

[REDACTED] / Medical Officer of Health, Wirksworth U.D.C.

Contributors

Wirksworth (England). Urban District Council.

Publication/Creation

1894 until 1962 extracts of Water and Sewerage Reports

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little place is either adequate or intended to cope with infectious diseases generally. Such a place requires a permanent staff, an ambulance and a disinfecting apparatus, the last costing £300 or £400, and out of the reach of individual authorities. At present we are unable to adequately disinfect without destroying. Isolation is useless without disinfection. Any proposal from neighbouring authorities to unite with them in forming a Joint Isolation Hospital District, is worthy of serious consideration. In a scheme for Isolation Hospitals, by the County Medical Officer, your district is included in an area comprising Middleton, the Matlocks, Bonsall, North and South Darley, and the Bakewell Southern District, with a centre near Matlock, and containing a population of 20,319. The minimum number of beds required for this area is estimated at 15. A circular letter received from the County Council states that they have decided to give a grant of one-fifth of the cost of constructing Joint Isolation Hospitals, as long as the cost does not exceed £200 a bed, the number of beds one per 1,000 of population, and the contribution given is not more than £3 6s. 8d. per £1,000 of the rateable value of the district (County rate basis). The Public Health Committee are now prepared to receive applications under the Isolation Hospitals Act, 1893.

SEWERAGE. A scheme by Mr. McCallum, C.E., for sewerage and sewage disposal at Wirksworth, and adopted by the Local Board, has been three years under consideration. The Sewage Disposal Works are on the International plan, and the delay has arisen in endeavouring to find the best possible and available site. It is a matter of regret that the Local Board were unable to finish the work so earnestly taken in hand. The completed work will be the better for the Board's exhaustive consideration, and for such modifications in the original plans as time and experience have proved desirable. The site first chosen by the engineer and adopted by the Local Board, is known as "Rushy Meadow." It was successfully opposed at a Local Government Enquiry in June, 1893. Acting on the result of that Enquiry, the Local Board selected what they believed to be the next best site, at an increased outlay, stated roughly at £1,000. Before it could be submitted to the Local Government Board as a complete scheme,

the Local Board were superseded by the District Council; the ratepayers electing a Council unanimously in favour of the "Rushy Meadow" site. Your Council will consequently submit a revised scheme of sewage disposal in "Rushy Meadow." Judging from what I saw at Royton, and from the improvements made in the original scheme, I believe the works, when completed, will be as perfect as our present knowledge can make them, and I am assured, by persons with experience in such works, of which I have none, that at "Rushy Meadow" they will not be a nuisance or injurious to health, so long as they are kept in a state of efficiency, and properly attended to.

WATER SUPPLY. The following figures from the Water Bailiff's monthly reports, give the quantity of water flowing from the springs into your reservoir at the commencement of each month:—

1894.	Galls. per hour.	1894.	Galls. per hour.
January... ..	2,668	July	3,850
February	4,150	August	3,100
March	9,000	September	2,872
April	8,300	October... ..	2,830
May	5,500	November	2,100
June	4,000	December	3,500

By the kindness of Mr. Gibbs, of Bridge House, I am able to give you the monthly rainfall.

1894.	inches.	days.	1894.	inches.	days.
January,	2.78 in.....	13	July,	2.60 in.....	11
February,	3.29 ,,	13	August,	2.65 ,,	13
March,	2.17 ,,	13	September,	.60 ,,	2
April,	2.70 ,,	13	October,	3.31 ,,	13
May,	1.96 ,,	14	November,	2.73 ,,	16
June,	2.16 ,,	11	December,	2.60 ,,	13

Total, 29.55 inches in 145 days.

The rainfall of the last five years has been as follows :—

1890.....	26.67	inches.
1891.....	40.66	„
1892.....	28.69	„
1893	22.77	„
1894.....	29.55	„

The rainfall in 1894 was an average one, but being more than usually even month by month; the springs were not so well replenished in the winter months.

Your population of 3,725 (1891 census) require 67,050 gallons of water a day, at 18 gallons a head. This is furnished by the springs when yielding 2,794 gallons per hour, provided you can store 12 hours water, or 33,525 gallons, during the night. Your reservoir holds 38,000 gallons. By turning the water off at night the yield of the springs has been equal to the demand, except in the months of January and November. In August, September and October, the margin was small enough to require the Water Bailiff's constant care. A table of the monthly water returns, 1884 to 1894 inclusive, will be found at the end of my Report.

The water comes from the millstone-grit, which, near Wirksworth, lies on the summit of the hill and does not descend to the valley. The water escapes near the base of the strata on the side of the hill, consequently, the strata does not hold much water, and the yield of the springs varies directly with the rainfall. In 1890 the Local Board consulted Mr. Radford, C.E., who advised and submitted plans for storage of the winter surplus, by building a reservoir to hold 3,000,000 gallons, at a cost of £3,700. With the sewerage already in hand, it would be not desirable to detain you this year with the water question, except that there is every reason to expect that the Borough of Ilkeston will come into your district for water from the Meerbrook Sough, which they will have to pump. Hence it is necessary for your Council, being practically a new body, to have a clear idea of your position.

The Meerbrook Sough, for my information about which I am indebted to Mr. Samuel Sheldon, the Assistant Barmaster, is a level, 8 feet high and 6 or 7 feet wide, driven from near Whatstandwell Bridge, at a point of about 250 feet above the sea, as far as, and under, the town of Wirksworth, with a branch to Cromford Moor and Middleton, and another towards Middle-peak Quarry. The undertaking was commenced in 1780 for the purpose of relieving the lead mines of water. These mines are now worked out. The quantity of water issuing from the Sough at Whatstandwell was gauged by Professor Anstead at 16,750,000 gallons a day. Three independent Analysts report on the quality of the water as excellent, free from all contamination, and without trace of lead. It is probable that Engineers will be engaged to report on the Meerbrook Sough and its tributaries, with particular reference to contamination, and that the reports will come before you in due course.

GENERAL SANITATION. Under this head are included scavenging, nuisances, building, dairies and cowsheds, slaughter houses, offensive trades and common lodging houses, all of which are regulated by bye-laws, adopted by the Sanitary Authority. I am indebted to Mr. Ridout, the Sanitary Inspector, for his assistance in this part of my report.

SCAVENGING. The streets should be more regularly swept, and in the summer months, watered. Clouds of dust containing quantities of decomposing animal and vegetable matter are a nuisance to householders and tradesmen, especially the purveyors of food. The assistance of a steam roller in repairing your macadamized streets would improve their appearance and add to the general comfort. The roller can be hired, and your Surveyor will lay before you the probable cost.

NUISANCES. SNOW is not generally cleared from the footpaths. Coal, ashes and manure might be less frequently deposited on the pavements. The removal of night-soil from privies is delayed longer than it should be; the charge of one shilling a load leads to the poorer occupiers indefinitely postponing it. No high standard of cleanliness can be maintained unless the

and most closely packed houses in your district.

House Accommodation.—The house accommodation for the poor in an old town like yours is no better than can be expected. The old houses appear to have been built to last for ever, and are wanting in points considered nowadays essential for health. In such houses it is a matter of considerable difficulty to decide how far it is practicable to enforce modern requirements. The want of through ventilation, of adequate ventilation, or of ventilation at all is a common fault not confined to the poorest houses. There should be no difficulty in remedying this. During the year the plans of twelve new houses were submitted to you, and your Council rightly insisted that your model building bye-laws should be complied with.

Closet accommodation.—There are over 300 privies and middens in the district, for the most part built years ago, and consequently in site and structure not up to modern requirements. These should be brought up-to-date. It is not too much to ask that privies should be removed from house walls, have water-tight pits, be roofed over to exclude rain, and so arranged that the excreta and ashes can be mixed. There are about 100 privies against house walls, a number of leaky and dilapidated privies, and more often than not there is no mixing of excreta with ashes. I understand that about 300 privies are emptied a year, and the number of privies being at least 300, we find that on an average each privy is allowed to go a year without being emptied. From this it may be inferred that their storage capacity is too great. Human excreta remaining such a time near dwellings and particularly those in over-crowded parts, must produce a constant condition of foul air, and consequent insidious deterioration of health with increased mortality. In your district, removal of nightsoil devolves upon the householder, and is regulated by bye-laws which the above figures prove have not been kept. The matter has had your careful consideration, and you passed a resolution that “it was absolutely necessary for the health of the town that there should be no accumulation of nightsoil, and that it must be systematically removed as provided for in the byelaws.” If after a reasonable time it is still found impossible to prevent over-accumulation, it will be best for the Authority to repeal their byelaws and undertake the systematic removal themselves.

House Drains.—Trapping and disconnection are not as perfect or as general as they should be. Repeatedly my attention is directed to defects, some of long standing and of the utmost gravity. Your Sanitary Committee have also noticed the want of disconnection between sink pipes and drains. Absolute disconnection of all houses from sewers, and the systematic trapping of drains, will be a necessary sequel to our new sewerage system.

Sewerage.—I am sure it is your wish that the sanitary condition of your district should com-

pare favourably with other places of similar size, situation, and population, and that you would be pleased to know that your death rate was as low as the average Urban death rate in the county. But just as a manufacturer with obsolete and worn-out machinery would be beaten, so you, with an old sewerage system, find your health record and death rate do not keep pace with the times. A scheme for sewerage and sewage disposal, prepared by Mr. McCallum, of Manchester, has been accepted by you; the difficulty is to find a site for the purification works.

Water.—Your water supply comes from the millstone grit, which near Wirksworth lies on the summit of a hill, and the water escapes near the base of the strata on the side of the hill; the strata dips towards the Derwent valley, *i.e.*, away from the town, and the acreage of your gathering ground is probably small. The flow of the springs is found to vary immediately with the rainfall. During Winter months the supply has been as high as twelve and fourteen thousand gallons an hour but every year (except in an unusual one like 1891, when the rainfall was over 40 inches) for four or five months the springs yield less than 18 gallons per head per day, though only in four months in the last twelve years has the supply been below thirteen gallons per head per day. Your present reservoir holding 38,000 gallons is not worth consideration for storage; practically you are served direct from the springs, and your water question is simply one of storage of your surplus supply in months of plenty. Doubtless, scarcity of water with consequent uncleanness and personal and domestic discomfort is considered by your ratepayers the most urgent need of the district. I think the more serious, more constant, and less noticed evils arising from bad sewerage and over-accumulation of night-soil are deservedly occupying your first attention. In good time you hope to provide the district with an adequate water supply. The Meerbrook Sough draining water from disused lead mines at a considerable depth under your district, with an outlet in the Derwent valley, near Whatstandwell Bridge, which was under the consideration of the County Council, has been pre-empted by the Derby Borough, and during the year their engineers have visited the district. I think it is immaterial to you who has the water, though, as the water is derived partially from within your district, it would be well for you to closely watch the powers, rights, and privileges that may be applied for.

Isolation Hospital.—The Belper Union, in which your district is situated, has been constituted an Isolation Hospital district by order of the County Council. After careful consideration, and your views had been laid before the Hospital Committee, you decided to join, having first assured yourselves that there would be no danger in removing

have no demonstrated relation to unsanitary conditions, your Council may be congratulated on the health of the district during 1896.

The following is a summary of the sanitary work done in the Inspector of Nuisances department during the year, from which you will see that matters referred to in my last annual report have had attention. Mr. Diver, the Sanitary Inspector, has done his work well.

		Inspections and Observations made.	Informal Notices served by Inspector.	Legal Notices by Authority.	Nuisances abated after Notice.	
Dwelling- Houses	{ Foul Conditions	12	3		3	
	{ Structural Defects	159	53	1	45	
	{ Overcrowding	2				
	{ Unfit for Habitation	1				
	{ Lodging-House	2				
	{ Bakehouses	2				
	{ Slaughter-Houses	2				
House Drainage.	{ Ashpits and Privies	165	55		55	
	{ Deposits of Refuse and Manure	12	2		2	
	{ Water Closets	12	4		4	
	{ Defective Traps	45	15		15	
	{ No Dis-connection	27	9		9	
	{ Other Faults	33	11		11	
	{ Water Supply	264	88		88	
	Totals		738	240	1	232

Samples of water taken for analysis, 7.

Condemned as unfit for use, 4.

Houses disinfected after infectious disease, 5.

Two houses were dealt with under Section 46, P.H.A., 1875, being in such a filthy and unwholesome condition that the health of the occupiers was endangered thereby.

The water at two houses being suspected, was analysed, and found bad. Your Council sent two further samples to the County Council Analyst, who condemned them, and asked for three more samples, one from the reservoir, one from the main in the Market Place, and one from one of the affected houses. He reported that they were all clear and bright, practically identical in character, free from lead and iron, and well adapted to supply the community. The impurities in the condemned samples were due to local contamination.

Removal of Excreta.—In a town like ours middens are inevitable. Their success depends on proper scavenging arrangements and efficient sanitary supervision, without which they become a nuisance injurious to health. Your Sanitary Inspector estimates the number of privies and cesspools within the town area at between four and five hundred. This implies that the health of

more than half, and the poorer and more overcrowded half, of your community is dependent on the regular and systematic removal of night-soil. Nineteen years ago, under Section 44 of the P.H.A., 1875, your authority adopted byelaws imposing this duty on the householder, and there has been a constant difficulty in enforcing them. In every one of my sixteen annual reports this difficulty has been referred to. Several committees have considered the subject, and made recommendations, which have been sometimes followed by temporary improvement. In 1892 the over-accumulation of night-soil was so enormous that the authority relieved the Sanitary Inspector, for three months, from other duties to devote more time to this matter. In 1896 an effort has been made to keep night-soil regularly removed. The portions of your district known as Wash Green, Bole Hill, Greenhill, and Dale have been systematically inspected from house to house, and a fair condition of cleanliness has been reached. Unless a man devotes his time to inspecting, serving notices, and seeing that they are complied with, either from poverty or carelessness, or want of opportunity, the removal of night-soil from proximity to dwellings will be as much neglected in the future as in the past.

Under Section 42, P.H.A., 1875, the Sanitary Authority may undertake the cleansing of privies, ashpits, and cesspools, and all refuse so collected becomes the property of the Local Authority, to be sold or otherwise disposed of. On September 29th, your Sanitary Committee instructed your Inspector to report, after visiting and enquiring of other Authorities, on the cost and working of this Section. His report is now before you. The cost will not exceed a sixpenny rate, which, to a householder complying with the present bye-laws and rated under £40, will be a saving. The working appears to be simple and the result will be that a constant nuisance, most injurious to health and responsible for high death rates, will be permanently removed.

Water.—The following are your Water Bailiff's monthly statements showing number of gallons per hour flowing into the reservoir at the beginning of each month in 1896:—

Month.	Gallons per hour.
January	5000
February	5400
March	4600
April	6700
May	5200
June	3970
July	2960
August	2500
September	2300
October	2600
November	5000
December	6970

In August, September, and October the supply was less than 18 gallons per head per diem.

		Inspections and Observations made,	Informal Notices served by Inspector.	Legal Notices served by Authority.	Nuisances abated after Notices.
Dwelling- Houses.	{ Foul Conditions	18	6	...	6
	{ Structural Defects	123	41	...	41
	{ Overcrowding	6	2	...	2
	Lodging-House	10	...	...	...
	Cowsheds	6	1	...	1
	Bakehouses	5	...	...	...
	Slaughter-Houses	5	...	...	...
	Ashpits and Privies	186	62	...	62
	Deposits of Refuse and Manure	8	2	...	2
	Water Closets.....	2	1	...	...
House Drainage.	{ Defective Traps	15	5	...	5
	{ No Disconnection	42	14	...	14
	Water Supply.....	231	77	...	77
	Animals Improperly Kept	2	1	...	1
	Totals.....	659	212	...	211

Houses Disinfected after Infectious Disease, 3.

Between August, 1896, and March, 1897, the whole of your district was systematically inspected by your Sanitary Inspector (Mr. Diver). He found in the poorer quarters of the town large accumulations of midden filth and ashes, a great number of slopstones in direct connection with drains, the majority of privy middens defective, and many instances of rubble drains passing under dwellings. All the nuisances were abated, and Mr. Diver reports, as the outcome of his periodical visits since that time, that the middens and ashpits in the

district have been emptied regularly and are in good condition.

WATER.—The following are your Water Bailiff's monthly statements, showing number of gallons per hour flowing into the reservoir at the beginning of each month :—

Month.	Gallons per hour.
January	11,760
February	11,870
March	14,000
April	10,000
May.....	7,000
June	6,000
July.....	4,428
August	3,192
September	2,952
October	2,460
November	2,208
December	11,800

The Rainfall measured at Bridge House in 1897 was as follows:—

			United Kingdom.
January.....	2·65 inches in 13 rainy days	...	2·66 inches.
February	3·89 " 18 "	...	3·10 "
March	3·66 " 20 "	...	4·13 "
April	2·42 " 13 "	...	3·37 "
May	1·29 " 11 "	...	1·69 "
June	3·98 " 11 "	...	2·57 "
July	0·94 " 7 "	...	1·39 "
August	3·09 " 17 "	...	4·09 "
September.....	3·72 " 14 "	...	3·66 "
October	1·48 " 12 "	...	2·87 "
November	3·55 " 13 "	...	—
December	4·65 " 18 "	...	—
Total	35·32 " 167 "		

Annual Rainfall at Bridge House since 1890 :—

1890...26·67 inches.	.....	1894...29·55 inches.
1891...40·66	„	..... 1895...32·36
1892...28·69	„	..... 1896...32·4
1893...22·77	„	..... 1897...35·32

Average rainfall for the last eight years, 31·05 inches.

Your water comes from the millstone grit, which caps the hill to the east of the town. In the words of Mr. Mansergh, “the millstone grit is a kind of natural reservoir in which your water is stored, the quantity impounded being in proportion to the rainfall on the percolation area above.” The springs issue on the side of the hill at the base of the strata, about 790 feet above Ordnance datum, and about 270 feet above the Market Place. These springs were allotted to the inhabitants of Wirksworth under an Act of Parliament in 1802 (42 George III., cap. 110), and in 1880 by a Provisional Order of the Local Government Board for partially repealing and altering the Act, they were transferred, with all rights appertaining to the supply, to the Local Board, for the benefit of the whole of the Urban Sanitary District of Wirksworth. They are situated in 12·629 acres of land, part of which was allotted with the springs, and the remainder bought by the Local Board at an auction sale, in 1886, for £370. In addition, the sum of £63 17s. was paid for enfranchisement, making the total outlay £433 17s. This money

was borrowed at $3\frac{1}{2}$ per cent., and on March 31st, 1898, there will be £270 still owing.

The water is pure, clear, cool, and sparkling, and is good for drinking, cooking, and washing. The following is an analysis of the water, by Mr. A. J. Bernay :—

	Grains in one gallon.
Sulphate of Lime.....	0·6500
Bicarbonate of Lime	2·4480
Bicarbonate of Magnesia.....	0·1370
Bicarbonate of Iron.....	0·0090
Carbonate of Soda	traces
Chloride of Sodium.....	0·0258
Silicia	0·0080
Carbonate of Potash	traces
Organic matter.....	1·1210
Free Carbonic Acid.....	7·2160

Its specific gravity is 1·00014.

He adds, "It is beautifully clear and sparkling, very soft, and available for every household purpose. It contains a large amount of carbonic acid, to which the briskness of this water is owing. It is just such a water as one would expect from the millstone grit, and I have no hesitation in saying that no town in England is supplied with one of better quality."

In October, 1878, an analysis was made by Mr. H. S. Bell, for the Local Board, with the following result :—

Free Ammonia.....	·02 per million.
Organic Ammonia	·04 "
Total Solids	8 grains to one gallon.
Volatile matter	4 " "
Fixed Solids.....	4 " "
Chlorine	2 " "

The hardness was estimated by Clark's process.

Permanent Hardness	4·5 degrees.
Hardness removed by Boiling	0·0 „
Total Hardness	4·5 „

“Each degree represents a grain of Carbonate of Lime in the gallon. The results of the examination prove the water to be of very excellent quality, and in every way suitable for the supply of a town.”

In 1896 your Council submitted to the County Council Analyst three samples—one from the reservoir, one from the main in the Market Place, and one from a house. He reported that they were well adapted to supply the community. The only contamination has been through rust from the dead ends of pipes, which is remedied by flushing the mains. The supply is permanent, and shows no signs of falling off. It varies from year to year in direct relation to the *winter* rainfall. The summer rainfall has very little effect on the springs. The following table gives the average number of gallons per hour in each year since 1884 :—

Year.	Average gallons per hour.	Rainfall. Inches.
1884	5884	—
1885	6195	—
1886	7923	—
1887	4901	—
1888	4660	—
1889	6115	—
1890	4621	26·67
1891	6470	40·66
1892	7030	28·69
1893	4380	22·77
1894	4405	29·45
1895	4596	32·36
1896	4433	32·4
1897	7314	35·32

In seven out of the fourteen years the supply averaged between 4000 and 5000 gallons per hour. In the remaining seven it averaged between 5000 and 8000 gallons per hour. Taking your requirements, as I shall presently shew, at 4000 gallons per hour, your springs have proved themselves over a period of fourteen years to be equal to your requirements. The water, however, does not flow evenly throughout the year; in each year there is a period of maximum flow and a period of minimum flow, the latter occurring in the summer and autumn, when water is most needed for flushing sewers and watering streets. I have prepared a chart from your Water Bailiff's monthly returns, shewing the monthly rise and fall in your water supply during the last fourteen years, and on this

chart are shewn the monthly fluctuations in relation to the rainfall during the last five years.

The requirements of your district may be placed at 25 gallons per head per day, which is equivalent to a flow of 4000 gallons per hour. Experience has shewn us that we are unable to keep up a constant supply to the householder with less than 4000 gallons per hour, and this amount is necessary to keep the sewers properly flushed. A black horizontal line on the chart indicates the 4000 gallons per hour level, and you can see how in each year, except one (1891), for a longer or shorter period, the flow from the springs has been below your requirements.

The following table shews, year by year, since 1884, the number of gallons of surplus water flowing, over and above your requirements of 4000 gallons per hour, during the months of maximum flow immediately preceding the annual deficit, and it also shews the total amount you were short of 4000 gallons per hour in each year, in the months of minimum supply. You will observe that the surplus in each year has invariably covered the deficit. In only one year (1896) was the margin of surplus narrow, and in this year the rainfall was 32.4 inches, or an inch above the average. The explanation is that of the 32.4 inches of rain, 6.38 inches fell in September, without any marked effect

on the springs, and 5.858 inches fell in December, the effect of which was not felt until January, 1897. There were two periods of exceptional and prolonged drought, viz., ten months in 1887-8, with a deficit of 10,730,400 gallons; and seven months in 1893, with a deficit of 8,392,800 gallons. In 1887 the surplus was 21,331,200 gallons; and in 1893, 13,764,000 gallons. Your springs have yielded ample to have carried you comfortably through any year since 1884 if the surplus water had been stored.

