

GAS SUPPLY AT WOTTON-UNDER-EDGE

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At the end of the Second World War there were 28 undertakings supplying gas in Gloucestershire (1). Originally they each made their own gas but by this date several had ceased production and relied on neighbouring companies for bulk supplies which they distributed to their customers. The gasworks at Wotton-under-Edge were opened in Valley Road in 1839. Gas production on the site ceased in about 1944 and bulk supplies were obtained from Dursley gasworks about 4 miles away. Initially one gas holder at Wotton was still used but eventually this too became redundant and was demolished. The one-acre site was used for many years as a builders yard until five red-brick detached houses were completed there in 1995. Today numbers 13-21 Valley Road occupy the old gasworks site and no trace of any former industrial activity can be seen.

The aim of these notes is to set out a brief history of the gas works at Wotton-under-Edge before they are totally forgotten. Unfortunately the company records do not appear to have survived. This account is therefore based mainly on the report of a public inquiry in 1854, gas industry Year Books and information kindly provided by local residents.

Early History of Wotton-under-Edge Gas Works: 1839 Onwards

The period 1820-1850 saw a rapid expansion in the number of gas works across the country. There was a chronological pattern of new supply to progressively smaller towns. The 1820s saw most gas undertakings established at towns with populations of 10,000 or more; the 1830's towns of 4,000-10,000 and the 1840's towns of 2,500-4000. (2). The population of Wotton at the end of the 1830's was about 5,000 and so the establishment of a gas works in the town in 1839 was consistent with developments nationally. A major factor leading to the establishment of so many gas works at this period was the passing of The Lighting and Watching Act of 1833. This gave parishes the opportunity to install street lighting if they so wished. The Wotton-under-Edge Gas Light and Coke Company was formed under this act in 1839 as a joint stock company.

A site on the south side of Valley Road between the road and Dyer's Brook was chosen (ST761935). The gas works at Stroud had been established 6 years earlier and it appears that Wotton enlisted the help of the Stroud Gas Light and Coke Company as they were described in 1854 as "the projectors" of the scheme (3). Between 200 and 300 shares of £12 were issued and about £3500 was spent on the works (3). No information has come to light, so far, on the layout or capacity of the plant at this period.

The Situation in 1854

The intolerable living conditions brought about by rapid population growth in industrial areas during the early part of the 19th century led to some very important legislation. The Public Health Act of 1848 provided for the setting up of Local Boards of Health which had powers to bring in schemes for vital services such as water supply, drainage and sanitation. In 1854 an attempt was made to obtain a Local Board of Health for Wotton. The necessary public enquiry was held and the inspector, Thomas Webster Rammell, recommended that such a Board should be formed. However, the opposition from some of the ratepayers who foresaw greatly increased rates ensured that the scheme was not carried out.

The inspector's report includes quotations from the evidence presented to the enquiry and gives an extremely detailed account of the appalling conditions the residents had to endure (3). Among his conclusions Rammell states that the town "is lighted with gas, by a private company; but it would appear insufficiently so". The report gives an indication of the area supplied as it notes that "pipes are laid through all the main streets". All parties residing within 300 yards of a lamp were rated towards public lighting. There were 42 public lamps in 1854 at a cost of about £2 each per year. There was some private lighting and this was charged at the rate of 8s 4d (42p) per 1000 cubic feet of gas. The Inspector noted that the rate had fallen gradually from the original figure in 1839 of 15s (75p).

These charges were considered high by the Inspector. However, the charges per 1000 cubic feet at Moreton-in-Marsh (4) were 9s 6d (47p) in 1848 falling to 7s 6d (37p) in 1860 which suggests the charges for these two works were in fact fairly similar. The Inspector considered that despite the high charges "the speculation would appear to have been far from profitable". He went on to quote Mr William G Foxwell, a director of the gas company who referred to the large fall in the price of the shares over the 15 years the gas works had been in operation. Foxwell considered the present value of the £12 shares was now no more than £4 at the most. Indeed, Foxwell recalled that one block of 15 shares was sold for just 48s (£2.40) per share. At this time about 170 of the shares were held by towns-people.

