

Industry on Paper Mill Brook; Hampton Loade Forge to Crow's Mill By David Poyner



Paper Mill or Bowhill's Brook is a short stream that runs through Romsley and Alveley into the River Sever at Hampton Loade. Despite its length, and its tributaries have powered 5 mills and two iron works (Figure 1).

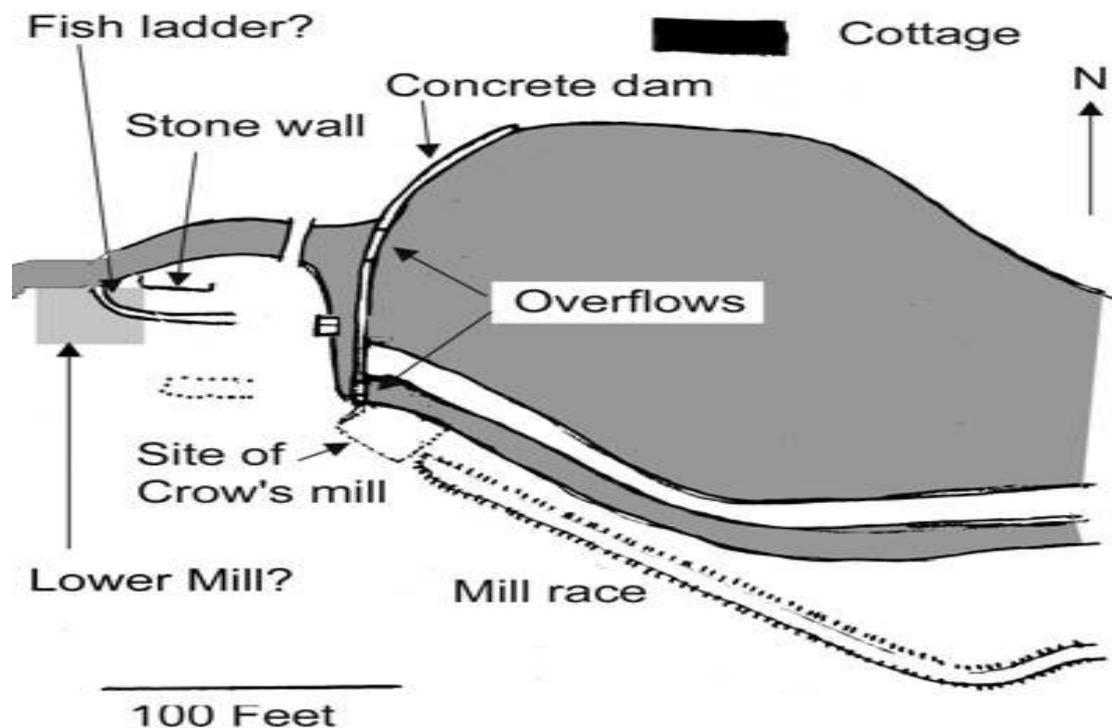
In past Transactions there have been articles on Hampton Loade forge, Hampton Loade furnace (a 17th Century charcoal blast furnace) and Elliot's /Moor House Mill¹. In this article, the history of the use of the lower reaches of the brook from Crow's Mill (SO 755860) to Hampton Loade forge (SO 784864) is described, combining documentary sources with evidence from the physical remains still to be found along its course. Hampton Loade forge is not described as this is too large a topic for the present account.