Year.	Rainfall in inches.	Remarks on Rainfall.	Months of Maximum flow im- mediately preceding deficit.		Months of Minimum flow.	
			Number of Months.	Total Surplus over 4000 gallons per hour.	Number of Months.	Total Deficit below 4000 gallons per hour.
1884	—	—	Six.	20,661,600 gallons.	Six.	5,128,800 gallons.
1885	—	—	Four.	13,598,400 "	Three.	2,349,600 "
1886	—	—	Eight.	28,992,000 "	Two.	1,471,200 "
1887	—	—	Six.	21,331,200 "	Ten.	10,730,400 "
1888	—	—	Three.	4,008,000 "	Three.	436,800 "
1889	—	—	Seven.	17,496,000 "	Two.	964,800 "
1890	26·67	4·366 below average.	Five.	8,406,000 "	Five.	6,175,200 "
1891	40·66	—	—	—	—	No deficit.
1892	28·69	—	Five.	24,528,000 "	Two.	1,020,000 "
1893	22·77	—	Six.	13,764,000 "	Seven.	8,392,800 "
1894	29·55	—	Four.	8,016,000 "	Seven.	3,943,200 "
1895	32·36	5·53 inches in July.	Four.	7,776,000 "	Six.	4,761,600 "
1896	32·46	6·38 inches in Sept., and	Five.	5,001,000 "	Five.	4,272,000 "
1897	35·32	5·85 inches in Dec., 1896.	Six.	25,344,000 "	Four.	4,380,000 "

Your present storage is about 40,000 gallons, and is not worthy of consideration as such. Mr. Radford, of Nottingham, in December, 1890, advised the Local Board to construct a reservoir to hold 3,000,000 gallons, but, with the records of the springs extending over twice the period on which that estimate was based, I think he would wish to correct his estimate. By referring to the table of annual deficits below 4000 gallons per hour, you will see that a reservoir of 3,000,000 gallons would have been inadequate in eight of the fourteen years. Seven of the fourteen years would have required storage of, at least, 5,000,000 gallons: and if your Council decides to construct a reservoir this seems to indicate its minimum capacity.

There are said to be seven miles of mains in your district. These were laid in 1882 on the plans of Messrs. Coke and Mills, of Chesterfield, at a cost of £4000, which was borrowed in 1882 from the Public Works Loan Commissioners at 3 $\frac{3}{4}$ per cent., with repayment extended over 30 years, and of which on March 31st, 1898, £1913 will still be owing. The whole of the pipes were newly cast, and coated with Dr. Angus Smith's composition, composed of pitch, pure naphthaline, and prepared oil.

Water is delivered throughout the district on the "constant" plan; there is no storage in the

houses except for water-closets and kitchen boilers. With the "constant" plan the chief waste arises from pipes and joints. Mains laid in 1882 should still be sound, but there is undoubtedly considerable waste from leakage. On the 31st May last, at a time when your Water Bailiff reported 7000 gallons per hour (equivalent to 44 gallons per head per day), you had not sufficient water for a constant supply, and were obliged to turn it off during the night. Recently Mr. Diver measured the flow into the reservoir at 1 a.m. and 6.30 a.m. on a Monday morning. He found that during that time 29,235 gallons of water ran into the reservoir, of which 8789 gallons had been stored and 20,446 gallons had run away through the mains in $5\frac{1}{2}$ hours of the day when no water was being used by householders. This shows an enormous waste and the necessity of having the mains throughout the district thoroughly tested. It would be well in future to have the amount of waste estimated every three months, and the yield of the springs should be recorded once a week in "gallons per day" instead of "gallons per hour."

During the year seven leakages arising from corroded and blown-off ferrules were detected and remedied, and seventy-seven notices were given to householders to stop waste. With the "constant" plan common taps don't answer, and the best screw-down taps should be used.

The waste of water referred to in my last annual report was investigated by your Council. In March your Water Committee recommended the Council to hire a Deacon's waste water meter for three months. On the 26th March the meter was fixed on the trunk main, and a constant waste of 4500 gallons per hour, or 108,000 gallons per day, was detected, being equivalent to 29 gallons per head per day on the population of the district. On the morning of the 28th March a waste of 7000 gallons per hour was detected in the high pressure service, and the waste of each part of the district was ascertained and followed up, the following defects being discovered:—Three cracked ferules at main, two leaky hydrants, one leaky air valve, one burst lead pipe, which, on being remedied, were found to save a waste of 1000 gallons per hour. Also 65 defective house fittings were detected, giving a waste of 2050 gallons per hour.

In April the total waste was reduced to 2600 gallons per hour; in May it was the same; in June 1200 gallons per hour; in July 1000 gallons per hour; and in August 820 gallons per hour. There is no doubt that owing to the action of the Council the district passed through the months of scarcity (August, September, and October) with far less discomfort than in previous years. The yield of the springs in these months was about 15 gallons per head.

We are again indebted to Mr. Gibbs, of Bridge House, for the rain and temperature records, the latter of which will be found appended.

I have the honour to be,

Gentlemen,

Your obedient Servant,

A. E. BROSTER.

Wirksworth, April 29th, 1899.

Temperature for the year ending 31st December, 1898, at Bridge House:—

Month.	Mean Max.	Mean Min.	Mean.	High- est.	Low- est.	Mean U.K.
January	44	37	40	58	26	47
February	47	34	40	56	20	43
March	47	33	40	56	26	42
April	39	29	34	47	26	48
May	53	43	48	60	35	50
June	61	46	54	71	38	54
July	67	50	58	76	42	58
August	67	52	60	78	44	60
September ...	63	48	56	82	33	59
October	57	49	53	68	40	54
November ...	48	38	43	58	30	
December ...	49	37	43	58	24	

by your officers to be disinfected at the Isolation Hospital. At the time of presenting this report there has been no case of scarlet fever or other notifiable disease in the district for five months, in itself evidence of the value of the Isolation Hospital to our district.

Water Supply.—The following figures give your water bailiff's monthly returns of the number of gallons per hour flowing from your springs at the end of each month in 1900:—

	Wirksworth.	Bolehill.
January	13,286	492
February	15,944	500
March	14,278	473
April	4,920	984
May	3,440	250
June	2,952	492
July	1,968	242
August	4,324	350
September	3,444	375
October	3,201	450
November	4,920	365
December	10,332	492

The rain measured by Mr. Gibbs at Bridge House was as follows (rain gauge set on the 500 feet contour line of Ordnance Survey):—

Month.	Inches.	Rainy Days.	Avge. for U.K.
January ...	5.66	26	5.26
February ..	5.12	18	4.18
March	1.07	10	1.50
April	1.43	12	2.12
May	1.92	14	2.42
June	3.77	18	2.92
July	3.97	13	1.69
August	4.84	15	3.24
September	0.72	7	2.22
October ...	4.00	20	4.20
November .	2.37	18	
December .	5.23	20	

Total ... 40.10 inches in 191 rainy days.

Annual rainfall at Bridge House, Wirksworth, since 1890:—

1890	26.67 inches
1891	40.65 "
1892	28.69 "
1893	22.77 "
1894	29.55 "
1895	32.36 "
1896	32.4 "
1897	35.32 "
1898	29.50 "
1899	32.24 "
1900	40.10 "

The rainfall in 1900 was 9.08 inches more than the average of the last ten years.

Owing to the exceptional rainfall, there was a shorter period of scarcity than usual. The

supply was turned off in July and part of August, and for a short time in October. With a service on the constant plan and the springs 300 feet above the town there is naturally considerable waste not only from bursted pipes and connections, but from taps which must be extremely good to stand the pressure. Your Council has successfully endeavoured to keep the waste down by systematic and repeated inspections, but there are certain months in every year in which the supply does not meet the domestic necessities of the district. A considerable quantity of water is required for manufacturing and trade purposes which are not provided for in the months of scarcity. The area of your district is drained at a considerable depth by the Meerbrook Sough, which has an outlet in the Derwent Valley, near Whatstandwell. A Bill is being promoted by the Heanor and Ilkeston Councils to acquire this water at its outlet, and it will be necessary, as I advised you in 1895, when the Derby Borough promoted a Bill, to acquire the same supply, for you to closely watch your interests. Undoubtedly there is a large quantity of water pouring into this Sough which might be used to augment your present supply in the months of scarcity, and on which, arising as it does within your district, you should have a first claim for all you want now and in the future.

Sewerage.—This has been fully dealt with in previous reports. The difficulty is to find a place for the outfall works. Situated as the town is at the head of a valley with a bottleneck outlet, sites for such works are few, and those open to serious objection. The nature of the soil is not adapted to sewage treatment by irrigation. A Royal Commission on sewage disposal has been sitting since 1898, and it is to be hoped that the result of their deliberations will enable small places like ours to carry out sewage treatment and disposal without creating a nuisance and without wasting money in costly and useless experiments.

Excrement and Refuse Disposal.—This is done by the householders. Under the supervision of the Sanitary Inspector the town has been kept clean. The following is a summary of the sanitary work done by him during the year:—

Dwelling-houses.—Number inspected, 305; informal notices to repair, 1; number of houses repaired, 1; number of infected houses, 12; number disinfected, 12.

Dairies, Cowsheds, and Milkshops.—Number on register, 45; number of inspections, 36.

Bakehouses.—Number of inspections, 16.

Slaughter-houses.—Number on register, 8; number of inspections, 25.

under no obligation to do anything until they are served with a notice. There were 279 notices served for the removal of offensive accumulations. In your district removal of night soil and house refuse devolves upon the householder. I believe it would be welcomed by all if your Council undertook the removal, and there can be no doubt it would add to the cleanliness and thereby to the health of the town. Three houses were dealt with for being over-crowded, two for their foul condition, and two were closed as unfit for habitation. Our old cottage dwellings must be made inhabitable or closed, otherwise they become the resort either of the worst of our own people or of undesirables from neighbouring districts. It is satisfactory to note that seven plans for new dwelling-houses were submitted to your Council during the year, making a total of nineteen new houses under construction. The demand for these new houses being far in excess of the supply, there is every prospect of more building in the immediate future.

There is one common lodging house in the district, which was inspected 12 times, and one notice was served. It has recently received careful attention, and a report was submitted to your Council dealing with its sanitary condition particularly in reference to cubic area per bed and ventilation in the bedrooms. Notice has been served for these requirements to be attended to.

There are eight slaughter-houses on the register, and 90 inspections were made. They are in repair and in good order.

There are 39 dairies and cowsheds on the register, and 67 inspections were made. The drainage is good, the ventilation adequate, and they are kept in good order. Alterations were made in two.

The seven bakehouses were inspected once a month, and with one exception are in satisfactory condition and in good order. The exception is at present under consideration.

Under the Factory and Workshops Act, 1901, your inspector and I have visited and inspected the workshops and workplaces in the district, of which your clerk furnished me with a list of 26. There were 52 inspections made. The sanitary condition of these places is on the whole satisfactory. At the present time there are certain recommendations under consideration, which will doubtless be carried out without troubling your Council.

Water.—Your Council, at the request of the County Council, have recently passed a resolution whereby you undertake to carry out and complete a scheme for an additional water supply within two years. It will be for the serious consideration of your Council how this supply can be best obtained, whether by an additional storage of your existing supply from

1902

5

the Millstone grit or by pumping the limestone water from a shaft of the Meerbrook Sough. The Millstone grit area of your district has been carefully explored by Mr. Radford, Dr. Barwise, and the late Local Board, but no new spring worthy of attention can be found.

Owing to the exceptional rainfall during the summer months we passed through the year with a minimum amount of inconvenience. From your water bailiff's monthly returns, which will be found appended, it appears that there were never less than 20 gallons per head per day flowing into the reservoir. With such a supply there should have been no scarcity of water. It is a matter for your consideration whether the present distribution is not responsible for the scarcity in some parts. There is undoubtedly considerable waste partly from the carelessness of the public in the use of a constant service, and partly from the pressure in your mains. In Coldwell Street the pressure in the low pressure service mains is 56lbs. to the square inch, while the pressure in the high pressure service is over 100 lbs. to the square inch.

The sewerage at Bolehill has received your Council's attention, and you are about to do some necessary work there.

A statement of the work done by your Sanitary Inspector will be found appended.

We are again indebted to Mr. Gibbs, of Bridge House, for the rainfall and temperature records of the year, and your Council, I am sure, will join me in thanking him.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

A. E. BROSTER.

Wirksworth, February 24th, 1903.

might be usefully employed from dinner-time in removing horse dung.

The town is adequately supplied with public water taps. To prevent waste a push-tap was tried, but did not answer. It is proposed to try a lever tap.

Water.—I need not remind you that we are entirely dependent on the rainfall for our water supply. From an interesting statement sent me by Mr. Gibbs, of Bridge House, we learn that the maximum rainfall occurs between September and January.

Average rainfall at Bridge House in each month of the year for the last ten years.

September	3.09 inches.
October	3.61 ..
November	2.98 ..
December	3.83 ..
January	3.17 ..
February	2.36 ..
March	2.60 ..
April	2.22 ..
May	2.00 ..
June	2.12 ..
July	2.72 ..
August	2.97 ..

Our springs are at their highest point between September and January, vegetation and evaporation absorbing the rainfall from April to August.

In the year under notice we had an exceptionally wet Summer, with a temperature below the average (the mean maximum never exceeding 66.5° F.). There was a constant supply of water throughout the year, except between August 1st and 22nd, when the yield of the springs dropped to 3813 gallons per hour, and the water was turned off during the night.

The following are your Water Bailiff's monthly returns of gallons per hour flowing into the reservoir in 1903:—

Month.	Gallons per hour.
January	8487
February	6273
March	8942
April	7749
May	9102
June	6519
July	4296
August	3813
September	7257
October	16,546
November	13,051
December	11,947

From the following rainfall return you will see how immediately the springs vary with the rainfall, showing that there is no storage in the gritstone from which the springs are derived.

Rainfall for the year ending December 31st,
1903, measured at Bridge House.

Month.	Rainy days.	Inches of rain.
January	19	2.59
February	12	1.55
March	17	4.21
April	15	1.48
May	16	3.54
June	9	1.12
July	15	2.26
August	8	5.21
September	18	4.20
October	29	7.42
November	14	2.95
December	21	1.79
	193	38.32

Our usual experience is one of longer or shorter scarcity of water for some months every year, and to meet this your Council are considering the best means of augmenting the supply. Whatever plan is decided on, in one respect we shall not be as well off as before. Hitherto we have been favoured with a water supply direct from the springs, and as there are no new springs, worthy of attention, to be acquired, in some way or other we shall have to put up with stored water. To supply your district with stored water three courses appear to be open to you—

- (1) Storing your own surplus water in the Winter months;
- (2) A supply from the Heanor and Ilkeston Water Board;
- (3) A supply from the Derwent Valley Water Board.

Of the first and third courses it must be said that the water will be gritstone water, while the second course will provide you with limestone water.

With either the second or third course you will have not only the expense of laying considerable lengths of mains outside your district, paying compensation, building a reservoir and buying the water, but also the constant expense of pumping from 100 to 200 feet for all time; while with the first course the water is your own, and will supply the district by gravity.

It seems to me to be a matter requiring sound advice before action is taken, and that it will be a mistake to be your own advisers. We want the best permanent scheme that can be devised, either by a man of undoubted authority or selected by your Council from competitive schemes.

In the meantime, to detect and lessen waste, I would advise the more free use of the Deacon meter both in the town and Bolehill mains.

A statement of the work done by your Sanitary Inspector (Mr. Wintle) will be found appended.

Month. 1904.	Town and District.	Bole Hill and Steeple Grange.	Total supply. gallons per h'r
January ...	8856	492	9348
February ...	16,760	615	17,375
March	9840	492	10,332
April	5904	615	6519
May	4674	492	5166
June	2952	363	3315
July	2460	492	2952
August	2706	363	3069
September ..	1839	363	2202
October	1476	363	1839
November ..	1347	363	1710
December ...	1968	492	2460

The monthly rainfall, measured by Mr. Gibbs, at Bridge House, is as follows:—

Month.	Inches.	Rainy days.	United K'gdom, inches.	United K'gdom, days.
January ...	3.21	21	4.58	25
February .	5.05	23	5.02	23
March	2.19	22	2.16	13
April	2.13	16	2.87	20
May .....	.9	12	2.78	20
June .....	.91	9	2.02	12
July	2.63	13	2.42	14
August	4.15	15	3.51	18
September. 1.44	9	3.25	15	
October	1.4	7	3.64	21
November .	1.6	12		
December .	2.18	15		
1904.....	27.79	174		

A statement of the yearly rainfall at Bridge House since 1891 will be found appended. The average yearly rainfall, 1891-1903 inclusive was 32.6in. The rainfall in 1904 is consequently 4.8in. below the average. The heaviest rainfall was on the 18th August, when 1.95in. were measured; on the 26th and 28th July over an inch of rain fell.

Comparing the yield of your springs with the monthly rainfall it will be seen how immediately the springs vary with the rainfall.

The requirements of your district may be placed at 25 gallons per head per day—that is, 96,000 gallons per day for 3840 persons, which is equivalent to a flow of 4000 gallons per hour from the springs. The Water Bailiff's monthly returns show that from June to December (inclusive) the district was short of water, and this was particularly the case in October and November, when there were barely 12 gallons per head. In the 24 years of which we have record, the springs were only once lower than in November (1710 gallons per hour), viz., in December, 1893, when, after seven months' drought, they yielded 1500 gallons per hour. The drought of 1893 continued until March, 1894, when the springs rose to 9000 gallons per hour. Ten months' drought was experienced in 1887-8, but the springs did not go below 2000 gallons per hour. On this occasion the improvement came in April, when they rose to 7000 gallons per hour.

In our water supply we live from hand to mouth—dependent on the rainfall. In one year only (1891) in the last 24 years the supply has been above 4000 gallons per hour throughout the year; in three years during that period the supply has been below that amount for from seven to ten months. The danger to health, the discomfort and annoyance to householders, and the disturbance of trade from scarcity of water, are obvious.

Your Council has decided to complete a scheme for additional water supply, and during the year it has had your constant and careful attention. You instructed Mr. Percy Griffith, M.Inst.C.E., to prepare and present a report. He has paid three visits to the district, and carefully investigated eight alternative proposals. We may, therefore, hope that a satisfactory scheme will be decided on, and that before long the work will be in progress.

The monthly temperature records will be found appended. For these, as well as for the rainfall statistics, we are again indebted to Mr. Gibbs, of Bridge House.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

A. E. BROSTER.

Wirksworth, 16th March, 1905.

SANITARY INSPECTOR'S STATEMENT OF WORK.

DWELLING-HOUSES—

Inspections	429
Unfit for habitation	2
Infected	36
Disinfected	36

INSPECTIONS—

Dairies and Cowsheds	68
Slaughter-houses	48
Bakehouses	42
Common Lodging-houses	10
Workshops	48

Informal Legal Notices. Notices. Abated.

Defective traps and drains	17	—	17
Drains obstructed	8	—	8
Insanitary privies and ashpits	18	—	18
Conversion of w.c.'s into privies	4	—	4
Defective closets	7	—	7
Surface of courts and yards	2	—	2
Eavespouts and downspouts	3	—	3
Offensive accumulations	146	—	144

workshops in the district are clean and well ventilated. Insufficient sanitary convenience at one workshop is having attention. There is no homework done in the district.

WATER.

The following are the monthly returns by your Water Bailiff of the gallons per hour flowing from your springs:—

1906. Month.	Town and District.	Bolehill and Steeple Grange.	Total supply in gallons per hour.
January	9,840	534	10,374
February ...	11,332	615	11,947
March	11,824	492	12,316
April	5,904	615	6,519
May	3,690	492	4,182
June	2,460	359	2,819
July	2,214	363	2,577
August	1,968	246	2,214
September ...	1,582	363	1,945
October	2,337	363	2,700
November ...	6,642	492	7,134
December ...	7,972	492	8,464

The maximum flow was in March, and the minimum in September.

Your Council are negotiating for the purchase of springs from which to augment the supply, and an early settlement of this long outstanding question may be expected.

The monthly rainfall and temperature records will be found appended. For these we are again indebted to Mr. Gibbs, of Bridge House.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

Wirksworth,
14th March, 1907.

A. E. BROSTER.

SANITARY INSPECTOR'S STATEMENT OF WORK.

Dwelling-houses :	
Inspections	530
Unfit for habitation	1
Notices to repair.....	2
Houses repaired	2
Inspections :	
Dairies and cowsheds	52
Bakehouses	42
Slaughter-houses	36
Common lodging-houses	6
Workshops	56

irregularly, and at too long intervals, and often only under pressure from the Sanitary Inspector.

LODGING-HOUSE (1).

Regulations adopted, 1879. Inspected 6 times. No complaint. Recently brought up to date in sanitary requirements.

SLAUGHTER-HOUSES (8).

Regulations adopted 1879. Inspected 32 times. Two notices served. Otherwise satisfactory.

DAIRIES, COWSHEDS AND MILK SHOPS (39).

Regulations adopted 1903. Inspected 39 times. Five notices served. Otherwise satisfactory.

BAKEHOUSES (7).

Inspected 35 times. No complaint.

FACTORIES, WORKSHOPS, ETC.

The workshops have been kept in a satisfactory condition, and are well ventilated and clean.

SCHOOLS.

The Elementary Schools are in a sanitary condition. All the Elementary Schools (4) were thoroughly disinfected three times during the year by the Council's officers. The Masters are promptly notified of each case of infectious disease, and children from infected houses are not allowed to attend school until permitted by the authority. The Masters have given great assistance in our endeavours to prevent the spread of infectious diseases.

WATER SUPPLY.

The district is supplied from springs issuing from the Yoredale Grit, and the water is laid on to the town for a constant service, which, each year in the dry season, becomes intermittent, the supply being in some years about 2000 gallons per hour below the requirements of the district, for as long a period as 120 days. The springs are quite free from any pollution.

During the year a spring supplying six houses at Breamfield was found to be contaminated by road washings and by the free access of animals. This is being attended to.

The following are the monthly returns by your Water Bailiff of the gallons per hour flowing from your springs:—

1907.	Town and District.	Boothill	Total gallons per hour.
January	8380	534	8914
February	8856	402	9258
March	6888	492	7380
April	5412	492	5904
May	3075	392	3467
June	5535	492	6027
July	6396	392	6788
August	5758	363	6121
September	4920	492	5412
October	3340	492	3832
November	5412	476	5888
December	12,070	492	12,562

of instances is directly against the house wall. Generally speaking, the privies are in close proximity to the dwellings and are emptied very irregularly and at too long intervals. Living under such conditions children's health is lowered and epidemics amongst them are severe and accompanied by a high mortality.

SEWERAGE AND SEWAGE DISPOSAL.

In October the County Council obtained an Order under the Rivers Pollution Act requiring your Council to carry out a scheme of sewerage and sewage disposal within eighteen months. Subsequently, by an arrangement with the County Council, the latter agreed not to press the Order provided your Council adopt the report of an engineer for the augmentation of the water supply within three months from the 28th December and apply for sanction for a loan within a further three months.

EXCREMENT DISPOSAL.

Approximate number of houses on—			
Privy Middens.	Pail Closets.	Water Closets.	Slop-water Closets.
711	a few.	272	2
Number of houses converted from privy middens to water closets 4			
Number of defective privies improved 5			

SCAVENGING.

