

## Bathford Paper Mill

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Now one of the few survivors in Avon of a paper-making industry that was once widespread, Bathford Mill is one of the few paper mills in the world to specialise in the production of cylinder mould paper. This process, originally developed in the 19th century, has been largely replaced by the much faster Fourdrinier process. However, the cylinder mould process is still widely used for the production of high quality watermarked paper and artists' paper.

A mill at Bathford is recorded in the Domesday Book of 1086, but this was almost certainly a grist mill. A deed of 1539 describes the mill as a grist and fulling mill - not an unusual combination of functions at this time. The mill had been leased to William Gamage for 66 years in this deed and two surveys of 1605 and 1606 record that it was now leased to William Dueke as a granary and fulling mill 'with two stones under one roof'. More detail is provided in a document of 1639 when the mill passed from William Fisher to his son Thomas: it is described as

'all that messuage or tenement garden orchard and water corn or grist mill and fulling mill with two stocks being under one roof lying in Bathford commonly called or known by the name of Ford Mills alias Gamage Milnes (ie Mills) now in the occupation of Thomas Skrine of the well tenement . . .'

There is a further reference to a 'water-grist mill and tucking stocks' in an advertisement for a farm sale at Bathford in the *Gloucester Journal* of 14 August 1733. Shortly after this, the mill became known as Trevarno Mill, after the name of a nearby cottage owned by Dr William Oliver. He was the well-known doctor of Bath who invented the Bath Oliver biscuit, which he prescribed for patients undergoing a special diet while taking a course of the waters. It is claimed that Dr Oliver used the mill to produce flour to make his biscuits. More certain is that after 1740 he also built a spa pavilion near the mill by a spring which had been discovered to be of medicinal value. The pavilion was designed by John Wood the elder, the famous architect, but no trace of it remains.

The miller at this time was Arnold Townshend, whose widow sold the mill in 1756. In 1768 the property passed to James Yeeles (1726-94), a skinner, and was used as a leather mill when recorded on a map of 1792. Skins would sometimes be beaten by hammers, similar to those employed in fulling or tucking mills, during the dressing process. Robert Eeles - an earlier form of the name Yeeles or Yeels - occupied a mill in neighbouring Batheaston in 1626, where there was also a leather mill in the seventeenth and eighteenth centuries.

The Yeels' mill in Batheaston had become a paper mill by 1799 and Trevarno Mill in Bathford was certainly producing paper by 1809, when watermarks

for this mill have been noted. By 1812 it was known to the Excise Commissioners as 'mill no 18' and was then worked by George Yeeles and John Midhurst. The mill almost certainly produced hand made paper at this time and some sources suggest that paper was made for Treasury notes. An advertisement in the *Bath Herald* of 23 August 1849 - which described the premises as 'those valuable and high reputed premises called Trevarno Paper Mills' - refers to 'a very superior Steam

Apparatus lately erected by Messrs Stothert & Co' and also that the mill had 'established its long reputation for making the finest writing papers in the Kingdom'. The quality of water is crucial in papermaking and 'a constant spring of perfectly pellucid water' is also noted here.

TO BE LET,  
*And may be entered on immediately, on Lease of Four or Seven Years,*  
THOSE VALUABLE AND HIGHLY REPUTED PREMISES, CALLED

### TREVARNO PAPER MILLS,

WITH a comfortable FAMILY RESIDENCE and Garden, &c., situate in the Parish of BATHFORD, in the County of Somerset, three miles from Bath by the London Turnpike Road, to which the Premises adjoin; and within four hours of the Metropolis by the Great Western Railway (from London to Exeter), which passes near thereto, the Box Station being only one mile and a half from the Mill, so desirable for the London and other markets.

The Premises and Machinery, which have cost the Proprietor a very considerable sum of money, are in excellent condition, and replete with every required advantage; worked by a powerful stream of water, and possessing a constant spring of perfectly pellucid water, that has established its long reputation for making the finest writing papers in the kingdom.

The Mill is also provided with a very superior Steam Apparatus, lately erected by Messrs. Stothert and Co., of Bath, on the most approved principle, for the purpose of boiling rags, warming and drying in the lofts and work-rooms, heating the vats, sizing vessels, and felt-washing vessel: the whole so arranged as to produce the utmost economy, cleanliness, and convenience in its several operations.

An order to view, and further particulars, may be obtained at the Offices of H. J. MANT, Esq., Solicitor, Wood Street, Bath. (33)

Sale advertisement for Trevarno Mill, Bath Herald  
23rd August 1849

Circular marks were recently discovered on the wall of a culvert under the mill. Almost certainly these were formed by a water wheel.

