

IV.—THE “NEW RIVER” WATER SUPPLY FOR NEWCASTLE UPON TYNE, 1698-1723.

BY PROFESSOR EDWARD HUGHES.

As early as 1621 witnesses in a Chancery suit, *Maddison et al. v. Arnold*, complained of “the great scarcity of wholesome water” in Gateshead occasioned by the sinking of coal pits which had “drawn away and decayed the fountains and springs . . . whereby a thousand people there comorant and inhabiting cannot get any water for themselves and their cattle.” The chancellor, Sir Richard Hutton, appointed local commissioners to look into the complaint. Their findings are not recorded, but it is clear that the problem was not confined to Gateshead. In the second half of the century, the Common Council of Newcastle had to deal with frequent complaints of the great scarcity of water, and on more than one occasion it intervened to prevent colliery sinkings and water courses from drawing off the water from Pandon Bank or Conduit Head, the town’s main source of supply.¹ In December 1675, as a result of urgent complaints of great scarcity, an order was issued that all private cocks should be either stopped or cut off. Five years later, one Cuthbert Dikes laid a proposal before the council to erect a water engine for supplying the town from the river Tyne; an agreement was made in June 1693, but it would seem, from reports of scarcity in the following year, that nothing came of it. In October 1697 the town granted a lease to William Yarnold which was confirmed by act of parliament in the following year.² The

¹ Brand, *History of Newcastle*, I, pp. 442-4.

² *Io William*, III, §.

bill was sponsored by the local M.P.s and appears to have encountered no opposition.³ This was the origin of the "New River," the town's first effective water supply.

The problem of finding fresh water was common to many expanding urban communities at this time. The supply of London and Westminster, the work of Lambe, Peter Moris, a Dutchman, and Bevis Bulmer in Queen Elizabeth's reign, was proving unequal to the growing needs a century later, and additional powers had been sought as early as 1664.⁴ Westminster, including the Treasury and Downing Street, and Chelsea, had their "New River" water early in the next century,⁵ and bills were promoted for the supply of Rochester and Chatham in 1685, for Bristol in 1695, and for Norwich and Deal in 1699.⁶ Boston and a score of other places from Knaresborough to Wigan followed in the next century.⁷ Little is known about William Yarnold, who is described as "gent, of St. Andrew's, Holborn." His brother, John, obtained a patent in 1698 for his invention of an engine "very useful for draining mines, meres and marshes and for raising water for the supply of towns."⁸ In the same year, the patent for Savery's steam-engine was obtained and confirmed by act of parliament a year later, but the relationship, if any, between the two inventions is obscure. What is clear, however, is that the numerous water-works undertaken in this and subsequent years are closely connected with the invention of the first effective steam-engine—the Savery-Newcomen engine. In 1700, William Yarnold and Robert Watson obtained a grant from the crown for providing a supply of fresh water to the royal manors of East Greenwich, Deptford and Sayer's Court, "which are in great want of

³ *Commons' Journals*, XII, pp. 100, 182, 308.

⁴ Stow, *Survey of London*, pp. 49-50.

⁵ C. J., VIII, 539. *Treasury Papers* (P. R. O.), 291/53.

⁶ C. J., IX, 735; XI, 429; XIII, 137, 208.

⁷ See Moore's *Index to the Commons' Journal*, 1714-74, under "Water."

⁸ *Cal. State Papers Domestic*, 1698, pp. 303, 333.

water and cannot be supplied without considerable charge.”⁹ Here the water was to be raised by “a forcing engine” from the river Ravenborne. The projectors claimed that they had already spent upwards of £600 and that the making of cisterns and conduits, the digging of trenches and laying of pipe-lines would cost many thousands more. They conceived “the profits will be small and will no way answer the charge” unless His Majesty grant them an exclusive licence for five hundred years at a nominal rent. Their petition was referred to the Surveyor-General, who reported favourably on the project and suggested a clause requiring the projectors to supply the Royal Hospital at Greenwich. With this rider, the Treasury “granted” the licence on the terms desired.