There is no public scavenging by the Sanitary Authority. The occupiers make their own arrangements for the removal of night soil and refuse to a tipping place, the rent of which is paid by the Council. The poorer occupiers usually wait until compelled by the Authority. Whether from lack of means or time they constantly have accumulations in close proximity to their houses, to their own detriment.

WATER SUPPLY.

With the exception of about 81 houses (equivalent to 324 inhabitants) situated in Longway Bank, Breamfield, Rise End, and Godfrey Hole, all the houses are supplied with the public supply which is derived from a limited area of the Yoredale Grit, capping the hill to the east of the town. It is of excellent quality and free from pollution, but as it varies immediately with the rainfall the quantity is short for a longer or shorter period every year in the summer months. This is felt by occupiers on the low-pressure service, particularly on Cromford Road. In 1908 the rainfall (taken at Bridge House) March to September was as follows:—

March	3.69 inches in 21 rainy days.
April	3.03 .. 19 ..
May	3.52 .. 18 ..
June	1.64 .. 8 ..
July	3.28 .. 14 ..
August	3.79 .. 16 ..
September ...	2.78 .. 18 ..

It was an exceptionally favourable rainfall for our water supply, but in spite of that it was necessary to turn off the water daily from 10 p.m. to 6 a.m. from 12th August to 14th December. No houses in the district are supplied from

surface wells. Pollution of the supply at Breamfield and Rise End has been remedied.

During the year two samples of water were submitted for analysis.

Your Council have engaged Mr. F. W. Hodson, F.G.S., of Loughborough, to report on the best means of augmenting your supply.

The following are the monthly returns of your Water Bailiff of the gallons per hour flowing from your springs:—

1908.	Town and District.	Bolehill.	Total Gallons per hour.
January	6642	512	7154
February	5658	492	6150
March	7872	492	8364
April	6642	615	7257
May	9602	615	10,217
June	5658	738	6396
July	3690	615	4305
August	2706	492	3198
September	2583	519	3102
October	2331	744	3075
November	2460	615	3075
December	4674	738	5412

LODGING-HOUSE (1).

Regulations adopted, 1879. Inspected 10 times. No complaint.

SLAUGHTER-HOUSES (6).

Regulations adopted, 1903. Inspected 79 times. Three notices served; otherwise satisfactory.

BAKEHOUSES (6).

Inspected 36 times. One bakehouse and its drainage re-modelled.

FACTORIES AND WORKSHOPS.

The factories were inspected 13 times and the workshops 52 times. The sanitary arrangements at one factory were re-modelled.

OFFENSIVE TRADES.

There are no regulations. The Council have ordered that no rags shall be sorted in a private dwelling-house.

SCHOOLS.

The sanitary condition of the elementary schools is satisfactory. The closets are in good working order. The masters are notified of each case of infectious disease, and children from infected houses are not allowed to attend school until permitted by the authority. Owing to the prevalence of scarlet fever amongst children attending the schools, on the 13th and 14th February all the schools were closed while the sanitary authority disinfected them. All the schools were closed from the 20th February to the 30th March in consequence of epidemics of measles and whooping-cough.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

Wirksworth.

A. E. BROSTER.

22nd February, 1909.

1909

Water Supply.

Water Bailiff's Monthly Guagings, 1909.

Date.				Total Gallons per hour.
January 25th	...	...	...	7888
February 22nd	...	...	...	5043
March 22nd	...	...	...	6396
April 26th ...	...	...	...	7134
May 24th ...	...	...	...	4920
June 28th ...	...	...	...	4428
July 26th ...	...	...	...	4305
August 23rd	...	...	...	4182
September 27th	...	...	...	3684
October 25th	...	...	...	12,070
November 22nd	...	...	...	7872
December 20th	...	...	...	10,963

A statement of the rainfall at Bridge House in 1909 will be found appended. Owing to the exceptional rainfall in the summer months we passed through the year with a minimum amount of inconvenience. 829 houses out of 912 are supplied from the public supply. No houses in the district are supplied from surface wells, and there are no houses with no supply within 100 yards.

Lodging House (1).

Regulations adopted 1879. Inspected 7 times. No complaint.

Slaughter Houses (6).

Regulations adopted 1903. Inspected 42 times. No notices served

Bakehouses (7).

Inspected 38 times. No notices served.

Offensive Trades (1).

Inspected 4 times. No complaints.

Dairies, Cowsheds and Milk Shops (39).

Regulations adopted 1899. Inspected 80 times. Three notices served, two of which should be attended to without further delay.

Factories and Workshops.

The Factories were inspected 9 times, and the Workshops 40 times. Three notices were served on Workshops and the defects remedied. There is no "home work" in the district.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

A. E. BROSTER.

WIRKSWORTH,

24th February, 1910.

Occupations of Inhabitants.

Quarrying, Tape Weaving, Farming. No workers in lead smelting reside in the district.

House Accommodation.

For the working classes, limited and poor.

Houses closed during the year as unfit for habitation—0.

Water Supply.

Constant service from Millstone Grit.

Number of houses supplied from public service—829.

Springs free from pollution, land owned by Council.

Quantity adequate in 1910, on account of exceptional rainfall. If the monthly rainfall and the Water Bailiff's returns are compared it will be noticed how little the rainfall influences the springs in the third quarter of the year.

No houses without supply within 100 yards.

No houses supplied from surface wells.

Two samples of water sent for analysis.

Milk Supply.

Number of cowkeepers on register—39.

Number of milksellers, not cowkeepers—none.

Some of the cowsheds are short of cubic space but are being gradually brought up to standard.

Milk periodically analysed by County Inspector and no complaint received.

One cow condemned on account of Tubercular Udder. The cow was isolated, the milk boiled and given to pigs, and she was subsequently fattened and sold for slaughtering.

The appointment of a Veterinary Surgeon to periodically inspect the milking cows is desirable.

	Number Registered.	Inspections made.	Defects found.
Cowhouses	39	78	0

Two defective cowhouses (referred to in last annual report) remedied.

Meat Inspection.

Slaughterhouses inspections—41. Defects found—0.

Carcases condemned for tuberculosis—0.

No other food condemned during the year.

Sewerage and Drainage.

There is no plan of existing drains, and no system of Sewage disposal. Some of the drains belong to the Town, the rest are claimed by private individuals. There are some pipe sewers but the greater number are rubble stone drains, while some are merely covered trenches cut out of the limestone.

On the 5th September the Council engaged Mr. H. A. Johnson, M.I.C.E., of Bradford, to prepare a scheme for Sewerage and Sewage Disposal, and plans are now before the Local Government Board who will shortly hold an enquiry in reference to the Council's application for a loan to carry out the scheme.

Pollution of Streams.

This will be corrected on completion of the Sewerage Scheme.

Excrement Disposal.

Approximate number of houses with—

Privy Middens, 698; Pail Closets, a few; Water Closets, 284; Slop Water Closets, 2.

Number of houses converted from Privy Middens to Water Closets—9.

Number of defective privies improved—10.

General Policy of District Council.

To improve the sanitary condition of the District at not too burdensome a cost to the ratepayers.

Removal and Disposal of House Refuse.

There is no public scavenging. Refuse is removed by the occupiers to a place provided by the Council. It is not removed with sufficient frequency from the poorer and more crowded parts.

Bye-Laws.

New Streets and Buildings, adopted	1879.
Prevention of Nuisances, ..	1879.
Height of New Rooms, ..	1903.
Lodging House, ..	1879.
Slaughter Houses, ..	1879.
Dairies and Cowsheds, ..	1899.
Offensive Trades, ..	1906.
Bakehouses,	None adopted.

Two notices were served on the owner of the Common Lodging-house and complied with.

Sanitary Circumstances of the District.

Water Supply.

Constant Service from Millstone Grit.

Mains laid in 1882 at a cost of £4,000, Local Government Board Loan, last instalment paid in 1912.

Number of Houses supplied from public service—847.

Springs situated in 12·629 acres of land, the property of the Urban District Council, and free from pollution. Balance owing on cost of the land, £30—last instalment due in 1916.

Number of houses with no supply within 100 yards—0.

Number of houses supplied by surface wells—0.

Number of houses supplied from outside springs under Council control—14.

Supplies liable to pollution—0.

Rainfall, January to May, 5·05 inches above average.

„ June to December, 7·74 inches below average.

Adequacy of Water Supply, January to July—ample; August to December—satisfactory. Water turned off at night in September and October. During the dry time occupiers co-operated by reporting leakages. Waste systematically ascertained by Deacon Meter and reduced to 200 gallons per hour.

Water Bailiff's Monthly Returns.

1913	Town District.	Bolehill.	Total Galls. per hour.
22nd January ...	19228	738	19966
26th February ...	11824	615	12439
25th March ...	7380	615	7995
22nd April ...	9356	615	9971
20th May ...	8910	615	9525
24th June ...	5412	615	6027
15th July ...	3198	492	3690
26th August ...	2331	492	2823
23rd September ...	1968	615	2583
28th October ...	1968	492	2460
25th November ...	2706	492	3198
23rd December ...	2460	615	3075

Rivers and Streams.

The pollution of the Hannage Brook will cease with the new sewerage and sewage disposal scheme now under construction.

Drainage and Sewerage.

On the 28th of April, a contract was entered into with Messrs. Parker & Sharpe, of York, to lay Main Sewers and construct Outfall Works for the sum of £9,276/11/8, and on the 28th of May a contract was made with Messrs. F. Bird & Co., of Marlbro' Works, Oxford Circus, London, W. to supply the Ironwork for the sum of £647/12/0.

A loan of £11,320 for carrying out the scheme is being obtained from the Public Works Loan Commissioners at 3½% interest re-payable in 30 years by equal half-yearly instalments of principal and interest, except as to £150 of the loan which is re-payable in 15 years in the same manner.

The actual work commenced at the end of May, 1913, and has proceeded to the Council's satisfaction. On the 23rd of February, 1914, the Engineer reported that about ⅔rds of the work had been executed.

The Outfall Site is situate about a mile south of the Town and has an area of about 2½ acres including half the bed of the Ecclesbourne stream. The scheme includes the whole of the district, except the outlying hamlets of Godfrey Hole, Rise End, The Moor, Breamfield and Longway Bank. The method of disposal will be by settling tanks, percolating filters, and humus tanks, with additional rough filters for dealing with storm water.

Closet Accommodation.

Privy Middens (approximate number)	—666
Pail Closets	—a few
Water Closets	—320
Slop Water Closet	— 2

Number of houses converted from privy middens to water closets—10

Number of defective privies improved—3

Number of houses converted from pail closets to water closets—0

Number of cesspool privies converted—0

The privy middens have been constantly under supervision, and kept in fair order. As the new sewerage system progresses these are being converted into water closets.

1917

3.

SANITARY CIRCUMSTANCES OF THE DISTRICT.

WATER SUPPLY.

Rainfall in 1917 36.52 inches.

Adequacy of Water Supply.

In consequence of dry weather the Springs were low in July, August, September and October and the "constant supply" was turned off during the night from the 7th July to the 8th October.

The following waste was discovered and corrected.

Defective Taps	31
Burst Pipes	17
Defective Cisterns	<u>3</u>
Total	<u>51</u>

WATER BAILIFF'S MONTHLY RETURNS.

1917	Town District.	Bole Hill.	Total Galls. per hour.
22nd January	11,579	615	12,194
26th February	8,380	738	9,118
26th March	7,872	615	8,487
23rd April	6,888	615	7,503
21st May	5,412	615	6,027
25th June	3,750	866	4,616
23rd July	2,460	615	3,075
27th August	2,460	615	3,075
24th September	2,706	492	3,198
22nd October	4,920	615	5,535
26th November	6,396	615	7,011
17th December	5,904	615	6,519

The water supply of an outlying part of the district was found to be open to serious contamination. A new scheme was prepared and will be carried out.

1917

4.

DRAINAGE AND SEWERAGE.

The majority of the houses were not connected with the new Sewerage system when the drains were laid in 1914. Fifteen houses were connected in 1915, nine houses in 1916 and nineteen houses in 1917. The Sanitary Inspector estimates that about 70% of the houses are still unconnected.

CLOSET ACCOMMODATION.

Privy Middens (approximate number)	616
Pail Closets	a few
Water Closets	372
Number of Privy Middens converted to Water Closets during the year	5
Defective privies improved	2
Privies converted to Pail Closets	2

The reduction in the number of Privies by conversion into Water Closets connected up with the Sewerage system is most desirable.

WATER SUPPLY.

Rainfall in 1919 35.40 inches.

Adequacy of Water Supply.

In consequence of dry weather the Springs were low in July, August, September, October and November, and the "constant supply" was turned off during the night from the 11th July to the 4th December.

The following waste was discovered and corrected:

Defective Taps	80
Burst Pipes	18
Defective Cisterns	12
	<u>110</u>

WATER BAILIFF'S MONTHLY RETURNS.

1919.	Town District.	Bole Hill.	Total Galls. per hour.
January 27th	19,236	615	19,851
February 24th	15,792	615	16,407
March 24th	14,792	615	15,407
April 28th	9,456	615	10,071
May 26th	5,166	615	5,781
June 23rd	3,315	492	3,807
July 28th	2,337	615	2,952
August 25th	1,968	492	2,460
September 22nd	1,968	615	2,583
October 28th	1,464	615	2,079
November 24th	2,214	615	2,829
December 22nd	6,642	615	7,257

The Water supply of an outlying part of the district was found to be open to serious contamination. A new scheme was prepared and passed by the Council but has not been carried out

DRAINAGE AND SEWERAGE.

The majority of the houses were not connected with the new Sewerage system when the drains were laid in 1914. Fifteen houses were connected in 1915, nine houses in 1916, nineteen houses in 1917, and 32 in 1919. The Canterbury Terrace sewer, hitherto connected with the old surface water sewer, and the New Bridge Council Schools have been connected to the new Sewerage system.

CLOSET ACCOMMODATION.

Privy Middens (approximate number)	606
Pail Closets	a few
Water Closets	386
No. of Pail Closets converted into Water Closets during year)	1
Number of Privy Middens converted) to Water Closets during the year)	10
Additional Closet Accommodation	2
Defective Privies improved	3

The further reduction in the number of Privies by conversion into Water Closets connected up with the Sewerage system is desirable.

SCAVENGING.

The duty of removing night soil and refuse falls on the occupier, and is neglected to an extent that is detrimental to health. It is impossible to keep the district in a Sanitary state without Public scavenging and this, in my opinion, is urgently required.

1920

SANITARY CIRCUMSTANCES OF THE DISTRICT.

WATER SUPPLY.

Rainfall in 1920 (Taken by Mr. Atkinson at the Manor House)
40.47 inches.

Adequacy of Water Supply.

In consequence of dry weather the Springs were low in October and November, and the "constant supply" was turned off during the night from the 26th October to the 28th December.

The following waste was discovered and corrected.

Defective Taps	48
Burst Pipes	11
Defective Cisterns	3
Total	<u>62</u>

WATER BAILIFF'S MONTHLY RETURNS.

Rainfall.	1920.	Town District.	Bole Hill.	Total Galls. per hour.
4.40	in January 26th	12,070	615	12,685
3.16	" February 23rd	11,824	615	12,439
2.58	" March 22nd	9,498	492	9,990
6.14	" April 19th	18,744	615	19,359
3.72	" May 17th	13,000	615	13,615
3.89	" June 28th	6,150	615	6,765
5.98	" July 26th	7,134	615	7,749
1.24	" August 23rd	5,412	615	6,027
2.09	" September 27th	3,444	615	4,059
2.20	" October 25th	2,460	492	2,952
1.27	" November 22nd	2,214	615	2,829
3.80	" December 20th	2,460	615	3,075

40.47 inches.

The Homesford water supply referred to in my last report is approaching completion.

41 to 44 Bole Hill are supplied from Broom Well. Owing to defects in the service pipes no water reaches their houses. The well is not protected and is open to pollution. The Sanitary Inspector communicated with the owner who has undertaken to protect the well and lay new service pipes.

A well at Spite Winter is not protected and has no arrangement for drawing water.

A number of houses were connected with the new Sewerage system when the Main Sewers were laid in 1914, but the majority were not. Fifteen houses were connected in 1915, nine houses in 1916, nineteen houses in 1917, 32 in 1919, AND 52 IN 1920. The Surveyor estimated that on 31st December, 1920. approximately 62 per cent of the house drains were still unconnected with the new Sewerage system.

REPORT ON SEWAGE OUTFALL WORKS FOR YEAR 1920.

The Sewage Outfall Works are situate near Haarlem Mill at the lowest level of the district and a short distance from the Urban District Boundary on Derby Road and to the south of the town.

They are on the bacteria system and include Detritus Tank, two Precipitation Tanks, two Storm Overflow Tanks, a Dosing Chamber, 3 Bacteria Filter Beds with Rotating Sprinklers and 2 Humus Tanks, and the Effluent empties into the River Ecclesbourne. There are 8 Slag Beds suitably drained for sludge drying.

Although there is a separate system of Surface Water Drainage a number of surface water drains and certain street gullies on account of various difficulties, are connected to the main sewer.

The larger quantity of Sludge received at the Outfall Works during the year through additional sewer connections has been quite noticeable, and as the amount of sludge further increases it will be necessary for the Caretaker to allot more of his time to the duties there, and the tanks will then have to be emptied and cleansed more frequently.

Every attention has been given to important requirements during the year under review. The Screening Chamber and Sprinklers have been cleansed daily and the Channels have been swept and scoured each day. Settling Tanks, Storm Tanks, and Humus Tanks have been emptied and cleansed at frequent intervals, and the sludge after drying on Slag Bed has periodically been removed.

There has been little difficulty in disposing of the major portion of the sludge at ninepence per load.

The flow of sewage on the whole has been constant and regular, and the treatment has produced a good and satisfactory Effluent, as shown by the Official Lists of the tests of the County Medical Office of Health. The Effluent Test for April 1920 was sixth out of 89 in the County, and each examination has shown a satisfactory result.

A little damage has been caused by spring water breaking into one of the Settling Tanks. The floor and two walls have been fractured. Some of the Channels at the N.W. end of the works are also defective through settlements, and the necessary repairs to these matters should be executed at the first suitable opportunity.

(Signed) T. C. SLACK,

31st December, 1920.

Surveyor and Sewage Works Manager.

During the drought attention was paid to localities within the district not supplied by the Council's springs.

Upper Bole Hill. On 21st June a scheme was prepared to supply water to the houses on the top road at a cost of £215. The land of the proposed site was purchased when the work was suspended.

Rise End. Well (with pump) in the limestone. This ran dry 11th July, and water was carted by the Council.

Godfrey Hole. Well in the limestone; supply sufficient for human consumption.

Homesford. Spring from millstone grit by roadside. Collecting tank constructed and a service lin. pipe conveyed to a relief tank which supplies the houses at Homesford. Work completed 9th June, 1921.

Longway Bank. Spring near the chapel requires attention.

The Sanitary Inspector estimates that there are 550 privy middens and 449 water closets. During the year 17 privies were converted into water closets and 4 privies into Pail Closets.

I am, Mr. Chairman and Gentlemen,

Your obedient servant,

A. E. BROSTER.

Wirksworth,
28th March, 1922.

WATER SUPPLY DURING THE YEAR 1921.

1921. Month.	RAINFALL.				YIELD OF SPRINGS IN GALLONS PER HOUR.						Increase.	Decrease.	
	1921	1920	In-crease.	De-crease.	Town District.		Bolehill.		Total Galls. per hour.				
					1921	1920	1921	1920	1921	1920			
January ...	4.37	4.40		.63	12,808	12,070	615	615	13,423	12,685	738		
February ...	.30	3.16		2.86	5,504	11,824	615	615	6,119	12,439		6,320
March ...	1.74	2.58		.84	4,674	9,498	615	492	5,289	9,990		4,701	
April ...	1.87	-6.14		4.27	3,444	18,744	492	615	3,936	19,359		15,423	
May ...	1.76	3.72		1.96	2,331	13,000	492	615	2,823	13,615		10,792	
June ...	.40	3.89		3.49	1,968	6,150	492	615	2,460	6,765		4,305
July ...	1.10	-5.98		4.88	1,722	7,134	492	615	2,214	7,749		5,535	
August ...	4.46	1.24	3.22		1,476	5,412	492	615	1,968	6,027		4,059	
September ...	1.26	-2.09		.83	1,230	3,444	492	615	1,722	4,059		2,337	
October ...	3.66	-2.20	1.46		1,353	2,460	492	492	1,845	2,952		1,107	
November ...	2.07	1.27	.80		1,230	2,214	492	615	1,722	2,829		1,107	
December ...	3.79	3.80		.01	1,230	2,460	492	615	1,722	3,075	Net Decrease	1,353	
Totals ...	26.78	40.47	Net De-crease	13.69	Average hourly yield of springs			3,770.25	8,462				4,691.75galls. per hour

TOTAL DECREASE ON PREVIOUS YEARS SUPPLY—41,099,730 galls. during year.

Bye-laws—	Date of Adoption.
New Streets and Buildings	} 1879
Common Lodging-houses	
Nuisances	1879
Cleaning Footways, Removal of House Refuse, and Cleansing Closets, Privies, Ashpits and Cesspools	1879
Regulations with respect to the Dairies, Cowsheds and Milkshops Order of 1885, and the Contagious Diseases (Animals) Acts, 1886	26th August, 1899.
Offensive Trades Order of L.G.B., No. 63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades	26th April, 1915.
Chicken Pox Compulsory Notification Order renewed for compulsory Notification on March 17th for twelve months ...	

The Council have adopted a scheme for conversion of privies to Water carriage system under Public Health Amendment Act, 1907, whereby the Council provide 50 per cent. of the cost and the owner 50 per cent.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER.

The question of the adequacy of the Town's water supply has, from records in my possession, been before the Council for 40 years, and probably for much longer. From reports of experts and statistics supplied from time to time, the contention that the supply is inadequate in anything like a dry season admits but little argument to the contrary.

The water is supplied from natural springs in the Millstone grit situated at Breamfield, about 270 feet above the Market Place, 790 feet above Ordnance datum. The springs are situated in 12.629 acres of land. The springs in the District, besides those now in use, have been examined by experts and found wanting in quantity and not worth the expenses of working. Water of inferior quality to the present supply could be obtained by pumping, but at a great expense. To impound the surplus winter water

seems to be the recognised remedy for the present shortage. As regards quality, the water is pure, clear, cool and sparkling, and is good for drinking, cooking and washing.

The following is an analysis of the water:—

	Grains in one gallon.
Sulphate of Lime	0.6500
Bicarbonate of Lime	2.4480
Bicarbonate of Magnesia	0.1370
Bicarbonate of Iron	0.0090
Carbonate of Soda	traces
Chloride of Sodium	0.0258
Silicia	0.0080
Carbonate of Potash	traces
Organic Matter	1.1210
Free Carbonic Acid	7.2160

Its specific gravity is 1.00014.

Hardness. Permanent hardness, 4.5 degrees; hardness removed by boiling, 0.0 degrees; total hardness, 4.5 degrees.

The Analyst adds:—"It is beautifully clear and sparkling, very soft, and available for every household purpose. It contains a large amount of carbonic acid, to which the briskness of this water is owing. It is just such a water as one would expect from the Millstone grit, and I have no hesitation in saying that no town in England is supplied with one of better quality."