A horizontal water turbine, probably dating back to the 1850s, was also discovered. Water was channelled below the turbine and then forced up through the turbine blades, turning the shaft in the process. Plans have been found to use the turbine to drive an electrical generator - probably in the 1920s or 1930s - but these were not put into operation.

In spite of the mill's reputation, the supply of clear water and its location close to the Bath to London turnpike road and, later, the nearby Great Western Railway, the business changed hands on a number of occasions and up to 10 occupiers failed in these early years. In the 1858/9 directory the

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Trevarno Mill in the early 1800s

mill was occupied by Thomas Dewdney who also rented a former cloth mill in Batheaston in 1856 and produced 'grocery papers and double small hands' here in 1860, with a workforce drawn from such diverse places as Bristol, Winchcombe, Market Deeping and East Malling. Dewdney had been awarded a prize medal at the Great Exhibition of 1851 for his writing paper and the permanent dye of his blue paper. Other operators included Thomas Henley (c1864), George Hill, John Hill (1868/9), William Southwood (1870) and Messrs Southwood and Unger (1872).

In 1873, however, the business was bought by Albert Reed, who subsequently went on to found what is now Reed International. Reed gradually moved the production from thin coloured wrapping papers to the more profitable coloured printing papers, for which the mill built up a good reputation. By the end of 1875 this strategy paid off, and the mill was operating profitably. In purchasing the business, Albert Reed had substantial

financial backing from Thomas Owen and Samuel Evans. Both men were strong Wesleyan Methodists and partners in Evans & Owen, a well known firm of drapers in Bath. The firm had close connections with what is now Owen Owen plc, the department stores group.

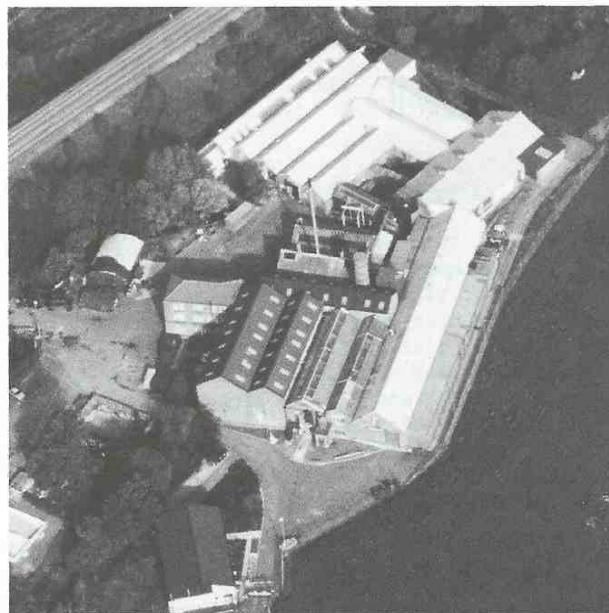
In 1876, Albert Reed sold the mill to a newly formed company with a nominal capital of £20,000, Bath Paper Mills Company, in which Thomas Owen and Samuel Evans were the major shareholders. Albert, together with his brother William and father Edward, was a minor shareholder and continued to manage the company until 1877, when he moved to Cardiff to manage the Ely Paper Company, recently purchased by Evans & Owen. Evans & Owen also purchased mills at Rippenden, near Halifax, and Ramsdunk, in Holland, and became one of the leading suppliers to the newspaper industry. Although Reed was at the mill for only four years, he retained a considerable affection for it. He said that his ideal was to have a mill somewhere in the country, where he could live among the people of the works, he knowing them and they knowing him. At Trevarno he came closer to this ideal than at any other time. In later life he used the name Trevarno both for his own home and for cottages built for his workers. After Reed's departure, the mill continued to thrive by producing coloured printing papers.

*The Horizontal Water Turbine. Water was channelled underneath the turbine and then forced up through the turbine blade, turning the shaft in the process., The shaft in the foreground is believed to be used for altering the angle of incidence on the blades.*