What first attracted Yarnold to Newcastle is uncertain. The industrial area of the Tyne had long been a happy hunting ground for speculators from London. As recently as 1693, Thomas Neale of the Mint, Alderman Bacon, the Lakes (later Sir Bibby Lake), John Tyzack and many other Londoners had invested heavily in the North Blyth Company with a subscribed capital of £10,000, which was to have a chequered and unsavoury history in the next quarter of a century. Whether Yarnold had interests in this concern is uncertain, but it is known that Mr. Meres, a director of the Sun Fire Office and of the York Building’s Company, had. A little later Meres and certain “fire engineers” had a controlling interest in the Savery-Newcomen patent as coal-owners on the Tyne were to discover to their cost. But that is another story. In 1713 one Nathaniel Yarnold applied for a grant to run the mail packet service from Dover and Harwich to the Continent¹⁰—we know that there was a proposal about this time to put the new steam engine in ships. We are clearly in the wake of an interesting scientific development.

⁹ *Ibid.*, 1700, pp. 73, 395. *Calendar of Treasury Papers*, LXX, §29; I.XXV, §15. William Rider who had obtained Letters Patent for the supply of Deal in 1688 subsequently claimed that he had been at great charges “in causing engineers to go from London.” C.J., XIII, p. 180.

¹⁰ *Ibid.*, CLX, §13.

Under the terms of the Newcastle Water Act, William Yarnold was empowered to ask the sheriff to appoint local commissioners to assess damages and settle questions of compensation for disturbance of ground in the digging of trenches, laying of pipes, making of cisterns and conduits and other work necessary for the undertaking. It is known that the commissioners, appointed by the High Sheriff of Durham, had three meetings for this purpose in 1699, on the strength of which Yarnold promoted in February 1701, a second bill in parliament to confirm and strengthen his position.¹¹ In this petition he claimed that he had "brought sufficient fresh water to serve the town" from a place called "*The Zeme*," situate in County Durham, some four miles from Newcastle. Brand in his *History of Newcastle*, supposed that the water came from three springs in Great Usworth Moor.¹² There is a place called "The Leam" a little to the north of Usworth. It would appear, however, that it was obtained from the wastes on Gateshead Fell; certainly it was brought through the inclosed grounds of the manor of Gateshead.¹³ In March 1700, Yarnold obtained leave from the common council of Newcastle to erect a cistern on the top of Cale-Cross, "carrying a pillar up in the middle and laying on it a new roof of lead" and, at the same time, he got permission to remove the cross in the Flesh Market and to erect there, on columns, a thirty feet square cistern. There were other cisterns at White Cross and at "The Side" part.¹⁴ Whether a forcing-engine was ever erected is uncertain: from the site of the reservoir at Gateshead it is conceivable that gravitation would suffice to maintain a level in the cisterns on the other side of Tyne.

An indenture has survived, dated 12th September 1700, between William Yarnold "for and on behalf of the pro-

¹¹ *Commons' Journal*, XIII, p. 763.

¹² Brand, *loc. cit.*, I, pp. 444-5.

¹³ *Infra*, p. 122.

¹⁴ Brand, *loc. cit.*

prietors and owners of the New River” and one Roger Garsell, vintner of Newcastle, under which Yarnold undertook to lay “a pipe of lead containing about three-quarters of an inch of water . . . in and through one small cock of brass souldered and set into the same” into the kitchen of the said Garsell who, in turn, covenanted to pay for a term of three years a yearly rent of £3, in quarterly instalments, for the supply of the said water, “casualty of fire or other unavoidable accidents, extraordinary and great frosts excepted.” (New wine into old bottles!) There were additional clauses giving Yarnold and his assigns the right of entry into the premises for purposes of inspection and the right “to cut off the said quill or branch-pipe” in case of abuse or non-payment of rent by the lessee. The indenture was signed by Yarnold himself and J. Petry on behalf of the proprietors and duly sealed and delivered with “a double stamp” (two sixpenny’s) in accordance with the stamp act of 1694.

That the proprietors did deliver the goods is indisputable, for there have survived the half-yearly accounts for the years 1721-23 inclusive. As these are identical in form it will be sufficient to reproduce the first for the half year ending Lady day 1721.