The supply is constant and is direct to the houses. The main reservoir supplies Wirksworth, and a smaller reservoir at a somewhat higher level supplies Bole Hill. There is also a separate small reservoir for Longwaybank and another for Homesford.

Contamination. Contamination is nil so far as the town supply is concerned. Conditions are hardly similar in the case of the supplies to Longwaybank and Homesford. The Longwaybank reservoir is so situated that I feel it is likely that surface water can drain into it, and contamination thus takes place. The supply of water, moreover, from this spring, is not very plentiful.

A far better supply is that to Homesford, the reservoir for which is situated a short distance below the Longwaybank reservoir; yet here again contamination is more than possible as the supply to the reservoir comes through an open hole in the wall, and that on the road side. Moreover,

it is possible, by removing a handful of clay, to entirely divert the stream and let it run to waste down the ditch. Situated as it is at the side of a very public road and in close proximity also to a gipsy encampment, I think that the supply should be piped through the wall. The door which covers the reservoir requires a lock.

Returning to the general water supply, **plumbo solvency** is nil.

Leakages, such as have been found by the detector, which is constantly used, have been repaired.

About 100 houses in all are not supplied direct with water. These are outside the town at Godfrey Hole, Longwaybank and outlying districts. Supplies in these cases are either by stand-pipes or wells, about 50 per cent. of each.

Rivers and Streams. The question of the pollution of the Hannage Brook receives attention under the heading of Scavenging.

SEWERAGE.

A modern system of main sewers and outfall works was undertaken in 1913.

The outfall site is situated about a mile South of the town. The scheme includes the whole of the district except the outlying hamlets of Godfrey Hole, Rise End, The Moor, Breamfield, and Longway Bank. The method of disposal is by settling tanks, percolating filters, and humus tanks, with additional rough filters for dealing with storm water. The system is satisfactory, though many of the houses in the district, estimated at 264, are still unconnected and unconverted to the water carriage system; this, of course, excluding the hamlets above mentioned.

I must again call urgent and particular attention to the state of a number of street gullies in the town which are untrapped and form ventilating shafts for the old sewer ways; that is the mine shafts, etc., in use before the construction of the present system. This condition of affairs is most undesirable and should be remedied without delay.

SCAVENGING.

Public scavenging was undertaken in December, 1923. A site was chosen for a new tip and here night soil, in addition to other refuse, is tipped and buried with nine inches of soil.

APPENDIX III

WATER SUPPLY DURING THE YEAR 1925.

1925. Month.	Rainfall.				Yield of Springs in Gallons per Hour.								
	1925.	1924.	Increase.	Decrease.	Town. 1925.	District. 1924.	Bolehill.		1925.	1924.	Total gallons per hour.		
							1925.	1924.			Increase.	Decrease.	
January	2.67	3.22	4.92	.55	9302	15300	615	615	9917	15915		5998	
February	6.71	1.79	3.98		14268	7134	615	615	14883	7749	7134		
March	5.42	1.44			8956	5412	615	615	9571	6027	3544		
April	3.49	3.13	.36		5412	4428	615	615	6027	5043	984		
May	3.31	4.90		1.59	4428	4920	615	615	5043	5535		492	
June	.56	3.37		2.81	4428	8760	615	615	5043	9375		4332	
July	2.44	5.77		3.33	3198	6642	492	492	3690	7134		3444	
August	5.72	4.04	1.68		2952	4182	492	615	3444	4797		1353	
September	6.31	4.10	2.21		3198	4428	615	615	3813	5043		1230	
October	4.30	5.48		1.18	4059	7626	615	615	4674	8241		3567	
November	2.64	2.55	.09		9856	9056	615	615	10471	9671	800		
December	5.12	4.07	1.05		4930	9548	615	492	5545	10040		4495	
	48.69	43.86	14.29	9.46	Average hourly yield of Springs				6843.42	7880.83	Ave. Net Decrease per hour		1037

H. S. TEBBITT, M.Inst., M.I.C.E.,
Water Engineer and Surveyor.

Sanitary Circumstances of the Area.

WATER SUPPLY.

Both the Wigwell and Dunsley supplies of water have proved satisfactory throughout the year, and with the original sources, there has been ample water of good quality for all purposes.

SEWERAGE AND SEWAGE DISPOSAL.

The system, on the whole, works very satisfactorily. In the near future, however, it will be necessary to consider the provision of another percolating filter at the main sewage works, and so allow of proper "resting" of the filters. With the addition of Middleton, the building of new houses, and the continued conversions to water-carriage, the strain on the works becomes increasingly greater.

POLLUTION OF RIVERS AND STREAMS.

All known sources of pollution have been removed from the Hannage Brook.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by annual contract—cost £460.

The whole of the refuse is disposed of on the Gorsey Bank and Hopton Wood tips, with the exception of the contents of the pail closets, which are taken to the Sewage Farm.

I should like to see a properly shuttered refuse-collecting vehicle in use in the district, and venture to suggest that this might be made possible by the offer of a longer contract period. I understand that vehicles of the convertible type are now obtainable, making it possible to use the same vehicle for refuse collection or haulage work.

PRIVY CONVERSIONS.

Seven privy-middens and fourteen pail closets have this year been converted to W.C's.

Water Supply during the Year 1937.

1937. Month.	Rainfall.		Yield of Springs in Gallons per Hour.		
	1936. Inches.	1937. Inches.	1936.	Total Gallons per Hour. 1937.	Total Gallons per Hour. Increase. Decrease.
January	3.50	4.44	7,960	7,230	720
February	2.39	5.24	8,800	8,560	240
March	2.59	2.96	10,000	7,850	2,150
April	1.79	2.51	9,450	7,120	2,330
May	.25	2.76	5,870	4,870	1,000
June	3.06	2.15	4,200	3,250	950
July	5.61	2.98	5,100	3,100	2,000
August	1.21	.52	5,550	2,910	2,640
September	4.43	1.66	3,950	1,920	2,030
October	3.80	3.00	4,560	1,700	2,860
November	3.81	2.08	5,760	3,720	2,040
December	2.92	4.51	5,950	6,230	....
	35.36	34.81	6,429	4,871	Average Net Decrease per hour. 1,556

CHARLES FROBISHER,
Water Engineer and Surveyor.

Sanitary Circumstances of the Area.

WATER SUPPLY.

Both the Wigwell and Dunsley supplies of water have proved satisfactory throughout the year, and with the original sources, there has been ample water of good quality for all purposes. The Wirksworth collecting system of pipework was found defective, and the system is being reconstructed at a cost of £600. Water supplies are being chlorinated as a precautionary measure.

SEWERAGE AND SEWAGE DISPOSAL.

The system, on the whole, works very satisfactorily. In the near future, however, it will be necessary to consider the provision of another percolating filter at the main sewage works, and so allow of proper "resting" of the filters. With the addition of Middleton, the building of new houses, and the continued conversions to water-carriage, the strain on the works becomes increasingly greater. I reported this last year but no action was taken upon same.

POLLUTION OF RIVERS AND STREAMS.

All known sources of pollution have been removed from the Hannage Brook, but some examination of waste products from the tape mills should be made as necessary.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by annual contract. This has proved unsatisfactory and I again recommend it be done by direct labour.

The whole of the refuse is disposed of on the Gorsey Bank and Hopton Wood tips, with the exception of the contents of the pail closets, which are taken to the Sewage Farm.

In the event of continuance of the contract system of scavenging, I should like to see a properly shuttered refuse-collecting vehicle in use in the district, and venture to suggest that this might be made possible by the offer of a longer contract period. I understand that vehicles of the convertible type are now obtainable, making it possible to use the same vehicle for refuse collection or haulage work.

PRIVY CONVERSIONS.

Thirteen privy-middens and three pail closets have this year been converted to W.C's.

Water Supply during the Year 1938.

1938. Month.	Rainfall.		Yield of Springs in Gallons per Hour.			
	1937. Inches.	1938. Inches.	1937.	1938.	Increase.	Decrease.
January	4.44	4.77	7,230	8,876	1,646	....
February	5.24	1.51	8,560	8,850	290	....
March	2.96	.39	7,850	6,870	....	980
April	2.51	.20	7,120	4,160	....	2,960
May	2.76	2.12	4,870	2,120	....	2,750
June	2.15	1.92	3,250	5,200	1,950	....
July	2.98	5.63	3,100	1,896	....	1,204
August	.52	1.38	2,910	2,150	....	760
September	1.66	2.72	1,920	2,850	930	....
October	3.00	4.58	1,700	3,960	2,260	....
November	2.08	4.55	3,720	6,600	2,880	....
December	4.51	5.12	6,230	6,280	50	....
	34.81	34.89	4,871	4,983	112	Average net Increase per hour.

CHARLES FROBISHER,
Water Engineer and Surveyor.

Sanitary Circumstances of the Area.

WATER SUPPLY.

Both the Wigwell and Dunsley supplies of water have proved satisfactory throughout the year, and with the original sources, there has been ample water of good quality for all purposes. The old earthenware pipes on the Wirksworth collecting ground have been replaced by spun steel pipes and the pipe line is now satisfactory. Bolehill has also been connected up to the Wigwell Supply, thereby assuring a water supply to houses in the highest part of this district.

SEWERAGE AND SEWAGE DISPOSAL.

The system, on the whole, works very satisfactorily, but as I have previously pointed out, it will be necessary to consider the provision of another percolating filter at the main sewage works, and so allow of proper "resting" of the filters. With the addition of new houses, and the continued conversions to water-carriage, the strain on the works becomes increasingly greater.

POLLUTION OF RIVERS AND STREAMS.

All known sources of pollution have been removed from the Hannage Brook.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by annual contract.

The whole of the refuse is disposed of on the Gorsey Bank and Hopton Wood tips, with the exception of the contents of the pail closets, which are taken to the Sewage Farm.

In the event of continuance of the contract system of scavenging, I repeat I should like to see a properly shuttered refuse-collecting vehicle in use in the district, and venture to suggest that this might be made possible by the offer of a three year contract period. I understand that vehicles of the convertible type are now obtainable, making it possible to use the same vehicle for refuse collection or haulage work.

PRIVY CONVERSIONS.

Eleven privy-middens have this year been converted to W.C.'s.

Water Supply during the Year 1939.

1939. Month.	Rainfall.		Yield of Springs in Gallons per Hour.			
	1938. Inches.	1939. Inches.	1938.	1939.	Increase.	Decrease.
January	4.77	6.21	8,876	....	....	0,776
February	1.51	2.38	8,850	....	....	1,050
March	.39	2.46	6,870	7,200	0,330	....
April	.20	3.57	4,160	6,400	2,240	....
May	2.12	1.41	2,120	5,785	3,665	....
June	1.92	2.00	5,200	4,500	....	0,700
July	5.63	5.34	1,896	3,134	1,238	....
August	1.38	2.11	2,150	2,415	0,265	....
September	2.72	2.20	2,850	1,871	....	0,979
October	4.58	5.10	3,960	2,087	....	1,873
November	4.55	6.20	6,600	3,852	....	2,748
December	5.12	3.22	6,280	8,665	2,385	....
	34.89	42.20	4,983	5,151	168	Average net Increase per hour.

CHARLES FROBISHER,

Water Engineer and Surveyor.

Bye-laws:-

New Streets and Buildings	- 1939
Common Lodging-Houses	- 1879
Nuisances	- 1879
Cleaning Footways, Removal of House Refuse, & Clean- ing Closets, Privies, Ashpits and Cesspools	- 1879
Shops Acts, 1912-28	25th August, 1930
do. 1934	26th November, 1934
Offensive Trades Order of L.G.B., No. 63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades	26th April, 1915
Chicken Pox Compulsory Notification Order for Compulsory notification	22nd February, 1926
Public Health Act, 1925, Parts II. to IV., except Sections 21, 22 and 44	2nd May, 1927
Shops Acts 1934, came into operation by adoption 1936.	

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

Both the Wigwell and Dunsley supplies of water have proved satisfactory throughout the year, and with the original sources, there has been ample water of good quality for all purposes. The old earthenware pipes on the Wirksworth collecting ground have been replaced by spun steel pipes and the pipe line is now satisfactory. Bolehill has also been connected up to the Wigwell Supply, thereby assuring a water supply to houses in the highest part of this district. Water supplies are being chlorinated as a precautionary measure.

SEWERAGE AND SEWAGE DISPOSAL.

The sewerage system is being examined by Messrs. Elliott & Brown, Consulting Engineers, Nottingham, following a representation of the Ilkeston & Heanor Waterworks Board, that such sewerage system contacts with the Meerbrook Sough and pollutes their water supply, a full report of which the surveyor rendered the Council in March, 1940.

POLLUTION OF RIVERS AND STREAMS.

In connection with the above alleged pollution, it has been found that several properties are directly connected to the Hannage Brook, and that the waters of this brook gain access to the Meerbrook Sough. An early disconnection of these properties is recommended. The Sanitary Inspector served 200 notices for conversion or disconnection of properties suspected of polluting the sough waters, but the greater proportion of the notices produced no action.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by annual contract. It has proved unsatisfactory and I again recommend it be done by district labour.

The whole of the refuse should be disposed of on the Gorsey Bank and Hopton Wood Tips, with the exception of the contents of pail closets which should be taken to the Sewage Farm.

The contract system of scavenging appears to be a complete failure. Every year I have cause to complain of its non-hygienic aspect, but this year stands unique in the number of complaints received and apparently not attended to, even after the contractor's attention has been drawn to same. The contractor, it is reported, does not carry out the systematic rota system of scavenging as continually directed by the Surveyor.

Whilst it is cheaper to execute by contract, it is worth spending more to execute in a proper manner. The present standard of scavenging can only be a menace to public health.

PRIVY CONVERSIONS.

Fifteen privy-middens have this year been converted to W.C's. During the forthcoming year, I suggest that this work be accelerated as circumstances will allow.

SCHOOLS.

The sanitary condition and the water supply of the schools, which were in some cases, last year, not up to standard, have now been improved.

1940

WATER SUPPLY DURING THE YEAR 1940.

1940	Rainfall.		Yield of Springs in Gallons per Hour.
Month	1940 Inches	1939 Inches	1940
January	7.69	6.21	5,822
February	2.72	2.38	5,280
March	2.12	2.46	8,267
April	1.87	3.57	6,532
May	2.05	1.41	4,900
June	.65	2.00	3,062
July	2.73	5.34	2,222
August	.34	2.11	1,981
September	1.66	2.20	1,765
October	3.35	5.10	1,649
November	8.67	6.20	4,721
December	1.76	3.22	8,502
	35.61	42.20	4,558

CHARLES FROBISHER,

Water Engineer and Surveyor.

Bye-Laws:-

New Streets and Buildings	-	1939
Common Lodging-Houses	-	1879
Nuisances	-	1879
Cleaning Footways, Removal of House Refuse & Cleaning Closets, Privies, Ashpits and Cesspools	-	1879

Shops Acts, 1912-28

25th August, 1930

do. 1934

26th November, 1934

Offensive Trades Order of L.G.B.,
No. 63721, of 18th June, 1915,
confirming Council's Order of
26th April, 1915, containing
list of offensive trades

26th April, 1915

Chicken Pox Compulsory Notification
Order for Compulsory notification

22nd February, 1926

Public Health Act, 1925, Parts II.
to IV., except Sections 21, 22
and 44

2nd May, 1927

Shops Acts 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

Both the Wigwell and Dunsley supplies of water have proved satisfactory throughout the year, and with the original sources, there has been ample water of good quality for all purposes. Should enemy action destroy the reservoirs, and/or the mains from the reservoirs, it seems imperatively necessary that an alternative supply should be available. The connection of the Wirksworth and Bolehill mains would probably meet the need. Water supplies are being chlorinated as a precautionary measure, but the proper dosing equipment should be acquired and operated.

SEWERAGE AND SEWAGE DISPOSAL.

The sewerage system continues to be examined by Messrs. Elliott & Brown, Consulting Engineers, Nottingham, following a representation of the Ilkeston & Heanor Water Board, that such sewerage system contacts with the Meerbrook Sough and pollutes their water supply, a full report of which the surveyor rendered

SEWERAGE (Continued).

the Council in March, 1940, and upon which an informal enquiry was held in March 1941 by Mr. John Gardner, Inspector of the Ministry of Health. The sewer at Harlaam Mill has been reconstructed entirely, and other works are in hand or being contemplated, for improvement of the system.

POLLUTION OF RIVERS AND STREAMS.

In connection with the above alleged pollution, several properties are still directly connected to the Hannage Brook, and early disconnection of these properties is recommended.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by annual contract, which has proved unsatisfactory and I again recommend it be done by the Council direct.

The whole of the refuse should be disposed of on the Gorsey Bank and Hopton Wood Tips, with the exception of the contents of pail closets which should be taken to the Sewage Farm, but apparently little of the latter has been complied with.

Whilst it is cheaper to execute by contract, it is worth spending more to execute in a proper manner. The present standard of scavenging can only be a menace to public health.

PRIVY CONVERSIONS.

Five privy-middens have this year been converted to W.C.'s. During the forthcoming year, I suggest that this work be accelerated as circumstances will allow.

SCHOOLS.

The sanitary condition and the water supply of the schools, which were in some cases, last year, not up to standard, have now been improved. Notices served upon the Managers of the C. of E. School, at North End, should be enforced by the Council. This school is dark, and some attempt should be made to increase the amount of light to the class-rooms.

INSPECTION AND SUPERVISION OF FOODS.

Milk, meat and other foods have been kept under supervision throughout the year, and found generally satisfactory. Early in the year, the transport and delivery of Meat from Derby was very unsatisfactory, but same has now been improved.

1941

WATER SUPPLY DURING THE YEAR 1941.

1941	Rainfall.			Yield of Springs in Gallons per Hour.	
Month.	1941 Inches	1940 Inches	1939 Inches	1940	1941
January	6.08	7.69	6.21	5,822	7,396
February	3.23	2.72	2.38	5,280	8,165
March	3.29	2.12	2.46	8,267	8,330
April	1.94	1.87	3.57	6,532	7,800
May	2.87	2.05	1.41	4,900	6,312
June	.50	.65	2.00	3,062	5,093
July	3.53	2.73	5.34	2,222	3,539
August	4.26	.34	2.11	1,981	3,036
September	.54	1.66	2.20	1,765	2,925
October	3.79	3.35	5.10	1,649	2,795
November	3.62	8.67	6.20	4,721	3,569
December	1.34	1.76	3.22	8,502	5,157
	34.99	35.61	42.20	4,558	5,376

CHARLES FROBISHER,

M.Inst.M. & C.E., A.M.Str.E., F.Inst.H.E.

Water Engineer and Surveyor.

Bye-Laws:-

New Streets and Buildings	- 1939
Common Lodging-Houses	- 1879
Nuisances	- 1879
Cleaning Footways, Removal of House Refuse & Cleaning Closets, Privies, Ashpits and Cesspools	- 1879

Shop Acts, 1912-28	25th August, 1930
do. 1934	26th November, 1934
Offensive Trades Order of L.G.B., No. 63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades	26th April, 1915
Chicken Pox Compulsory Notification Order for Compulsory notification	22nd February, 1926
Public Health Act, 1925, Parts II. to IV., except Sections 21, 22 and 44	2nd May, 1927

Shops Acts 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

Both Wigwell and Dunsley supplies of water, have been unsatisfactory during the last year. In such a little district district as Wirksworth, there is a great tendency to pipe fractures, and accordingly, much wastage of water. Waste detection takes considerable time and labour, and changes in Water Bailiff have rather interfered with this work. Similarly with the supervision and servicing of the water installations. The original spring supply at Middleton has diminished considerably, and some measure will have to be taken to ensure a supply against breakdown in the Dunsley Hydrostatic system. Water supplies are being chlorinated, but proper dosing equipment would be preferable. Boxes have been acquired and filled for protection of the existing elementary apparatus.

SEWERAGE AND SEWAGE DISPOSAL.

The sewerage system continues to be examined by Messrs Elliott & Brown, Consulting Engineers, Nottingham, following a representation of the Ilkeston & Heanor Water Board, that

such sewerage system contacts with the Meerbrook Sough and pollutes their water supply, a full report of which the surveyor rendered the Council in March, 1940, and upon which an informal enquiry was held in March 1941 by Mr. John Gardner, Inspector of the Ministry of Health. The sewer at Harlaam Mill has been reconstructed entirely, and other works are in hand or being contemplated, for improvement of the system. A full report of the scheme of abatement is now under consideration as a post war work.

The work of 54 conversions and the introduction of Elsan Closets, has been carried out with a view to materially improving the situation of alleged pollution of the Hannage Brook.

It has not been possible to proceed with the cleaning -- scraping of the main sewer, owing to lack of labour.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by direct labour, and is proving more satisfactory than when executed by contract.

The whole of the refuse is disposed of on the Gorse Bank and Hopton Wood Tips, with the exception of the contents of pail closets which are taken to the Sewage Farm,

PRIVY CONVERSIONS.

Fifty-four privy-middens and pail closets have this year been converted to W.C.'s. During the forthcoming year, I suggest that this work be accelerated as circumstances will allow. A large number of notices are still outstanding and I recommend the Council to insist on completion of same.

SCHOOLS.

The sanitary condition and the water supply of the schools, which were in some cases, last year, not up to standard, have not been improved to the full extent I should have liked, but labour scarcity, certainly retards progress. Notices served upon the managers of the C of E. School, at North End about two years ago, should be enforced by the Council. This school is dark, and some attempt should be made to increase the amount of light to the class rooms, and to remove the depressing environment which is very prevalent.

1942

- 17 -

WATER SUPPLY DURING THE YEAR 1942.

1942 Month.	Rainfall.			Yield of Springs in Gallons per Hour.	
	1941 Inches	1940 Inches	1942 Inches	1942	1941
January	6.08	7.69	5.83	6.450	7.396
February	3.23	2.72	3.53	6.750	8.165
March	3.29	2.12	3.76	6.450	8.330
April	1.94	1.87	1.72	5.900	7.800
May	2.87	2.05	4.98	6.250	6.312
June	.50	.65	.54	4.650	5.093
July	3.53	2.73	2.82	2.720	3.539
August	4.26	.34	3.69	2.500	3.036
September	.54	1.66	1.35	2.350	2.925
October	3.79	3.35	2.27	2.150	2.705
November	3.62	8.67	2.04	1.950	3.569
December	1.34	1.76	3.16	3.760	5.157
	34.99	35.61	34.96	4.323 Average.	5.376

CHARLES PROBISHER,

M. Inst. M. & C. E., A. M. I. Str. E., F. Inst. H. E.

Water Engineer and Surveyor,
and Sanitary Inspector.

