THE MIDLAND WIND AND WATER MILLS GROUP

This Journal is published by the Midland Wind and Water Mills Group, which is concerned with the study of the history and technology of mills and with their preservation and restoration. Its area is the region loosely defined as the Midlands, especially the central counties of Staffordshire, Shropshire, Worcestershire, and Warwickshire.

The group holds monthly meetings, with talks and discussions, during the winter, and arranges mill tours and open days during the spring and summer. Members periodically receive a Newsletter and the Journal.

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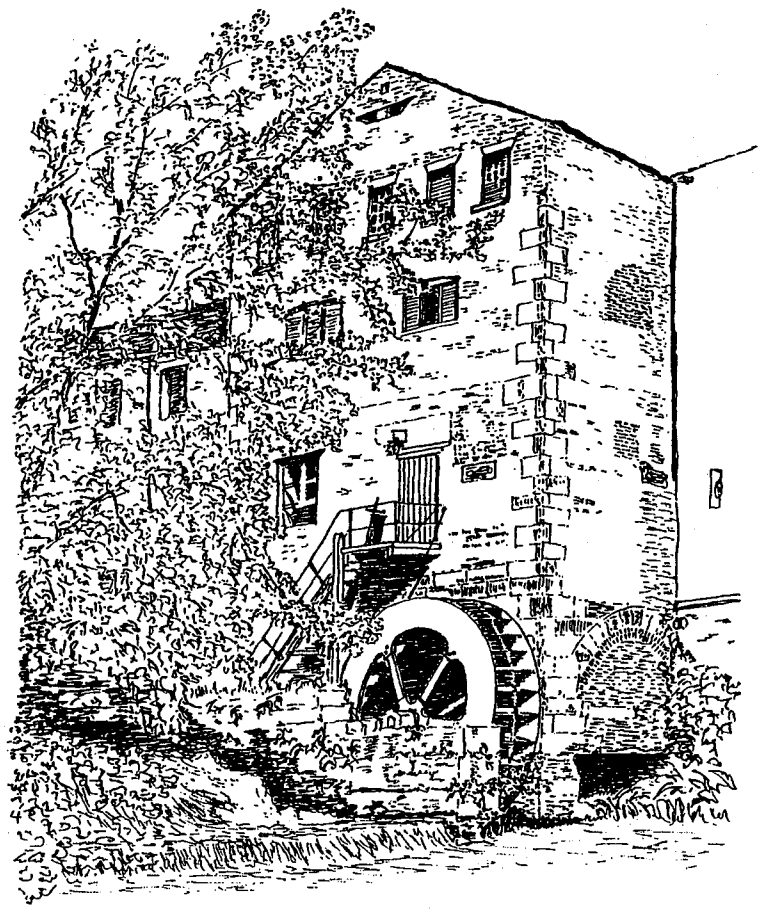
Wind and Water Mills

Number 15



The Midland Wind and Water Mills Group

Wind and Water Mills is the Journal of the Midland Wind and Water Mills Group and is therefore naturally concerned with the mills of the Midlands, but it is not intended to be narrowly parochial. Interesting and important articles relating to mill matters in other parts of Britain and the world will be included whenever available. In general, articles by members will have priority for publication, but submissions by non-members will be willingly included.

Cover illustration. The central section of Washford Mill, Buglawton, Congleton, Cheshire, housing flint grinding equipment, 1996. (See page 8).
Drawn By Tim Booth.

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Contents

CARMOUNTSIDE FARM, STAFFORDSHIRE ..... Page 2.
By Barry Job.

THE HISTORY OF WASHFORD MILL, BUGLAWTON, CHESHIRE ..... Page 8.
By Tony Bonson.

WIND AND WATER MILLS ON POSTCARDS ..... Page 19.
By Michael Yates.

WATERMILLS AND WATER-POWERED WORKS ON THE RIVER PENK AND ITS TRIBRUTARIES. ..... Page 30.
By Michael Cooksley.

LITTLE ASTON WATERMILL ..... Page 43.
By George Golder.

Carmountside Farm, Staffordshire

By Barry Job

The Sneyds were an old Staffordshire family who lived in the grand manner at Keele Hall. They had considerable colliery interests throughout North Staffordshire, in addition they owned various farms and estates including land at Hulton Abbey which they purchased in 1618. When Ralph Sneyd decided to improve his holding at Carmountside, which lies on the Abbey land to the north-east of Stoke-on-Trent, by constructing a new range of farm buildings he employed the services of Ralph Dain, architect of Burslem, but the design was by Andrew Thompson, his own agent. In 1854 the buildings were constructed to, a comprehensive plan and, at a cost of £2500, little expense was spared. They formed a square plan about a central courtyard (see Figures 1,2 and 3). Included was accommodation for 32 cows, stabling for 7 horses, plus accommodation for ducks, geese and calves. There was a storage for hay, straw, turnips and corn with an implement and cart shed. Also included was a boiler for hay steaming but of particular interest was machinery for thrashing, winnowing, turnip cutting and a corn mill, all drivrn by belts and line shafting from an external overshot waterwheel of about 12 feet in diameter.

Fortunately the details of 312 homesteads, including Carmountside, were published in 1865 by J.Bailey Denton in a work dedicated to the landowners of England. he said that:-

> 'To farm successfully with defective and ill-arranged buildings, is no more practical than to manufacture profitably in scattered, inconvenient workshops... No one who is at all acquainted with the Farmsteads of Great Britain can fail to be struck with their wont of adaptrion to the purposes for which they are required. ...the benefits arising from a perfect adaption of the farm buildings to the various operations conducted within them, are now generally admitted....Thus a work collecting and recording valuable pre-cedents....must prove of essential service, especially to those who want to advance further.'

The excellent drawings show a variety aof buildings, some with steam power and some, like Carmountside, with water power.

The site, now to be found directly to the east of the A5009 Stoke-on-Trent to Leek road, is of considerable interest. A Cistertcian abbey was founded here in 1222. Henry d'Audley was the benefactor and the Audleys remained patrons until the expiry of the male line in the 14th century. It was a small impoverished house which followed a mixed economy including tanning and fulling. After the dissolution in 1538 and systematic destruction by John Scudamore, the King's Receiver General, there followed centuries of piecemeal despoilation until it gradually disappeared from the public consciousness. the farmhouse, also

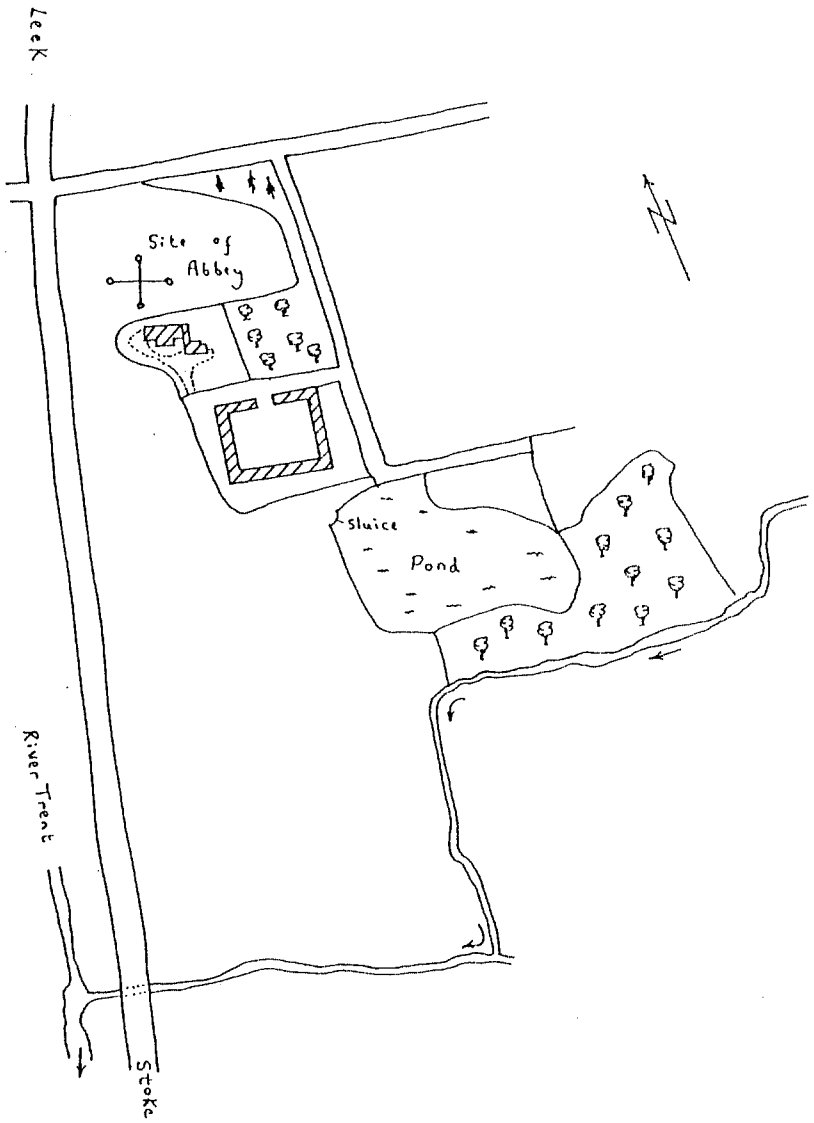

Figure 1. Sketch from an Estate map in the Sneyd Papers at the University of Keele, 1878. Scale 1/2500.

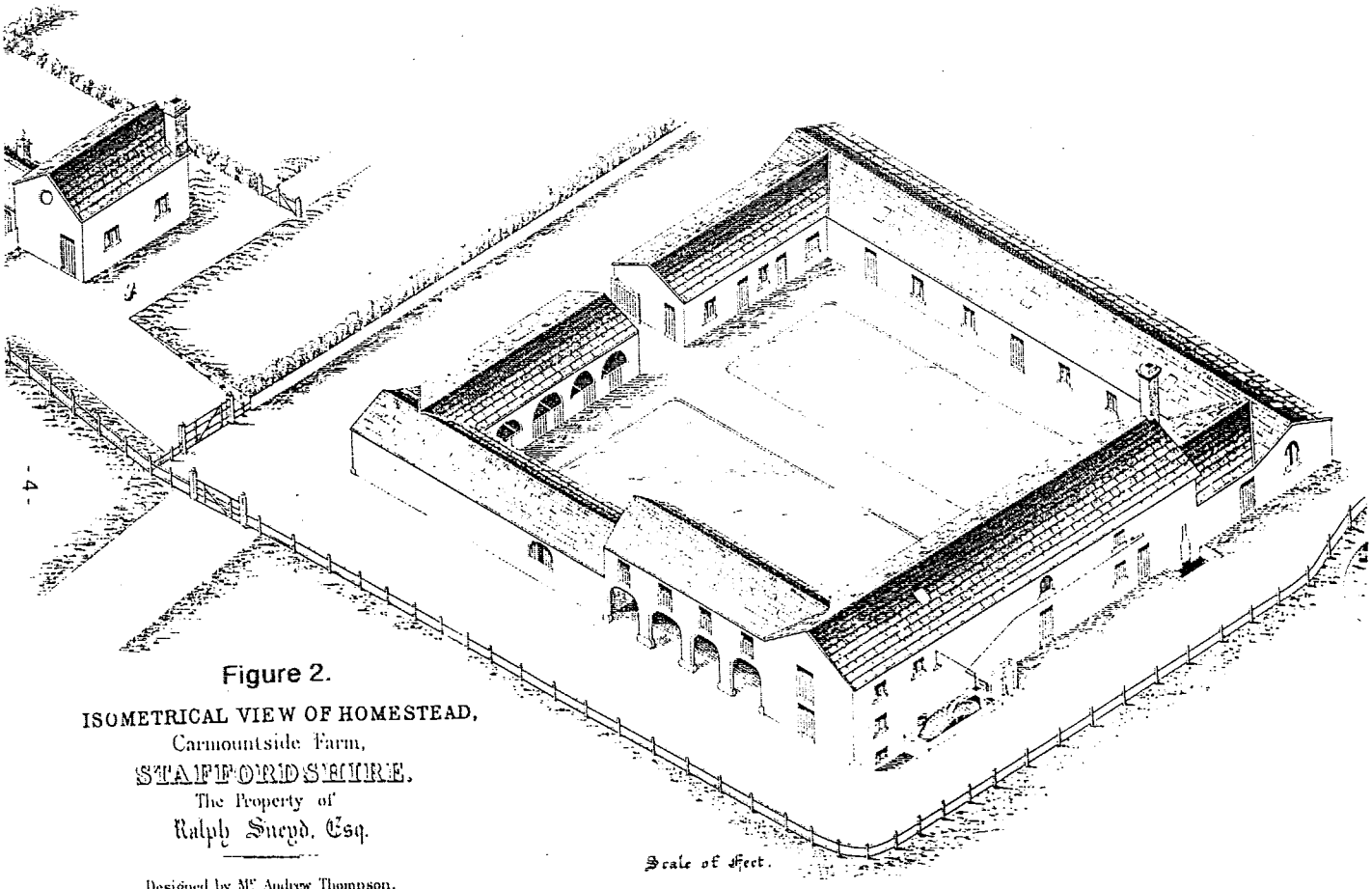

Figure 2.

ISOMETRICAL VIEW OF HOMESTEAD,
Carmountside Farm,
STAFFORDSHIRE.
The Property of
Ralph Sneyd, Esq.

Designed by Mr Andrew Thompson.

Mr Ralph Dain, Architect.

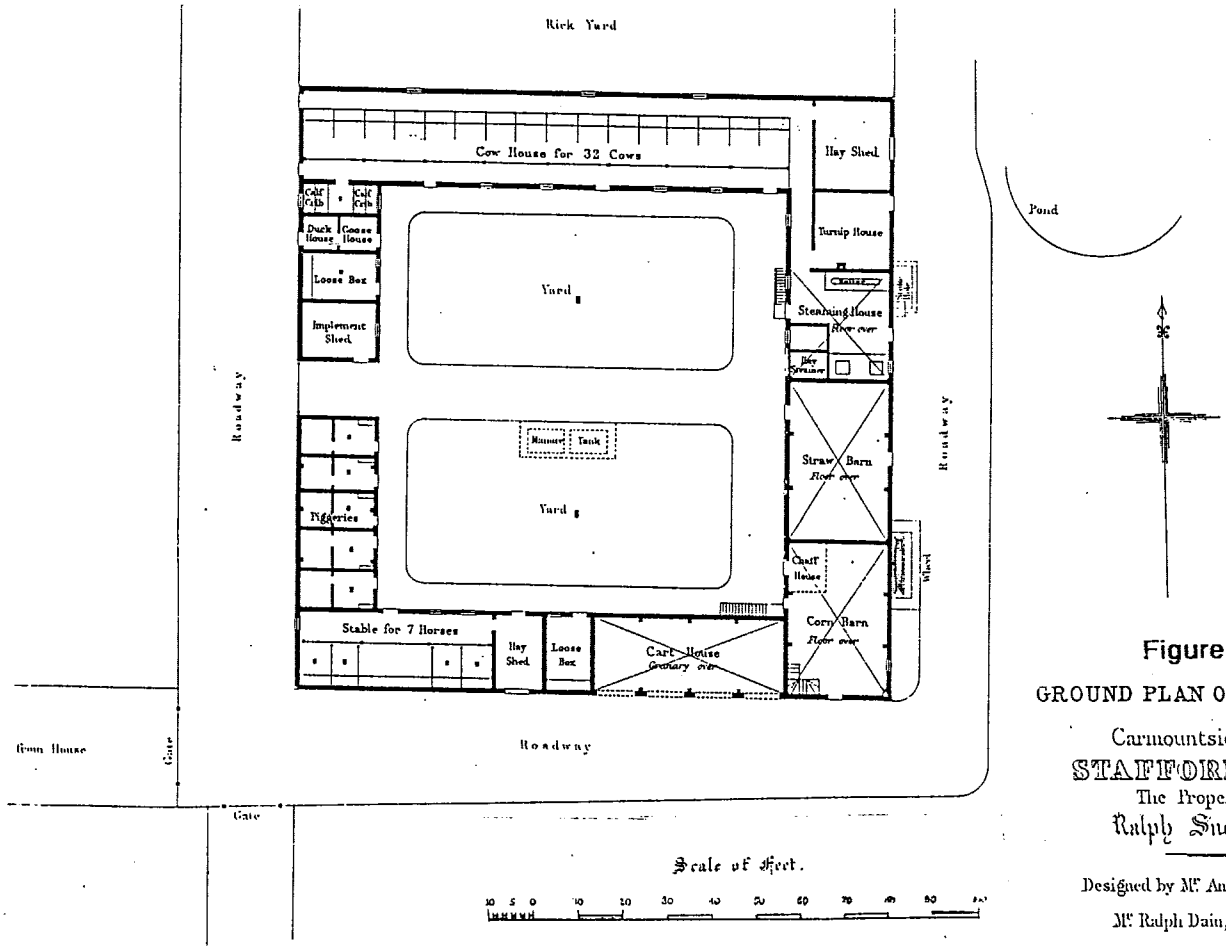

Figure 3.