It was Foxwell's opinion that the town was "neither well or sufficiently lighted". He felt that twenty more lamps would be desirable (but then as a director of the Gas Company perhaps he would say that!). He conceded that there was a difficulty levying the rate as it stood and with fifty per cent more lamps it would clearly be more difficult still. He also referred to the "much difference of opinion in the parish formerly as to the lighting". It seems that for three years a gas rate was set over the whole of the Parish.

The Rev. Benjamin Perkins was Vicar of Wotton-under-Edge from 1829 to 1881. He elaborated on the attempt to levy a gas rate over the whole parish although only the residents in part of the parish actually benefited. He said that this action had "excited very great discontent and opposition". The rate could not be collected and consequently the gas company remained unpaid for three years, although they continued to light the town. Several persons paid rates during this period and, allegedly, the money was not properly entered in the accounts. Rev. Perkins said that this made the same people very reluctant to pay at the present time. He admitted that, for this reason, he did not pay immediately himself although he was a shareholder. He also suggested that the reason for the depreciation in the value of the shares was due to the fact that the town had made "a bad bargain with the projectors", that is, the Stroud Gas Light and Coke Company. In his opinion the gas works could have been built for only two thirds of the actual cost. In fact the cost of Moreton-in-Marsh gas works when it opened in 1848 (4) was a mere £1500 compared to £3500 at Wotton.

The Situation in 1917

The next year for which details are available is 1917 as the annual report and accounts survive (5). The company was now The Wotton-under-Edge and District Gas Company Ltd having changed its name in 1912. Mr Edward J. Close, the Chairman reported that the year's working had followed on much on the lines indicated in the last report but bemoaned that the

difficulties then mentioned had been accentuated. As it was wartime the cessation of public and all exterior private lighting, together with further lighting restrictions had seriously affected income. Another problem was that for the greater part of the year the gas works had been without adequate technical assistance. They also had the misfortune to lose one of their horses which, because it was wartime, could only be replaced by a mule. Nevertheless they were able to record a small surplus in the revenue of nearly £250 which meant that after paying interest on debentures and loans they were able reduce their overdraft at the bank by £116 to £411.

The Plant

A picture of the gas works in about 1944 has been published in a book containing old photographs of Wotton. (6). It shows the retort house, coal store, two gasholders and a large stack of coke. An entry in a directory of 1938 refers to the works as having horizontal retorts and no carburetted water gas or other plant. It can therefore be described as a very traditional "village gas works". Two gas holders are shown on the 25 inch Ordnance Survey map of 1882 (7) and reference is made to two gasholders in 1926 where the capacities are given as 20,000 and 30,000 cubic feet. In the same year the total length of gas main in use was estimated to be 4 miles. A 1933 directory again mentions two gasholders but the total capacity of the two is put at 70,000 cubic feet.

The 1936 edition of the 6 inch O.S. map (8) confirms that changes had been made. The location of the northern gasholder appears unchanged whereas the southern gasholder now lies further east, that is, nearer Dyer's Brook. Later on, in the 1950's, a plan of the site describes the northern gasholder as two-lift with a capacity of 24,000 cubic feet while the southern one is marked as disused (see Figure 1). The works were equipped with a weighbridge to check the consignments of coal coming in and coke going out.

In the 1930's coal from the Forest of Dean and Yorkshire was used. It was delivered to Charfield Station on the Bristol to Gloucester line about 3 miles away and brought up to the gas works by lorry. One resident remembers a lorry load arriving every morning. The coal merchant, J. Williams and Co, was a regular supplier to the works at this time (9). The Gas Company office was at 15 Church Street, now the India Palace Restaurant.

Gas Production and Other Statistics

Sample figures for gas production, taken from some of the available gas industry Year Books are shown in Table 1. These cover the period 1839 to 1948 and show the annual tonnage of coal carbonised, the volume of gas made per annum, the price per cubic foot and the numbers of public lamps and customers supplied.

The amount of gas produced remained relatively constant during the 19th century and up to 1914 at about 4 to 5 million cubic feet per annum. Production increased significantly in 1914 with 7.5 million cubic feet produced. It stayed at this level for the next ten years and was then pushed up steadily to 18.7 millions by 1939. The amount of coal used increased from 500 tons by 1886 to an estimated 1500 tons by 1944. The use of gas for cooking and heating was gaining popularity at about this time and was likely to be the reason for the increased production.