1943

-6-

Bye-Laws:-

New Streets and Buildings	- 1939	
Common Lodging-Houses	- 1879	
Nuisances	- 1879	
Cleaning Footways, Removal Of House Refuse & Cleaning Closets, Privies, Ashpits and Cesspools	- 1879	
Shop Acts, 1912 -28		25th August, 1930
do. 1934		26th November, 1934
Offensive Trades Order of L.G.B., No.63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades		26th April, 1915
Chicken Pox Compulsory Notification Order for Compulsory Notification		22nd February, 1926
Public Health Act, 1925, Parts II. to IV., except Sections 21, 22 and 44		2nd May, 1927

Shops Acts 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

The winter of 1942-1943, was a very dry one, having scarcely any snow, therefore affecting the springs considerably. In spite of this, consumers, both at Wirksworth and Middleton, had practically a constant supply.

Many leakages were repaired on the Water Services and Mains. The Hydrostat, since its overhaul, has worked very satisfactorily. Plans and Contract have been approved for the installation of a Booster Pump, to work in conjunction with the Hydrostat, and it is hoped this will be of service in 1944.

In May 1943, Mr.K.Harrison took up the position of Water Bailiff and Water Engineer.

1943

-7-

SEWERAGE AND SEWAGE DISPOSAL.

There have been no new developments, and the disposal of sewage at the works appears satisfactory.

SCAVENGING AND REFUSE DISPOSAL.

This is carried out in the entire district by direct labour, and is proving more satisfactory than previously.

The whole of the refuse is disposed of on the Gorsey Bank and Hopton Wood Tips, with the exception of the contents of pail closets which are taken to the Sewage Farm.

PRIVY CONVERSIONS.

Five privy-middens and pail closets have this year been converted to W.C.'s.

SCHOOLS.

In some cases the conditions are mainly satisfactory, in others, nothing has so far been done to improve the circumstances.

INSPECTION AND SUPERVISION OF FOODS.

Milk, meat and other foods have been kept under supervision throughout the year, and found generally satisfactory.

HOUSING.

Building has been in abeyance owing to the War, only necessary repairs being done. The Council houses are supervised regularly and special inspections are made, when specific reasons or complaints demand them. Repairs are carried out, as and when materials and labour become available.

Reviewing the year as a whole, and considering the difficulties, under present conditions, the results have not been too bad.

The water supply of the district has caused much concern in the past. The more satisfactory working of the Hydrostat after overhaul, certainly improved the Middleton supply, and with the proposed Booster installation, one would expect a still better result.

1943

-8-

As regards Wirksworth supply, I am, unfortunately, not so optimistic, but it is hoped that the complete overhaul of the pumping plant may produce more satisfaction.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient servant,

W.S.G. CHRISTIE.

1943

-17-

WATER SUPPLY DURING THE YEAR 1943.
(COMMENCING MAY)

1943 Month	Rainfall.			Yield of Springs in Gallons per Hour.	
	1941 Inches	1942 Inches	1943 Inches	1942	1943
January	6.08	5.83	4.62	6.450	-
February	3.23	3.53	1.24	6.750	-
March	3.29	3.76	.60	6.450	-
April	1.94	1.72	1.42	5.900	-
May	2.87	4.98	5.24	6.250	3,440
June	.50	.54	1.93	4.650	2,960
July	3.53	2.82	1.40	2.720	2,591
August	4.26	3.69	3.43	2.500	2,345
September	.54	1.35	3.64	2,350	2,222
October	3.79	2.27	1.79	2,150	2,162
November	3.62	2.04	2.86	1,950	2,714
December	1.34	3.16	1.29	3,760	3,206
TOTAL	34.99	34.96	29.46	4.323 Average Per month.	2.705 Average per month for 8 months.

K.HARRISON.

Water Engineer and Bailiff.

1944

Bye-Laws:-

New Streets and Buildings	-	1939	
Common Lodging-Houses	-	1879	
Nuisances	-	1879	
Cleaning Footways, Removal of House Refuse & Cleaning Closets, Privies, Ashpits and Cesspools	-	1879	
Shop Acts, 1912 -28			25th. August, 1930
do. 1934			26th. November, 1934.
Offensive Trades Order of L.G.B.? No.63721, of 18th June, 1915, confirming Council's Order of 26th. April, 1915, containing list of offensive trades			26th. April, 1915.
Chicken Pox Compulsory Notification Order for Compulsory Notification			22nd. February, 1926.
Public Health Act, 1925, Parts II. to IV., except Sections 21, 22 and 44.			2nd. May, 1927.
Shop Acts 1934, came into operation by adoption 1936.			

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

The first half of the year was attended with difficulties owing to the Pump & Engine at Wigwell being overhauled and not being completed till well into June. Later, the position was very good and the supply of water satisfactory.

The Booster Pump installation in the Via Gillia has proved satisfactory, the supply at Middleton being exceptionally good, and constant, throughout the year.

Leakages have been sought, found & repaired throughout the district. Mains have been laid at the Road Crossings on the New Housing Site, Derby Road.

1944

SEWERAGE AND SEWAGE DISPOSAL.

The length of flat gradient main sewer between Cinder Lane and the outfall works, has been thoroughly scraped & cleaned of silt.

Regular attention is being paid to the employing of existing silt pits, in an attempt to avoid excessive silting of the sewer in the future.

At the Derby Road post-war Housing Site (98 houses), separate surface water drains are being laid to avoid excessive surcharges of the main sewer, referred to above.

HOUSING.

The Council joined the Ilkeston Group for the Advance Preparation of Housing Sites, and work was commenced on the Derby Road Housing Site in September.

During the period of war, not much, unfortunately, can be done in regard to social improvement, but one can look forward to the post-war stages, and make plans for the future. Increased & improved housing is required in many places throughout the country, and in this district the position is being tackled. Along with housing goes artificial lighting, heating and cooking facilities. The Gas supply in parts of this district is extremely unsatisfactory, a condition which should be rectified as soon as circumstances permit.

I have already mentioned the matter of Maternity accommodation. The existing service at the local Hospital, has, I think, been much appreciated, but many cases have, in the past, had to find accommodation outside the district, and I personally wish that we were in a position to cater, in the district, for as many as possible, desiring Hospital care.

Regarding Professional Nursing in the Home, there is no provision for a General Nurse, and I consider that in a district of this size, it is very essential, and I recommend this service for your consideration.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient servant,

W.S.G. CHRISTIE.

1944

WATER SUPPLY DURING THE YEAR, 1944.

Month.	RAINFALL.		1944 inches.	Yield of Springs in Gallons Per Hour.	
	1942 inches.	1943 inches.		1943	1944
January	5.83	4.62	3.79	-	4928
February	3.53	1.24	2.04	-	5912
March	3.76	.60	.30	-	6404
April	1.72	1.42	2.35	-	4682
May	4.98	5.24	1.40	3440	3698
June	.54	1.93	2.33	2960	2960
July	2.82	1.40	3.68	2591	2591
August	3.69	3.43	2.80	2345	2339
September	1.35	3.64	4.94	2222	3329
October	2.27	1.79	3.98	2162	3452
November	2.04	2.86	6.04	2714	8372
December	3.16	1.29	2.60	3206	14,276
TOTAL	34.96	29.46	36.25	2,705 Average Per Month for 8 Months.	5245 Average Per Month.

K. HARRISON.

WATER ENGINEER AND BAILIFF.

1945

Bye-Laws:-

New Streets and Buildings	- 1939	
Common Lodging-Houses	- 1879	
Nuisances	- 1879	
Cleaning Footways, Removal of House Refuse & Cleaning Closets, Privies, Ashpits and Cesspools	- 1879	
Shop Acts, 1912	- 28	25th. August, 1930
do. 1934		26th. November, 1934.
Offensive Trades Order of L.G.B., No.63721, of 18th June, 1915, confirming Council's Order of 26th. April, 1915, containing list of offensive trades		26th. April, 1915.
Chicken Pox Compulsory Notification Order for Compulsory Notification		22nd. February, 1926.
Public Health Act, 1925, Parts II. to IV., except Sections 21, 22 and 44.		2nd. May, 1927.
Shop Acts 1934, came into operation by adoption 1936.		

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

1945 proved a very good year for water, an adequate supply being maintained both at Wirksworth and Middleton. Except for a short spell of a week at Wirksworth, there was a constant supply throughout the District.

The Pumping Plant at Wigwell worked very satisfactorily after the previous year's overhaul. Owing to the very low rainfall in the Autumn, the pump was running periodically till well into the New Year.

Plans for the Water Mains to the Wirksworth and Middleton Housing Sites have been submitted to the Ministry for their approval.

1945

WATER SUPPLY DURING THE YEAR, 1945.

Month	RAINFALL			YIELD OF SPRINGS IN GALLONS PER HOUR.	
	1943 inches	1944 inches	1945 inches	1944	1945
January	4.62	3.79	2.47	4928	7380
February	1.24	2.04	3.47	5912	12.800
March	.60	.03	.91	6404	6896
April	1.42	2.35	2.11	4682	4436
May	5.24	1.40	2.76	3698	3821
June	1.93	2.33	3.64	2960	3206
July	1.40	3.68	2.3	2591	2960
August	3.43	2.80	2.54	2339	2591
September	3.64	4.94	1.69	3329	Not Read.
October	1.79	3.98	4.62	3452	2222
November	2.86	6.04	.51	8372	3698
December	1.29	2.60	2.51	14.276	3206
TOTAL	29.46	36.25	29.53	5845 Average per Month.	4847 Average per Month for 11 Months.

K. HARRISON,

WATER ENGINEER AND BAILIFF.

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

It is gratifying to note that during the year an adequate supply of water has again been available in the Wirksworth and Middleton Areas.

The usual spate of burst mains has of course arisen and been dealt with as occasion demanded.

Repairs were carried out to the Hydrostat at Via Gellia and the plant is again satisfactory. The Wigwell Pumping Plant has caused no trouble during the year except of course for the ordinary maintenance and running repairs which are always necessary with any mechanical plant.

The laying on of the new water mains to the Derby Road Housing Site and the connecting up of the same to the Council's Main in Derby Road was commenced towards the latter part of the year. This will be completed in 1947.

SEWERAGE AND SEWAGE DISPOSAL:-

The rainfalls during the past year have again pointed out only too clearly the inadequacy of the Council's Sewage Outfall Works. Extension of the Works is long overdue and the position will indeed be even more aggravated upon the completion and occupation of the New Council Housing Estates.

In times of rain the works are completely inundated and although much long overdue work has now been carried out by the Council's new Surveyor upon this Outfall Works; such as clearing out of sludge beds, channelling etc., yet the conditions of work upon this site are most disheartening for both Officials and Staff.

The Council will most certainly have to seriously consider extending these works whatever may be the cost.

The overloaded and surcharged sewers throughout the District have also received much attention during the year and low gradient lengths have been dragged and cleansed.

HOUSING.

During the year, work progressed upon the New Council Housing Estates.

Contracts were signed for the following Houses:-

<u>Wirksworth.</u>	70 "D" Type Houses
	6 "B" Type Houses
	6 "A" Type Houses
	2 "C" Type Houses
<u>Middleton</u>	12 "D" Type Houses
	2 "B" Type Houses
	8 "C" Type Houses
	2 "A" Type Houses

Progress was maintained throughout the year, and despite the shortage of materials and the bad weather towards the end of the year, the position in December, 1946 was that:-

50 Houses were up to Damp Course Level.
 40 Houses were up to Eaves Level.
 38 Houses were roofed.
 and 6 Houses were Plastered.

WATER SUPPLY DURING THE YEAR, 1946.

RAINFALL				1945	YIELDS OF SPRINGS IN GALLONS PER HOUR. 1946
MONTH.	1944 inches	1945 inches	1946 inches		
January	3.79	2.47	2.59	7.380	-)
February	2.04	3.47	5.15	12.800	-)
March	.03	.91	1.26	6.896	-)
April	2.35	2.11	0.93	4.438	-) Information
May	1.40	2.76	1.30	3.821	-) not available
June	2.33	2.04	5.00	3.206	-)
July	3.68	2.3	2.82	2.960	-)
August	2.80	2.54	5.45	2.591	-)
September	4.94	1.59	0.12	Not read	-)
October	3.98	4.62	0.73	2.222	4275
November	6.04	.51	7.04	3.698	9050
December	2.60	2.51	4.07	4.206	7840
TOTAL.	36.25	29.53	36.46	48.47	7055
				Average per Month for 11 Months	Average per Month over 3 monthly period.

During the year 26 Samples of drinking water have been taken throughout the district and submitted by me to the County Analyst and Bacteriologist. In four instances Samples were found to be unfit for drinking purposes and the necessary steps were taken to either render the supplies wholesome or to provide alternative supplies.

11)

REFUSE COLLECTION.

A weekly collection of household refuse is carried out by the Council. Trade Refuse is also collected weekly and a charge is levied for all bins in excess of the first one.

Waste paper is collected and after baling sold for Salvage.

In addition to these duties the Council's Refuse Collection Vehicle has also to undertake the work of snow-ploughing in times of heavy falls.

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

Some concern was experienced during the year in respect of the Wirksworth Supply owing to the exceptionally dry summer, but the Middleton Supply was at all times sufficient and satisfactory.

The Council have engaged the services of Consulting Engineers who are now preparing a scheme for the augmentation of the Wirksworth Supply.

During the year a new cylinder block was fitted to the Wigwell Diesel Pumping Engine and other repairs were carried out.

The major portion of the new water mains were layed on the Derby Road Housing Estate.

SEWERAGE AND SEWAGE DISPOSAL.

Steps are now being taken to give effect to the proposals as outlined in my 1946 Report. A firm of Consulting Engineers is now preparing a Scheme for the extension of the existing Sewage Works at Derby Road, Wirksworth and it is hoped to be able to place the necessary plans in the hands of the Ministry of Health shortly.

The existing filter beds have been renewed with new filtering media during the year and a distinct improvement in the effluent has been noted.

Maintenance Works have also been carried out to the Homesford Sewage Outfall.

Low gradient Sewers have once again been cleansed and dragged during the year, some of them being almost completely full of road silt.

HOUSING.

The New Council Housing Estates have progressed very favourably during the year and the position at 31st December, 1947 was as follows:-

COUNCIL HOUSING:-

WIRKSWORTH:- Completed:- 42 "D" Type Houses
6 "B" Type Houses
and 6 "A" Type Houses

in all 54 Houses which is a splendid effort.

6 Old Peoples Bungalows - Plastered.
14 Further Houses in various stages of completion.

MIDDLETON:- 6 "D" Type Houses - roofed - four of which were plastered.

In addition to these, there have been 5 Bungalows erected by Private Enterprise throughout the Urban District.

It is hoped that a start will be made on the roads and sewers etc., at the Middleton Housing Site early in the new year.

A review of the statistics of this area, shows that they compare very favourably with those of other districts, and with those of England and Wales, as a whole.

It is gratifying to note that during 1947, there was not a single case of Diphtheria in Wirksworth, which, I think, is ample testimonial for Immunisation.

RAINFALL				1946	YIELDS OF SPRINGS IN GALLONS PER HOUR 1947.
MONTH	1945 inches	1946 inches	1947 inches		
January	2.47	2.59	5.53	Information not available.	No readings available as the Letch Water Ballist does not appear to have maintained his records.
February	3.47	5.15	4.03		
March	0.91	1.26	7.08		
April	2.11	0.93	2.88		
May	3.76	1.30	2.48		
June	3.04	5.00	1.76		
July	2.5	2.82	2.40		
August	2.54	5.45	0.65		
September	1.69	0.12	1.94		
October	4.62	0.73	0.43			4275
November	0.51	7.04	3.22	9050	
December	2.51	4.07	3.13	7840	
TOTAL	29.53	36.46	(no readings) 33.53	7055	
				Average per month over 3 monthly period.	

No readings are available from the Council's Station for 1947, but the above readings are those which were taken at Mr. A. Smith's Weather Station, Cromford Road, Wirksworth, and very kindly supplied by him.

- (1) (a) The water supply to Middleton has been most satisfactory throughout the whole of the year both as regards quality and quantity.
- (b) In respect of Wirksworth, however, the supply has occasioned some concern and owing to the exceptionally dry summer months the hours of supply had at one period to be cut down to 6 hours per day. It was also necessary during the months of heavy snow to cart water to certain properties and I should like to take this opportunity of thanking those Councillors who assisted in this work and who forfeited a week-end to do so.
- (ii) Frequent bacteriological examinations were made of the raw water at the works as well as of the treated water before going into supply. Twenty Samples in all were submitted during the year to the County Analyst and Bacteriologist and herewith is a result selected at random:-

R.W.Sutton, B.Sc., F.I.C.,
County Analyst.

County Offices,
St. Mary's Gate,
DERBY.

CERTIFICATE OF ANALYSIS.

Sample of Water labelled: Tap direct from Main, Town Hall, Wirksworth.

Received from: Wirksworth U.D.C. (J. Taylor).

Date of receipt: 18th August, 1947.

Offensive Trades Order of L.G.B.
No. 63721, of 18th June, 1915,
confirming Council's Order of
26th April, 1915, containing
list of offensive trades.

26th April, 1915

Chicken Pox Compulsory Notification
Order for Compulsory Notification.

22nd February, 1926

Public Health Act, 1925, Parts 11.
to IV., except Sections 21, 22 and 44.

2nd May, 1927.

Shops Acts, 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

On the whole the water supplies during the year both in respect of the Wirksworth Supply and the Middleton Supply were much more satisfactory than in 1947 - this, of course, being largely due to the rainfall throughout the year.

At one period some concern was caused when the samples of drinking water taken by the Sanitary Inspector were declared to be unsuitable for drinking purposes by the County Bacteriologist. However, following the complete draining and cleaning out of the reservoirs (which unfortunately had to take place during a dry period) together with improvements in the chlorination drip process, satisfactory results were obtained and further samples taken proved fit for drinking. There has been no re-occurrence of this trouble.

The Consulting Engineers of the Council put forward their scheme for auxiliary supplies for the Wirksworth area during the year, but unfortunately some delay has occurred with regard to the acquisition of the necessary land. It is hoped that agreement will be reached in the near future as the additional supply is urgently required now that the town is growing.

The Wigwell Diesel Engine had a complete breakdown in 1948 and for a long period the Council used a Gardner Diesel Engine temporarily installed and complete with a "V" Belt Drive to the Pump. Fortunately the necessary repairs have now been executed and a completely re-conditioned Diesel Engine has now been installed.

The installation of the new water mains to the Middleton Housing Site was completed during the year by a firm of outside Contractors.

Some difficulties have been experienced with the Hydrostat at Via Gellia and for the major portion of the time it was necessary to use the Electric Motor,

SEWERAGE AND SEWAGE DISPOSAL.

The Council's Consulting Engineers submitted their scheme for the extension of the existing Sewage Works, at Derby Road, Wirksworth, and a Ministry of Health Inquiry was held at the Town Hall, Wirksworth, when evidence was given on behalf of the Council by the Clerk to the Council, The Surveyor and Sanitary Inspector and Messrs. Elliott and Brown (Consulting Engineers), following inspections at the site by the Ministry of Health Engineer and Council Officials, the Urban District Council finally received approval of the Ministry of Health for the carrying out of the greater portion of the scheme. This will include a new Pyramidal Settling Tank, new Storm Tanks, new Mud Drying Beds, new Humus Tank, Pumping Station and two new Bacterial Filters, together with many other minor alterations at the Main Derby Road Sewage Works and in addition to this includes for the relaying of certain lengths of sewer throughout the district which at present have insufficient fall, together with the improvement of various Storm Overflows.

Great improvements have also been carried out at the Homesford Sewage Outfall Works. A new Overfed Rotary Distributor has been fitted and a new Circular Bacterial Filter constructed by the Council's own Staff. Additions and improvements have also been carried out to the Settling Tanks.

Again it was found necessary to cleanse and drag low gradient sewers throughout the area during the year, but it is hoped that much of this will be obviated when the new work as outlined above takes place. This work together with the re-construction of the Sewage Works at Derby Road, Wirksworth, is expected to take place during the year 1949.

HOUSING.

The progress of the New Council Housing Estates has been most disappointing during the year 1948, owing to a series of

DISINFESTATION.

9) Powder Blowers and Liquid Pressure Sprayers have continued to be used throughout the year whenever the occasion arose, but I am happy to state that there have been no severe infestations brought to my notice.

The chief trouble in a town the age of Wirksworth is that of woodworm infestation in the timbers of the very old properties.

10) WATER SUPPLY DURING THE YEAR, 1948.

MONTH	RAINFALL			YIELDS OF SPRINGS IN GALLONS PER HOUR 1948.	
	1946 inches	1947 inches	1948 inches		
January	2.59	3.53	No Reading	) No Readings Available.	
February	5.15	4.03	2.16		
March	1.26	7.03	1.07		
April	0.93	2.88	2.03		5,062
May	1.30	2.48	1.90		3,733
June	5.00	1.76	3.51		3,986
July	2.82	2.40	1.51		3,480
August	5.45	0.65	6.06	) 1st. 2,995 2nd. 4,556	4,340
September	0.12	1.94	2.24			4,429
October	0.73	0.43	2.04		3,880
November	7.04	3.22	1.80		4,673
December	4.07	3.13	5.01		
TOTAL	36.46	33.53	29.33 (Less Jan.)		

(1) On the whole water supplies to Middleton and Wirksworth have been satisfactory throughout the year both as regards quality and quantity, but there was one period in August and September when the Wirksworth Supply gave rise to some anxiety. After thorough draining and cleansing of the open reservoirs and alterations in the chlorination procedure this trouble was, however, overcome and since that time there has been little cause to worry. The Council were of course lucky during 1948 in that the yield of the springs was far better than 1947.

Bye-laws:-

New Streets and Buildings	- 1939
Common Lodging-Houses	- 1879
Nuisances	- 1879
Cleaning Footways, Removal of House Refuse and Cleaning Closets, Privies, Ashpits and Cesspools.	- 1879

Shop Acts, 1912 - 28
do. 1934

25th August, 1930.
26th November, 1934.

Offensive Trades Order of L. G. B.
No. 63721, of 18th June 1915
confirming Council's Order of
26th April, 1915, containing
list of offensive trades.

26th April, 1915.

Chicken Pox Compulsory Notification
Order for Compulsory Notification.

22nd February, 1926

Public Health Act, 1925, Parts 11 to
1V, except Sections 21, 22 & 44.

2nd May, 1927.

Shops Acts, 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

Throughout the whole of the year 1949 the water supplies both at Middleton-by-Wirksworth and Wirksworth itself were most satisfactory, and I think that this was due in no small part to the work of waste water detection carried out by the Council's Water Superintendent. Due to his efforts it was only necessary to run the Wigwell Borehole Pump from the 22nd of June, 1949 to the 18th of November, 1949, and even then only intermittently for a few days each week in order to top up the Reservoirs.

During 1949 the Ministry of Health held a Public Inquiry at Wirksworth to consider the question of approving a new scheme for the sinking of a borehole 250 feet deep near Hanson Farm, Longway Bank, Wirksworth. After evidence had been heard from all parties concerned, the Minister finally gave his approval to the scheme, and it is anticipated that in 1950 the trial borehole will be commenced. The Council trust that if this scheme is satisfactory then adequate water supplies for Wirksworth will be assured for many years to come, whatsoever may be the development of the Town.

SEWERAGE AND SEWAGE DISPOSAL.