By this time, British paper-makers had solved the pressing problem of a shortage of rags, the original raw material of the trade, by the use of esparto grass, first successfully employed in 1856 by Thomas Routledge at Eynsham Mill in Oxfordshire. Esparato was certainly in use at Trevarno Mill in 1884, when a major explosion of the esparto boiler wrecked half of the premises. Pieces of broken masonry, timber and shattered iron plate were recently discovered about one metre below ground level. These are believed to have come from the esparto boiler explosion. In 1899, the mill was extended and a 90ins machine from Bentley & Jackson was installed. Paper had previously been produced on a machine of 54ins. By 1908, however, the company was in financial difficulties and the shareholders called in Thomas Bray Tabb to manage the business. As a young man Tabb had left Cornwall to seek his fortune in London. On the way he came through Bath and decided to settle there instead, starting a business as a stationer. By the time he was asked to manage Bathford Paper Mill, he had retired from his stationery business in Bath. Under his management the firm prospered and orders were placed for two new paper machines. However, in 1910 there was a major fire, as a result of which Bath Paper Mills Company was wound up. Meanwhile, Henry Samuel Tabb, Thomas Bray's son, had been managing a paper mill at Ryburndale in West Yorkshire. Following the fire at Bathford Mill, he raised enough money to buy the site and, while still working in Yorkshire, made all the drawings and preparations for the mill at Bathford, now known as Bathford Paper Mills Company. A 250hp steam engine had been installed in 1911 and in 1913 the new mill started to make paper, concentrating on lightweight papers for bibles, dictionaries and encyclopaedias. Customers included Oxford University Press, the British and Foreign Bible Society and Lloyds. Other publications printed on Bathford paper included the Automobile Association Year Books and Punch. Throughout this time Bathford Mill had close links with Ryburndale Mill, and in 1960 the two were combined into Bathford and Ryburndale Holdings. Electric power was installed in 1966, replacing the 1911 steam engine. The engine, complete with a 12ft flywheel, is now running in Wendron Forge Museum in Helston, Cornwall.

Both mills continued to concentrate on lightweight paper until they were purchased by Portals in 1972. In 1973 production of all lightweight papers was moved to Ryburndale,



Bathford Mill, the only paper mill in the world totally specialising in non-banknote high security mould paper.

while the machine at Bathford was converted to enable it to produce high quality watermarked cylinder mould paper. Since then, Bathford Mill has substantially increased its production based largely on an expanding export business. In addition Portals is also heavily involved in water treatment, engineering and property.

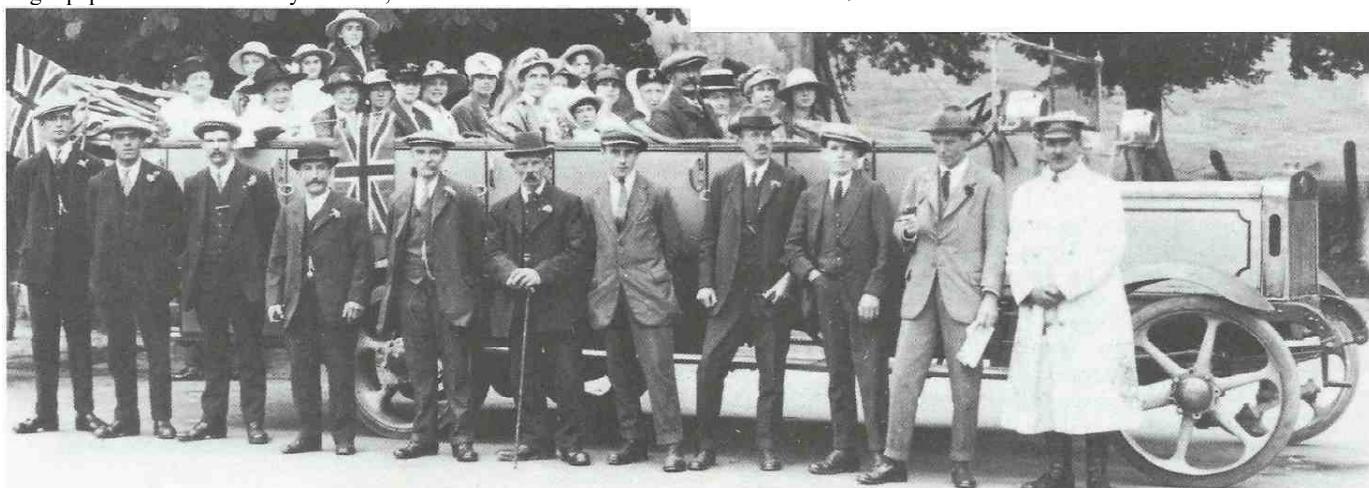
## References and further reading

The references to early deeds are from Somerset Record Office, collections DD/SK 10/4, No 4.

The report of a BIAS paper mills survey, by Brian Attwood, was published in *BIAS Journal* Vol 3 (1970).

References to developments in Batheaston are from Beatrice Willmott Dobbie, *An English Rural Community : Batheaston with S.Catherine*(Bath University Press,1969).

Papermaking in general is covered by Alfred H Shorter, *Paper Making in the British Isles : an historical and geographical study* (David & Charles, 1971)



Excursion of mill workers to Weston-super-Mare, 1919