GROUND PLAN OF HOMESTEAD,
Carmountside Farm,
STAFFORDSHIRE.
The Property of
Ralph Sneyd, Esq.

Designed by Mr Andrew Thompson.

Mr Ralph Dain, Architect.

erected in 1854 and shown in the Figures, was built over the east end of the church, covering the high altar and part of the north trancep[. When the foundations were being dug the workmen 'came upon the bodies of several monks who had been buried upright in their clothes.' In the spring of 1884 workmen repairing land drains uncovered several coffin lids. By this time the Reverend Walter Sneyd was the owner, he was a passsionate romantic antiquarian and he ordered the site to be excavated with items of interest being taken to Keele Hall. An anonymous letter to the local paper concerning tyhis "vandalism" alerted Charles Lynam, the curator of the Hanley Museum, who carried out a thorough investigation of the site. he suggested that the abbey had been surrounded by a moat with the wter supplied by the tail water from the adjacent mill (this is not to be confused with the medieval Abbey Mill on the River Trent which is not discussed here) with the water then supplying fish ponds and stews before emptying into the Trent. Current thinking does not support the idea of a moat and the existence of an adjacent mill is also open to doubt although there is no question that the monks did control the stream flow for the economy of the abbey. It is this stream which supplied the pond for the farm wheel. thus the basis for water power on the site predates the farmstead construction in 1854.

William Blackshaw was the farm tenant in 1854. Unfortunately the Sneyd Family Papers throw little light on Carmountside but Blackshaw was still there in 1861 for he received a number of payments for fencing in that and the previous year. It appears that the farm continued in use through the turn of the century until the whole area was purchased in the 1920s in preparation for a large housing development for the expanding city. In 1930 the site was re-excavated as part of the Wedgwood bicentenary celebrations before the site of the farm was covered by a school. the construction of this effectively restricted further work although limited excavation took place in 1959. The pond and the sluice remained until relatively recently, the area being levelled for a children's play area in 1977. However, the recent demolition of the school has again exposed the abbey site and has renewed interest in the whole area.

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Acknowledgement

This article would not have been initiated without the help and encouragement of Tim Booth.

THE HISTORY OF WASHFORD MILL, BUGLAWTON, CHESHIRE

By Tony Bonson

The River Dane rises high in the Peak District on Axe Edge Moor west of Buxton and flows in a westerly direction until it leaves the foothills of the Pennines at Hug Bridge about halfway between Macclesfield and Leek. There the river's westerly progresss is halted by a high outcrop called Bosley Cloud which forces the river to flow northwards in a semi-circle round its northern extremity before regaining its westerly flow at Congleton (see illustration below). As the river flows in a south-westerly direction just before reaching the town of Congleton it passes through the township of Buglawton where, on the river's left bank at O.S. grid reference SJ 865637, is the building called Washford Mill. Buglawton was an independent borough until 1935 when it merged with the neighboughing borough of Congleton.

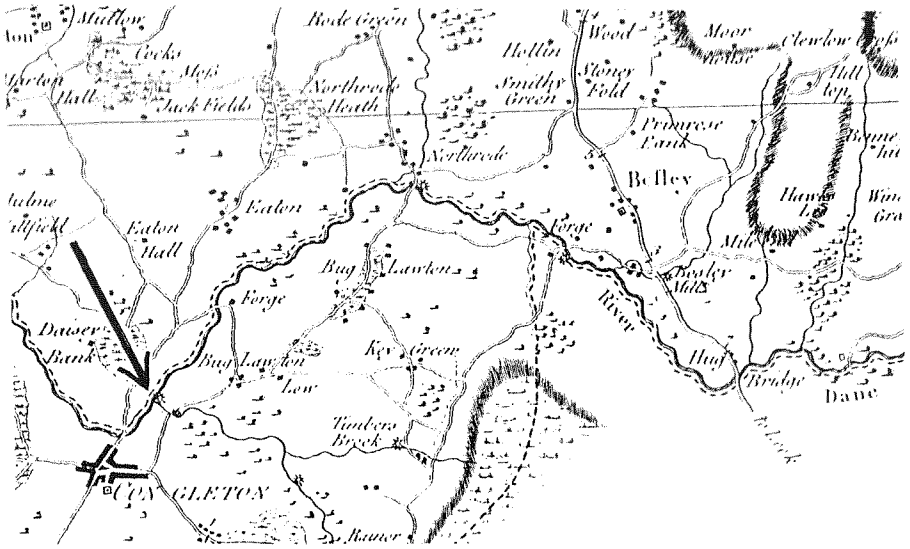

Figure 1. Burdett's map of 1775 showing the location of Washford Mill.

Washford Mill was a very impressive sight, being a large building in three distinct sections. The centre section is 11 yards long by 15 yards wide with four storeys. Attached to this are two wings; the one to the north-east of 13 bays, is 33 yards long by 10 yards wide with three storeys, and the one to the

Plate 1. Washford Mill before 1988, showing both wings.

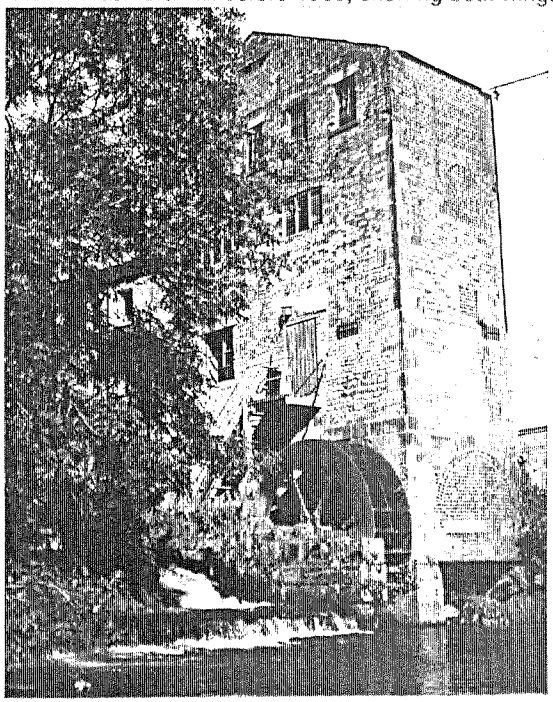

Plate 2. The centre section of Washford Mill showing the waterwheel.

south-west, of 11 bays, was 25 yards long by 8 yards wide and had four storeys (see Plate 1). The waterwheels (one external and one internal) were situated on the north-west side of the central block just downstream of the weir which stretched across the River Dane (see Plate 2). Unfortunately the south-west wing was destroyed by fire in 1988 and has been replaced by a modern office block. However the central section still contains a complete range of flint grinding equipment together with the external waterwheel and an internal turbine, as described in a recent article.[1]

Fortunately information concerning the early history of Washford Mill has survived. In 1775 and 1803, surveys were made of Buglawton and Congleton, presumably to assist in the assessments for the Land Tax which was levied in those days. Both surveys still exist today, together with a list of transactions concerning Washford Mill that appears to be contemporary with the 1803 survey. Contained in the 1775 survey there is a sketch map of the area around Washford Mill that is entitled 'The Flint Mill Estate' (see illustration below).

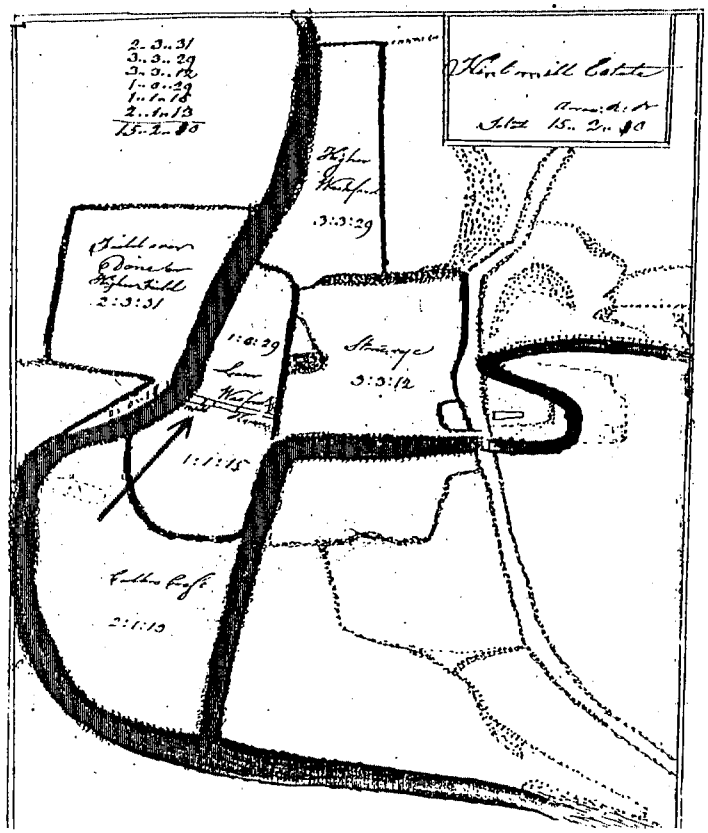

Figure 2. The 1775 survey map of the 'Flint Mill Estate' at Washford.
(Reproduced by kind permission of the *Congleton Chronicle*.)

It is evident from this map that at this time Washford Mill consisted of just the central section without any wings. From the information attached to the 1803 survey, entitled 'Flint Mill situation', it would appear that the land was purchased by Philip Antrobus in 1751 for £40 and that sometime between then and 1775 he built Washford Mill for about £400. Certainly in 1775, according to the survey, it was a flint mill, presumably used to grind flint for use by the pottery industry, and was probably built for this use in the first place.[2] The flint grinding process had been perfected in 1732 by Thomas Bentley and in the following 50 years the building of flint mills was a growth industry in the Potteries region and as far away as Stone.[3] The passing of the Act of Parliament for the building of the Trent and Mersey Canal in 1766 may have stimulated interest in flint mills in Congleton as the canal was planned to pass about 5 miles to the south of the town, at Lawton, which would give cheap access to the Potteries. Unfortunately the Harecastle Tunnel which separates Lawton from the Potteries themselves was not completed until 1776.[4]

According to the list of transactions appended to the 1803 survey, Antrobus sold Washford Mill to J.Booth in 1786 for about £400.[5] In Tunnicliffe's Directory of 1789 a John Booth of Congleton was described as a cotton manufacturer.[6] The survey map of the Washford Mill area in 1803 shows that the mill then consisted of the original centre section plus a wing to the south-west which covered about the same area as the centre section and so was not the 11 bay wing that stood until 1988 (see illustration below).

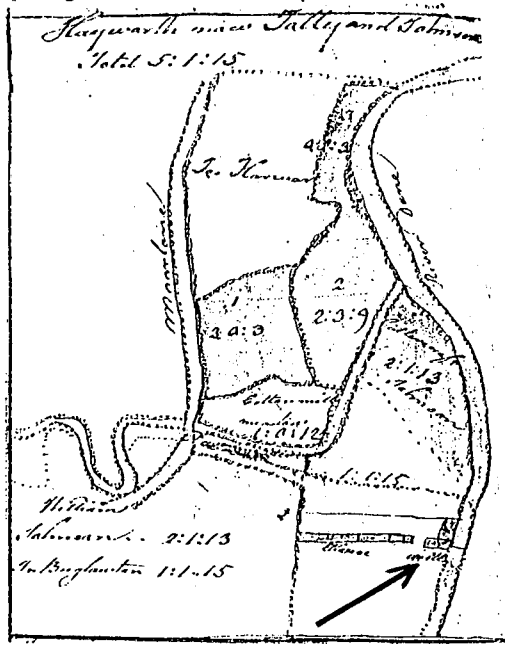

Figure 3. The 1803 survey map showing the central section of Washford Mill with a small extension to the south-west.
(Reproduced by kind permission of the *Congleton Chronicle*.)

It is possible to speculate that the wing shown in 1803 could have been built by John Booth to accommodate his cotton spinning business, certainly in later years it was used to house other textile oriented processes. In 1790 John Booth sold the mill for £400 to someone called Burne who owned the mill for 12 years, but unfortunately nothing is currently known about Burne or his business at Washford Mill. In 1802 Burne sold the mill to Wedgwood for £459, a name that suggests that the mill may still have been grinding flint for pottery making at this time, but there is no indication as to whether this was the famous pottery firm or some other more obscure Wedgwood. Wedgwood re-sold the mill in the same year but appears to have made a significant capital investment in the mill as the list of transactions shows:-

> 'Wedgwood sold it to Broadhurst for.....£1000
> having erected two new wares [*sic*] so he lost by it
> as they cost each abt. £300, sold in 1802.' [7]

The significance of the 'wares' in this statement is not known. The Broadhurst family, who bought the mill in 1802, did not have a background in flint grinding or the pottery industry, in fact John Broadhurst was listed in 1789 as a breadmaker working in Congleton. It is probable that the Broadhursts converted the mill to corn grinding to produce flour for their established bakery business. By 1815 Jonathan Broadhurst claimed to own 'a corn mill in the said township of Buglawton',[8] and in the 1828 directory he is listed as a miller at Buglawton. Having acquired the whole of Washford Mill they also set up a silk throwing business, presumably in the small south-west wing, where they were listed as the firm of J & J Broadhurst (Jonathan & James) in 1828.[9]

In the first half of the 19th century the Broadhurst brothers profitted greatly from their use of Washford Mill, re-investing in the purchase of other silk mills in the area, and in other pieces of real estate in the neighbourhood. At this time the silk industry was oscillating between periods of boom and recession, and the over-exposure of the Broadhurst fortunes to the silk industry led to their bancruptcy in the depression of the late 1820s. In 1829 the sale of their whole estate lists 19 separate auction lots including the King's Head public house in Lawton Street in Congleton, 18 cottages in Congleton and Buglawton, a smithy, an allotment on Congleton Moss, a silk factory and 7 cottages occupied by Matthew and Charles Wallworth, Eaton silk mill, Lower Washford silk mill with 16 cottages and a dye house, seven various lots of land in Buglawton, and Washford Mill which was described as follows:-

> 'Lot XVII. A corn mill and silk factory situated in Buglawton on the banks of the River Dane.
>
> The corn mill is capable of turning 5 pair of stones with all the necessary engines and appurtenances and is one of the best frequented and useful mills of the neighborhood. Mr.Jonathan Broadhurst is the present tenant.
>
> The silk factory has recently been erected and is most advantageously situated for water turning. It is presently unoccupied.' [10]

Although the wing housing the silk mill is described as 'recently erected' the contemporary usage of this phrase in auction advertisements seems to cover an elastic number of years, quite often in excess of twenty five, so its use does not rule out the south-west wing being built before 1800.