The archaeology of watermills

A typical mill is not usually worked directly by a stream or brook. The level of a natural brook is too variable; in drought there might not be enough water, in flood the resulting torrent would be likely to damage the mill. Usually, water for a mill is diverted by a dam (sometimes called a "stank") or a weir into a separate mill race. Here the water is taken in a channel called a leat to the site of the mill. The leat usually runs parallel to the brook, but is engineered to run down only a very slight gradient. By the time the site of the mill has been reached, the water in the leat is often many feet above the level of the brook. It may then allowed to fall over the millwheel to turn it; such a wheel is said to be an overshot wheel (or breast fed, if the water hits the wheel half-way down). The greater the height difference (the head of water), the more power will be produced by the water wheel. The alternative is an undershot wheel, where it is the force of a current of water flowing beneath a wheel that strikes paddles attached to the wheel and causes it to turn. Whatever type of wheel is involved, once the water has flown by it, it is led back to the brook in a tail-race. It is essential that the water is efficiently removed; if it backs up, it will stop the wheel turning and may even flood the mill. Mill owners were often worried about shortages of water in summer; to safeguard this, they would build large mill ponds to store water. Sometimes several ponds would be built upstream of the mill; these storage ponds simply existed to impound water and had no leat leading from them. Floodgates were sometimes provided to release excess water. On the other hand, if the water flow was regular, there would be no need for mill ponds and a simple weir would suffice to turn the water into the mill race. When investigating streams, it is important to identify dam sites and the remains of watercourses; these often survive long after any mill buildings have been demolished.

The lower reaches of Paper Mill brook are not easy to survey. The stream has cut its way through solid rock forming a steep-sided gorge. Thus there are numerous piles of stones, which might represent traces of dams but which are more

likely to have been deposited naturally. There have been landslips that would have obliterated any evidence of leats and floods have eaten into the banks and may have destroyed some potential dam sites. In spite of this, a survey over the last year has identified a number of interesting features.



Brimford Mill

The earliest reference to a mill on the lower reaches of Paper Mill brook comes from a document dated January 26th 1500. This is a lease for 40 years from John Strangeways, Lord of Quatt to Walter Heth, a bookseller, formerly of London. Strangeways allowed Heth "To turn the course of the brook between Quatt and Alveley and construct flood gates or stanks on Docketts Batch to turn the course of water from Brymfforde Mylle to the Severn, and take profits of fishing therein" for the rent of 20d. The deed was witnessed by various local dignitaries; Humfrey Woolriche of Quatt, Sir Thomas Tonks, parson of Quatt and Roger Scribener².

I am not aware of any other references to Brimford Mill. Dockett's Batch can still be identified; it is the name of the land that is immediately to the north of the brook, on the Quatt bank. Heth was being allowed to take water from the lower reaches of Paper Mill brook. The "course of water" in Docketts Batch between Brimford Mill and the Severn is probably another way of referring to the brook itself, although it may mean a tail-race flowing from Brimfield Mill parallel to the brook down to the Severn. It seems that Heth was diverting the water into fish ponds; these were a common feature of the medieval landscape and were often very profitable enterprises, supplying the local populace with fresh fish. It cannot be excluded that these ponds then supplied water to some other mill, but there is no evidence for this. Given the subsequent history of this part of Paper Mill brook, the chances of identifying any of Heth's works are remote. However his ponds, which by definition must have been downstream of Brimford mill, were probably in the very lowest reaches of the valley. The mill may have been immediately upstream of these; if not, the next practical site would be on the Crow's Mill site. Who Walter Heth was and what attracted him from London to Shropshire are both unknown. Indeed, his profession of bookseller was unusual at so early a date, only a few years after the invention of printing.

Hampton Loade Furnace.

Hampton Loade furnace is first mentioned in a document of 1641 (see below) and there are passing references to it in 1647, 1653 and 1662. Peter King (who first drew my attention to the furnace) has argued that the furnace operated from 1641 to 1662 on a 21 year lease to Thomas Foley, a common period for such leases³. I have recently become aware of another reference, in a family settlement dated 17th February 1660, concerning arrangements for lands to be used for the benefit of Sir Thomas Wolryche of Dudmaston and his children⁴. It mentions "Lee Hall in Quatt, in the occupation of Margaret Nash, widow, the site and stream for iron making near Lee Hall farm and the ferry or passage over the Severn at Hampton Loade". These were to be excluded from the property transactions mentioned elsewhere in the settlement, almost certainly because they were the subject of existing leases. The document confirms that the furnace site was owned by Thomas Wolryche and that the furnace must have been very close to the site of the later forge. It is also useful

in supporting the evidence from the 1662 reference (a receipt issued to one John Legas for pots cast at Hampton and elsewhere) that the furnace was still in existence at the start of the 1660s.