Following the Ministry of Health Inquiry, which was held at the Town Hall, Wirksworth, in 1948, regarding the extension of the existing Sewage Works at Derby Road, Wirksworth, after which the final approval of the Ministry of Health was received, the Council advertised the scheme and sought tenders for the carrying out of the work.

After all negotiations had been satisfactorily concluded, the tender of Messrs Bowmer and Kirkland of Heage was accepted for this work, and it is anticipated therefore that now the preliminaries are finally concluded, an early start will be made in the year 1950 with the extension of the existing Sewage Works at Derby Road, Wirksworth. The final cost of the improvements will be in the region of £25,000 to £30,000.

1949

Ref. 8719/30.

County Offices,
St. Mary's Gate,
Derby.

7th November, 1949.

REPORT OF PUBLIC ANALYST.

Article: Water.
Label or Description: "Thorntree House"
Cromford Rd.
Wirksworth.
Submitted by: J. Taylor Esq.,
Sanitary Inspector,
Wirksworth U.D.C.
Subject of Examination: Free Chlorine content.
Date of Receipt: 3rd November, 1949.

RESULTS OF ANALYSIS.

Free Chlorine 0.08 part per million.

Signed R.W. SUTTON.

(iii) Samples of raw water were submitted to the County Analyst during the year for determination as to whether or not these waters possess any aggressive action on metals, and the following is a copy of the County Analyst's Report upon these tests:-

County Offices,
St. Mary's Gate,
Derby.

24th January, 1949.

Ref. 8488, 8489, 8490/29.

- Sample No.1 - Dunsley Spring water from Ram Feed,
Via Gellia Pump House, Middleton-by-
Wirksworth.
Sample No.2 - Spring water at discharge point,
Middleton Reservoir, Middleton-by-
Wirksworth.
Sample No.3 - Wirksworth Springs from measure
chamber, Wirksworth.

I have examined the samples described as above which I received from you on the 19th of this month to determine whether or not the waters can be described as having any aggressive action on metals. For this purpose the saturation index has been determined and the lead solvent action investigated by the method of Dr. Thresh. The following results were obtained:-

1950

Bye-laws:-

New Streets and Buildings	-	1939
Common Lodging Houses	-	1879
Nuisances	-	1879
Cleaning Footways, Removal of House Refuse and Cleaning Closets, Privies, Ashpits and Cesspools.	-	1879

Byelaws made under Section 15 of the Food and Drugs Act, 1949 for securing the observance of Sanitary and cleanly conditions and practices in connection with the handling, wrapping and delivery of food etc.

10th July, 1950.

Shop Acts, 1912 - 28
do. 1934

25th August, 1930.
26th November, 1934.

Offensive Trades Order of L.G.B.
No.63721, of 18th June, 1915
confirming Council's Order of
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22nd February, 1926.

Public Health Act, 1925, Parts 11 to
1V, except Sections 21, 22 & 44.

2nd May, 1927.

Shops Acts, 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

Once again during the whole of the Year, 1950, the water supplies both at Wirksworth and Middleton-by-Wirksworth, have been very good both as regards quality and quantity. A new Water Bailiff was appointed at the beginning of September 1950, and he has maintained the various pumps, equipment and distribution system in a most satisfactory manner.

The new borehole, which I mentioned in my 1949 report, was sunk at Hanson Farm, Longway Bank, Wirksworth, but unfortunately this borehole when pump-tested did not yield the supply which had been anticipated, due to the fine grained texture of the rock. Various suggestions have been made by the Consulting Engineers, such as driving adits, etc., but to date work on the site has been abandoned and no further decisions have been made by the Council.

SEWERAGE AND SEWAGE DISPOSAL.

As was anticipated in my 1949 Report, an early start was made in 1950 with the extensions of the existing Sewage Works at Derby Road, Wirksworth. This £30,000 improvement scheme is now well under way and good progress has been made with the work on the new sludge beds, bacterial filters, pump house and pyramidal humus tank, together with incidental works thereto. There will undoubtedly be some unavoidable delay in obtaining spun-iron pipes, special fittings and other metal work for the filters due to world conditions, but the remainder of the engineering work is proceeding in a most praiseworthy manner.

1950

An improvement has also been made with the old Mill Tail Race which passes through the sewage works and this old culvert has now been piped with 3' diameter concrete pipes throughout a portion of its length.

HOUSING.

Council Housing:-

Progress under this heading was maintained satisfactorily throughout the year 1950. The Derby Road Housing Scheme, which had been at a standstill for some long time until Messrs. George Shipman and Sons took over the contract, was finally completed and all the houses on this site (a total of 98) were occupied. Only footpaths and boundary walls remain to be completed.

The Middleton Housing Site was carried on simultaneously with the above site and by the end of December 1950, fourteen houses had been completed and occupied.

The following table shows the total number of new Council Houses completed during the year under review:-

Wirksworth (Derby Road Scheme)	26 "D" Type Houses.
Middleton (Churchill Avenue Scheme)	4 "C" " "
	10 "D" " "
TOTAL	= <u>40</u>

Private Housing:-

Houses and Bungalows erected by private enterprise during the year 1950 were as follows:-

1 house
4 Bungalows or Semi-Bungalows.
TOTAL = <u>5</u>

GENERALLY:-

From the foregoing it will be seen that the District compares favourably with the County as a whole, and was relatively free from Infectious Disease, except for whooping cough and chickenpox, both of which were of a mild epidemic form.

I should like to take this opportunity of thanking the Sanitary Inspector for his continued help in the work of the Public Health Department and all other Officers who have rendered assistance in any way.

To the Chairman and Members of the Council for their sympathetic consideration and co-operation my thanks are due, and I look forward to their continued support in the future.

I have the honour to be,

Mr. Chairman, Madam and Gentlemen,

Your obedient Servant,

W. S. G. CHRISTIE,

Medical Officer of Health.

New Streets and Buildings	-	1939
Common Lodging Houses	-	1879
Nuisances	-	1879
Cleaning Footways, Removal of House Refuse and Cleaning Closets, Privies, Ashpits and Cesspools.	-	1879

Byelaws made under Section 15 of the Food and Drugs Act, 1949 for securing the observance of Sanitary and cleanly conditions and practices in connection with the handling, wrapping and delivery of food etc.

10th July, 1950.

Shop Acts, 1912 - 28
do. 1934

25th August, 1930
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26th April, 1915.

Chicken Pox Compulsory Notification Order for Compulsory Notification.

22nd February, 1926

Public Health Act, 1925, Parts 11 to 1V, except Sections 21, 22 & 44.

2nd May, 1927.

Shops Acts, 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

Both the quality and quantity of the water supplies for the Middleton and the Wirksworth areas have been satisfactory once again during the last year and the actual results of samples submitted by the Sanitary Inspector will be observed in a later portion of this report.

Various meetings took place during the year between the Council and their consulting engineers regarding the proposed new Borehole at Hanson Farm, Longway Bank, Wirksworth, and it has now been decided that early in the new year Imperial Chemical Industries Explosives Department will be commissioned to fire shots down this borehole in the hope of breaking up the close grained strata and thereby ensuring a steady flow of water into the borehole. It is understood that this blasting is to take place on February the 5th. 1952, and the Council will look forward with interest to the results obtained.

Meetings will also be taking place early in the new year with farmers and other persons concerned e.g. Agricultural Executive Committee regarding the provision of water supply to outlying farms in this area.

In addition to the above the Council have instructed their Consulting Engineers to prepare a larger scheme for the supply of water to the Rural parts of the Urban District together with alterations and improvement to the existing undertaking.

The new £30,000 Extension Scheme to the Derby Road Sewage Works, Wirksworth, progressed rapidly during the year and towards the end of 1951 the actual constructional work had been almost completed, any delays on final completion being due to the non delivery of metal work etc. from Messrs Adams Hydraulics Limited. It is hoped that early in the new year these fittings will be to hand so that the whole Contract can be finalised. Parts of the new extensions are already in use, such as sludge beds, settling tanks, storm water tanks, and the main pump house.

Just before Christmas, work was commenced on the relaying of certain lengths of old sewer throughout the district to new falls in order to ensure that they will be self cleansing.

HOUSING.

Council Housing.

New Council Housing Schemes have been prepared and it is hoped that a commencement will be made on these early in 1952, meanwhile the following tables show the total number of new Council Houses and Private Houses completed during 1951:-

Wirksworth (Completion of Bournebrook Avenue Scheme)	-	4 Houses.
Middleton (Completion of Churchill Avenue Scheme)	-	9 Houses and Bungalows.
	Total	= <u>13</u>

Private Housing.

The following total indicates the number of houses and bungalows erected by private enterprise during the year 1951 :-

		3 Houses
		4 Semi-Bungalows
Total	=	<u>7</u>

Any New Adoptive Acts, Byelaws and Local Regulations relating to the Public Health in force in the District.

Nil.

GENERALLY.

The Health of the Urban District of Wirksworth has again maintained its usual high standard and reference to my detailed tables giving extracts from Vital Statistics of the year will show that the number of cases of Infectious Disease notified has been remarkably small except for minor ailments.

I have the honour to be,

Mr. Chairman, Madam and Gentlemen,

Your obedient Servant,

W. S. G. CHRISTIE,

Medical Officer of Health

1951

- (i) (a) Monthly samples of water taken by me throughout the year proved that the quality of the various supplies has been maintained. Once again the open reservoirs were the cause of any unsatisfactory samples of water which were taken and this was particularly noticeable after very heavy prolonged rains. Throughout the winter months the Water Bailiff has ceased to chlorinate the water supply and as the Council already know even the summer dosing of the water supply with chlorine in the open reservoirs is most inefficient and at no time can the water supply be termed a properly and efficiently chlorinated one whilst the present methods continue. In fact I have now adopted the policy of submitting the samples to the County Bacteriologist as nonchlorinated water samples, taking the attitude that the chloros which is put into the open reservoirs is for the purpose of inhibiting algal growth and cannot under any stretch of imagination pretend to present a properly chlorinated water supply to the consumers tap.
- (b) Once again, reference to the Medical Officer of Health's report will show that the water supplies at both Wirksworth and Middleton-by-Wirksworth have been very satisfactory with respect to quantity throughout the year under review, and again thanks to the Water Bailiff no shortage has been experienced.
- (11) Fifty-six samples in all were submitted by me during 1951; of these, fifty were satisfactory, and six unsatisfactory. Herewith are a few selected typical results of analyses taken throughout the year and I reproduce them for your information.

Lab. Ref. No. A.1548/50.

DERBYSHIRE COUNTY COUNCIL.

Public Health Laboratory.

County Offices, St. Mary's Gate, Derby.

BACTERIOLOGICAL WATER REPORT.

Authority: Wirksworth U.D.C.

Source of Sample: Town Hall, Wirksworth - tap over sink direct from main.

Date of Receipt: 11.1.51. Age in Hours $\frac{1}{2}$.

CL. WELCHII. Not Done.

PRESUMPTIVE COLIFORM COUNT.

Probable number of coliform bacilli present = Nil. per 100 ml.

DIFFERENTIAL COLIFORM TEST.

Probable number of faecal B. Coli = ----- per 100 ml.

Bacteriologically the sample of water is suitable for drinking purposes.

Date:- 15.1.51.

J.L.G. IREDALE.

County Bacteriologist.

Shops Acts, 1934, came into operation by adoption 1936.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

Both the quality and quantity of the water supplies for the Middleton and the Wirksworth Areas have been satisfactory once again during the year 1952, and the actual results of all samples taken by the Sanitary Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.

Unfortunately I have to report that the proposed new Borehole at Hanson Farm, Longway Bank, Wirksworth, (referred to in my last year's report) has proved to be a failure. Although the Imperial Chemical Industries Explosives Department fired shots down this Borehole with the intention of breaking up the closely grained strata and thus ensuring a steady flow of water into the Borehole, these attempts did not produce water. Following this, further attempts at blasting in the Borehole were made with local labour, but these also were abortive and reluctantly the Council decided to abandon the Borehole Scheme.

The Council are now seeking alternative sources of additional supplies.

Meetings between the Council, the Agricultural Executive Committee and Farmers took place on a number of occasions during 1952, with regard to the provision of water supplies to outlying farms, but as all the farmers and other persons concerned did not give their consents to contributions towards the cost of this scheme, it has not borne fruition.

No further progress has been made with regard to the Council's Consulting Engineers preparing a larger scheme for the supply of water to the Rural parts of the Urban District or alterations and improvements to the existing undertaking. This matter was mentioned in last year's report.

In my opinion it is imperative that with the continued growth of the Town, additional sources of water supply must be secured, and I cannot stress this matter too strongly.

SEWERAGE AND SEWAGE DISPOSAL

During 1952 the now £30,000. 0. 0. Extension Scheme to the Derby Road Sewage Works, Wirksworth, was completed and the official opening of the New Works took place on the 10th of April, 1952, attended by Representatives of the Trent River Board including Dr. Clay of the Pollution and Fisheries Department.

The Council now possess a modern Sewage Outfall Works capable of dealing with the whole of the Sewage from Wirksworth and Middleton and allowing for future growth of the Town.

Referring to my last year's report, I would add that in 1952 the work was completed on the relaying of certain lengths of low gradient sewer to new falls and in addition a number of storm water overflows were re-designed and re-constructed.

Work commenced on the New Main Derby Road Housing Site and separate Foul Sewers and Surface Water Drains were laid, allowing for future development of this large site for some years to come. In order to alleviate the already overburdened Main Sewers a new Foul Sewer was laid from this site to a point very near the Sewage Outfall Works.

Precautionary terminal disinfection was as usual carried out in respect of any other types of disease whenever the Medical Officer of Health so directed me - 4 cases in all receiving such attention.

8. DISINFESTATION.

Once again no cases of bed-bug infestation were brought to my notice during the year.

As in previous years complaints were received from time to time regarding infestation of old properties with woodworm and the death watch beetle and in all instances the occupants were given the necessary advice and instructions on how to deal with these pests.

The Council's Powder Blowers and Insecticide Sprayers were used whenever necessary with gratifying results.

9. WATER SUPPLY DURING THE YEAR, 1952.

MONTH	RAINFALL			YIELDS OF SPRINGS IN GALLS. PER HOUR 1952.
	1950 inches	1951 inches	1952 inches	
January	1.04	3.00	3.37	11,200
February	6.10	3.98	1.13	9,000
March	1.52	4.67	2.31	8,625
April	3.15	2.37	2.50	6,615
May	1.43	2.73	2.95	5,460
June	1.62	1.50	2.64	5,625
July	2.74	0.76	1.54	4,500
August	4.08	5.71	2.62	3,500
September	4.17	2.75	2.28	3,000
October	1.04	0.88	4.45	2,600
November	4.72	8.43	1.92	2,900
December	2.10	3.38	3.05	3,500
TOTALS	33.71	40.14	30.76	

- (i) (a) I have continued to take monthly samples of Public Water Supplies from both the Wirksworth and the Middleton Areas throughout the year, and once again the quality of the various supplies has been maintained, any unsatisfactory samples being due to the open reservoirs and not to the actual sources of supply. The Council's Water Bailiff has continued to carry out chlorination of the supplies whenever necessary during the warmer months of the year, but he has not found this to be essential during the Winter months.
- (b) Despite the growth of the District it was not necessary to turn off water at any time during 1952, and my thanks in this direction are due to the Water Bailiff (Mr. Wm. Webber) for his attention to plant and mains. As my Council are well aware, the time is rapidly approaching when the present sources of supply may be inadequate during Summer months for a Town of this size and various additional sources of supply are being actively pursued by the Council's Water Committee.
- (ii) Fifty-one samples in all were submitted by me during 1952; of these Forty-five were satisfactory, and six unsatisfactory. Herewith are a few selected typical results of analysis taken throughout the year and I reproduce them for your information.

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

The quality and quantity of the water supplies for the Middleton and the Wirksworth Areas have again been satisfactory during the year 1953, and the actual results of all samples taken by the Sanitary Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.

Referring to my 1952 report in which I stated that the Council were seeking alternative sources of additional water supplies following the abortive attempt to obtain water from a Borehole at Longway Bank, I am pleased to report that by the end of 1953 a new scheme to obtain water from the Blobber Mine was well under way.

I have personally visited the Blobber site with the Council's Sanitary Inspector and other Officials for the purpose of obtaining samples and the results of these were satisfactory. Despite this fact, however, the new scheme will incorporate the provision of chlorinating apparatus which will always be available as a standby precaution. I hope that in the early part of the new year this scheme will be complete and that the new submersible pump will have been installed together with the necessary mains extension and ancillary works.

No further action has been taken with regard to provision of water supplies to outlying farms following the breakdown of negotiations with certain of the farmers concerned, and no further progress has been made with regard to the Council's Consulting Engineers preparing a larger scheme for the supply of water to the Rural parts of this Urban District.

In connection with the Water Undertaking, Blood Tests for Widal Re-action were taken from the following personnel:- Messrs Harry Reville, Harry Allen, Roy Webster, Walter Butlin, Herbert Brewell and Stanley Pearce.

In every case the County Bacteriologist reported that the patient's serum gave a negative reaction with "H" and "O" suspensions of S. Typhi, S. Paratyphi A and B and the non-specific Salmonella group "H".

SEWERAGE AND SEWAGE DISPOSAL.

No additions to sewerage or sewage disposal works have been carried out during the year only day to day maintenance and repairs of certain lengths of sewer. One particularly large repair entailing relaying of the main sewer was carried out at Wesh Green, Wirksworth, during July, 1953, when the Council's direct labour staff worked jointly with a private Contractor. The classified road had to be closed for a period of a few days whilst the very deep excavation was made and the new length of sewer concreted in.

Two other failures of the main sewers occurred at Middleton-by-Wirksworth; one at Rise End and one at Water Lane, Middleton. The collapse of the sewer at Rise End was a formidable job and a new manhole and length of sewer was constructed early in the year. The Water Lane repair was of a less serious nature and the damage was undoubtedly due to the shallow depth at which this sewer was originally laid.

HOUSING.Council Houses:-

As indicated by the Surveyor and Sanitary Inspector in his portion of this Annual Report, Council House Building is now concentrated on the New Main Site at Derby Road, Wirksworth, and the following tables show the total number of New Council Houses completed on this site during the year under review.

Wirksworth Main Derby Road Site.

- (a) 14 x 3 Bedroom Council Houses.
- (b) 6 x 2 Bedroom Council Houses.

Vaccination.

This service also, is carried out by the General Practitioners of the area.

<u>LIST OF ADOPTIVE ACTS, BYELAWS AND LOCAL REGULATIONS RELATING TO THE PUBLIC HEALTH IN FORCE IN THE DISTRICT.</u>	
	<u>Date of Adoption.</u>
Infectious disease (Prevention) Act, 1890	6th December, 1893.
Public Health (Amendment) Act, 1890 Part 111 (Subject to certain conditions as to Sects. 35 and 38 Order L.G.B. No. 59992 of 22nd January, 1913)	5th March, 1913.
Public Health (Amendment) Act, 1907. (subject to certain conditions as to Sects. 25, 27 and 30 Order L.G.B. No. 63662, 29th May, 1915)	12th July, 1915.
<u>Bye-laws:-</u>	
New Streets and buildings	- 1939
Common Lodging Houses	- 1879
Nuisances	- 1879
Cleaning Footways, Removal of House Refuse and Cleaning Closets, Privies, Ashpits and Cesspools	- 1879
Bye-laws made under Section 15 of the Food and Drugs Act, 1949 for securing the observance of Sanitary and cleanly conditions and practices in connection with the handling, wrapping and delivery of food etc.	10th July, 1950.
Shops Acts, 1912 - 28	25th August, 1930.
do. 1934	26th November, 1934.
Offensive Trades Order of L.G.B. No. 63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades	26th April, 1915.
Chicken-Pox Compulsory Notification Order for Compulsory Notification	22nd February, 1926.
Public Health Act, 1925, Parts 11 to 1V, except Sections 21, 22 & 44	2nd May, 1927.
Shops Acts, 1934, came into operation by adoption 1936.	1936.

SANITARY CIRCUMSTANCES OF THE AREA.WATER SUPPLY.

The quality and quantity of the water supplies for the Middleton and the Wirksworth Areas have been satisfactory during the year 1954, and the actual results of all samples taken by the Sanitary Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.

In my Annual Report for 1953 I stated that towards the end of that

year a new scheme to obtain water from the Blobber mine was well under way. This scheme has progressed and is completed, and it is gratifying to know that the growing demand for water in the district can now be met. A new pump-house has been erected containing meters and chlorination apparatus and a pumping unit consisting of an Electric Submersible 24 h.p. Pump has been installed capable of delivering 144,000 galls. of water per day against a total head of 347 feet. Laying of new mains, alteration of existing mains and all ancillary works necessary for the completion of the scheme have been carried out. The water to be extracted from the disused mine and mixed with the present spring supplies is of excellent quality and entirely free from contamination. The normal procedure of bacteriological examination of the water will be carried out and any slight deterioration of quality can be corrected by the newly installed automatic chlorination plant.

The Council will recall that for some years now the hydrostat at Via Gellia Pump House has not been too reliable, and I am very pleased to be able to report that finally during this year it was found possible to remove the old Hydrostat and replace it with an 8.5 h.p. Electric Pumpset. This, of course, now means that the Council have duplicate electric pumpsets installed at this Station.

For many years now I have pressed for the removal of the old Diesel Plant from the Wigwell Borehole and the electrification of this scheme. Towards the end of the year under review the Council sanctioned this work and I hope that in the early part of 1955 the necessary Electric Submersible Pumpset will be installed.

Certain water main extensions have been carried out in The Moor area in order to supply the Malt Shovel Inn and also to improve the supply to other existing properties.

No further action has been taken with regard to provision of water supplies to outlying farms following the breakdown of negotiations with certain of the farmers concerned, and no further progress has been made with regard to the Council's Consulting Engineers preparing a larger scheme for the supply of water to the Rural parts of this Urban District.

SEWERAGE AND SEWAGE DISPOSAL.

Since the complete modernisation of the Council's Sewage Outfall Works in 1952 it has not been necessary to carry out any further alterations or additions to the sewerage or Sewage Disposal Works.

During the year 1954 it has only been necessary to carry out the normal day-to-day maintenance and repair of the general sewerage system throughout the District.

LEGISLATION.

Any new legislation, i.e. Local Acts, Special Orders, General Adoptive Acts and Bye-laws relating to the public health which came into force during the year:- Nil.

GENERALLY.

The district has again enjoyed a comparatively good bill of health. The number of notified diseases is less in the year under review, than in any of the four preceding years. Another significant point, is that there have been no new cases of Tuberculosis, a unique feature, and possibly one not recorded for the district in any previous year.

As you will observe, there is again an entire absence of Diphtheria, and once more, I make a plea for the immunisation of all children in their first year of life, and so make possible the continuance of this wonderful record of freedom from such a dreaded disease.

1954

The provision of new houses with proper living amenities must go far towards the well-being of a community. There is still a housing shortage, but building of new houses is continuing.

There are still many houses in use which are unfit for habitation, by present-day standards. These, however, will be tackled in due course, and will either be improved or demolished, according to the degree of fitness.

The water supply of the district has long been an anxiety, but the completion of the Blobber Mine Scheme, has now altered the picture entirely. In addition to being able to meet the increasing demand, an ample water supply is also an attractive asset, in the development of existent and new industry in the district.