Most of the Broadhursts' estate was purchased by their tenants at one of the silk mills, namely the Wallworth family. According the the deeds of Washford Mill, the mortgagees transfered the mill to Randle and Matthew Wallworth in August 1830 and in December of that year the Wallworths raised a mortgage on the property from Samuel Higginbotham who was acting in trust for Messrs. Brocklehurst.[11] In 1834 Thomas Wallworth was listed as a miller at Buglawton and the 1840 tithe apportionment shows that the mill was then owned by Charles and William Wallworth, who carried on a silk throwing business there, and occupied by Thomas Wallworth.[12] The tithe map shows that at this time Washford Mill still consisted of the centre section plus a small wing of similar size to the south-west, as shown in 1803 (see illustration below).

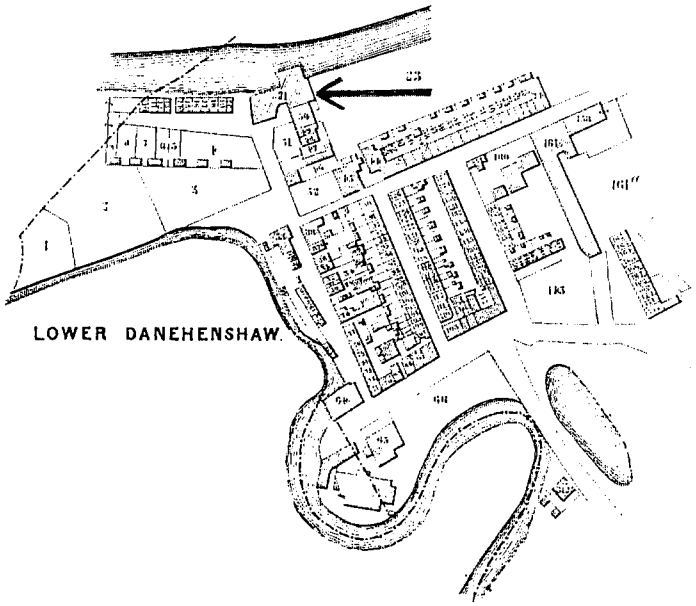

Figure 4. The Buglawton Tithe Map, 1840, with Washford Mill without the two large wings.

Either business must have been suffering about this time, or there might have been family reasons, but Washford Mill was advertised to be sold in October 1840:-

'To be sold by private treaty. A corn mill and silk factory adjoining thereto situated in Buglawton near Congleton of which immediate possession can be had.

The corn mill consists of 6 pair of stones with every requisite for carrying on an extensive business. It is turned by a powerful waterwheel on the River Dane and is now in full working order.

The silk factory is fitted up with proper machinery for carrying on the silk throwing business and is turned by the waterwheel and steam engine jointly.' [13]

This advertisement appears to have been unsuccessful as the Wallworths were again trying to sell the mill in 1842 when the advertisement confirmed that there were two waterwheels.[14] This may have been more successful because in 1844 the deeds show that Washford Mill was conveyed from the late Randle and Matthew Wallworth to John Johnson who owned a steam powered silk mill nearby in Buglawton called Throstles' Nest mill and who lived alongside this mill at Throstles' Nest House. It is likely that John Johnson bought Washford Mill as an investment to be let to tenants rather than work the mill himself. In 1850 a Mr.Diggory was a tenant at the mill employing 60 hands at silk throwing.[15]

In 1852, when John Johnson advertised that the corn mill at Washford was to let, the miller was Mr.Joseph Wood.[16] Two years later, in 1854, John Johnson was again trying to let the corn mill, extolling the fact that the mill 'had just been repaired and a new waterwheel put in'.[17] This advert must have been unsuccessful so causing John Johnson to decide that Washford Mill would be a better investment if it reverted to its original occupation of flint grinding. Consequently he advertised the contents of the corn mill for sale eight months later, which provides an interesting inventory of the main machinery in the mill at that time.

'To be sold at public auction. All the excellent machinery, French Buhr [*sic*] stones driving gears, straps, etc. comprising:-

Cast iron vertical shaft 12 feet 6 inches by 8½ inches.
Cast iron cog pit wheel 10 feet diameter, 8 inches wide, 2¾ inches pitch.
Cast iron crown wheel 4 feet 6 inches diameter, *do,do.*
Cast iron crown spur wheel 12 feet 6 inches diameter, *do,do.*
One pair French Buhr stones 4 feet 4 inches diameter with vertical shaft, cog wheel, and wooden boxing.
One pair ditto, 4 feet 4 inches diameter, *do, do, do.*
One pair ditto, 4 feet 6 inches diameter, *do, do, do.*
One pair grey stones 4 feet 6 inches diameter, *do, do, do.*
One screen complete with driving gear.
One dressing machine with 16 inches cylinder.
Hoisting tackle,
Vertical and horizontal wrought iron shafting with bevel wheels,
Seven pulleys, leather driving straps.

The mill is now at work and may be inspected any day prior to the sale. The sale of machinery, stores, etc. is imperative to afford room for the necessary fittings for grinding Potters' Materials.

The sale is at 2 o'clock. Further information from Mr.Johnson, Buglawton and Mr.Higginbotham, surveyor & Potter's valuer, Folly Place, Longton, Staffordshire Potteries.' [18]

This conversion to flint grinding must have been of interest to entrepreneurs in the Potteries as the central part of the mill was occupied by William Webberley , a flint, stone, and bone grinder from Longton, in 1857. He appears to have other interests that kept him in the Potteries because although still operating the mill up to the late 1870s, a Joseph Pickin or Perkin was named as manager or agent at Washford.[19]

This raises the question of when the two wings that survived until late in the 20th century were built. They are obviously absent fron the 1840 tithe map but do appear on the 1875 large scale Ordnance Survey map of the area, identified as silk mills. It would be amazing if the wings were built after 1860 because the Free Trade Act passed by parliament that year decimated the British silk industry, a blow from which it never recovered. Consequently, the prevailing trading conditions that existed after 1860 would not have justified the large investment represented by the building of the wings. Although steam power had been introduced before 1840, (it was mentioned in the sale advertisement of that year as powering the silk mill in the south-west wing), when the north-east wing was built a new steam plant was installed with its chimney at the south corner of the new wing. This level of investment suggests that the wings would most likely to have been built in the 1850s, a very prosperous time in the silk industry.

After William Webberley the flint grinding business was operated by William Edward Cartledge in 1878 and by the 1880s the it was being operated by Thomas Ford and his son William.[20] It was William Ford who, in 1887, took out a mortgage of £900 from the Congleton Equitable Benefit Building Society to buy Washford Mill. In 1886 Henry Barton was silk throwing at the mill but he only employed 30 hands, a far cry from previous numbers employed in the industry at Buglawton. [21]

Fortunately the space provided by the two wings could be utilised by a variety of trades which led to them being leased as 'industrial units'. In 1896 the firm of W.Hoyle & Co were making turkish towels in the mill, a trade that lasted until after 1939. Also the fustian cutting industry was brought to the Congleton area in an attempt to alleviate the distress caused by the wholesale unemployment among the silk workers after 1860. This trade did not require any power only long spaces where the fustian cutters could stretch out their cloth for the knap to be cut by hand. The two wings at Washford Mill were ideal for this application consequently they were occupied by fustian cutters such as Joseph Slater in 1902, Charles Henry Cobb in 1902 and 1906, and William Barton from 1912 to the mid 1930s. [22]

In the mean time the flint grinding mill in the central section of the mill had

passed from the Ford family to Thomas Malkin but his death shortly before 1910 ensured yet another change of occupier in the shape of Jonathan Hopkins who maintained flint grinding in operation up to the start of World War II.[23] After the Second World War the mill was taken over by Mr.J.M.Goodwin who operated the flint grinding equipment until 1968 when all production was transferred to Lower Washford Mill. The two wings were used as industrial units for a variety of tenants.

Unfortunately most of the information about Washford Mill refers to the central corn/flint mill and very little can be learned from documentary sources concerning the two wings. An examination of the building may lead to further understanding concerniong their building and use.

The south-east wing was four storeys high and 11 bays long. The slate roof was supported by five queen posts and trusses. The beams were machine sawn and had Roman numeral assembly marks. On the ground floor the single span beams have only two cast iron column supports. The brickwork of this wing is English garden wall bond on a foundation of regular sandstone blocks laid to courses. In the stonework beneath the fifth bay from the gable end is a bricked up stone culvert arch (see Plate 1). The windows had segmental brick arches and splayed reveals. The sills are positioned lower than the window frame and the brickwork between the sill and the frame was faced with a stone flag. In 1988 the wing was occupied by a pine furniture manufacturer when it caught fire destroying the wing which was then demolished to make way for a new modern office block.

The north-east wing is three storeys high and 13 bays long. The slate roof is supported by seven queen post trusses. The brickwork of this wing is also English garden wall bond and the windows have segmental header brick arches, rounded reveals, with slightly lowered wooden sills. The first floor ceiling is supported by single span wooden beams which all have shaft housing marks on them. There are wooden props along the centre of the floor supporting four of the beams. On the ground floor the ceiling beams are supported by longitudinal RSJs and have shafting housing marks positioned off centre. [24]

The central section is four stories high built of stone up to about the first floor and then brick for the remainder of the building. Stone quoins are present at second floor level but the third floor level is built entirely of brick with rounded corners. At the level of the stone quoins the brickwork is again English garden wall bond but above this the brickwork is irregular at the third floor level. The slate roof is supported by two queen post trusses and the internal floors are supported by four cast iron columns on each floor although the second floor boardings have been removed. The central section still contains all the flint grinding equipment as described elsewhere. [1]

The use of English garden wall bond throughout, unlike many south-east Cheshire mills which used Flemish bond brickwork on their public elevations, and the scant timberwork in the roofs indicate that the two wings at Washford Mill were probably built on speculation to the cheapest specification. There is

some indication that the central section may well have been heightened by one floor when the wings were built. The two wings, while appearing very similar, have sufficient details different to suggest that they were built at different times and/or by different builders. The wings are unlike mills built in the area in the 18th and early 19th century in their roof structures and materials, king post trusses and local stone roofing slabs being the local norm for mills such as the Old Mill (1752), Daneinshaw Mill (1784), and even Park Mill (1825). They are also unlike those mills built in the locality after 1870 to house the fustian industry such as Riverside, Shepherd's and Fair mills (all built in the 1870s), in that the fustian mills had much larger windows. Of the many surviving silk and cotton mills in south-east Cheshire, the mill that shows the most similarity in construction and style to Washford Mill's two wings is the Albany Mill in Canal Street, Congleton, built in 1845. This architectural evidence supports a date in the late 1840s or 1850s for the building of the wings, however in spite of their cheap construction they have survived (almost) to the present day.

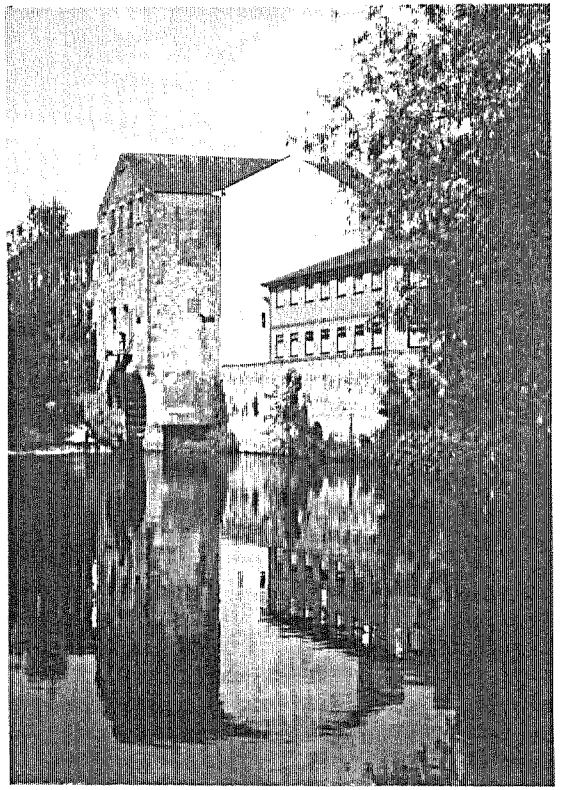

Plate 3. Washford Mill as it is today.

Washford Mill has had many and varied occupations in its long life, it is now some 230 years approximately since the first building was erected. During that time it has had to adapt to the changing fortunes of the various trades that have yielded profitable employment. It has seen three different textile trades, cotton, silk throwing, and fustian cutting before giving way to a variety of short lived usages. It is probably quite unusual that the trade which the mill was originally built for, namely flint grinding for the pottery industry, should be the trade that it reverted to and remained faithful to up to the present time. Although not used any more for that purpose it is likely to remain in a state of 'suspended animation' while remaining with the present owner.

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6. Tunnicliffe's Directory of the County of Chester, 1789.
7. Survey of Congleton, 1803, held by the Congleton Chronicle.
8. Buglawton Inclosure Award, 1814.
9. Pigot's Directory of the County of Chester, 1828.
10. *Macclesfield Courier,* 3rd October 1829.
11. Deeds of Washford Mill, held by Mr.Goodwin.
12. Tithe map and Apportionments for the Parish of Buglawton, 1840.
13. *Macclesfield Courier,* 24th October 1840.
14. *Ibid.,* 26th February 1842.
15. Head, R., *Congleton Past and Present,* 1887.
16. *Macclesfield Courier,* 4th December 1852.
17. *Ibid.,* 21st January 1854.
18. *Ibid.,* 16th September 1854.
19. Kelly's Directory of Cheshire, 1857
20. Slater's Directory of Cheshire, 1883.
21. Head, R. *Congleton Past and Present,* 1887.
22. Kelly's Directories of Cheshire, 1896 - 1939.
23. *Ibid.*
24. East Cheshire Textile Mills Survey Records, held at The Herritage Centre, Macclesfield

WIND AND WATER MILLS ON POSTCARDS

By Michael Yates

Introduction

Wind and water mill postcards is a subject on which little seems to have been written but is one which can yield much valuable information about the mills that were standing and, in many cases, working approximately one hundred years ago. There has been a tendency to pour scorn on this subject, particularly in view of the prices asked for some postcards and in some cases this is a justified criticism, particularly when modern cards are offered for sale at prices above those at which they can still be bought in the shops or at the mill. However, I believe that much can be gained, both in terms of personal pleasure and historic interest from building up a collection of mill postcards and I hope to convince others that this is so and to pass on some tips I have learnt by experience.