There are no obvious references to the furnace or its site in the remainder of the Dudmaston Hall archive, deposited at the Shropshire Records and Research Office. This in itself may be significant, as the documents extend for many years either side of the period 1641-1662, suggesting it had no previous or subsequent history. However, it is possible that Heth's works were still visible, if long-abandoned in 1640. The presence of existing leats and pool earthworks may have been instrumental in the decision to build a furnace at this site, not at the mouth of any of the other numerous streams and brooks that empty into the Severn.

There is one reference which suggests that the memory of the furnace was not forgotten after 1662. Amongst the Boulton and Watt papers in the Birmingham Reference Library is a list dated 1st January 1788, of "Charcoal Blast Furnaces which have declined blowing since the year 1750 owing either to the want of wood or the introduction of the making coak [sic] iron". This list includes Hampton Loade, although a marginal note marks this as "Forge"⁵. There is no other suggestion that iron smelting was ever revived at Hampton after 1662, nor is there any other evidence for a forge at Hampton before the late 18th Century. Whilst it is difficult to rule out either of these possibilities completely, it seems most likely that the compiler of the list was mistaken. There was probably still a dim memory of the furnace in operation when the list was drawn up but the supposed date of its closure was out by almost 100 years.

Elliot's Mill.

There is only one explicit documentary reference to Elliot's Mill. This is an agreement of the 13th April 1641 between Thomas Foley, the occupier of Hampton Furnace and John Heath of Alveley, miller. Foley had set up a dam "over the brook below and near Elliot's Mill or Moor House Mill in Alveley" in the occupation of Heath, "where the water (for the purpose of the turning of it to a furnace of the said Thomas Foley) is pounded and kept above its normal height to the damage of the said John Heath and his mill". Foley was to pay £1-6-8 a year to Heath for 7 years to indemnify him against claims by Lancelot Lee, the mill owner⁶.

Whilst short, this does provide some useful information about the location of the mill. The name "Moor House" shows that it must have been close to the farm of that name. It is difficult to imagine that the name could have been attached to a mill any further upstream of Paper Mill brook than the former Crow's Mill. Thus the mill must have been between this and the furnace. As with Brimford Mill, the most likely sites for the mill are either just upstream of the furnace or on the Crow's Mill site. Elliot's Mill was owned by Lancelot Lee in 1641. By 1770, the only land owned by the Lee family along the lower reaches of Paper Mill brook was at Crow's Mill⁷.

The land downstream belonged to the Hill House estate and I am not aware of evidence that this ever previously belonged to the Lee family. Thus, Crow's Mill would seem to be the best candidate site for Elliot's Mill.

"Elliot's Mill" reflects the name of an early occupier of the mill. The parish registers show the burial of a Thomas Elliot in 1584, followed by Ann in 1591. Francis Elliot, perhaps a son, baptised a daughter in 1600 and buried "Widow Griffiths", his mother-in-law in 1601 before apparently dying himself in 1614. The last mentions of the family in the registers are both in 1620, with the burials first of Elizabeth "daughter of Francis Elliot" and then Frances Elliot, widow. It is not clear if the Elliots were the first owners of the mill or whether they took over and gave their name to a pre-existing mill (ie Brimford mill?). By 1641 the mill was leased by John Heath from Lancelot Lee. The Lee family had acquired much property in Alveley and Astley in the early 17th Century; perhaps this included the mill. We do not know where Heath was born, but it was not Alveley. Heath could have learnt his trade at any mill in the West Midlands. He lived in Alveley until he died in 1659, baptising children Thomas and Elizabeth in 1639 and 1642 before burying his wife, also Elizabeth in 1649. The children all left Alveley.

Following Heath's death, Elliot's/Moor House Mill passes from sight. It may have metamorphosed into Crow's Mill or it may have been abandoned and demolished.

Crow's Mill.