The price per 1000 cubic feet of gas dropped steadily throughout the 19th century from 15s (75p) in 1833 to 4s (20p) in 1895. It then remained at the latter value until the First World War. The price had increased to 5s (25p) per 1000 cubic feet of gas by 1918 and was as high as 6s 6d (33p) in 1920-1. Thereafter up to the Second World War the price was between 5s and 6s (25p-30p).

Two methods of payment were available to customers. Ordinary customers had a meter which recorded the amount of gas used and they paid less than prepayment (slot meter) customers. In 1924 there were 260 ordinary customers compared to 136 with slot meters. By 1947 there were 373 ordinary domestic customers compared to 732 who used slot meters. In addition there were two industrial customers but it has not been possible to identify them yet.

The number of cookers in use by 1915 was recorded as 120 and the number rose steadily to 200 by 1925. Over the next six years the number increased to 430 by 1931 and reached 560 by 1933. Further details of the numbers of ordinary or slot meter customers and cookers are given in Table 1.

The 42 public lamps in 1854 had almost doubled in number by 1910 when the peak of 81 was reached. Over the next ten years the number declined to 40 by 1920. From now on the number of public lamps fluctuated and after 1929 competition in the form of electricity was available. However, the parish did not go over to lighting by electricity immediately and even when then did they subsequently went back to gas for a time (10). Examples of the types of lamps used can be seen in old photographs of the town. One shows a lamp post in the middle of the road at Old Town at the exact spot occupied by the War Memorial today (11). Some of the lamps in Bear Street were suspended above the roadway on a long arm which could be rotated through ninety degrees to lower the lamps for ease of maintenance (12). As late as 1947 some gas was being supplied for some public lighting but it would only have been sufficient for a few lamps.

By 1938 the Company was controlled by the South Western Gas & Water Corporation. This was a holding Company which by then had 23 Gas Companies and also several Water Companies. Their largest acquisitions were Truro, Dorchester and Wotton's nearest neighbour, Dursley. The Corporation supplied central administrative services, bought coal more cheaply and provided technical, marketing and financial expertise.

By 1944 Wotton appears to have stopped production and was taking its supplies from Dursley. A four inch diameter high pressure pipeline was laid from Dursley gas works at Kingshill to Wotton by way of North Nibley. The work was carried out by the firm of J. H. Grange and Son, public works contractors, from Woodmancote, Dursley. (12). This provided the capability to increase supply from 18.7 millions in 1939 to 25.9 million cubic feet by 1944 and no less than 37.0 millions by 1948. It is interesting to note that the figure of 37.0 millions is for gas bought in while gas sold only accounted for 33.7 millions giving an indication of the likely losses through the distribution system. The site continued as a holder station until the late 1960's.

By-products

The main by-product was coke. Some of this would be burnt in the furnaces to carbonise further coal to produce more gas and some was sold off to the public. In the 1930's all the

coke that could be got into a wheelbarrow cost 6d (2.5p) and a large lorry load cost 30s (£1.50). A lot of the coke went to local schools such as Kingswood and Wickwar as well as in the town. Some residents can recall warming themselves during their schooldays round a coke-fired "Tortoise Stove". This was a common type of cast iron stove at that time. It got its name from the cast iron trademark in the form of a tortoise.

In 1926, 533 tons of coke were made of which 250 tons were used in the furnaces. The price of coke was 24s 6d. In the same year 7,200 gallons of tar and 9,000 gallons of ammoniacal liquor were collected by the Bristol firm of William Butler and Co for processing. The liquor provided a source of ammonia or sometimes it was put directly on the ground as fertiliser. The tar was distilled to provide a number of useful by-products. Also, tar was obtained from the gas works by local farmers who used to treat gate and fence posts. (13)

Some Personalities Associated with the Gas Works

There were a number of people who gave the Gas Company long and loyal service. The most notable of these that we know about was undoubtedly Edward James Close. He was associated with the company from at least 1914 to his death in 1949. He was a very prominent public figure and fifty years after his death he is still remembered by some the older residents. He was both Chairman and Secretary of the Gas Company. He combined these interests with a drapers and milliners shop run with his wife in Long Street. Teddy Close, as he was known, was a County Councillor, and Chairman of Wotton Parish Council and the Parochial Committee. He died in the retiring room at Wotton Magistrate's Court just after being re-elected chairman of the bench (14).