I have been interested in wind and water mills for over 40 years and have collected any items I could relating to them, their history, their position and their appearance. About 8 years ago I realised that, among the newspaper cuttings, pamphlets and pictures which I had stored in two filing cabinet drawers, there were a number of postcards, some of which were quite old. I went carefully through the files and extracted these postcards, partly to see what I had got and partly to store them more carefully. Although I did not realise it at the time, this act started me off on a branch of mill studies which is probably as important to me now as are my other researches into mills.

At about the same time that I separated the postcards of mills from the rest of my collection, I realised that there were people who actually traded in old postcards and I bought (as opposed to obtained) my first card, a photograph of Cranbrook smock mill with the cap being painted from a special cap ladder that still exists in the mill. Not long after this I went to my first Postcard Fair and I became hooked on a new hobby with strong associations with my prime leisure interest. From that date I started to build up a collection of postcards and I have found, that with time, I have become more and more specialised.

Initially, I tended to buy as many cards as I could as cheaply as possible. These were either foreign mills, mainly Dutch, or were painting reproductions, many of which were German in origin. Although this gave me a sizable collection quite rapidly, I found that it was not satisfying and I decided to purchase cards of British wind and water mills. Because these were slightly more expensive, my collection grew less rapidly but was becoming more interesting. It soon became apparent that watermill cards were (and are) cheaper than those of windmills but

in general are less spectacular from both the visual and the historic aspects. I then found I was tending to concentrate on windmill cards in general and watermill cards of south-east England. More recently still, I have limited my interest even further and now I specialise in the windmills of Surrey, Sussex and Kent. However, if I go to a fair where I am unable to find a card of a windmill from these counties which I have not got, I still buy the odd card or two of unusual or lesser known English mills or foriegn oddities.

Besides fairs, it is possible to find cards in second hand shops, at bric-a-brac shops and at Antique and Collector's Fairs. There are some dealers who have shops that specialise in postcards alone or associated with the sale of stamps. Quite often the mill cards have been separated out as a category by the dealer but it is more likely that you will have to go through hundreds of cards separated into counties to find, if you are lucky, one or two mill cards. With regard to the cost of postcards, they can range from as little as 30p for modern ones to over £30 for a fine condition photographic card of a lesser known and long vanished mill. Like all collecting hobbies, it is the buyer who determines whether the item is worth the asking price to him as no one is forcing him to buy it. If you ask you might get a slight reduction in price. Remember that although you may only be interested in the mill, the card also has significant interest to the collector of topographical and local history photos and is thus much sought after.

A Brief History of Postcards

The postcard first made its appearance in Austria in October 1869 but not in the form we know it today. The first cards were plain with one side for the message and the other for the address. Great Britain introduced postcards (the plain type) in October 1870. Picture postcards made their appearance in the early 1890s and in 1894 Messrs. Geo. Stewart of Edinburgh produced the first British pictorial card. These early cards had space on the picture side or front of the card for the message and the whole of the back was used for the address. They are known as 'undivided backs'. By 1902 the Postmaster-General had sanctioned the use of 'divided-back' cards, where the message and address were written on the same side. This allowed a much greater scope in the size, style and quality of the picture and the picture postcard industry boomed.

To give some idea of the size of this means of communication, the Postmaster-General reported that 314 million cards (both plain and pictorial) were posted in 1895, 336 million in 1896, 419 million in 1900 and 880 million in 1914. The total number of postcards sent by post in the U.K. during the period 1894 - 1914 was probably about 10,000 million and based on my collection of pre-1920 cards where 40% are not postally used, the total number in circulation in that period must be approaching 20,000 million.

Postcard Printing Methods

Postcard production methods result in several qualities of pictures and these effect not only the usefulness of the card to the molinologist but also its value in

monetary terms. By far the best reproduction method is the real photograph (RP) although even here there are significant variations in the quality of the original photograph as well as in the finished product. The RP card, usually, allows the use of a hand lens to search for small details of the mechanical aspects of the mill. It is possible to distinguish the type of shutter adjustment (elliptical spring, coil spring, patent), details of the fantail construction and of the gallery or stage construction method on windmills, whilst with watermills it is possible to see the details of the wheel construction. For example, I have in my collection an RP of Menstrie Mill which shows an intricate decoration on the cast iron rim of a high pitchback wheel.

Some of the better RP cards I have found are those produced by small local photographers such as Amos and Amos of Dover, G.A.Cooper of Maidstone and Ridley Studios of Tenterden. With these producers, not only is the quality of the photograph good but also the composition and the artistic aspect is excellent. No doubt there were similar small postcard producers in other parts of the country.

Lithographic or chromo-lithographic (coloured) postcards are almost up to the standards of the RP cards in terms of their value to a molinologist. They can reveal a lot of detail when studied under a hand lens but do not quite have the sharpness of a photograph. Sometimes the colouring of this type of card spoils the mill detail. Lithographic cards were produced in very large numbers during the early part of this century and many were printed abroad, especially in Germany. Lithography is not used to any great extent at the present time for picture reproductions.

The type of card which does not lend itself to detailed study is that produced by the photogravure process. These can easily be distinguished from RP and lithographic pictures by using a hand lens. On a photogravure card the picture is made up of many hundreds of tiny dots and because of this little detail of the mill machinery not visible to the naked eye can be distinguished under magnification. The photogravure process covers the whole range of postcard history and the majority of present day cards (black & white and coloured) are produced by this means. The end result of the process, particularly for modern cards, is the presentation of a good small picture without much detail.

Other types of mill postcards are the non-photographic versions such as line drawings and painting reproductions. These can be lithographs or photogravure and often do not carry the mill name as they are artistic impressions only. Unless they are named they are of little value to the serious molinologist and even when they are named there is always the worry that some artistic licence has been applied to the picture rendering it useless for detailed study.

Dating of Mill Photographs on Postcards

When attempting to establish the date at which a particular mill postcard photograph was taken there are several features which can be usefully employed. These are:-

1. The postmark date.

This, unfortunately, does not tell you when the picture was taken but does give you a firm fix on the most recent date for it. This, however, can be misleading at times especially if the postcard was used many years after it was produced (see comments below on Greatham tower mill).

2. The postcard back.

As was mentioned above in the paragraph on postal history, the picture card with an undivided back made its appearance in Great Britain in 1894 and remained in use until 1902 when divided back cards were allowed. Thus an undivided back suggests that the card dates from this period although they were still in use up to 1907. A British divided back card cannot be earlier than 1902 although obviously the photograph on it could be a year or two earlier.

3. The postal instructions.

On the divided back card, the left hand section (usually) carried a printed message of instructions to the sender. This message initially was of the type 'For Inland Postage, this space as well as the back may be used for communication' or 'This space may be used for communication in the British Isles or to France at postcard rate'. An instruction of this kind dates the card to the period 1902 - 1907. From 1907 onward for several years the instruction was usually 'This space for communication'. Modern cards often carry no printed marking of this type on the back of the card or simply say 'Correspondence' and 'Address'. Out of interest I have found over 60 variations on the 1902 - 1907 instructions on the cards in my collection. Some unused early cards, while carrying no instructions of the above type do frequently have printed in the stamp rectangle 'Affix halfpenny stamp here'. This fixes their last date of manufacture as June 1918 when the postal rate increased to 1d. for postcards.

4. The mill.

Using the mill shown on the postcard to date the photograph can be the most satisfying and reliable method. There are now a number of good reference books devoted to individual counties and most of these have good photographs of mills, standing and vanished, and sufficient detail in the text to allow the date to be pinned down to say a 5 - 10 year period. It is perhaps a matter of regret that watermills are less well documented than windmills making it more difficult to date postcards of them. When attempting to decide on a photograph date from the state of the mill, several factors should be considered. The types of information to look for are:-

Is the mill still working?

Does it have a full set of sails or a good condition waterwheel?

Does it have a fantail in good repair?

Is the building well cared for and painted or is it showing signs of decay?

How much of the sails, fantail or waterwheel are missing?

When all the relevant technical data has been obtained from the picture the reference books should be consulted and cross-checks carried out. To give an example, I have a postally unused RP postcard of Peasenhall Mill, Suffolk showing a working post mill with ladder mounted fantail (see Plate 1, below). Just behind this mill can be seen the sailless shell of a smock mill. The postal instructions on the back dates the card's production to the period 1902 - 1904 whilst reference to *Suffolk Windmills* by B.Flint shows the smock mill to have been moved to Peasenhall from Cranford in 1883. The photograph can therefore be dated fairly quickly to the years between 1883 and 1903, a range which, with further work, could probably be narrowed down.

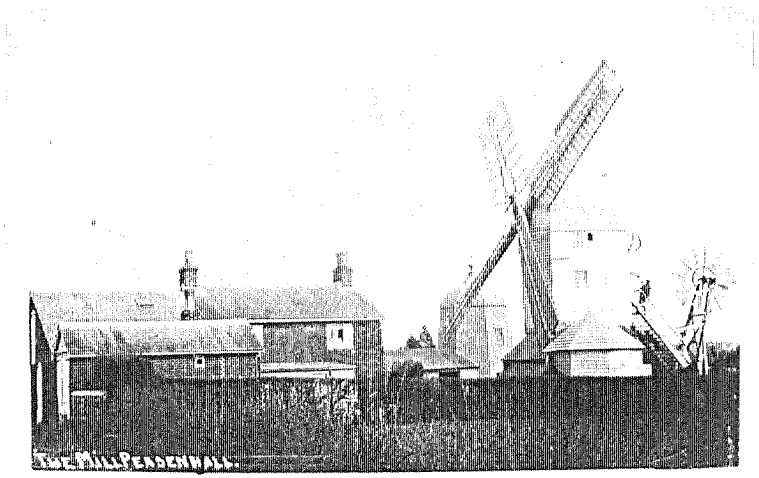


Plate 1. Peasenhall, Suffolk, c.1900.

5. Non-mill features.

Occasionally various items, other than the mill in the picture can give a clue to the date of the photography. Often the people carefully posed in the photo are wearing distinctive clothing which a fashion expert would be able to date fairly accurately. Sometimes a perambulator can be seen and this can be dateable. Many mill postcards show old cars and lorries near to the mill and motor historians should be able to identify and date these. Regrettably the occurance of these features are less frequent in mill photographs than they are in town or village scenes but they can still help to confirm a date.

Often close study of the mill shown on the postcard reveals added bonuses to both the dating of the card and to the picture record. I have an RP postcard of Patcham tower mill, Sussex carrying the postmark date of 4th May 1928 which shows clearly in the graffiti around the mill base the date 26th May 1926. It is

thus almost certain that this picture records the state of this mill at some time in the two years between 1926 and 1928 (see Plate 2, below)

Plate 2. Patcham, Sussex, 1926-28 dated graffiti round the base.

Similarly, a RP card of Cranbrook smock mill, Kent (no postmark) shows it with three common sails and a ladder up from the stage to the cap by the sailless fourth stock. This dates the picture to the years 1918 - 1920 according to Rex Wailes in *The English Windmill*, who says that from 1918 John Russell ran Cranbrook with four common sails and no fantail until 1920 when he fitted one pair of spring sails. In 1921 the fantail was replaced and in 1922 a second pair of sails were added and all four converted to the patent type (see Plate 3).

The postmark date can, at times, give a very misleading indication of the age of the postcard and there seems to have been a tendency in the 1940s and 60s to use old postcards to send messages to friends and relatives. For example, I have a card posted in 1964 which shows Greatham tower mill, Co.Durham. The style of the photo, the fashions of the men just visible and the tinted picture all suggest the early 1900s and this date is confirmed by the printed instructions 'This space may be used for Inland Communication only' on the back which, in itself, suggests about 1905 as the date. I now only use the postmark date as a means of establishing the last possible date for the photograph and where possible look for other clues to the actual date.

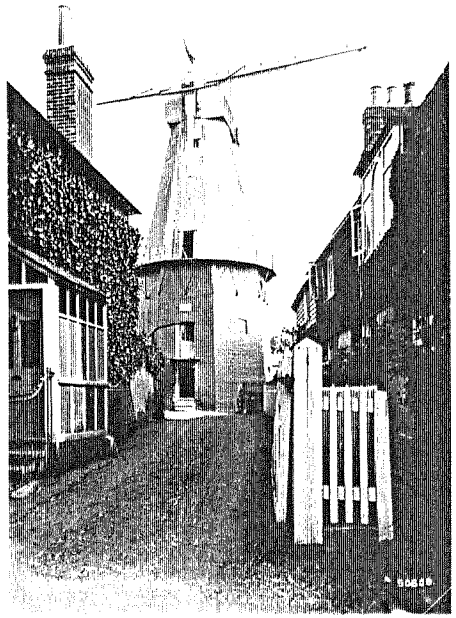


Plate 3. Cranbrook, Kent, 1918-20. Note the common sails.

Other Information from Postcards

With the careful selection of the postcards bought, it is possible to build up a collection that consists mainly of good full card pictures of the mills themselves although at times the picture is more of the landscape type with the actual mill being quite small. This can, occasionally, be an advantage as the general setting and the topography of the area can be seen. Because windmills rarely had buildings close to them as these would interfere with the wind flow, pictures of the mill house and windmill are quite rare. This is not so with watermills where the two buildings were quite often continuous.

It is possible to find postcards of the internal structure and machinery of wind and water mills but these, again, are fairly uncommon among early postcards. Pictures of the sub-structure of Reigate Heath post mill, Surrey and High Salvington post mill, Sussex are fairly easily found but these were taken to show the chapel and the tea room respectively. I have found one card with a set of millwrighting tools shown on it (probably 1940s, but the mill is not identified). Often the miller can be seen at the door of or in front of his mill and the classic example of this is the RP postcard of Mark Cross tower mill, Sussex where he is shown in front of the mill wearing a smock and waistcoat. It is possible to find

the miller himself on a card. There is one excellent portrait photo of 'Johnny, the mill, Talgarth' on a card dating from about 1905 (see Plate 4, below).

Plate 4. The Miller, c.1905.

Many mills, both wind and water, carried advertisements on their walls and often these can be read under a hand lens. For example, 'Molassine', 'Kositos Cooked Maize', 'Spratt's Patent', 'Mellins Food', 'Old Calabar', 'Thorley's Cakes', 'News of the World', 'Ovum', 'Daily Telegraph' and 'Daren bread' can be seen without much difficulty. Crowborough tower mill, Sussex is a good example of this (see Plate 5)

At Littlehampton tower, mill, Sussex, the roof of the outbuilding had 'C.A.Bailey, Rustington Mill' painted on it whilst Cobham watermill, Surrey, had the name 'Henry Moore and Son' painted on the side of the second, now demolished, mill. The name 'T.Kirkham' can be seen on the outbuildings of Marsh tower mill, Thornton, Lancashire and also probably on the mill itself. The miller's cart or perhaps his early lorry can sometimes be seen in front of the mill, for example 'T.R.Laidlaw, Draper's Mill, Margate', 'A.Dobson and Sons, Burgh Le Marsh', 'Mapledurham Mills' and 'Pratt and Sons, Crowborough' (see Plate 5)

Plate 5. Crowborough, Sussex, c.1910 showing the miller's cart and advertisements

Plate 6. Rossett, Clwyd, c.1905. Note the added water.

Also the postcards themselves could be printed specially for the miller as a part advertisement, part communications card. I know of at least two examples of this, Iping Paper Mills near Midhurst in Sussex and T.C.Greensmith and Sons of Burton Mill, Burton upon Trent, Staffordshire.