The first reference to a mill on this site (leaving aside conjectures about Brimford and Elliot's Mills) is on a 1770 map of the lands owned by Lancelot Lee (Fig 3b). This has some obvious surveying errors (see footnote 7), but shows two mills, a paper and a leather mill, one on the brook and the other on the mill race. Compared to its present position, the mill starts further downstream, east of the lane that led past the cottages at The Stank and follows a different course. It is difficult to accept the map exactly as drawn, but there is an intriguing reference in the Alveley Court rolls for 1805, for repair of the footbridge at the "new stank" at the paper mill which suggests the original watercourse was altered. Both mills were leased at £15pa. The entire estate covered 26 acres in Astley and Alveley and was occupied by William Crow. Crow lived in the cottage on the high ground to the north of the mill; further north another building marked on the map may have been a barn.

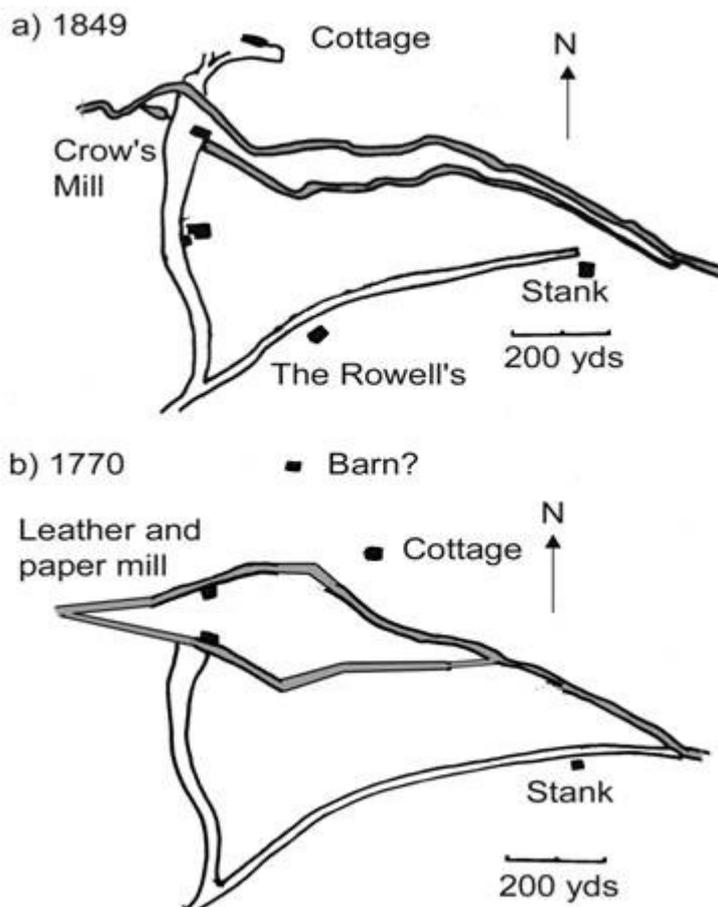
William Crow gave his name to the mill. The first mention of the Crow family in Alveley is in 1747, when William and Mary Crow baptised Betty, their daughter. They subsequently baptised another 8 children, concluding with George in

1767. In the Alveley manor court rolls, William Crow of the Lowe is mentioned in 1757, but perhaps the William of Crow's Mill and husband of Mary is more likely to be William Lowe junior, mentioned in the rolls in 1763. It has not been possible to identify the origins of the family although people of that name were established around Ludlow, Cleobury and Milson⁸. The 1770 map shows that William was operating leather and paper mills. Paper making was established in Alveley in the 17th Century; in 1686 the paper mill of William Atwell of Alveley was burnt down. Richard Fosbrook worked as a papermaker from at least 1705 to his death in 1729. Whilst the location of Atwell and Fosbrook's mills are unknown, they were almost certainly on Paper Mill brook, a name which is first recorded in the court rolls of 1760. Previous authors have assumed that the most likely site for these mills was Coton Mill, which worked as a paper mill until the middle of the 19th Century and which subsequently remained as a ruin for many years. However, the evidence for this is slender. The mill is located in Nordley, not Alveley. The earliest reference to Coton mill is in the Nordley manor court rolls for October 1788, when Richard Windle erected a "stable, paper mill and [enclosed] a garden adjoining to the said paper mill on the Lord's waste". This would seem to date Coton Mill to that year, 18 years after Crow's Mill appeared as a paper mill on the Lee estate map. This does not prove that Crow's Mill was the site of the earlier paper mills, but it appears to have a better claim than any other mill in Alveley. It may even be that Elliot's Mill was converted to a paper mill by Atwell, burnt down, rebuilt by Fosbrook and then taken over by Crow⁹.