<i>The Names of the Several Streets where the water serves.</i>	<i>The Annual Rents.</i>	<i>Rents received every half year.</i>	<i>Abatements for want of Water.</i>	<i>Arrears.</i>
Keyside	£40 13 0	The figures in this column are approximately one-half of those in the preceding column, less any amounts for arrears or abatements.	There was an abatement of two shillings for “want of water” in the Close.	£2/12/6
Butcher and dogg banks	£6 10 0			5/-
Sandhill	£15 5 0			(?)
Castle Garth	£6 0 0			(torn MSS.)
The Close	£24 6 0			£2/11/9
The Side	£56 19 0			£1/-/-
Westgate & Denton Chaire	£17 15 0			—
Flesh Market	£44 9 0			—
Pilgrim Street	£33 15 0			—
Gateside	£44 15 6			£2/14/6
Totals	£290 7 6	£141 4 6	£7 7 9¹⁵	

¹⁵ Obviously an error.

The disbursements for this half-year were £143/11/6. The figures for the following half-yearly periods were as follows :

	<i>Annual Rents.</i>	<i>Receipts (half yearly).</i>	<i>Disbursements.</i>
½ Year ending Michaelmas 1721	£301/3/6	£143/4/-	£176/18/1½
" " " Ladyday 1722	£315/13/-	£147/11/3	£191/14/9½
" " " Michaelmas 1722	£323/14/-	£153/15/9	£187/16/6½
" " " Ladyday 1723	£340/16/6	£157/10/3	£200/4/1¾
" " " Michaelmas 1723	£346/-/6	£156/16/10½	£216/12/5¼

Thus it is clear that although the rents were steadily expanding it was not, in fact, a paying concern.

A comparison of the figures for Michaelmas 1723 with those printed above gives some indication of the places where the biggest expansion had occurred. Gateside [i.e. Gateshead] had gone up to £63/5/-, the Flesh Market to £52/8/-, Keyside to £52/-/6; elsewhere the increase was small, while the rents from Pilgrim Street actually showed a slight decrease. That all was not well may perhaps be deduced from the column headed "Abatements for want of water"—all but three of the places in the list (Gateshead was a notable exception) now had small amounts allowed; the Side, the Close and the Castle Garth were the scenes of the worst trouble. These accounts were prepared by Mr. Whitaker, who was presumably the collector or cashier. He was possibly a relative of a person of that name who was in the employ of Sir Ambrose Crowley at the famous Winlaton iron works: the form of the accounts bears some resemblance to those at Winlaton. At the foot of the last half-yearly account, Whitaker added this note. "Two milles rented of Robt. Ellison Esq. at £40 per ann. and have allwaies been let at £20 per an. till lately that I raised it to £23 per an: the rent badly paid." This is interesting as showing the principle of assessment used by the water company, viz., half the rentable value.

Some time before, however, the proprietors had encountered trouble from another quarter.

[Draft.]

PARK STREET,

April 4. 1718.

M^r PRICE.

By what has [been reported to] us since I came to Town and from your behaviour to me in the Country and what has been suggested to you from thence, that I may be likely to make a Great waiste of your water. I apprehend it will be difficult to make an accomodation with the Gentlemen that are the proprietors, or at least there will be so great a delay in my haveing the water laid into my house & the terms of my being constantly supplied so hard to fix that I find myselfe obliged to take some other method for bringing water to supply my family & hope you will be so kind as to agree with some of my neighbours, that are more acceptable to M^r Whitaker & that have grounds laying contiguous to mine for making a Pond and as, for the time you have had the use of my ground, I desire no further consideration than that you will leave my ground as good as it was before the pond was made there. When you consider the delay that has [been given me] in this small matter . . . and the reasonable demand I made of M^r Whitaker in July last & of yourself since, I am persuaded you will think it just for me to resolve on having no more to do with your people for I am satisfied I shall have no good neighbourhood from them. This, I beg you will be pleased to take notice of & beleive me to be

Your most obedient humble servant.