Occasionally the mill picture has other information added to its title. A postcard of Chailey smock mill, Sussex is entitled 'Centre of Sussex' whilst one of the post mill at Edmonton, Middlesex says 'The old wheel forming the gate is the first steam made wheel manufactured in England.'

With watermills the publisher of the cards often thought that the picture was too static and uninteresting and he 'enlivened' the scene by adding tumbling water to the wheel. This was more common on the tinted photogravure cards than on real photograph or lithograph cards and at times created some obviously ridiculous end results. There is a Wrench Series tinted card of Rossett Mill with a very strong flow of water over the top of an undershot wheel but how the water got there is not thought of by the printer (see plate 6). It is also obvious that both water and wind mill postcards in the early days suffered from the need seen by the printer to include carefully posed people in the picture. Often these were children or pretty young ladies and it appears that, at times, they were superimposed on the picture during printing.

Identifying Unnamed Mills

Some postcards were printed without any title to indicate where they were taken and these are usually offered at a lower price by dealers. It is often possible to identify these mills by noting such features as the cap shape, the shape of the mill body, the materials of construction and the countryside around the mill. If a positive identification can be made and the card is good quality picture then its value is obviously enhanced.

Although quite often the message and the postmark on the back of the card can be of use in naming an unnamed mill, they can also be very misleading. I have a pre-1908 postcard called 'The Old Mill' showing a combined tower and water mill. The postmark shows the card to have been posted in Hambledon, Hampshire and the first line of the message says 'This is not far from here, about 3 miles'. When I finally identified the mill it proved to be Melin y Bont, Bryn Du, Anglesey, a long way from Hampshire.

One item essential to the postcard molinologist is, in my opinion, a good gazetteer (I use a 1963 Bartholomew's *Gazetteer of the British Isles*). Often the mill location is not accurate or it does not give the county and much light can be thrown on the mill's situation by using the gazetteer. For example I have a watermill card identified as Mannering's mill, River. The gazetteer listed three possible sites and with the use of other reference books I was able to establish that the mill was Crabble Mill, near Dover, Kent.

Tracing Changes in Mills

Some mills were and still are photographed more frequently than others and it is possible to trace the changes over about a 100 year period by studying their postcards. In the South-East of the country, windmills such as Rottingdean smock mill, High Salvington post mill, Rye smock mill, Reigate Heath post mill and Wray Common tower mill are much photographed as is Castle watermill, Dorking. With High Salvington, it changes from a working mill with a wooden roundhouse to a tea room with a concrete roundhouse to a restored working mill, whilst Wray Common goes from a working mill with an ogee cap to a disused mill with damaged skeleton sails to a mill with a good quality skeleton sails and a conical cap. Since Wray Common lost its sails and fantail in gales in the 1980s it has lost its appeal as a postcard subject. Cranbrook smock mill is another that is shown on many postcards but because it has been well looked after for many years its appearance does not alter much although as noted, during the period 1918 - 1922 there were several changes to the sail types.

Final Comments

It is very obvious from the study of the many books on wind and water mills that postcards are a much used source of the book illustrations. Frequently the picture's printed or hand written title can be seen, competely or partly, at the base of the picture. The acknowledgements for the picture sources in these books only mention on rare occasions that they are taken from postcards but always credit their source to the person or institution who supplied the picture. It is regrettable that the original producer of the card seldom gets any recognition of their work and I suggest that in future picture credits should include the postcard manufacturer's name in addition to those whose collection it comes from.

As anyone who has struggled through this article will realise, I have a deep interest in the photographic records of wind and water mills and that I have now concentrated this into the collection of postcards. The pleasures of building up a collection are many; the visit to the postcard fairs or ephemera shops; the search through many hundreds of cards in the hope that you will find a classic; the purchase of an unidentified mill card and the subsequent search through books in an attempt to name it; the leisurely study of the cards at home to see what facts can be made out from the photograph; the attempted dating of the picture and, probably best of all, looking through the collection again and again. Finally, on a lighter side, it is often interesting to read the messages on the back of the posted cards and to speculate about the lives of the sender and receiver. Why did Katie send a postcard simply saying 'Thank you for postcard. Love from Katie'? Why did Hugh only tell Miss L.Devon that he was 'Still living'? Did Janet meet the writer of the card that said 'What are you doing with yourself this afternoon? Unless you are otherwise engaged will you come out for a walk'?

WATERMILLS AND WATER-POWERED WORKS ON THE RIVER PENK AND ITS TRIBUTARIES

By M.V.Cooksley

Introduction

In a series of papers in previous editions of this Journal the watermills of the River Stour and its tributaries were surveyed. The main tributary from the north is the Smestow Brook. This system extends to just north of the centre of Wolverhampton. Beyond that watershed a series of streams converge into the River Penk which flows northwards to enter the River Sow near Stafford. This survey is on similar lines to the earlier studies and the aim is to establish the location, nature and history of the water-powered sites which it is hoped will provide a basis for more detailed study. Many mill sites in this area have very little known history and few remains. It is hoped that more information may be forthcoming as a result of this article.

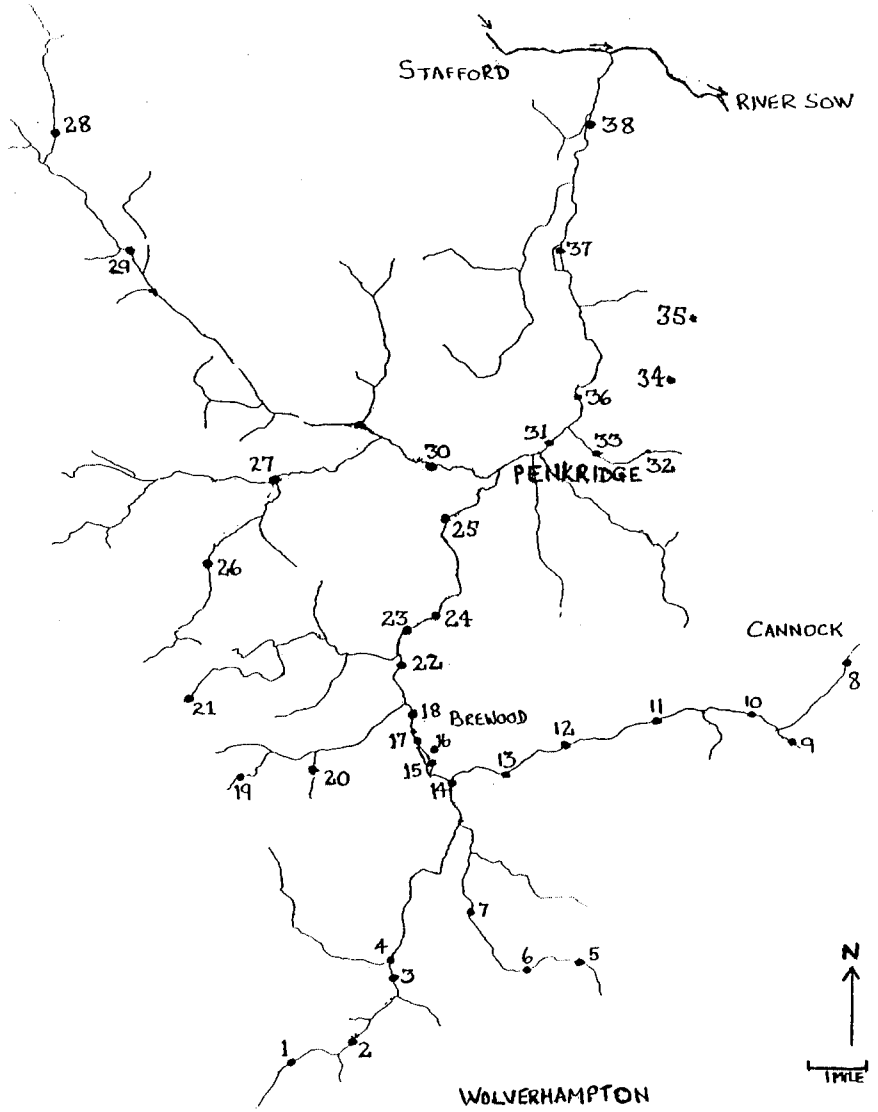
The total area drained is approximately fifty square miles. The river rises at about 120 metres above sea level and enters the River Sow at 74 metres. The total fall is about 46 metres an a river length of approximately 16 miles. Many of the streams appear not to have been used for powering watermills. The fall on these streams is often very small and much work would have been needed to engineer an adequate head of water to operate a mill. Several sites were recorded in Medieval times but went out of operation before 1600. Corn milling has been a major use for the mills up to very recent times. Several sites have been associated with the iron industry with furnaces and forges in the charcoal iron period. There have been few survivals into the present century.

Gazetteer

The sites are listed proceeding from the sources of the various tributaries down to the River Penk and then northwards along that river until it meets the River Sow.

1. New Mills SJ 868015

Sir Hugh Wrottersley, who died in 1381, held a watermill at Wergs but by 1441 it was mentioned in a Wrottesley family settlement as Burdon or Burdun's mill. It was again mentioned in 1501 but by 1613 the mill at Wergs was called Rodesford mill. The mill pond is still to be seen as the pool on the infant River Penk north-west of Wergs Hall.



Map of the River Penk and its tribrutaries, showing the location of the watermills.

2. Dam Mill SJ 883022

This mill was mentioned in a 1260 Tax Assessment and it was owned by the Dean of Wolverhampton in 1341. In 1412 it was one of the mills in the neighbourhood that was attacked by rioters. It was working in 1559 and also a miller was recorded there in 1616, however it had been demolished by 1653. There was possibly a rebuild early in the next century.

3. Flemings Mill SJ 883037 approximately

This mill was on the Stanford Brook which later powered Pendeford Mill. Roger Fleming, who had earlier built a mill at Pendeford, was sued in 1411 by the Priory of St.Thomas, near Stafford, because it was alledged that the output at Pendeford Mill had been reduced from 10 quarters per day to only 10 bushels due to the lack of water. (**Note.** 8 bushels = 1 quarter)

4. Pendeford Mill SJ 892040 approximately

This mill was at the confluence of the River Penk and Moat Brook. In 1277 John de Pendeford sold the Manor of Pendleford to the Priory of St.Thomas but kept the mill. A short while later John transferred the mill to Ralph de Burgh at a nominal rent but suggested that it should be given to the Priory. This suggestion was carried out by Ralph and confirmed by John de Pendeford. After the Battle of Worcester in 1642 Charles II hid in an oak tree and was then accompanied by the Penderel brothers to Pendeford Mill then owned by Humphrey Penderel. The future king then journeyed on one of the mill horses to Moseley Hall and thence to Bristol. In 1712 the copyhold was transfered to Thomas Higgs. His son John Higgs sold it to John Taylor of Wolverhampton in 1779. The son of John Taylor, also called John, died in 1794 when his executors sold the mill to the Staffordshire & Worcestershire Canal Company. They sold it to T.W.Giffard of Chillington Hall in 1826 after which the mill remained as part of the estate until it was sold to the Wolverhampton Corporation. The water supply became inadequate and the mill closed in 1911 and was converted to two cottages which were only demolished in 1961. During the 18th century the mill operated three sets of stones.

5. Mosley Mill SJ 930038

This mill was shown on Yates map of 1775.

6. Fordhouse Mill SJ 918035

This mill was shown on Yates map of 1775 and on Ordnance Survey maps up to 1949.

7. Old Farm Mill SJ 908049

This mill was sold as part of the Bushbury and Coven estate by Sir Walter Leveson to Francis Toncke and his wife in 1614. In 1657 a mill in the manor of

Coven and Brinsford was occupied by Walter Clarke. The derelict brick mill building dating from the early 18th century was to be seen in 1958 at Old Mill Farm, Bushbury. The centre part of the mill house is built of stone and may have been built some time earlier in the 17th century.

8. Cannock Mill SJ 988099

Possibly there were two mills in this area. A mill was held by the Bishop of Coventry and Lichfield which was rented to James de Audley about 1250 for 10s per year. It was held by William Trumwyn for the Bishop in 1317, and by his heirs until 1639 when Thomas Leveson made a settlement including a mill at Cannock.

The other mill in Cannock was the lord of the manor's mill which was leased for 3s-4d in 1274. It was repaired considerably in 1281. In 1424 William the Miller was the tenant and repairs to the mill and pond cost the lord of the manor 14s 1d. The mill was leased to John Justice in 1449 and after his death in 1463 to John Parker and Hugh Collins. In 1473 repairs cost 14d. In 1641 the lease was transferred by William Lord Paget, who was then the lord of the manor, from John Coleman to Walter Chetwynd for 21 years at a rent of £22 per annum. The lease was sold by Lord Paget in 1650 to John Byrch of Stafford and Robert Sankey of Cannock but in 1659 it was held by an Edward Rowley. Edward Rowley's grandson Henry Burton conveyed the mill to Edmund Wilson in 1697. Wilson died in 1709 and the lease passed to Thomas Barton for thirteen years. In 1954 there was a red brick mill with overshot waterwheel measuring 19'2" x 5'4" which worked occasionally. The wheel, which worked four pairs of stones, had 10 arms and was made by Bate of Compton and dated 1902.

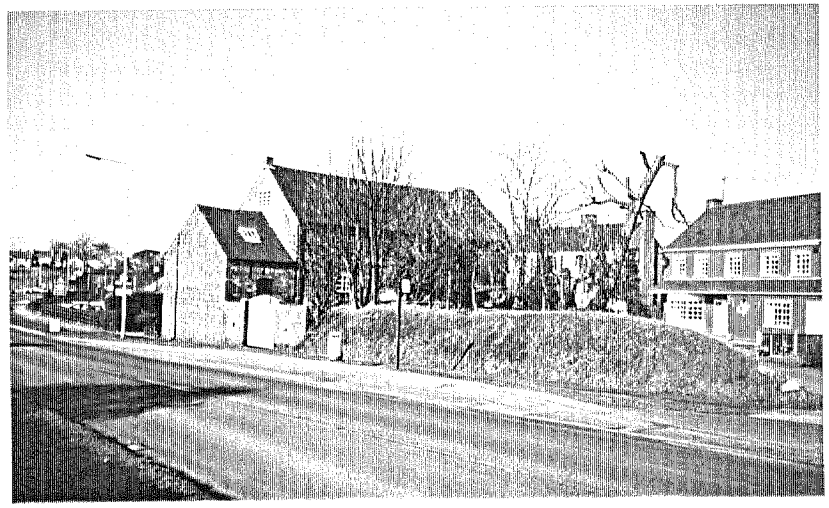


Plate 1. Cannock Mill, 1996.

9. Walk Mill SJ 976082 approximately

The place name would indicate that there was a fulling mill near this site. The mill was in existence in 1775. At the time of the Tithe Apportionments the mill was owned by Jonathan Stokes M.D. but was soon to be sold at auction when it was described as a corn mill. Any excess water in the Hatherton branch of the Staffordshire & Worcestershire Canal at this point overflows into the mill leat.

10. Wedges Mill SJ 967090 approximately

In 1643 Robert Wedge was renting Whitnall Mills from Sir Edward Littleton. By 1754 the mill was known as Wedges Mill and was rented by John Olerenshaw from another Sir Edward Littleton. William Webb had the mill in 1768/9. Later it formed part of William Gilpin's edge tool works during the first half of the 19th century and by 1843 was owned by George Gilpin.