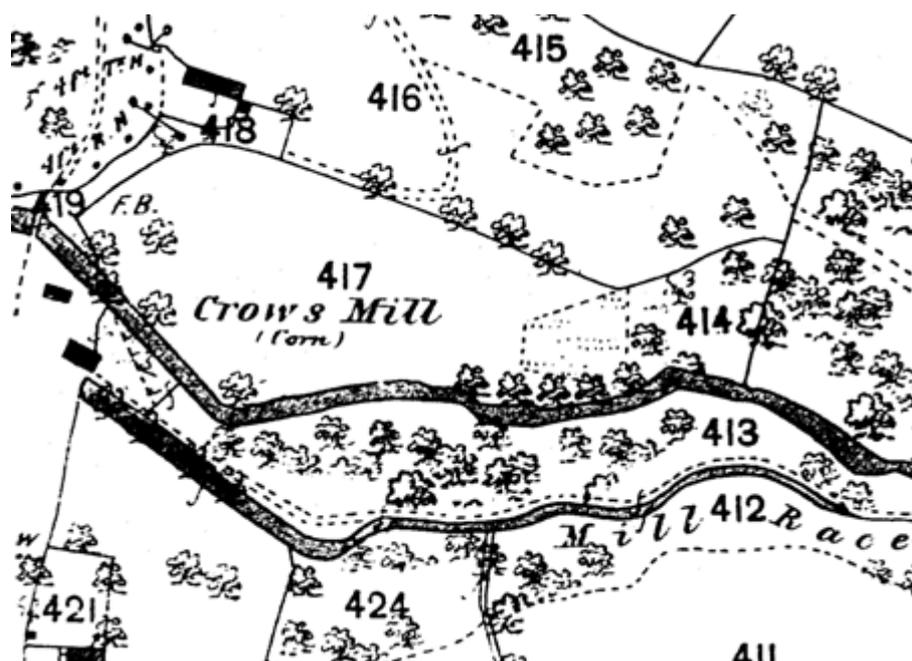
Crow's Mill remained in the Crow family for many years. William seems to have been succeeded by Richard (1761-1823), one of his sons. In 1806

Richard leased a 21 acre estate including a dwelling house, corn and paper mills in Alveley for the annual rent of £12, fixed for his life. At that date, the estate was offered for sale. Whatever the outcome of this, Richard was still recorded working the paper mill in 1816. A list of paper mills in 1826 does not mention Crow's Mill but records a new mill, "Crow's Nest", owned by Henry Harris. This is probably a case of a new owner changing the name of an existing mill. Harris owned paper mills at Langley in Milson and Sturt's in Neen Sollars in 1816, so he was clearly no stranger to the trade. In 1831 he was in partnership at Sturt's with Joseph Harris but it closed very shortly afterwards. As Crow's Nest was also closed by 1832, it seems that it suffered the same fate as Sturt's. It is not clear if the Harris's gave up their paper mills freely or if their business failed¹⁰.

The history of the site for the next twenty or so years is obscure. It is marked as a mill on the tithe map of 1849 (Figure 3a); it is not clear if there was still a building on the brook but the main mill is in the same place as on the 1881/2 OS map (Figure 4). It is likely that the brook-side mill became disused in the early 19th Century. The 1881/2 map shows an apparently new building between the mill and the brook and suggests that the tail-race had been partially culverted. It is not possible to find a miller on the 1841 or 1851 census who was definitely associated with the Crow's Mill. In 1851 a miller was living at the nearby Gorton's Mill but at Crow's Mill only an agricultural labourer, John Fox was recorded, along with two empty houses. Thus it may have been seen only intermittent use during this period, perhaps being worked with Gorton's Mill. However, in the 1861 census Edwin Spillsbury is recorded as a miller employing one man.