In general, I think it can be said that 1954 has been a year of progress, and that the continued improvement in social welfare, is reflected in the well-being and comparative good health of the people.

In conclusion, I should like, once again to take this opportunity of expressing my appreciation of the understanding and co-operation shown by members of the Council, and my sincere thanks to the Staff, for their valued assistance throughout the year.

I am,
Mr. Chairmen, Madam and Gentlemen,
Your obedient Servant,

W.S.G. CHRISTIE.

Medical Officer of Health.

Chicken-Pox Compulsory Notification Order for Compulsory Notification	22nd February, 1926.
Public Health Act, 1925, Parts 11 to 1V, except Sections 21, 22 & 44	2nd May, 1927.
Shops Acts, 1934, came into operation by adoption 1936.	1936.
Derbyshire County Council Act, 1954.	30th July, 1954.
<u>Bye-laws (Water).</u>	
Prevention of Waste, Undue Consumption, Misuse or Contamination of Water.	11th May, 1955.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

- (a) Both the quality and quantity of the water supplies for the Middleton and the Wirksworth Area have been satisfactory during the year 1955, and the actual results of all samples taken by the Sanitary Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.
- (b) I referred in my last year's report to the fact that for many years now I have pressed for the removal of the old deisel plant from the Wigwell Borehole and the electrification of this scheme, and I mentioned that towards the end of that year the Council finally sanctioned this work. It now gives me great pleasure to be able to report, that the electrification of this pump house is complete and a new submersible pumping unit has been installed consisting of a 14 Stage Centrifugal Pumping Unit Type 14D5 complete with a 20 BHP. Squirrel Cage Submersible Motor. This pump which has been supplied by the Fulcometer Engineering Company Ltd. of Reading is rated to deliver 3,500 g.p.h. of clean water against a total head of 525 feet. This pump is fitted with a sensitive pattern sump type Noflote relay unit.
- The Electrical installation, erection of Submersible Pump and coupling up to the existing main was finally completed on August the 29th and since this period the plant has worked quite satisfactorily and its performance is in keeping with the specification; in fact the plant has delivered at the rate of 4,000 g.p.h. when required to do so.
- (c) Certain lengths of Water Mains have been taken out and renewed in the Bolehill Area during 1955, and I understand that there has been a noticeable improvement in the water supply to the properties served by this new main.
- (d) No further action has been taken with regard to provision of water supplies to outlying farms following the breakdown of negotiations with certain farmers concerned, and no further progress has been made with regard to the Council's Consulting Engineers preparing a larger scheme for the supply of water to the Rural parts of this Urban District.
- (e) Complaints were received during the year from residents in the Longway Bank Area regarding inadequate private water supplies and asking if the Council could assist in this matter. The Council have met a number of the owners and tenants concerned and have agreed to prepare a scheme for a supply of Mains water to this area and submit it to the owners for their observations when their financial commitments have been estimated.

SEWERAGE AND SEWAGE DISPOSAL.

Since the complete modernisation of the Council's Sewage Outfall Works in 1952, it has not been necessary to carry out any further alterations or additions to the sewerage or Sewage Disposal Works.

During the year, the normal day-to-day maintenance and repairs to the general sewerage system throughout the district has been carried out, but on one particular occasion, the 15th of November, an abnormal incident took place when there was a collapse of the Main Sewer at Manhole No. 49 off Cromford Road, Wirksworth, at a point where the Main Middleton Sewer junctions with the Main Bolehill Sewer. Repairs were commenced by the Council's Contractor immediately the damage was located, and the Sanitary Inspector found it necessary to spend the major portion of the following few days on the site. In accordance with my instructions the Sanitary Inspector notified the Ilkeston and Heanor Water Board of this damage, having regard to the close proximity of their shafts.

A new Turbling Bay was constructed and the whole of the work was finally completed by the 21st of November, at which date sewerage was stopped flowing into the adjoining field and turned down the Main Sewer.

The Manager of the Ilkeston and Heanor Water Board expressed his thanks to the Council for bringing the incident to his notice so promptly, as this had enabled him to take the immediate precautions necessary to safeguard Public Water Supplies.

LEGISLATION.

Any new legislation, i.e. Local Acts, Special Orders, General Adoptive Acts and Bye-laws relating to the public health which came into force during the year:-

- 1) Derbyshire County Council Act, 1954.
- 2) Water Bye-laws:- (made under Section 17, of the Water Act, 1945) by the Urban District Council of Wirksworth for the Prevention of Waste, Undue Consumption, Misuse or Contamination of Water, on 11th May, 1955.

GENERALLY.

It will be seen from the "Infectious Diseases" table, that there have been relatively few notifications. The infantile death rate is comparatively low as is also the general death rate. These figures reflect in some measure the state of health of the Community. Cancer, unfortunately, ranks high in the causes of death, as it does in most parts of the country.

There is again an entire absence of Diphtheria, and I beg parents not to neglect having their children immunised, as it is only by this means that we can completely combat the disease.

More new houses have been built and occupied since my last report and we continue to wage war on the "not-so-fit" properties, by the various means at our disposal.

Another improvement has been made to the water supply in the form of the installation of an electrically operated submersible pumping unit and motor to replace the old Diesel Plant, thereby adding efficiency to the whole scheme. Further improvements are still necessary and one hopes that, in time, these will be put into operation.

This then has been another year of progress and improvement, and undoubtedly reflects itself in the well-being and comparative good health of the community.

In conclusion, may I express to the Members of the Council my appreciation of their courtesy and consideration, and I take this opportunity also of tendering my sincere thanks to the Staff of the Department for their co-operation and assistance.

I am,
Madam Chairman, and Gentlemen,
Your obedient Servant,

W.S.G. Christie.

Medical Officer of Health.

WATER SUPPLY DURING THE YEAR 1955.

MONTH	R. INFALL			YIELDS OF SPRINGS IN GALLS. PER HOUR 1955.
	1953	1954	1955	
	inches	inches	inches	
January	1.08	1.71	2.87	13,100
February	1.79	3.29	2.54	11,150
March	2.31	2.57	3.06	7,300
April	2.90	0.51	1.44	8,800
May	2.23	3.45	2.98	8,400
June	3.38	4.35	3.46	6,500
July	2.85	2.81	.75	6,100
August	2.55	4.10	.41	4,800
September	1.67	4.59	1.05	3,450
October	2.46	4.74	2.91	3,150
November	2.67	6.00	3.33	3,020
December	1.58	3.71	3.49	2,800
TOTALS	27.27	41.83	28.29	

(i) (a) QUALITY:-

I have continued to take monthly samples of Public Water Supplies from both the Wirksworth and the Middleton Areas throughout the year, and once again the quality of the various supplies has been maintained, any unsatisfactory samples being due to the open reservoirs and not to the actual sources of supply. The Council's Water Bailiff has continued to carry out chlorination of the supplies whenever necessary during the warmer months of the year, but he has not found this to be essential during the Winter Months.

(b) QUANTITY:-

Once again, as in the previous year, there was no shortage of water whatsoever in the Wirksworth Urban District during the period under review. You will perhaps recall that in 1954 this was due to the abnormal rainfall and no pumping was necessary from the borehole; the springs alone sufficing to provide the needs of the Town. In 1955, however, the Town Spring Supplies were insufficient, and augmentation of these yields was obtained by pumping from the Wigwell Borehole and the Lady Flatts supply. These combined supplies proved more than adequate, and indicate that even in a dry period such as was experienced this last year, the Wirksworth Urban Council has now made quite sure that its water supplies will not fail any calls which the population may make upon them.

(ii) TESTING AND SAMPLING:-

Twenty-eight samples in all were submitted to the County Bacteriologist during the year and of those, twenty-three were satisfactory and five unsatisfactory. I think it only fair to state, however, that three of these five unsatisfactory samples were "test" samples of raw water taken from the Lady Flatts supply as a control measure prior to chlorination, in order to assess what degree of chlorination would be necessary. The reason for the other two unsatisfactory samples which came from the Main Town Supplies is explained in paragraph (i) (a) above.

DERBYSHIRE COUNTY COUNCIL.Public Health Laboratory.

County Offices, St. Mary's Gate, Derby.

BACTERIOLOGICAL WATER REPORTS.

Lab. Ref. No. A.1587/54.

Authority: Wirksworth U.D.C.

Source of Sample: "Amber Cottage", The Green, Middleton.

Date of Receipt: 12.1.55.

Age in Hours - $\frac{1}{2}$.CL. WELCHII: Not Done.

Bye-laws:-

New Streets and buildings	-	1939
Common Lodging Houses	-	1879
Nuisances	-	1879
Cleaning Footways, Removal of House Refuse and Cleaning Closets, Privies, Ashpits and Cesspools	-	1879

Bye-laws made under Section 15 of the Food and Drugs Act, 1949 for securing the observance of Sanitary and cleanly conditions and practices in connection with the handling wrapping and delivery of food etc. ----- 10th July, 1950.

Shops Act, 1912 - 28 ----- 25th August, 1930.
do. 1934 ----- 26th November, 1934.

Offensive Trades Order of L.G.B. No. 63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades ----- 26th April, 1915.

Chicken-Pox Compulsory Notification Order for Compulsory Notification ----- 22nd February, 1926.

Public Health Act, 1925, Parts 11 to IV, except Sections 21, 22 & 44 ----- 2nd May, 1927.

Shops Acts, 1934, came into operation by adoption 1936 ----- 1936

Derbyshire County Council Act, 1954 ----- 30th July, 1954.

Bye-laws (Water).

Prevention of Waste, Undue Consumption, Misuse or Contamination of Water. ----- 11th May, 1955.

SANITARY CIRCUMSTANCES OF THE AREA.Water Supply.

- (a) Both the quality and quantity of the water supplied for the Middleton and the Wirksworth Area have been satisfactory during the year 1956, and the actual results of all samples taken by the Public Health Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.
- (b) No major works of improvements to plant or sources of supply have been carried out during the year.
- (c) Further lengths of water main were taken out and renewed in the Bolehill and Steeple Grange area during 1956, in order to complete the programme of improvements commenced in this region during the previous year. The agreed programme has now been completed and this has improved the water supply to properties in this vicinity.

(d) No further action has been taken with regard to provision of water supplies to outlying farms following the breakdown of negotiations with certain farmers concerned, and no further progress has been made with regard to the Council's Consulting Engineers preparing a larger scheme for the supply of water to the Rural parts of this Urban District.

(e) Alternative schemes were prepared for a supply of mains water to properties in the Longway Bank Area and submitted to the owners for their observations. To date none of these schemes have borne fruition.

Sewerage and Sewage Disposal.

Normal day-to-day repairs and maintenance of the Council's Sewerage System have sufficed to keep the Town's Public Sewers in working order, and there have been no particular instances worthy of special report up to December, 1956.

Legislation.

Any new legislation, i.e. Local Acts, Special Orders, General Adoptive Acts and Bye-laws relating to the public health which came into force during the year:- NIL.

Year	Number of Acts	Number of Orders	Number of Bye-laws
1955			
1956			
1957			
1958			
1959			
1960			
1961			
1962			
1963			
1964			
1965			
1966			

1957

Offensive Trades Order of L.G.B. No. 63721, of 18th June, 1915, confirming Council's Order of 26th April, 1915, containing list of offensive trades.	26th April, 1915.
Chicken-Pox Compulsory Notification Order for Compulsory Notification	22nd February, 1926.
Public Health Act, 1925, Parts 11 to 1V, except Section 21, 22 & 44	2nd May, 1927.
Shops Acts, 1934, came into operation by adoption 1936	1936
Derbyshire County Council Act, 1954	30th July, 1954.
<u>Bye-laws (Water).</u> Prevention of Waste, Undue Consumption, Misuse or Contamination of Water.	11th May, 1955.

SANITARY CIRCUMSTANCES OF THE AREA.

Water Supply.

- (a) Both the quality and quantity of the water supplied for the Middleton and the Wirksworth Area have been satisfactory during the year 1957, and the actual results of all samples taken by the Public Health Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.
- (b) No major works of improvements to plant or sources of supply have been carried out during the year

Re-Grouping of Water Undertakings.

In February 1957, Members and Officials of the Wirksworth Urban District Council attended a Conference of Representatives of Water Undertakings in the proposed South Derbyshire Water Area according to the suggestions contained in the Hawksworth Report of 1950. This meeting was convened at the County Offices, Derby, by the Derbyshire County Council. Since that date, a number of meetings have taken place between Statutory Water Undertakings in the suggested South Derbyshire Water Area in order to discuss the Ministry of Housing and Local Government Circular No. 52/1956 - "Re-grouping of Water Undertakings". In July 1957 an "ad-hoc" Committee was established to give further detailed consideration to a Joint Water Board, and the Wirksworth Urban District Council became Members of that Committee. Early in the new year it is hoped to arrange a further meeting of the "ad-hoc" Committee at the Derbyshire County Council Offices and to secure the attendance of Mr. W.A. Wood, Assistant Secretary, Ministry of Housing and

SEWERAGE AND SEWAGE DISPOSAL.

(a) During the year a new length of Main Sewer was laid by the Council at the top Western end of Summer Lane, Wirksworth, in order to provide for the development of land in that area. This work was satisfactorily completed by Private Contractors on behalf of the Council.

(b) Main Sewer, Middleton.

Following a report which the Public Health Inspector gave to the Public Health Committee of the Wirksworth Council in January of 1957, he was authorised to employ the Council's Contractors to carry out any necessary works with new stoneware pipes in mass concrete to the Main Sewer at Middleton, over a particular length which had been causing considerable trouble for some time. The testing, locating and repairing of this sewer extended over a period from the 10th of January, 1957, to the 22nd of January, 1957, during which time a number of defective and crushed lengths of sewer were found and repaired and the new lengths surrounded in mass concrete. New manholes were also constructed wherever necessary. The Public Health Inspector stated that this had been a major repair job, and he further informed the Committee that, from tests and observations, it was apparent that the length of sewer from the Guest House, Middleton, up to The Green (including lengths along New Road and Water Lane) was in a crushed condition, and that it would be in the Council's interest to relay the whole of this sewer. He suggested that this could be done over a period of years relaying a portion annually, and that a sum of £500 might be included in the Annual Estimate until such work was completed.

(c) A number of major blockages on various lengths of Main Sewer were relieved during the year by the Council's own Workmen, in some cases assisted by Contractors and using winches and sewer devils.

(d) Other than those major items reported above, normal day-to-day repairs and maintenance of the Council's sewerage system sufficed to keep the Town's Public Sewers in working order.

Once again no cases of bed bug infestation were brought to my notice during the year.

As in previous years, complaints were received from time to time regarding infestation of old properties with woodworm and the death watch beetle, and in all instances the occupants were given the necessary advice and instructions on how to deal with these pests.

The Council's Powder Blowers and Insecticide Sprayers were used whenever necessary with gratifying results.

WATER SUPPLY DURING THE YEAR 1958

MONTH	RAINFALL			YIELDS OF SPRINGS IN GALLONS PER HOUR 1958
	1956 inches	1957 inches	1958 inches	
January	5.79	2.43	4.03	7,900
February	1.34	3.27	4.82	10,600
March	1.34	2.90	2.21	9,800
April	1.54	.11	1.24	10,000
May	.78	1.00	3.57	8,100
June	3.44	1.36	4.09	6,150
July	3.98	4.76	4.98	6,200
August	6.325	6.42	2.50	6,350
September	2.92	7.51	3.40	6,000
October	1.77	2.72	2.72	4,900
November	1.30	2.17	1.01	6,300
December	4.04	3.06	4.25	5,200
TOTALS	34,565	37.71	38.82	

(1) (a) QUALITY:-

I have continued to take monthly samples of Public Water Supplies from both Wirksworth and the Middleton Areas throughout the year, and once again the quality of the various supplies has been maintained, any unsatisfactory samples being due to the open reservoirs and not to the actual sources of supply. The Council's Water Bailiff has continued to carry out chlorination of the supplies whenever necessary during the warmer months of the year, but he has not found this to be essential during the Winter months.

(i) (b) QUANTITY:-

Once again, as in the previous year, there was no shortage of water whatsoever in the Wirksworth Urban District during the period under review; the Council's Springs and Boreholes were quite adequate to meet the needs of the district, and in fact kept plenty in reserve.

Report of the Medical Officer of Health for 1959

To the Chairman and Members of the
WIRKSWORTH URBAN DISTRICT COUNCIL.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to submit this, my Thirtieth Annual Report, on the state of health and conditions in the Urban District of Wirksworth for the year 1959. My report is set out, as last year, in accordance with the request of the Ministry of Health, and gives detailed information and statistics, including vital statistics of the area. The work of the Sanitary Department is described in some detail in the Public Health Inspector's report and illustrates the variety of services which that department is called upon to perform.

The historic town of Wirksworth, as you will observe, has an estimated population of 4980, a figure which does not vary much over the years. Possibly the most striking addition which has taken place in the past is the Council House Estates. Some of the houses are occupied by persons displaced from properties which have been condemned as unfit for human habitation, and all the tenants are now enjoying accommodation of comfortable and up-to-date standard.

The water supply has been improved and in spite of the increased consumption, mainly due to the requirements of new houses, the maintenance of supply is considerably better than in the past, in fact, as you will read, there was no shortage of water in Wirksworth, when many parts of the country were suffering from drought.

The quality of the water at the 'spring' source is excellent, but, unfortunately, suffers deterioration from storage in open reservoirs. To effect improvement, in addition to chlorination, which is disagreeable, efficient filtration is necessary, or, alternatively, a covered reserve and water softening plant where required.

The expansion of the quarries in and around the district has been considerable in the past few years, giving rise to more atmospheric pollution by dust. This has led to complaints from the public, which

Water Supply

- (a) Both the quality and quantity of the water supplied for the Middleton and the Wirksworth Area have been satisfactory during the year 1959, except for the short period in December, the cause of which is more fully explained in my Public Health Inspector's Report. The actual results of all samples taken by the Public Health Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.
- (b) No major works of improvements to plant or sources of supply have been carried out during the year.
- (c) Several lengths of water main were relaid in the Willowbath Lane and Bournebrook Avenue area during 1959 and loan sanction has also been obtained for the extension of the main from Adam Bede Crescent to Haarlem Mill. It is anticipated that this work will be carried out early in the New Year.
- (d) Discussions are still taking place with regard to the provision of water supplies to certain outlying farms, which are at present situated above the limits of normal gravitational flow.

Re-Grouping of Water Undertakings

Following on my last year's report upon this matter, the Council supplied data regarding their water undertaking to the Derbyshire County Council, which was summarised by that authority and presented to Parliament, together with the South Derbyshire Water Board Bill. In the meantime, the Derby Corporation had presented their own private bill to Parliament and in March of this year, the Clerk of the Council, together with certain delegate members, attended at the House of Commons and met the Minister of Housing and Local Government, to discuss the pros and cons of the two bills, at which meeting it is understood the Minister came out in favour of the single board. In October, 1959, the Derbyshire County Council and the County Borough of Derby together drafted a proposed South Derbyshire Water Board Order, and the latest information which has been received from the Clerk of the Derbyshire County Council is contained in a

letter addressed to the Clerk of the Wirksworth U.D.C., in which it is suggested that an appropriate date for the 'take-over' by the Water Board might be 1st October, 1960.

SEWERAGE AND SEWAGE DISPOSAL

(a) Normal day to day repairs and maintenance of the Council's sewerage system have sufficed to keep the Town's Public Sewers in working order and there have been no particular circumstances worthy of special report up to December, 1959.

(b) Following certain complaints received from the Trent River Board, I would state that the Public Health Committee recommended to the full Council that certain extensions should be carried out at the Wirksworth Sewage Disposal works, consisting of two additional bacterial filters, renewal of media in the existing filters and provision of additional sludge beds, together with ancillary works.

In December of this year, after full discussions, the Council resolved that the Consulting Engineers should be requested to press forward with this scheme as soon as possible, and at the time of writing this report, formal applications have been made to the Ministry of Housing and Local Government for approval to this scheme.

LEGISLATION

Any new legislation, i.e. Local Acts, Special Orders, General Adoptive Acts and Bye-Laws relating to the public health which came into force during the year:-

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WATER SUPPLY DURING THE YEAR 1959

MONTH	RAINFALL			YIELDS OF SPRINGS IN GALLONS PER HOUR 1959
	1957 inches	1958 inches	1959 inches	
January	2.43	4.03	2.80	8,500
February	3.27	4.82	0.11	13,500
March	2.90	2.21	2.14	8,500
April	.11	1.24	3.28	4,500
May	1.00	3.57	0.46	5,200
June	1.36	4.09	1.10	4,500
July	4.76	4.98	1.90	3,900
August	6.42	2.50	1.20	3,000
September	7.51	3.40	0.04	2,800
October	2.72	2.72	2.36	2,180
November	2.17	1.01	3.90	2,300
December	3.06	4.25	6.32	1,800
Totals	37.71	38.82	25.61	

(i) (a) QUALITY:-

I have continued to take monthly samples of Public Water Supplies from both Wirksworth and the Middleton Areas throughout the year, and once again the quality of the various supplies has been maintained, any unsatisfactory samples being due to the open reservoirs and not to the actual sources of supply. The Council's Water Bailiff has continued to carry out chlorination of the supplies whenever necessary during the warmer months of the year. but he has not found this to be essential during the Winter months.

(i) (b) QUANTITY

Once again, as in previous years, it is very good indeed to be able to state that there was no actual shortage of water from the combined sources of the Wirksworth Urban District during the period under review. In fact, whilst many areas throughout the country had to impose restrictions on the use of water, full supplies were available throughout the whole of the Wirksworth Urban District at all times, except for a few days at the end of the year. Unfortunately, on Monday, 14th December, when, as reference to the Spring Yield Table above will show, these were at their lowest ebb, the submersible pump at the Lady Flatts Scheme developed a fault. It will be realised that at this period the Council were relying on their borehole supplies, and without this particular borehole, there was insufficient water to maintain a 24 hours supply.

1959

PUBLIC HEALTH LABORATORY SERVICEW A T E RBACTERIOLOGICAL EXAMINATION REPORTAuthority: Wirksworth U.D.C.Lab. Ref. No. W.677/59Sender's Ref. No.1

Nature of Sample: Town Hall, Wirksworth

Date and hour of collection 1.4.59 9.45

Date and hour of arrival 1.4.59 10.45

Date of Report 3.4.59

Plate Count. Yeastrel agar 24 hours 37° C. aerobically not done per ml.

Probable number of coliform bacilli, MacConkey 2 days, 37° C. nil per 100 ml.

" " " Bact. coli (type 1) ----- per 100 ml.

Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director.Authority: Wirksworth U.D.C.Lab. Ref. No. 1938/59Sender's Ref. No.1Nature of Sample: Mr. B. Gretton,
Amber Cottage, Main Street, Middleton.

Date and hour of collection 15.7.59 10.00

Date and hour of arrival 15.7.59 10.30

Date of Report: 17.7.59

Plate Count Yeastrel agar 24 hours 37° C. aerobically not done per ml

Probable number of coliform bacilli, MacConkey 2 days, 37° C. Nil per 100 ml.