11. Great Saredon Mill SJ 946088

The estate of William of Worcester included a mill at Great Saredon in 1288 which was held by his successor William de la Pole in 1293. The mill was granted to William atte Mulnehouse in 1388 by Sir William de Shareshill but William was later sued by Sir William for not maintaining the mill. After 1840 the mill had a wharf at Bridge 4 on the Hatherton Branch of the Staffordshire & Worcestershire Canal.

12. Deepmore Mill SJ 920080

This mill was present on Yates map of Staffordshire in 1775. It was said to be a very powerful corn mill in 1817 but by 1829 it was a 'water corn mill and blade mill' owned by the Monckton family. It remained in use until about 1900. The pool is now dry. The mill had a wharf at Bridge 75 on the Staffordshire & Worcestershire Canal.

13. Standeford Mill SJ 914076

In 1318 John de Aldenham was granted a third share in the old watermill in Coven near Brewood Park at a quit rent for 14 years and subsequently at a rent of 20s. In 1337 the Bishop of Lichfield complained that this mill diverted water from the Saredon brook and the Coven Brook so reducing the flow to his mill at Somerford. There were further references to the mill in 1704, 1757, and 1760. William Shenstone was occupying the mill in 1834 but by the time of the Tithe Apportionments it was owned by William Shenstone's executors and occupied by John Austin. Later in the 19th century the owners were the Yeoman family who sold the mill in 1939 to Evelyn Monckton of Stretton Hall. The mill was a grist mill to about 1912 and then produced horse fodder. The mill was an 18th century brick building but the mill house was damaged by fire in 1933 and rebuilt.

14. Coven Furnace SJ 905065 approximately

In 1642 the furnace was a quarter mile from the iron forge in Brewood Park (q.v.). William Mansell was clerk at the furnace in 1669.

15. Brewood Upper Forge SJ 898081

A forge was leased to Thomas Smith in 1485 for a rent of 4d. Also, in 1603, there was a reference to 'hammermen' at Brewood Park. About 1620 Thomas Chetwyn and Walter Coleman built a forge a quarter mile south of Somerford Hall. In 1623 Thomas Somerford complained that not only was his mill impeded and his meadows flooded but his family was disturbed 'by the usual knocking thereof at several times of the night...the unwholesome smoke, sparks and air... and by the ill neighborhood of disorder and ill-disposed persons usually employed in and repairing unto such iron-works'. The forge was leased by Philip Foley from Walter Giffard in 1669 and in 1673 the lease was renewed for a rent of £20 until 1690. In 1717 the output for the year of this forge and Brewood Lower Forge (q.v.) was 100 tons. Sometime during the 18th century the forge was worked by Mr.Barker of Congreve. The forge was still in use in 1832 but disused by 1841; it later became a corn mill which burned down about 1869. The present day Forge House has a late 16th century chimney but the rest of the house dates from the 18th and 19th centuries.

16. Somerford Hall SJ 899081

In 1965 this estate mill had a turbine in use for sawing and grinding cattle food.

17. Brewood Lower Forge SJ 898093 approximately

There was a reference to a forge called Lower Forge in 1673 but it was disused. A new forge was built in 1696 in Shurgreave Field. In 1717 the output for the year of this forge and Brewood Upper Forge (q.v.) was 100 tons. The Lower Forge is believed to have been disused in 1753.

18. Somerford Mill SJ 896090

This is a possible Domesday site. Richard de Somerford was granted the right to build a mill between 1120 and 1126. A mill which was rebuilt by the Bishop of Lichfield and in use in 1291 seems to have been here. In 1337 there was a complaint by the Bishop that John de Aldenham had diverted the Saredon Brook to the mill at Standeford (q.v.) which reduced the output from 30 quarters to only 6 quarters for every 24 hour period. In 1473 the Bishop leased the mill as a fulling mill. However it had reverted to a corn mill by 1620. Three years later Francis Somerford complained that its working was again being affected because water was being diverted to a new forge, Brewood Upper Forge (q.v.) just upstream. About 1841 the Tithe apportionments show that the mill was owned by Edward Monckton and occupied by Joseph Brewster. The mill was in use at least until 1884. The mill building is now part of Somerford Mill Farm forming its northern part, with the kitchen now in the old wheelhouse.

19. Chillington Mill SJ 868056 approximately

In 1279 Sir John Chillington's estate had a water mill. Another Sir John Chillington held it in 1556. A mill was still on this site in 1723.

20. Hyde Mill SJ 876081 approximately

There was a mill here from at least 1477. About 1841 it was owned by T.W.Giffard with Joseph Bill as tenant. The mill continued in use until 1939. The mill was built of brick with three storeys and formed an L-shaped block with the mill house. In 1956 there were two millstones supplied from Kidderminster and a large metal overshot waterwheel.

21. Blackladies Mill SJ 848094 approximately

A grant to Thomas Giffard included a mill 'within the site' in 1539. Humfrey Giffard had the mill in 1613 and Walter Giffard in 1632.

22. Engleton Mill SJ 892098

This was probably another Domesday mill which was later refered to in 1291 when owned by the Bishop of Lichfield. In 1467 the Bishop leased the mill to Robert Knightley for 10 years at a rent of 53s-4d. The Bishop leased the mill to Roger Fowkes in 1583 for forty years at a rent of 4 marks. In 1643 it was owned by Peter Giffard and occupied by Francis Lun at a rent of £2-10s. The mill was passed down the generations of the Giffards until they sold it to the Monkton family in 1864, however the tenancy was held by the Mellow family from 1754 to 1876. The mill was out of use by 1896, but the derelict building was still standing in the middle of the 20th century.

23. Stretton Mill SJ 816109

This mill was included in the Domesday survey. In 1273 Agnes, widow of Sir Richard de Stretton claimed one third of the mill as her dower. In 1331 this share was held by William le Champion and the remainder by Sir Hugh de Weston. In 1334 the larger share was transferred to Thomas de Weston, Hugh's son, and in 1352 this was taken over by William Champion. In 1403 Robert de Congreve had the mill. There were references to two grist mills held by the Lord of Stretton in 1630 and in 1725. The present mill is a three storey red brick building of various dates from the late 18th century onwards. There were two waterwheels, one has been removed and the other which was used to grind meal until about 1945 is derelict. (See Plates 2 & 3)

24.Water Eaton Mill SJ 902110 approximately

Another Domesday mill was on this site. It was referred to in 1310 and in 1345 Walter Beysin died holding a watermill and fulling mill which had become delapidated.

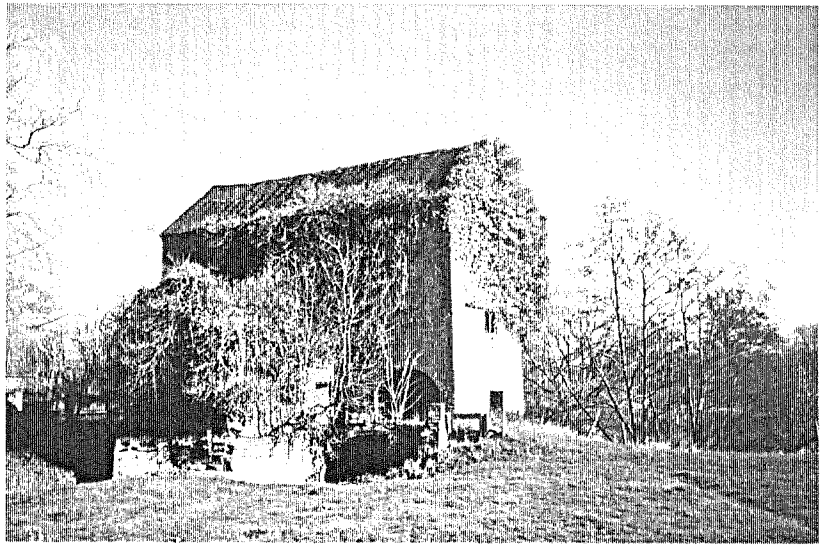


Plate 2. Stretton mill, 1996.

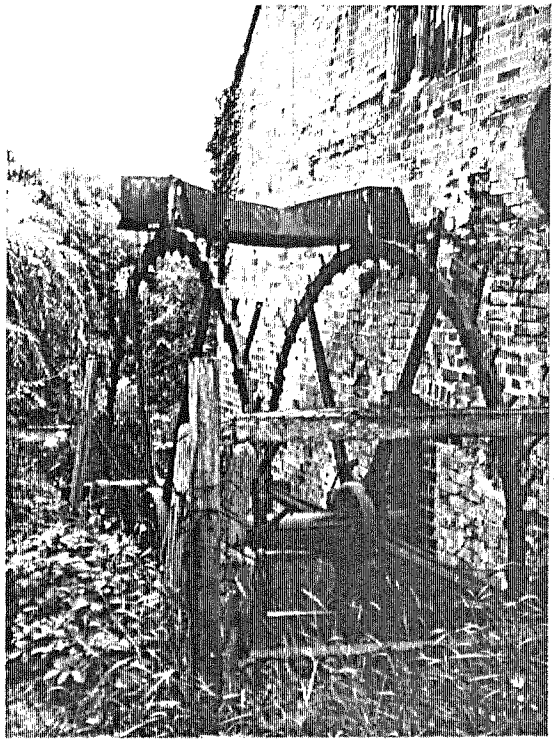


Plate 3. The remains of the waterwheel at Stretton Mill, 1996.

25. Congreve Mill SJ 905132

There was a reference to this mill in 1227, with a further mention in 1236 due to a court case concerning ownership. In 1260 there is reference to Richard 'ad molendinum de Congreve'. The mill was rented by Thomas Congreve from his father in 1620 and passed to Francis Congreve in 1622. In 1709 the mill had lately been converted to an iron forge which was in the possession of Thomas Rock and Stephen Onions. In 1750 the output of the forge was 120 tons. In 1775 Yates described it as a 'mill forge' and the forge continued until at least 1832 but it was unused in 1841. The site is a cowshed to the south-west of the manor farm.

26. Brookhouse Mill SJ 855125 approximately

At least from 1291 to 1358 this mill was held by the Prior of Lapley. The site is south-east of Wheaton Aston village where there were the remains of a large pool.

27. Lapley Mill SJ 869141

The first reference to this mill was in 1266 when the rent was 4d. The mill was held by the Prior of Lapley, with Brookhouse Mill, from at least 1291 to 1358. Later there were regular references to the mill from 1548 to 1706. In 1912 it was held by Mrs.Edmund Vaughan. The mill had been demolished by 1955. The remains of the foundations indicate that the waterwheel was probably undershot

28. Hollies Mill SJ 816216 approximately

This was probably refered to as Gnosall Mill in 1086. A mill and pool were mentioned in 1505. About 1677 the mill and pool were leased by William Davenall. By 1709 the mill had disappeard but William Davenall still had the site, which was between the mill pool and the Knightly road.

29. Reule Mill SJ 842190 approximately

This mill was held by Robert de Stafford in 1086. The next mentions were in 1307 and 1337. In 1341 Robert de Chetwynd conveyed lands together with the mill to his mother for life. The mill was mentioned in the dower of Elizabeth de Chetwynd in 1418. Mills were listed in the lease of 1735 from Chetwynd to Bromley. In 1892 broken mill stones were still to be seen near the pool.

30. Whiston Mill SJ 901142

There was a mill here in 1370 valued at 30s per annum. A survey of 1652 shows that the mill was held by Stephen Cotton at a rent of £1. The Tithe Apportionment of about 1841 show it was owned by T.W.Giffard of Chillington Hall. The mill continued in operation almost to 1939. The mill building is of red brick construction, probably 18th century, the wheelhouse is single storeyed, but the mill has 3 storeys and the mill house 2 storeys. The waterwheel was breastshot but is not in situ, however the machinery was present in 1967.

31. Roller Mill, Penkridge SJ 926145

This another possible Domesday site. There were two mills in 1172 which were repaired for 20s and further references in 1225 and 1259. Three mills called Penkridge Mills were leased to James Southall in 1598. About 1627 Robert Lord brook granted the mill to Lady Katherine Russell and her husband Robert who still owned the mill in 1643. Their second son held two mills in Penkridge in 1662. There was an estimate for rebuilding the mill in 1764. In the early 19th century the mill was rolling iron but had reverted to a corn mill at least by 1834. In 1938 the mill was sold by Lord Hatherton. The waterwheel which was undershot was removed in 1939 and the pool filled in. In 1956 the then owner Mr. Bottomley had electrical plant installed replacing the older gear. The mill is a three storey brick building dating from the late 18th century and the mill house some 100 yards south of the mill was built about 1830.

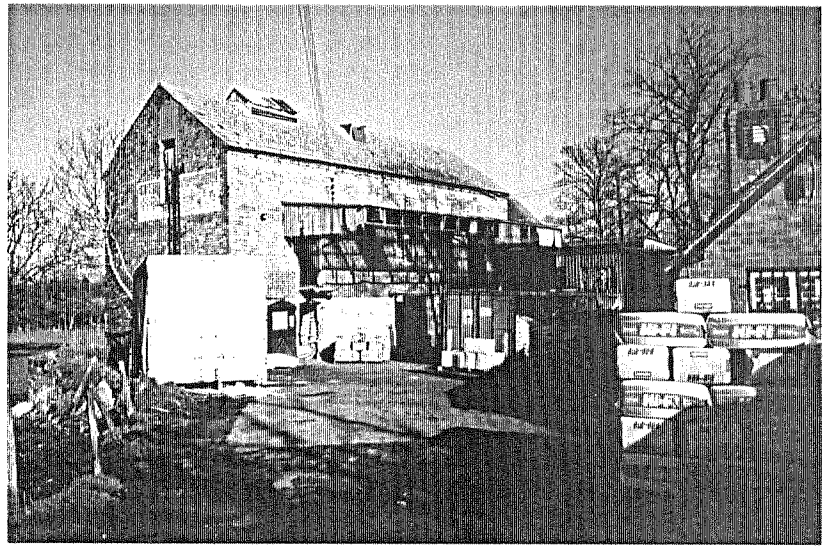


Plate 4. The Roller Mill, Penkridge, 1996.

32. Hazel Mill SJ 947144

There is a reference in 1280 to a mill on the boundary of Pillaton and Huntington that was probably this mill. There was a claim by the widow of Stephen de Elmedon in 1304 to a share in the mill when a third share of the mill was held by Robert, son of Adam Acton. A grant by William, son of William of Wrottesley in 1310 was made of a mill to William de Elmedon who then settled the mill known as 'le Haselnemulne' on his son in 1342. The 'Hasyll' mill was mentioned in 1598 together with 'Hasill' mill pool. For a while the mill was associated with the iron industry. There has been no building since about 1754. The site is 200 yards south-east of Banley Park.

33. Bone Mill SJ 937144

This was one of two mills in the Wolgarston area. They were held by William Hussey in 1532, one being a fulling mill rented to Edward Littleton. Sir Edward Littleton was farming the tithes of Wolgarston mill for 6d par annum in 1548 and his estate included the mill when he died in 1610. In 1834, according to the Tithe Apportionments, the tenant was John Boyden and the owner was Edward John Littleton. The mill was used for crushing bones by Henry Wood in 1851 but later it was used as a grist mill. However it was disused by 1912. The mill was sold as part of Wolgarston Farm by Lord Hatherton in 1947 but by 1956 the mill was derelict. It was of brick construction, of 2 to 3 storeys, built on a stone base against the stone dam.