Using censuses and trade (Kelly's) directories it can be seen that Spillsbury was succeeded by Samuel Davies by 1871, John Giles from c1879-c1885, Emma and William Giles in 1891 (the mother and younger brother of John) and finally "Hy Grubb" in 1895. Grubb was the last recorded miller and the mill probably ceased to work around 1900. The mill was eventually demolished and a large concrete dam built close to its site (Figure 2); apparently part of a scheme for fish pools¹¹. The mill weir is well preserved (SO 75648593) although surrounded by concrete fish pools and from it, the mill race can be traced to the site of the mill. This is lined with stone blocks at its terminus. The mill stood adjacent to a cart road leading from Alveley and the Butter Cross to Hampton Loade and beyond. This is clearly a very old track and would have provided ready access to the mill. There is no map evidence for any mill pond, so it seems the owners were happy to rely on the natural flow of the brook, even in the summer. The mill itself has largely been obliterated by the 20th Century pool (Figure 2). However, fronting the current course of brook are traces of a sandstone wall that is in the right place to be part of the mill. A sandstone millstone survives on site; 4' diameter with a 9" eye in the centre. It has the typical domed shape of millstones; 2" thick at the perimeter and 5" in the centre.



Beyond Crow's mill, a tail-race led to the main course of the brook. To the west of the cart road is a platform, about 10' wide and about 20' above the present course of the brook (Figure 5). This may have carried the tail-race but it has two problems. It stops short some way from the brook and it is difficult to see why any mill builder would waste a 20' head of water. Immediately next to the brook, the bank is supported by a substantial stone retaining wall up to 10' high (SO 75288604; Figure 5). At its west end, there is a 6' wide buttress that extends 4' towards the brook. The east end of the wall is very indistinct. It may turn through

90° but tree roots make it difficult to be certain. There is no evidence from the surviving masonry that the wall ever extended across the whole width of the brook, as would have been expected for a dam. Furthermore, at this site it seems impossible that any watercourse could have lead to a mill further downstream, at least on the Alveley bank. However, a tail-race between the wall and the platform would make much better use of the water available at Crow's Mill, allowing for perhaps a 15' to 20' diameter overshot wheel. A fish ladder now occupies the likely course of the water channel. The tithe map of 1849 shows that the tail race included a small pool before finally emptying into the brook; there is space between the retaining wall and the platform for such a pool. Immediately below the retaining wall, the brook bank is lined by stone blocks, continuing the alignment of the wall and buttress. These are now no more than a foot high, but at the east end are made of large blocks of dressed sandstone. At their west end they join with a low bank which once appears to have been a stone wall. The steep valley has been cut away at its east end to create a straight, stone face. Together these features define a square with sides of about 35'. It seems very likely that this was once a mill. Its wheel may have been fed directly from the brook, from the tail race of Crows Mill or via a mill race that reached it over the high-level platform. The latter is the most economical explanation of the features on the site. In the brook, by the foundations is a brick arc. The bricks seem fairly recent and may be connected with the intake to the fish ladder that now crosses the site.

The 1770 map shows a mill on the brook in addition to the mill on the mill race. The map suggests that the mill on the brook is not in the same place as the surviving foundations. However it is so badly surveyed in the region of the brook that it is possible that the two are the same. The mill would have been very prone to flooding and it may have abandoned because of this problem. The fear of flooding at Elliot's Mill was the reason for the 1641 agreement between John Heath and Thomas Foley and it is tempting to associate the foundations with that mill and perhaps even Brimford Mill before it.