" " " Bact. coli (type 1) ----- per 100 ml.

Remarks: Bacteriologically this sample is suitable for drinking purposes.

J.L.G. Iredale
DirectorAuthority: Wirksworth U.D.C.Lab. Ref. No. W3552/59Sender's Ref. No. 1

Nature of Sample: Top open reservoir, Wirksworth - Raw water

Date of Report: 13.11.59

Date and hour of collection 11.11.59 9.15

Date and hour of arrival 11.11.59 10.40

Plate Count. Yeastrel agar 24 hours 37° C aerobically not done per ml.

Probable number of coliform bacilli, MacConkey 2 days, 37° C. nil per 100 ml.

" " " Bact. coli (type 1) ----- per 100 ml.

Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director.

(iii) Plumbosolvent Action: It is not necessary in this Urban District to take any precautionary measures in respect of plumbosolvent action with regard to present sources of supply.

(iv) Contamination: The only fit samples taken during the year were those five to which I have already referred in para. (ii) under the sub-title of "Testing and Sampling", and once again the trouble in the Main Town Supplies can be attributed to the open reservoirs; suitable cleaning and dosing with Chlorox being the only remedy available.

(v) APPROXIMATE FIGURES FROM INFORMATION AVAILABLE

(a) Number of Dwelling Houses supplied from Public Water Mains direct to houses	1691
(b) Number of Population supplied from Public Water Mains direct to houses	4804
(c) Number of Dwelling Houses supplied from Public Water mains by means of stand pipes	52
(d) Number of Population supplied from Public Water Mains by means of stand pipes	156

SAMPLING FOR FLUORIDE CONTENT

In October an instruction was received from the Ministry of Housing and Local Government directing me to take samples of drinking water from each source to determine the fluoride concentration of each source utilised for public supply purposes. Accordingly, the necessary number of samples were submitted from each of the undermentioned sources and the results are appended herewith:-

<u>SAMPLE</u>	<u>Determination of FLUORIDE as F</u>
1. Wigwell Borehole Raw water at Discharge Point into Wash Green Reservoir.	0.05
2. Wirksworth Springs at Point of Delivery into Measuring Chamber - Raw Water	0.05
3. Dunsley Spring Via Gellia Pump House	1.30
4. The Moor, Middleton-by-Wirksworth - from Pipe at point of discharge into Middleton Reservoir	0.05
5. Lady Flatts, Millers Green, Wirksworth. Lady Flatts supply - raw water	0.25

The results of the above analyses were collated and despatched to the Ministry of Housing and Local Government on the 23rd November, 1959

Water Supply.

(a) Both the quality and quantity of the water supplied for the Middleton and the Wirksworth Area have been satisfactory during the year, 1960, except on those odd occasions, the causes of which are more fully explained in my Public Health Inspector's Report. The actual results of all samples taken by the Public Health Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report.

(b) No major works of improvements to plant or sources of supply have been carried out during the year.

(c) The water main extension from Adam Bede Crescent to Haarleu Mill was well in hand at the end of the year under review and would have been completed except for the very wet, inclement weather, which made working conditions impossible in the type of soil encountered, as trenches collapsed before mains could be laid. It is hoped that with an improvement in the weather this work will be completed early in the New Year.

(d) During the year, the submersible pump was withdrawn from the Lady Flatts Scheme and reconditioned at the makers. This pump has now been re-installed and as a safeguard the Council have ordered a duplicate pump for this site.

(e) The submersible pump from the Wigwell Borehole has been withdrawn and at the time of writing this report is still in the hands of the manufacturers for reconditioning.

(f) As you are no doubt aware, the South Derbyshire Water Board will come into operation on the 1st April, 1961, and preliminary discussions and inspections have already taken place between officials of this Council and the Derby Borough Water Engineer's Department regarding the handing-over of the undertaking.

Normal day to day repairs and maintenance of the Council's sewerage system have sufficed to keep the town's public sewers in working order and there have been no particular circumstances worthy of special report up to December, 1960. You will recall that in my last year's report, following certain complaints received from the Trent River Board, the Public Health Committee recommended the full Council to carry out certain extensions at the Wirksworth Sewage Disposal Works. The scheme for the necessary works has now been prepared in detail by the Council's Consulting Engineers and towards the end of the year under review, Ministerial approval was obtained. Tenders have been received and accepted and a prospective Clerk of Works has been interviewed. The Council do not wish the work to proceed during the winter months with all the attendant risks of frost damage to mass concrete work, and it is therefore anticipated that a start will be made with this scheme on the 1st April, 1961.

LEGISLATION

Any new legislation, i.e. Local Acts, Special Orders, General Adoptive Acts and Bye-laws relating to the public health which came into force during the year:-

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1960

Once more I have received the full co-operation of H.M. Inspector of Factories, Miss J.E. Hoggood, and whenever necessary we have discussed problems and on a number of occasions we have visited Factories in this Urban Area together.

Throughout the year, the Factory Inspector has kept me fully informed of all deletions, additions or changes, together with information regarding the use of mechanical power in Factories within the Urban area, and your Registers have been duly amended and brought up to date.

S T A F F

Yet again I am able to report no change in the personnel of the administrative and clerical staff of the department.

It is now clear, of course, that with the coming into operation of the South Derbyshire Water Board, I shall lose the services of the Water Bailiff with effect from April, 1961, but I will report finally upon this matter in my next year's Annual Report.

C O N C L U S I O N

My sincere thanks are due to the Chairman and Members of the Council and my colleagues in other departments for the help, co-operation and support they have given me during the year. Also for the interest taken in my Department's efforts on environmental health matters by the Medical Officer of Health.

I also express my grateful thanks to all my staff, Foreman and manual workers for their loyal work during the year, and particularly to my Clerk, Mrs. J. Moore, for her able assistance. I am happy to have worked with them all in what may appear to be an unspectacular occupation, but which, nevertheless, is a very necessary and vital one to the well-being of the community as a whole.

I am, Mr. Chairman, Ladies and Gentlemen,

Your obedient Servant,

J. TAYLOR.

Surveyor's Office,
Town Hall,
WIRKSWORTH, Derby.

Public Health Inspector and Surveyor.

March, 1961.

1961

WIRKSWORTH URBAN DISTRICT COUNCIL

Report of the Medical Officer of Health for 1961

To the Chairman and Members of the
WIRKSWORTH URBAN DISTRICT COUNCIL

Mr. Chairman, Ladies and Gentlemen,

I have the honour to submit this, my Annual Report, on the state of health and conditions in the Urban District of Wirksworth for the year 1961. My report, as previously, is set out in accordance with the request of the Ministry of Health.

Vital statistics are tabulated for ease of comparison, as also are enumerated the diseases of the district. You will observe how few notifiable diseases are recorded, and this is extremely gratifying. Another interesting fact is that there have been no new cases of Tuberculosis for the year. The main causes of deaths would appear to be Cerebral Thrombosis - 28% of all deaths, with Myocardial failure 20% as second, Coronary disease comes next at 18% and is followed by the Cancer group - 13%.

Diphtheria Immunisation

Parents, on the whole, are very mindful of this dread disease, and readily come forward to have their children protected. The combined vaccine, Diphtheria and Whooping Cough, or Triple Vaccine which includes Tetanus, appears a satisfactory prophylactic.

Poliomyelitis Vaccine

The response to the need for protection against this disease has been extremely gratifying for this area, and the campaign continues.

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In the exercise of functions under the Public Health Acts since 1936, information about water and its supply is necessary, whether it is entirely satisfactory, both in quality and quantity. You will see from my report on water, that the recently formed South Derbyshire Water Board, is now the responsible body, having taken up their function in April.

Sewerage and Sewage disposal is also very important to the health of a community, and it is vital that arrangements are adequate, and that Sewage Disposal Works are sufficiently manned and supervised. Considerable repairs, reconstruction, and extensions were carried out during the past year, and are fully described. It is now anticipated that the Works should cope

Water Supply

(a) Both the quality and quantity of the water supplied for the Middleton and the Wirksworth Areas have been satisfactory during the year, 1961, except on odd occasions after the Council's undertaking had been taken over by the South Derbyshire Water Board. The actual results of all samples taken by the Public Health Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report. Appended also are results of samples taken direct by the South Derbyshire Water Board.

(b) There was another occasion worthy of mention towards the latter part of the period under review when I found it necessary to draw the Council's attention to numerous complaints which I had received from the public concerning the condition of the drinking water. They described it to me as distasteful, having a peculiar odour, apart from Chlorine, extremely Chlorinated at times and often very hard. Whilst realising the difficulties confronting the new Water Authority, yet I felt it my duty to report this matter to the Council and afterwards convey my remarks to the South Derbyshire Water Board.

As I anticipated, the Engineer & Manager of the Board replied stating that he would look into this matter to see what could be done to improve it, but that it must be appreciated it was essential that Chlorine be applied to those public supplies which are connected with the open service reservoirs.

(c) Reference to my last year's report will show that the 'take-over' by the South Derbyshire Water Board was scheduled for the early part of this year, and in fact this took place on 1st April, 1961, as anticipated. The Council are aware that for many years I have advocated the building of a new high level covered reservoir so that the use of the old open reservoirs could be discontinued - unfortunately finances have never permitted this. I realise the numerous calls which will be made upon the new Water Authority, but I am indeed pleased to learn that they do propose to go ahead in due course with such a new high level covered reservoir, and in fact, I understand that the Surveyor has now obtained Town Planning Approval in outline form for this project.

Main Sewage Disposal Works - Wirksworth(a) Maintenance

Normal day to day repairs and maintenance of the Council's sewerage system have sufficed to keep the Town's Public Sewers in working order and there have been no particular circumstances worthy of special report up to December, 1961.

(b) Capital Works

Reference to my last year's report will show that extensive reconstruction and additions to the main Wirksworth Sewage Disposal Works were scheduled to commence in the Spring of this year.

The Contractors commenced work on the site on the 5th April, and the Clerk of Works officially started his duties on Monday, 17th April.

The extensions and improvements included in the original contract were as follows:-

Bacterial Filter Beds

Two additional filter beds.

Three of the existing filter beds formed part of the original disposal works scheme constructed about 1912. A certain amount of ponding occurred on the surface of these old beds in times of maximum flow coupled with seasonal conditions. The top of the filter media had broken down and the upper two feet were to be removed and replaced with graded granite media. The cast iron revolving arms of the old sprinklers had deteriorated and were to be renewed.

Sludge Drying Beds

Eight additional sludge drying beds, together with the purchase of land in enclosure 996 to the South of the Works for storage of dried sludge.

Extension of existing paved roadways in order to facilitate the removal of dried sludge and movement of transport on site in all weathers.

Storm Water Tanks - Remedial Works Required by Trent River Board

Floating arm outlets to be fitted to the storm tanks in order to allow only top water to decant into the River.

Existing filter bed washouts to be gathered together and discharged into a soakaway containing a rough filtering media prior to entering the watercourse.

Extension of the sludge drainings rising main to the two rectangular settlement tanks in addition to the existing feed into the pyramidal tank.

Dump Truck

One motorised dump truck of $\frac{1}{2}$ cubic yard capacity for sludge removal.

Additional Works Found Necessary during the Course of the Contract

During the course of the Contract however, the four existing filter beds were opened out for inspection, when it was ascertained that the renewal of the top 2' of media in two of these beds would be sufficient. Unfortunately in the other two beds, which incidentally were constructed nearly 50 years ago, the limestone media had completely broken down to what was little more than slurry at the lower levels. There was no sign of life in the beds and therefore no proper biological functioning was possible. It was resolved, therefore, to rehabilitate these two filter beds by renewing with completely new media.

On dismantling the four existing distributors it was also found that extensive repairs and renewals were required to the bearings and Kingfisher Lubricators in the crossheads of the machines, to the ends of the arms, the adjusters and the dosing syphons.

In addition to the above extra work to the Contract it was also found necessary to form new embankments to the existing sludge lagoons at the Northern end of the Works.

By the end of the year under review the extensions to the above works were virtually complete with the exception of minor details and, in addition, the repair of the recording and integrating apparatus which had, of necessity, been left until towards the end of the Contract.

Despite the minor details mentioned above, however, the Works were fully operational at the end of December, 1961.

Homesford Sewage Outfall Works

The Public Health Committee decided that whilst the Contractors were engaged on the major works at the Derby Road site they would also request them to carry out certain improvements and remedial works at the Homesford Sewage Outfall Works. Accordingly, during 1961, the following works were carried out:-

Filter Beds

Complete renewal of old media with new. Repairs to distributor arms and feed pipe.

Septic Tanks

Removal of old spindles and brackets and provision of new. Removal of old penstocks and provision of new.

Humus Tanks

Removal of old spindles and brackets and supply and fitting of new.

Maintenance

Rodding and clearing of old disused lengths of the drainage system - now brought back into use.

LEGISLATION

Any new legislation, i.e. Local Acts, Special Orders, General Adoptive Acts and Bye-laws relating to the public health which came into force during the year:-

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efficient as it could be; some doubts were at first evident but matters had been rectified. A report by the Medical Officer of Health dated 24th November, was also read out.

Mr. Canon stated that he would do all within his power to remedy any outstanding matters, but his Company were getting to the limit of what could be done. He also expressed the opinion that he was not entirely convinced that all the dust came from his Company's Quarry.

WATER SUPPLY DURING THE YEAR 1961

On April 1st 1961, the South Derbyshire Water Board took over my Council's duties with respect to their Water undertaking and I shall, therefore, have to discontinue giving you the Rainfall Figures and Spring Yields as these are no longer in my possession. The usual table is thus omitted from this Annual Report.

(i) (a) QUALITY:

I have continued to take monthly samples of Public Water Supplies from both Wirksworth and the Middleton areas throughout the year, and once again the quality of the various supplies has been maintained, any unsatisfactory samples being due to the open reservoirs and not to the actual sources of supply. You will have read, under the Medical Officer of Health's portion of this Report, about the projected high-level covered reservoir which the South Derbyshire Water Board intend to construct.

(i) (b) QUANTITY:

Once again, as in previous years, it is very good indeed to be able to state that there was no actual shortage of water from the combined sources of the WIRKSWORTH URBAN DISTRICT during the period under review.

(ii) TESTING AND SAMPLING:

(a) Twenty-five samples in all were submitted to the Director of the Public Health Laboratory during the year by me and, of these, twenty-four were satisfactory and one unsatisfactory. The reason for the one unsatisfactory sample which came from the Middleton-by-Wirksworth Supply is explained in paragraph (i)(a) above. Whenever I receive a report from the Bacteriologist to the effect that one of my samples is unsatisfactory, then I immediately contact the Deputy Manager of the South Derbyshire Water Board and notify him of this result, so that he may take the necessary remedial action.

In addition to the direct control of Sampling undertaken by me as a Statutory Duty, I have also requested the Engineer & Manager of the South Derbyshire Water Board to supply me with details of any Sampling carried out by his own Chemist and he has most kindly supplied the following information:-

"Between the 1st April and 31st December, 1961, 25 samples were taken from consumers' premises in this area, none of which indicated the presence of coliforms or E.Coli, Type 1, in 100 ml. In addition to this, 71 samples were taken from service reservoirs, mains and other works of the Board, of which 4 indicated the presence of Coliforms, and 3 of E. Coli Type 1, in 100 ml. Increased chlorine dosage was immediately applied, and satisfactory conditions restored."

Herewith, in accordance with the Ministries request I give a selection of Bacteriological reports on samples submitted by me to the Director of the Public Health Laboratory Service during the year.

Authority: Wirksworth U.D.C.

Lab Ref. No. W 371/61
Sender's Ref. No. 1

Nature of Sample: Raw Water - Town Hall, Wirksworth. Date of Report 6.2.61

Plate Count. Yeastrel agar 24 hours 37° C. aerobically not done per ml.

Probable number of coliform bacilli, MacConkey 2 days 37° C Nil per 100 ml.

" " " Bact. coli (type 1) ---- per 100 ml.

Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director

Authority: Wirksworth U.D.C.

Lab Ref. No. W 370/61
Sender's Ref. No. 2

Nature of Sample: Raw Water - Mr. B. Gutton, Amber Cottage, Main Street,
Middleton.

Date of Report 6.2.61

Plate Count. Yeastrel agar 24 hours 37° C aerobically not done per ml.

Probable number of coliform bacilli, MacConkey 2 days 37° C nil per 100 ml.

" " " Bact. coli (type 1) ---- per 100 ml.

Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director

Authority: Wirksworth U.D.C.

1961

Lab. Ref. No. W 976/61
Sender's Ref. No. 1

Nature of Sample: Raw Water - Town Hall, Wirksworth. Date of Report 6.4.61
Plate Count. Yeastrel agar 24 hours 37° C aerobically not done per ml.
Probable number of coliform bacilli, MacConkey 2 days, 37° C Nil per 100 ml.
" " " Bact. coli (type 1) ---- per 100 ml.
Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director

Authority: Wirksworth U.D.C.

Lab. Ref. No. W 977/61
Sender's Ref. No. 2

Nature of Sample: Raw Water - Mr. B. Gretton, Amber Cottage, Main Street,
Middleton.
Date of Report 6.4.61
Plate Count. Yeastrel agar 24 hours 37° C aerobically not done per ml.
Probable number of coliform bacilli, MacConkey 2 days, 37° C Nil per 100 ml.
" " " Bact. coli (type 1) ---- per 100 ml.
Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director

Authority: Wirksworth U.D.C.

Lab. Ref. No. W 4124/61
Sender's Ref: No. 1

Nature of Sample: Raw Water - Town Hall, Wirksworth. Date of Report 6.10.61
Plate Count. Yeastrel agar 24 hours 37° C aerobically not done per ml.
Probable number of coliform bacilli, MacConkey 2 days, 37° C Nil per 100 ml.
" " " Bact. coli (type 1) ---- per 100 ml.
Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director

Authority: Wirksworth U.D.C.

Lab. Ref. No. W 4125/61
Sender's Ref. No. 2

Nature of Sample: Raw Water - Mr. B. Gretton, Amber Cottage, Main Street,
Middleton.
Date of Report 6.10.61
Plate Count. Yeastrel agar 24 hours 37° C aerobically not done per ml.
Probable number of coliform bacilli, MacConkey 2 days, 37° C Nil per 100 ml.
" " " Bact. coli (type 1) ---- per 100 ml.
Remarks: Bacteriologically, this sample is suitable for drinking purposes.

J.L.G. Iredale
Director

Once more I have received the full co-operation of H.M. Inspector of Factories, Miss J. B. Hopgood, and whenever necessary we have discussed problems and on a number of occasions we have visited Factories in this Urban Area together.

Throughout the year, the Factory Inspector has kept me fully informed of all deletions, additions or changes, together with information regarding the use of mechanical power in Factories within the Urban area, and your Registers have been duly amended and brought up to date.

S T A F F

Certain staff changes affecting my Department have occurred during 1961.

Mr. J. L. S. Roberts, B.Sc., was appointed on the 17th April, 1961, as Clerk of Works to supervise the new extensions to the Sewage Works and he remained on the Council's payroll until the 31st December, 1961. He was a most conscientious and efficient officer and I only wish my department could retain his services. Although he officially completed his duties with me on the above-mentioned date, in order to take over the supervision of a high level reservoir for the South Derbyshire Water Board, yet, by agreement, he will continue to visit the Wirksworth Sewage Works from time to time until the final completion of the whole of the works.

In October, after serving with me for some three years, my Clerk, Mrs. J. R. Moore, left the Department. It can readily be appreciated that in a small Department such a loss can quite seriously affect the day-to-day routine, but I am happy to state that her successor, Mrs. K. R. Clayton, who took over her duties on 25th September, has now settled down admirably and is rapidly becoming acquainted with the numerous duties which fall to the lot of a "combined office".

C O N C L U S I O N

My sincere thanks are due to the Chairman and Members of the Council and my colleagues in other departments for the help, co-operation and support they have given me during the year. Also for the interest taken in my Department's efforts on environmental health matters by the Medical Officer of Health.

SANITARY CIRCUMSTANCES OF THE AREAWater Supply

Both the quality and quantity of the water supplied by the South Derbyshire Water Board for the Middleton and the Wirksworth Areas have been mainly satisfactory during the year, 1962, except on odd occasions when the necessary remedial action was taken by the South Derbyshire Water Board. The actual results of all samples taken by the Public Health Inspector and submitted for Bacteriological Examination are set out in the Inspector's portion of this report. Appended also are results of samples taken direct by the South Derbyshire Water Board.

With reference to item (c) of my last year's Report, I am pleased to state that the detailed plans for the high level covered reservoir at Breamfields have now received Town Planning and Building approval, and I am hopeful that this work will be commenced by the South Derbyshire Water Board in the near future. Extensive new additional water mains have already been laid in connection with this scheme.

SEWERAGE AND SEWAGE DISPOSAL(a) Capital Works

Reference to my last year's Report will remind you that extensive additions were carried out to the Council's Main Sewage Outfall Works at Derby Road, Wirksworth, together with other maintenance work at both these Outfall Works and the Homesford Sewage Outfall Works.

By the end of 1961 these alterations and additions were virtually completed except for minor details and the repair and reconditioning of the recording and integrating apparatus.

This apparatus was completely overhauled and re-fitted during 1962, and the final work on the sludge pump was eventually carried out by Messrs. Wallwin (Pumps) Ltd.

The Official Opening of the Extended Sewage Works took place on the 7th September, 1962.

(i) (a) QUALITY:

I have continued to take monthly samples of Public Water Supplies from both Wirksworth and the Middleton areas throughout the year, and once again the quality of the various supplies has been maintained, any unsatisfactory samples being due to the open reservoirs and not to the actual sources of supply. You will have read, under the Medical Officer of Health's portion of this Report, about the projected high-level covered reservoir which the South Derbyshire Water Board intend to construct.

(i) (b) QUANTITY:

Once again, as in previous years, it is very good indeed to be able to state that there was no actual shortage of water from the supplying authority.

(ii) TESTING AND SAMPLING:

(a) Twenty-five samples in all were submitted to the Director of the Public Health Laboratory during the year by me and, of these, twenty-four were satisfactory and one unsatisfactory. The reason for the one unsatisfactory sample which came from the Wirksworth Supply is explained in paragraph (i) (a) above. Whenever I receive a report from the Bacteriologist to the effect that one of my samples is unsatisfactory, then I immediately contact the Deputy Manager of the South Derbyshire Water Board and notify him of this result, so that he may take the necessary remedial action.

In addition to the direct control of Sampling undertaken by me as a Statutory Duty, I have also requested the Engineer & Manager of the South Derbyshire Water Board to supply me with details of any Sampling carried out by his own Chemist and he has kindly supplied the following information:-

"During the year ended 31st December, 1962, 53 samples were taken from consumers premises in this area, two of which indicated the presence of coliforms or B.Coli, Type 1, in 100 ml. Remedial action was taken immediately and repeat samples showed that satisfactory conditions had been restored. In addition to this, 107 samples were taken from service reservoirs, and other works of the Board, all of which were free from coliforms and B.Coli Type 1.

Herewith in accordance with the Ministries request I give a selection of Bacteriological reports on samples submitted by me to the Director of the Public Health Laboratory Service during the year.