34. Teddesley Hay Home Farm SJ 951161

On this farm there is an overshot waterwheel, 38'diameter by 2'8" wide, made of wrought iron which is housed totally below ground level in a barn. The wheel is built on the suspension priciple so the drive was from a toothed ring on the rim and not by the shaft. The wheel has 13 arms with braces between each arm. It was built for £764 by Sir Edward Littleton who died in 1812. The water supply comes from a reservoir via a 15" diameter pipe and the tailrace flows in a 500 yard tunnel before joining Lodgerail Pool. It operated a thresher, saw mill, kibbling machine and cutter. The wheel was made by Thomas Bate, of Himley in 1838.

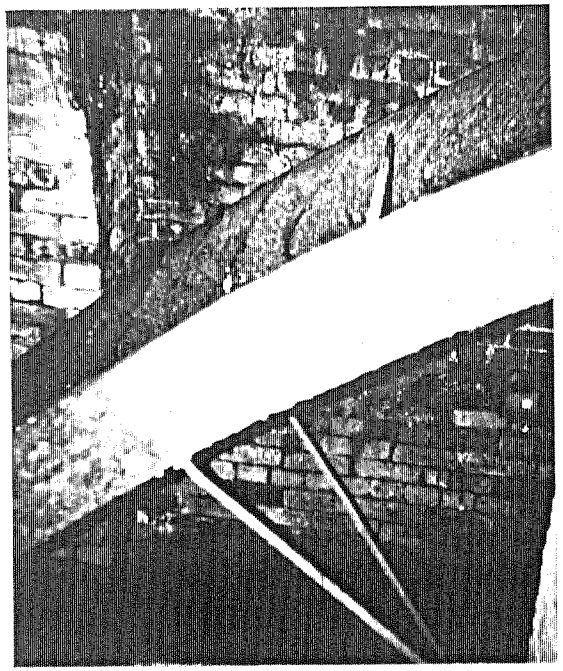


Plate 5. A section of the underground waterwheel at Teddesley Home Farm.

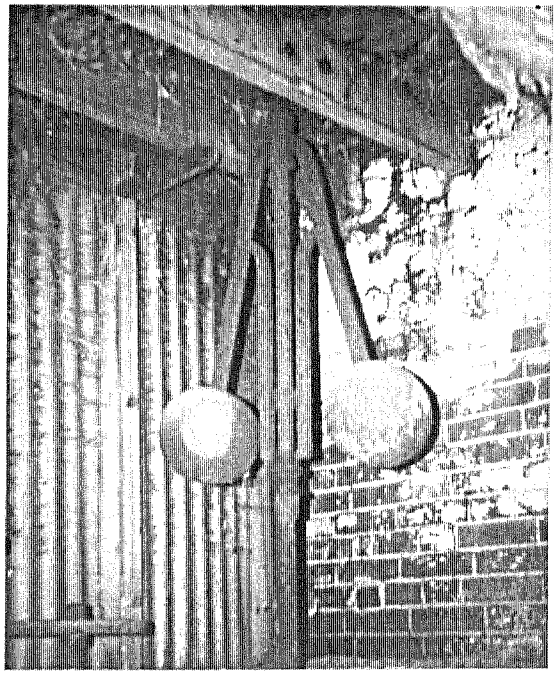


Plate 6. The governor at Teddesley Hay Home Farm.

35. Teddesley Hay Iron Works SJ 950170 approximately

This was operated in 1576 by Thomas lord Paget. The site may have been on the north side of Springslade Pool.

36. Drayton Mill SJ 934158 approximately

In 1194 Drayton manor mill, together with mill pool maintenance and the haulage of the millstone, was transferred to St.Thomas's Priory at Stafford by Hervey Bagot. The value of the mill in 1291 was £1 per annum but in 1535 it was worth 40s. In 1643 the tenant was paying £3 rent for the mill to Walter Fowler. The mill had disappeared by 1754. The probable site is near the small bridge over the River Penk at Lower Drayton.

37. Acton Mill SJ 931189

This was held by the Bishop of Chester in 1086. In 1449 rent was paid for the water course by the Lord of Acton to the free tenants of Dunston. In 1553 a person called Fowke rented the mill from Lord Stafford. The tenant in 1574 was Richard Dickenson. Richard Thomason paid £12 rent for the mill to Sir Edward Littleton in 1645 but was forfeited about 1653 back to Sir Edward Littleton whose family paid suit for it up to 1755. Another Sir Edward Littleton acquired the mill in

1775 and his desecendant E.J.Littleton owned it from at least 1827 to 1845. The mill was used until after 1878 but was demolished by 1900, and the pool partly filled. The present day Acton Mill Farm was the mill house and dates from the first half of the 19th century.

38. Baswich Mill SJ 938215

The Bailiff of Baswich accounted for 18d for transporting new mill stones to the mill in 1279. In 1472 there was a corn mill and fulling mill, however the mills had disappeared by 1732. The site was a half mile west of Radford Bridge. There were also other possible mill sites in this area near Brocton Hall and Milford Hall where at the upper end of the lake traces of a waterwheel have been found.

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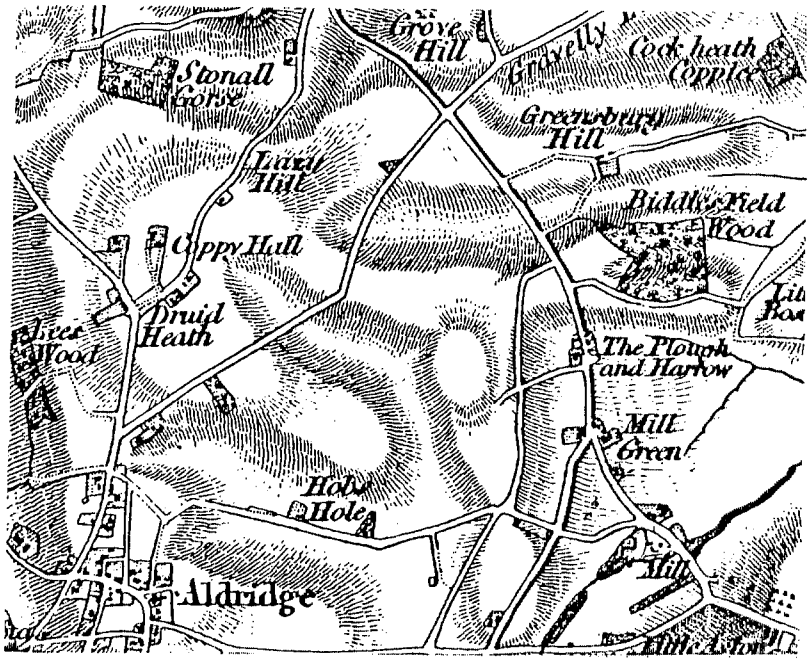
LITTLE ASTON MILL, ALDRIDGE, STAFFORDSHIRE

By George Golder

Introduction

The Bourne Brook rises in the open countryside between the conurbations of Walsall and Sutton Coldfield. It runs in a north-easterly direction until the village of Shenstone where it then flows eastwards until it joins the River Tame at Fazeley near Tamworth. Although only about twelve miles long the Bourne Brook had about eight mills on its length at one time or another. Just to the north of Sutton Park is the village of Little Aston while further westward is the township of Aldridge. The infant Bourne Brook flows between these two places providing a green corridor between Sutton Coldfield and Walsall. About a mile from its source the brook was dammed to provide the water supply for Little Aston Mill (SK 082009) near to the habitation called Mill Green. The stream at this point forms the Staffordshire county boundary which runs through the mill pool.



The 1st edition Ordnance Survey map, c.1840, showing Little Aston Mill at the bottom right

History

The earliest reference to Little Aston Mill was in 1383 when Richard Le Smyth was granted 'two acres by Robert Grendon for honour and services paid in his manor towards the way of Alrewic (Aldridge) which leads to Aston ford in the moor and towards the Mill of Aston'. Over a hundred years later, in 1509, 'William Prist for the mill.... 4 marks' was recorded in the rentals of the Manor of Aston in Coldfield. Thomas Jebbern paid £3-6s-8d for the same mill some nineteen years later, in 1528. Thus there was clearly a mill at Aston in the Middle Ages, however its exact location is not specified but it is likely to have been on the same site as the present mill.

In 1712 an indenture of lease and re-lease occurred between Richard Scott of Little Aston Hall and Anne Addyes of Moor Hall concerning 'A messuage cottage or tenement with the mill house and all those three water corn mills in Aldridge Parish known as Aston Mills....and also all the lands, millholmes, banks, ponds, and pools, etc., in the possession of John Thoryworke'. This reference to three corn mills probably does not mean three separate mills in Aston but more likely it refers to there being three sets of millstones within the mill.

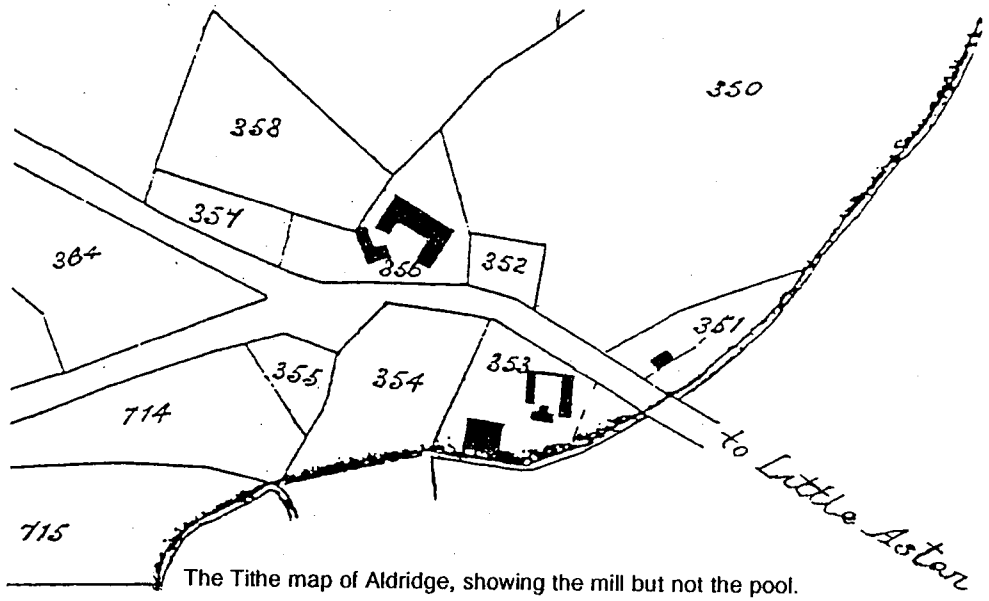
The first map to show the mill was that of Yates in 1769, all earlier maps of Staffordshire being not to a scale sufficient to even show the Bourne Brook. Yates, however, clearly shows the brook and the mills along its course. Tracing the brook from its source, the Bourne Pool is the first dam shown, near to the South Staffordshire Waterworks pumping station, but no mill is shown there although it is clear that an iron-working forge was to be found there about 200 years previously. The next dam is the one at Little Aston together with a waterwheel symbol indicating the mill, and although the purpose of the mill is not stated, it can be assumed to represent a corn mill. A little further downstream is an iron-working establishment Aston Forge and further down the Bourne Brook Yates indicates the position of Shenstone Mill, a slitting mill at Weeford, and two mills at Hints one of which was another forge.

In the latter half of the 18th century and the first half of the 19th century the Mills family provided the millers in Mill Green. In 1774 the mills for grinding corn were in the holding of William Mills, although they were the property of Andrew Hackett Esq. of Little Aston Hall. The Mills family operated the mill and farmed nearly all of Mill Green and Gainsborough Hill Farm for nearly 100 years.

About 1845 the tithe map was drawn up which includes a plan of the mill itself shown as it is today, but the farm buildings are laid out somewhat differently (see illustration opposite). According to the tithe apportionments the descriptions of the plots held at that time by the occupier, William Mills are as follows:-

Plot 351 Wagon Hovel	1d
Plot 352 Gardens	1d
Plot 353 House, mill buildings, yards and garden	3d
Plot 354 Part of mill pool	1s- 1d
Seven other plots were held by the occupier	£1-1s-10d
Total value	£1-3s- 4d

The occupier noted on the tithe apportionment was William Mills and the owner was William Leigh. Certainly in 1851 William Mills, his wife Charlotte, and two daughters were still at Little Aston Mill, however by 1861 they had left and William Humphries was the resident miller. After a further ten years there had been yet another change as William Humphries had been replaced by a Edward Massey, a Cheshire miller, and his family.



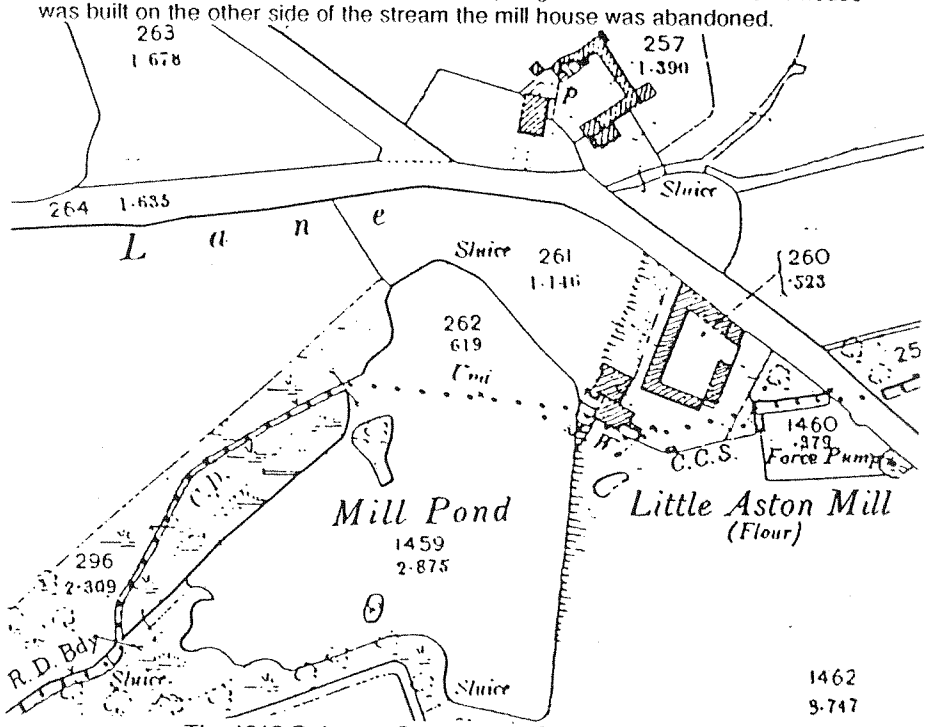
The Tithe map of Aldridge, showing the mill but not the pool.

In 1884 the Ordnance Survey published a large scale map of the area which shows the corn mill. The shape of the pool is different from that shown on the tithe map and and also the farm buildings are cosiderably altered since 1845. The sluice by Mill Dam House is also shown. The second edition of this map in 1902 shows no changes in the layout at Little Aston Mill but includes the force pump on the opposite side of the stream near the road (see illustration overleaf).

In 1907 Little Aston Mill was sold along with 52 acres of land to 'Bob' Brown, a farmer of Mill Green, for £2000. Subsequently the mill passed to the Sturgess family by marriage and was farmed by a branch of the Foden family. On the Ordnance map of 1914 the sluice to the north of the mill has disappeared and an overflow indicated in the dam south of the mill, also the pool is shown to be silting up.