During the 1930's and 1940's he was assisted by his niece Gwen Haynes (née Close) who handled a lot of the administrative work and dealt with the public (9). This was not an easy job during the war when gas was rationed to 1939 levels and there was a shortage of fitters to carry out work on consumers' appliances. One of her jobs was to drive Mr Close's car down to Charfield Station to collect Mr Norton H Humphreys, Engineer and Manager of the Salisbury Gas Light Company, who had a wide consulting practice and was a well known author on gas matters. The greatly increased production in about 1914 may be due to Mr Humphreys joining the company as a director at this time.

Before Teddy Close, Mr William Townsend Adams was Manager and Secretary of the Gas Company from at least 1894 up to 1913 and Mr. W. L. Tapscott was the Chairman from about 1898 to about 1914. W. Owen is listed as manager in 1921 and he continued in this role until about 1940. He occupied the dwelling at the western end of the site which was known then as the "Gas House" and is now 11 Valley Road. This is a large house and it needed to be at that time as Mr Owen is remembered as having 19 or 21 children.

In 1948 Mr T L Tallantire is listed as the engineer at Wotton. He was actually the Engineer and Manager at Dursley gas works, and a number of small undertakings then controlled by the South Western Gas and Water Corporation had been placed under him. In the same year the distribution manager for Wotton is given as Mr C. L. White but he may not necessarily have been Wotton based. One of the stokers in the time of Gwen Haynes was Fred Bennett. She recalls that Fred collected edible snails when in season, cooked them on a retort and served them with butter, salt and pepper (9).

Epilogue

The gas industry was nationalised in 1949 and the holder station came under the control of the South Western Gas Board. Part of the site became occupied by Horace Tiley a local builder and eventually the whole of the site came under the control of the building firm Jotcham and Kendall. They used it as a builders yard and went on to build the five houses that have occupied the site since 1995.

Today, natural gas from the North Sea is distributed around the country at high pressure by a network of pipelines known as the National Transmission System. The pumping station at Pucklechurch forms part of this network and it supplies gas in the Wotton area.

Concluding Remarks

It cannot be said that there is anything out of the ordinary about the history of the gas works at Wotton-under-Edge. However, for more than 100 years it supplied the community with fuel for lighting, and later on for cooking and heating. It therefore played a vital role which should not be forgotten. Hopefully, sometime in the future, it may be possible to learn more about the works and its people.

References

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- (14) Dursley Gazette, 17 January 1949.

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Board of Trade: Returns.

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Year ¹	Coal Carbonised tons	Gas Make millions of cubic feet per annum ²	price per thousand cubic foot (credit)	Customers ³	Public Lamps	Notes
1839						
1854						
1886	500		4s 9d			
1895		4	4s 0d	202	62 @ 32s	Capital £3200, Dividend 7%
1898		4.5	4s 0d	220		
1900	750	4	4s 0d	225	65 @	Population supplied 3275
1906		4	4s 0d		75	
1910		4	4s 0d		81	
1913		4	4s 0d		81	
1914		c.4		222	78	Population supplied 2992
1915		7.5	4s 0d	355 (114)	75	
1918		7	5s 0d	355 (125)	75	120 cookers
1920		7	6s 6d	355 (125)	40	120 cookers
1921		9	6s 6d	405 (145)	40	150 cookers
1923		8	5s 10d	400 (159)	46	150 cookers
1924	821	9.7		396 (136)	50 @ 62s 6d	Population Supplied 3000 Capital £3200
1925		10	5s 5d	430 (180)	50	200 cookers
1927		12	5s 0d	480 (230)	54	230 cookers
1931	1330	14.5 (13.1)	5s 5d	620 (313)	90	430 cookers
1933	1200	15 (13)	5s 5d	750 (475)	25	560 cookers
1937	1300	16 (14.9)	5s 2½d	900 (400)	30	
1938	1300	17 (14)	5s 2½d	935		Capital £6780
1939		18.7				
1944	1800*	25.9				
1947		37 (33.7)		1107 (732)		
1948		35 (32)	6s 5d			

Notes

As with all Year Books the statistics apply to one year previous to the year given.

Figures in brackets give volume of gas sold.

Figures in brackets give number of slot meters

Estimated tonnage.

Table 1 Sample Production Figures and Other Statistics

Figure 1
Wotton-under-Edge Gas Works
The site in c1960 after closure

