
August.....	1·93	−0·81	4	8	0·61	23rd
September	2·63	+0·41	3	11	0·50	17th
October ...	5·70	+1·86	6	18	1·44	11th
November	2·34	−1·08	6	12	0·81	13th
December	2·45	−1·80	7	11	0·64	1st
Year.....	31·47	−2·22	61	127	1·44	Oct. 11th

MONTHLY MEANS FOR THE TEN YEARS 1911–21.

MONTHS.	Temperature of Air.				Humidity.	Hours of Sunshine.	Cloud.	Rain.	
	Maximum.	Minimum.	Mean daily range.	Mean.				Days it fell.	Inches.
January	47·3	36·8	10·5	43·1	87	57·8	7	17	3·37
February	48·4	39·4	9·0	43·9	85	73·1	7	16	3·33
March	50·3	39·5	10·8	45·0	82	121·2	5	18	5·38
April	54·9	42·6	12·3	48·8	76	189·8	5	13	1·65
May	61·5	49·0	12·5	55·3	74	220·6	5	10	1·60
June	64·8	52·2	12·6	58·5	73	231·5	5	12	1·66
July	68·0	55·6	12·4	61·9	74	223·3	6	13	2·07
August	68·3	55·2	13·1	62.3	76	200·7	5	14	2·99
September	64·4	52·9	11·5	58·4	80	160·4	5	12	2·27
October	58·2	48·1	10·1	53·2	83	113·0	6	18	3·29
November	54·1	42·1	12·0	47·1	83	76·5	6	15	3·03
December	49·6	40·8	8·8	45·2	86	66·1	6	21	5·71
Year	57·5	46·2	11·3	51·9	79	1734	5·6	179	36·35

DIRECTION OF WIND, FOR 1923.

MONTHS.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
January	14	1	—	—	—	2	21	8	2
February	4	2	—	3	3	7	20	1	2
March	9	7	14	5	6	3	7	5	1
April	3	3	11	5	6	3	10	—	—
May	15	4	3	—	3	3	7	5	3
June	26	7	—	3	—	5	5	3	—
July	6	2	5	3	5	3	22	5	2
August	8	—	2	5	1	2	27	2	—
September	6	1	2	—	2	1	25	5	4
October	7	—	—	—	1	4	34	5	1
November	12	5	3	—	—	1	13	5	4
December	15	—	—	—	1	1	19	12	4
Year	125	32	40	24	28	35	210	56	23

TABLE SHOWING THE NUMBER OF HOURS OF BRIGHT SUNSHINE DURING 1923 AT VARIOUS STATIONS, MOSTLY HEALTH RESORTS.

(From the Meteorological Office, Air Ministry Returns).

Town.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
TORQUAY ..	83.5	86.1	132.7	114.5	209.1	214.5	205.9	260.8	198.1	126.2	124.1	74.9	1830.4
Bath ..	45.4	59.7	78.3	115.5	181.6	151.4	187.7	225.3	132.9	79.4	72.2	40.5	1389.9
Bournemouth ..	75.9		128.2	132.5	194.9	171.2	218.1	261.6	193.9	99.5	109.0	72.4	
Brighton ..	65.4	60.9	131.9	170.9	182.3	142.2	239.6	242.9	217.6	95.6	103.3	53.7	1706.3
Buxton ..	25.9	36.1	79.6	116.0	150.2	106.9	148.9	150.0	128.9	64.7	64.3	29.0	1104.5
Douglas ..	55.0	55.0	156.2	139.5	199.9	171.5	195.4	157.0	156.1	122.4	101.2	51.0	1560.2
Eastbourne ..	77.6	67.8	151.0	169.1	199.9	148.8	279 8	264.7	238.4	99.9	111.2	61.2	1869.4
Falmouth ..	65.7	76.9	136.6	137.7	192.1	220.3	169.0	219.6	179.1	127.5	145.0	76.1	1745.6
Folkestone ..	72.6	58.9	122.6	160.6	190.1	158.7	276.7	286.4	201.7	96.7	104.9	44.6	1763.4
Guernsey ..	62.6	80.2	152.6	164.0	213.7	274.5	211.4	270.1	202.9	94.8	109.8	56.3	1892.9
Harrogate ..	66.6	39.3	97.9	126.2	169.3	159.2	166.7	177.2	157.7	110.6	73.3	54.0	1398.0
Hastings ..	77.8	69.0	136.8	162.7	186.5	147.2	280.5	265.4	221.7	95.0	115.3	58.9	1816.8
Ilfracombe ..	39.7	70.2	113.5	132.2	196.9	174.8	161.3	200.1	139.4	79.3	78.9	38.2	1424.5
Llandudno ..	32.5	61.2	112.1	136.2	192.3	136.3	164.5	154.8	151.4	84.0	68.2	33.7	1330.2
Margate ..	56.7	56.7	107.7	150.7	137.9	141.5	284.0	271.8	232 0	105.5	100.2	46.0	1690.7
Paignton ..	84.5	87.5	129.5	108.3	208.8	201.1	204.8	254.6	192.9	131.7	126.9	75.1	1814.7
Plymouth Hoe ..	55.5	76.4	134.2	124.3	198.1	203.7	178.8	216.1	168.8	110.7	120.3	77.0	1663.9
Sandown ..	77.8	70.3	130.3	146.3	195.2	156.1	235.1	261.9	211.0	108.2	101.8	68.7	1762.7
Scarborough ..	68.1	41.1	101.3	155.8	166.2	152.9	176.5	180.7	164.7	102.0	67.6	40.0	1416.9
Southport ..	45.7	53.3	117.7	152.9	196.9	157.3	161.3	174.7	155.9	97.2	75.0	42.1	1430.0
Teignmouth ..	81.9	83.4	128.9	116.5	206.8	198.4	188.2	247.1	181.1	126.4	127.4	78.3	1764.4
Tunbridge Wells	66.2	57.3	114.8	134.9	161.4	118.3	261.7	251.3	209.5	98.2	93.7	44.8	1612.1
Ventnor ..	74.5	67.7	134.2	143.8	189.7	157.1	221.6	257.3	207.3	102.4	108.7	70.7	1735.0
Weston-S-Mare..	58.1	60.7	91.4	116.5	171.2	152.1	156.8	213.3	145.9	86.2	96.8	58.0	1384.7
Weymouth ..	72.7	71.4	129.4	123.1	198.6	182.6	214.0	241.6	192.7	104.6	105.9	59.0	1695.6
Worthing ..	74.5	61.8	133.5	166.9	196.6	153.5	251.8	267.4	224.3	107.0	109.5	59.1	1805.9

METEOROLOGICAL ABSTRACT, 1923.

Highest Shade Temperature	87·0
Lowest Shade Temperature	28·1
Mean Maximum Temperature	57·7
Mean Minimum Temperature	46·3
Mean Temperature	52·0
Mean Range of Temperature	11·1
Total Rainfall	31·47
Hours of Bright Sunshine	1830·4
Sunny Days	327
Mean Humidity (percentage of possible 100) ...	77%
Mean Ozone	54%
Prevailing Winds	W., N. and N.W.


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