W^m COTESWORTH.

It was soon apparent that the new Lord of the Manor of Gateshead had more sinister intentions.¹⁶ In the next month he took the opinion of learned counsel, Mr. Thomas Lutwyche, on the matter in dispute. In setting out the case for counsel's consideration he pointed out :

¹⁶ Cotesworth had succeeded to the manor of Gateshead in 1716 on the death of his brother-in-law, Alderman William Ramsay. The above letter and other material used in this paper are from the *Cotesworth MSS.*, now deposited in the Public Library at Shipcote.

- i. That the Bishop of Durham had granted a lease to the manor of Gateshead for twenty-one years to Dame Elizabeth Gerard from 29 May 1696 which expired in 1717.
 - ii. That under the act 10 William III for the better supplying the town of Newcastle with fresh water, W^m Yarnold had procured from the Sheriff of Durham three inquisitions the first of which assessed Lady Gerard's damages in cutting trenches and laying pipes through certain inclosed lands; the second through certain wastes, & the third 'in making a large Receptacle, Bason or Pond in other parts of the inclosed lands' and such damages were accordingly paid to the said Lady Gerard.
 - iii. 'But no damages were assessed in respect of damages accruing to the Bishop in whom the inheritance was.'
 - iv. That on 25th Feb. 1702, the Bishop granted a fresh lease of 21 years of the manor to M^r Bassett (who had married Lady Gerard) which lease by several assignments is now vested in W^m Cotesworth.
 - v. 'The water in this Bason or Pond very often breaks through ye Bankes . . . and overflows and damages other great parts of the inclosed Lands.'¹⁷
- 'Qu[ery]. Whether M^r Yarnold had by this act . . . a power to make a Bason or Pond in the inclosed lands.'
- M^r Lutwyche. 'If this Bason or Pond was necessary for ye work intended to be compleated, I think Yarnold had power to make such pond or bason in those lands.'
- 'Qu. Whether Lady Gerard having received ye damages assessed by the said inquisition in respect of this Pond or Bason & ye said lease, then in being, being since expired M^r Cotesworth is obliged by Law to permit ye continuance of ye said Pond or Bason.'
- M^r Lutwyche. 'The Act plainly intended a satisfaction to

¹⁷ Cotesworth, at this time, farmed considerable areas about Shipcote, Balkfield and Kirver's Close.

every person in proportion to the estate and interest that he had [cites the act]. And if the Lady Gerard's damages were only considered I think that ought not to be binding to M^r Cotesworth who does not now claim under that lease. But the act seems not to be fully worded for a remedy in this case for first it gives a general power for Yarnold etc. to enter and work, and then a power to the Sheriff at the request of Yarnold to call a Jury to assess damages & then a Proviso that it shall not be lawful for him [i.e. Yarnold] to enter etc. until payment of the sums so ascertained and assessed which may be doubtful whether that is a sufficient restriction where the Case happens.'

'Qu. Whether Lady Gerard having received ye severall damages . . . & the said lease then in being, being since expired, M^r Cotesworth is obliged by Law to permit the Continuance of ye said pipes through his grounds.'

M^r Lutwyche. 'That he [i.e. Yarnold] neglects to get any inquiry at all or anything assessed, but I conceive that the interpretation ought to be that when he neglects to get the damages of the reversioner assessed that it is not lawful for him to enter or convey water etc. and therefore as to the reversioner when his interest commences in possession he may (as I apprehend) bring an action of trespass for entering his ground and working there. And if that should be adjudged not to lye as the act of Parliament is worded, he has no remedy but to bring a Bill in Equity to compel the undertakers to procure an assessment of the damages according [to the intention of the act]. . . . As to the first laying of the pipes, the chief damage seems to have been to the then owner . . . but in respect of the opening of the ground for reparacon that the present lessee ought to be considered in the manner above mentioned.'

Whether Cotesworth did sue the proprietors is not

known at present; they were scarcely in a position to fight an expensive action. For the present, the story must end there. Brand records no more instances of complaints of shortage of water and of action by the Common Council until 1737, so presumably the "New River" supply continued.