The author's ealiest memories of the mill date from 1925, when he was 5 years old. The Mill farm was then a working dairy farm with the fields being meadowland and the barns used to store corn from the two farms. The millstones were not in use at that time but a small modern vertical mill was used

to grind cattle food, a set of steel rollers were used for rolling oats for the cattle, and a set of steel crushers used to break up linseed cattle cake. These were all powered by the waterwheel which was restored or renewed about that time. Some time in the 1920s Pratts Mill at Walsall was destroyed by fire and Little Aston Mill was used by them to produce flour for some of their customers. A portable steam engine was used to supply continuous power via belting, driving through a hole that had been knocked in the wall. In the middle of the 1930s the modern machinery was still in use but the millstones were again not in use. Towards the end of the 1930s electricity was installed and the waterwheel fell into disuse. After the Second World War R.Brown leased the mill and farm to Edgar Foden who continued to use it. In the early 1950s the tail race was filled in to prevent the whole structure from collapsing and when a new farm house was built on the other side of the stream the mill house was abandoned.



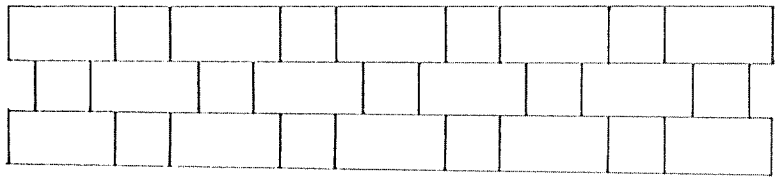
The 1912 Ordnance Survey Map of Little Aston Mill.

Unfortunately due to these structural problems and neglect the mill fell into disrepair and disuse. The centre of farming moved to Gainsborough Hill Farm and the meadows were all ploughed up as the farm changed over to arable farming before 1963. Although there were plans to restore the mill house in 1982, when the Council invited the applicant to include the mill nothing further came of the plans. Since then the decay has continued, the house neglected and the mill has been declared unsafe.

Visual Survey

The general appearance is of neglect and decay with grass and weeds growing on the roofs where large areas of tiles are missing and the laths have loosened. The mill building has 14" thick walls with brickwork layed to Flemish Garden Wall Bond. The original bricks are hand-made but the mortar has fallen out as have the windows and most of the window frames.

FLEMISH BOND



Flemish Bond has alternate headers and stretchers in rows.
Flemish Garden Wall Bond has one row of headers, up to five rows of stretchers

Plate 1. Little Aston Mill in 1988, little has changed today.

The headrace is partially filled in and overgrown. An Ash tree has fallen across the headrace and damaged part of the mill house. The grill across the race is still in position with the water level about 6" below it. Looking through the headrace arch the remains of the launder can be seen, some of it lying on the wheel. The sluice gate is complete together with the operating gear. The waterwheel has all its buckets although they are badly rusted. The wheel is

approximately 10' in diameter and 5' wide, with rims, spokes and shaft made of cast iron. The shaft is approximately 1'3" in diameter. The building over the tailrace is a later addition and is not bonded to the original mill structure. Its roof and floor are both dangerous and the arch over the tailrace is collapsing into the tailrace channel which has been filled in.

The entrance to the mill is in the east wall via a stable type door which is still in good condition. The ground floor is roughly paved with irregular flag stones but is reasonably level. The pit wheel, wallower, spur wheel, nut wheel and tentering gear for one of the stones are all in position. There is also a screw device used to disengage the nut wheel attached to the tentering beam. The pit wheel is made of cast iron and although rusted shows little sign of wear. The wallower and spur wheel are mounted on a polygonal wooden shaft about 1' across the flats. The wooden supporting framework is intact and parts of the flour chutes can be seen through the upper floor.

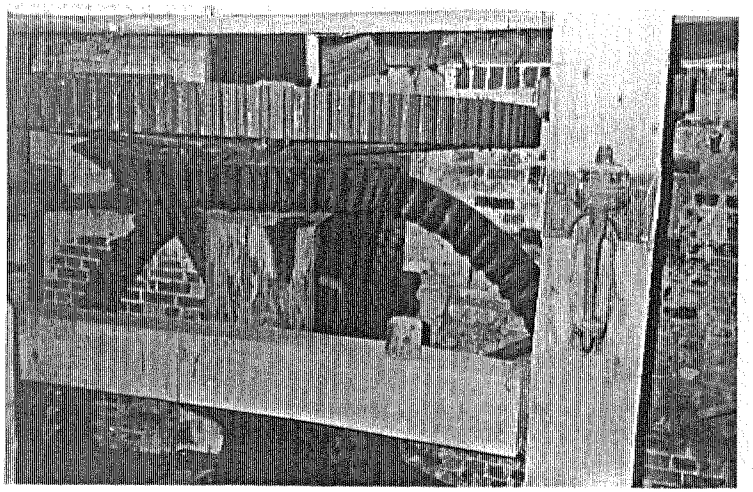


Plate 2. The pit wheel and wallower.

On the first floor there is a set of millstones in position complete with their damsel but with their iron bands broken. The tun has been removed from the stones and laid to one side but although the grain chute is in position the grain hopper and vibrating shoe are missing. The crown wheel is in its position together with gears, which are made of cast iron. The shafts and pulleys for driving auxiliary equipment are still in place although the auxiliary equipment, probably a sieve, has disappeared leaving only an old pulley in the wall where it was located. The second set of millstones have disappeared but a more modern piece of equipent, which used to be driven by electricity, stands where they

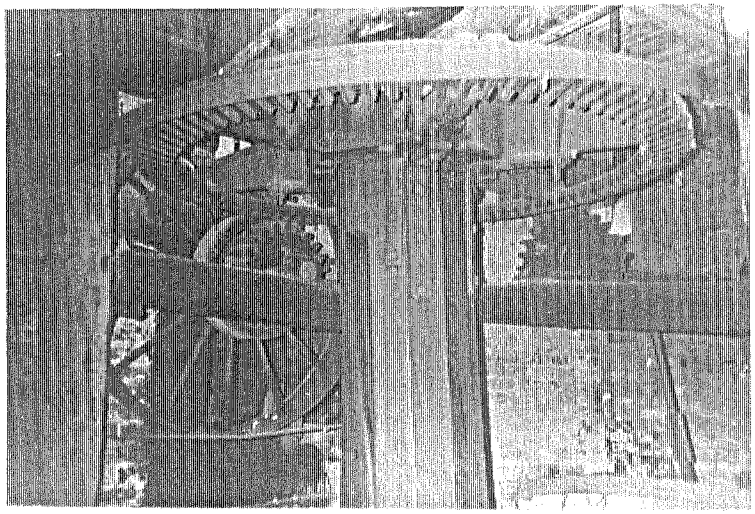


Plate 3. The main shaft and crown wheel.

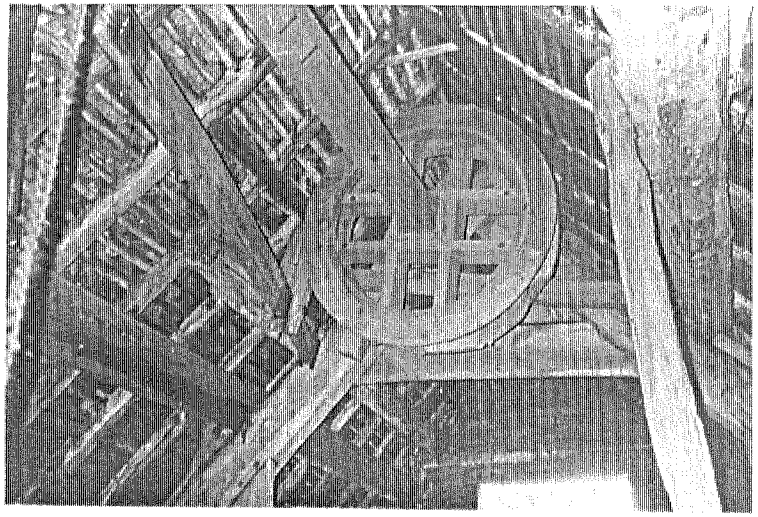


Plate 4. The sack hoist pulley in the roof of the mill.

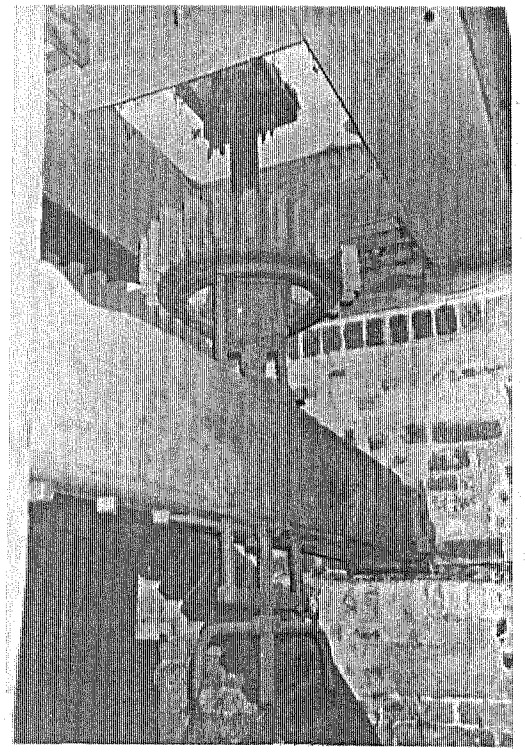


Plate 4. The tentering arrangement.

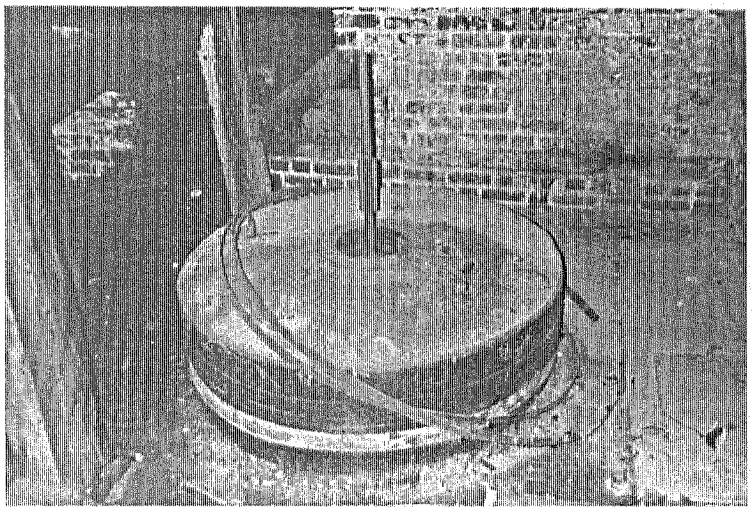


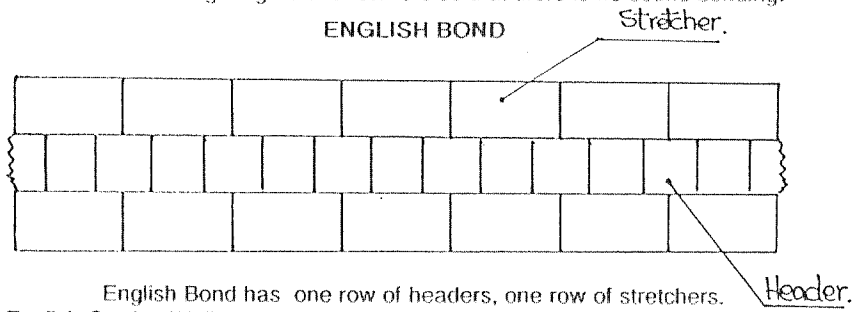
Plate 5. One pair of stones without any stone furniture.

were. There are two pulleys on one power take off shaft, one approximately 3' in diameter and one about 1' diameter. One of these pulleys used to supply power to the sack hoist via a belt.

The second floor is virtually empty as the grain bins and drop flaps have been completely removed. However the sack hoist is complete less the driving belt and control ropes and the drive belt tensioning gear is still in position as is part of the hoist chain. Fixed to a beam is an idler shaft, badly worn, while on the sack hoist can be seen iron reinforcing bars. The hoist chain used to pass over another pulley situated over the drop flaps. The timbers of both floors are not in very good condition.

The mill house is in a very poor condition and is near to collapse. The brickwork is 9" thick and is partly English garden wall bond, but the rows of headers contain long lengths of stretchers so that there is no sound bonding.

ENGLISH BOND



English Bond has one row of headers, one row of stretchers.
English Garden Wall Bond has one row of headers, up to five rows of stretchers.

Inside the house there is a scullery with the position for a fireplace. Also the scullery is equipped with a bread-baking oven and a cast iron open top boiler standing on a large stone slab. This slab continues into an extension alongside the scullery where there are some shelves and the remains of a cheese press. The living room contains a good 19th century cooking range with a wall cupboard and in one of the other two ground floor rooms there is a 19th century sitting room fireplace. The upstairs floors and roof are in a very dangerous state.

The farm buildings show two distinct stages of development. The barn on the south side of the square and the buildings on the east side are original, with restorations and alterations. The rest of the buildings date from the 1884 rebuilding. There are two cruck beams in the roof over the stable supported by a cross beam. The brickwork of the new (1884) buildings is very good, neatly laid Flemish garden wall bond with only one row of stretchers.

In the yard are two millstones being used as door steps. One appears to be made of millstone grit and the other is a composite French burr stone. There is a dam to the north of the mill and one to the south. The gentle slope away from the dam to the south is the silt removed in the 1960s which completely fills the low ground where the overflow water used to lie.

Force Pump

Near to the mill along Mill Lane can be found a force pump. This was not part of the mill and was not fed by water from the mill dam in spite of its location. It was fed by an ingenious system of land drains which provided a good, clean water supply. The drains used to feed into a header tank and via a small launder onto the small overshot waterwheel. This then drove a set of pumps using gears and a camshaft which operated the piston rods in the cylinders. All in all a very neat piece of late Victorian engineering.

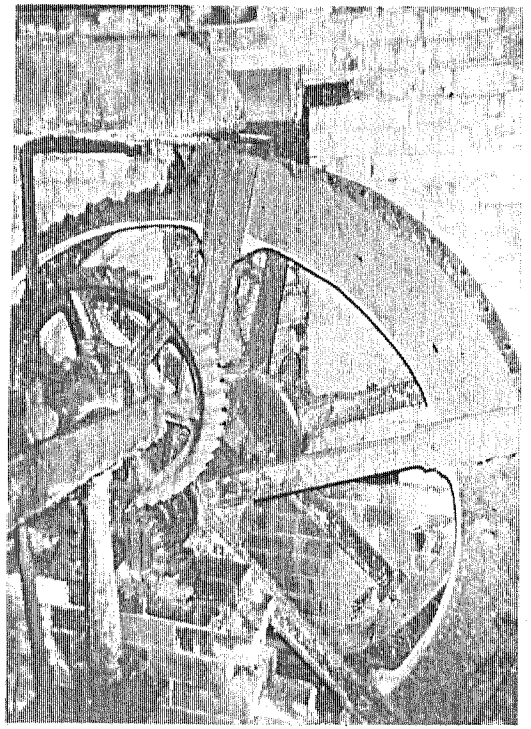


Plate 7. The force pump waterwheel and machinery.

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