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1698—1933: Barnstaple's Water Supply

by MR. C. N. WOOD, Manager of the Barnstaple Water Company.

[In view of the near completion of Barnstaple's new half-a-million-gallons reservoir, the following description of the Borough's water supply the designer of the reservoir, Mr. C. N. Wood (who is also the Manager of the Barnstaple Water Company) is of timely interest. [Editor.]

I WISH to urge upon you the very great importance of a good, adequate, and constant water supply, particularly in such an important and delightful town as this. Of course, we are all aware (if we give the matter a thought at all) of the very great importance, or one might almost say the necessity, of good and abundant supply of pure water for our use, but how many or how few of us really realise how utterly dependent on it we are, and I think only those who have suffered from a shortage of water know what it means. Fortunately, the inhabitants of Barnstaple have not been put to any such test, and have had a really good supply of very excellent water, which meets all their needs, and is brought not only to their very doors, but into every part of the premises desired. This is all very nice and convenient, but how has it come about?

It commenced in the year 1698, when a company entered into an agreement with the then mayor, aldermen, and burgesses supply the Borough of Barnstaple with water for 300 years. This old company had a grant to take water from the Raleigh leat, and the water was conveyed from there to the town through pipes formed of trunks with a hole bored therein, and one of these wooden mains or pipes was dug up in Boutport-street in 1906. These primitive arrangements gave only an intermittent supply, the water being turned on two or three times a week to a few tanks about the centre of the town (one of which was in the churchyard) at the will of the turn-cock, and from these tanks it had to be fetched and carried in jugs, cans, or pails by anyone who so desired. Water for drinking was chiefly taken from private wells.

Comparatively few of the townspeople, however, availed themselves of the supply from the tanks, and many persons made a regular business of drawing water from the river Yeo by means of donkey carts on Saturday nights selling to customers who wanted soft water for washing purposes on Mondays.

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In the year 1850 an agitation was commenced with a view to putting the water supply of the town on a more satisfactory basis. The late Dr. Budd took an active part in this, and warned the townspeople of the dangers the old system entailed. He and others wanted the development of the water supply to be undertaken by the council, but years slipped by without anything being done. In October 1857, a public meeting took place, at which it was decided to get an improved supply. Prominent movers were Judge Tyrrell, Dr. Budd, and Messrs. W. Averv, J. R. Chanter, W. Snow. J. N. Miller, N. J. Gribble, W. Thorne, W. Carter, J. W. Tatham, and J. S. Clay. The old company opposed the new company's bill in Parliament, but later their rights were voluntarily purchased and paid for by the new company, and deeds dated 1698, 1699, and 1700 were surrendered to the new company.

Mr. John Lister, of London, prepared a scheme for taking water from the river North Yeo, near Loxhore Cross, bringing it to Snapper along the site of an ancient waterway (said to date from the time King Athelstan, when it was used to supply the Priory at Pilton), and from Snapper to the site of the present waterworks in Raleigh Park by a line of earthenware pipes. Two filter beds and a covered reservoir at the waterworks were constructed, and a line of pipes therefrom ran through Pilton street to the town. All this was done under the Barnstaple Waterworks Act, to which Royal Assent was given on May 21st, 1858, and the money therefor was raised by 1,022 shares issued in November, 1857.

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Since that period additional filtering plant, reservoirs, mains, hydrants, etc., have been added for the maintenance and improvement of the supply of water to meet the increased demands as the town has grown and developed, and all possible safeguards have been taken to ensure against any chance of pollution, and abundant hydrants to cope with outbreaks of fire have been fixed at convenient points.

The source of the water is the river North Yeo, whose tributary streams and springs originate from the slopes of Exmoor on a catchment area of about 22 square miles, and the water available is fully adequate for all the needs of the district, including supplies for domestic, sanitary, and trade purposes. The water is taken in from the river North Yeo at Loxhore Cross, and therefrom flows, along an open concrete leat about 2¼ miles in length as far as Snapper, where it enters an 18-inch diameter iron pipe, which conveys it to the waterworks near Westaway, Pilton. There it first enters a settling tank wherein most of the suspended particles (if any) gradually deposit themselves. It is then carried to the five filter beds provided for the thorough filtration of the water, and after passing through the filters it is stored in covered-in reservoirs, and thence distributed by a network of iron main supply pipes to all parts of the town. To supply houses in the higher parts the town water is pumped by steam pumps to a high-level reservoir situated on Pickard's Down (just above Fort Hill) and thence distributed to the higher parts of the town and district.

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During the last year a new reservoir to hold 500,000 gallons has been constructed at the waterworks. This will give an additional reserve to draw from, and maintain a steady pressure in the mains. Two new hydraulic rams have also been fixed. These will augment the pumping plant and help to maintain the high-level supply so that it will be well able to meet all the demands made upon it.

The total length of the mains of various sizes from 2-in. to 18-in. bore that convey the water to the different streets and districts is about 47 miles in all.

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The quality of the water is really excellent for all general purposes of public supply, being palatable, not too hard, and well suited for all domestic purposes. For the supplies to engine boilers it is exceptionally good, and for ordinary trade uses it is well suited. The reports upon analysis from time to time are invariably very favourable in every respect, and no one need have the slightest hesitation in drinking as much of the water as desired, either in its raw state or otherwise.

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The quantity of water is, except in quite exceptional periods of prolonged drought, ample for a liberal supply for all, but there is, of course, a limit, and it is fallacy to suppose otherwise, or to think it does not matter how wastefully it is used. It is generally accepted, and is borne out by experience in many different towns of various sizes, that the quantity of water required for all domestic purposes per head of the population supplied is from 25 to 35 gallons per 24 hours. Allowing for municipal and trade purposes an additional seven gallons makes the total quantity per head from 32 to 42 gallons. **In Barnstaple the quantity supplied reaches the figure of 62 gallons per head per day, which is, of course, exceedingly high,** and could undoubtedly be considerably decreased without any loss either cleanliness, health, or even the smallest inconvenience to anyone. Usually, whenever this subject is mentioned there is a sort of smirk, with the rejoinder, "What does it matter? there is plenty of water." This is, of course, an absurdity, for wastage is of no use to anyone, and is detrimental to the supply to others, but the notion persists.

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To sum up, I think you may confidently rest assured that the town and districts served have really good and adequate supply of pure water for all requirements, and need have no anxiety on the subject at all.

[The foregoing is the substance of an address given by Mr. Wood before the members of the Rotary Club of Barnstaple on Thursday.]