Other features of Paper Mill brook

The Sites and Monuments Records for Shropshire record a forge (7028) by Crow's Mill. This is almost certainly incorrect. Whilst there is clinker and slag in the bed of the brook at this point, it has probably been washed off the track from Alveley to Quatt. The basis of the record seems to be a misreading of Robert Baugh's 1808 map of Shropshire; the forge marked by Baugh is the well-known one at Hampton Loade

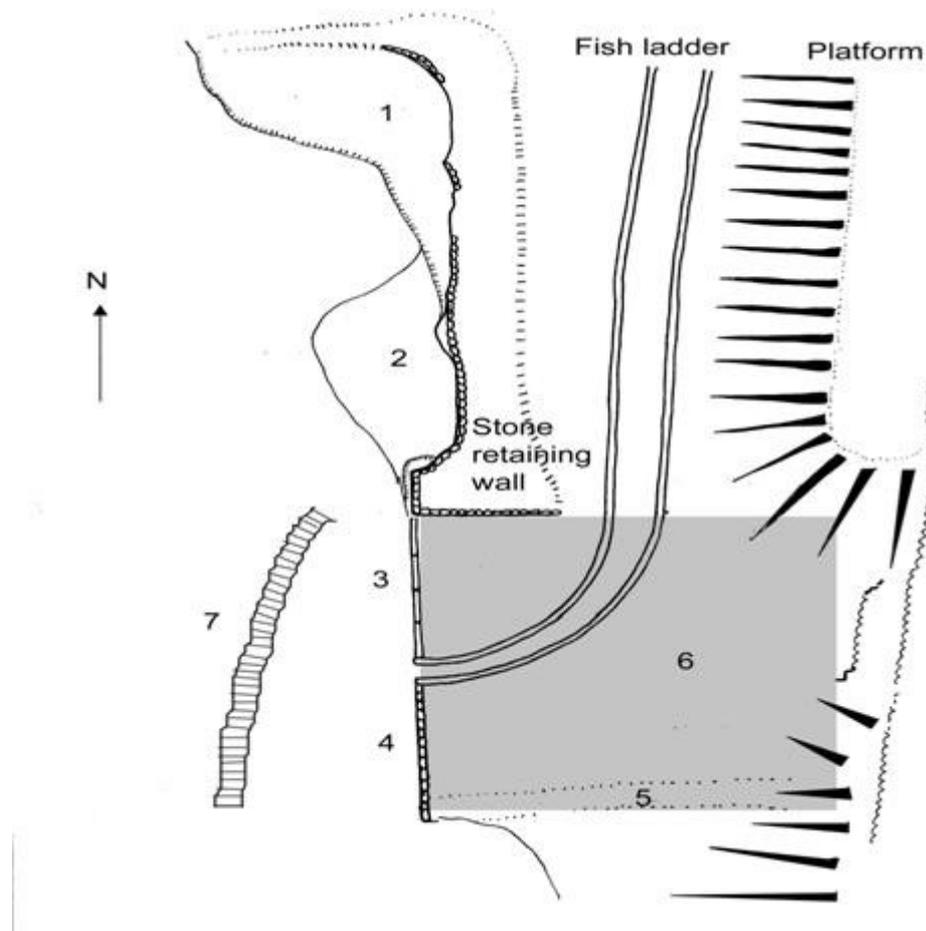


Figure 5

Retaining wall at Crow's Mill.

1) Rock shelf. 2) Loose gravel and rubble. 3) Low retaining wall made of large stone blocks 4) Low retaining wall made of small stone blocks. 5) Indistinct wall. 6) Outline of possible building. 7) Brick arc in the brook.

The dam that served Hampton Loade forge is well preserved, although breached. On the Alveley bank is a concrete, 20th Century fish ladder. On the Hampton Loade side the remains of the sluice and leat are to be found. In 1786, William Whitmore, who owned the land on the Quatt bank of the brook, was given permission by the Alveley landowners, Edward Oakley (Hillhouse Farm) and Henry Lee (Crow's Mill) to construct a dam across the brook within 200 yards of

the mill and divert the water on payment of £21¹². This must refer to the construction of the dam and it also suggests that Hampton Loade forge dates from 1786.

Between Crow's Mill and the forge dam, the Quatt bank of the brook is supported for a short length by a stone wall (SO 75238607). This is 4' high and currently about 15' long; it may have once been twice this length. A collection of stones a few yards upstream may be the faint traces of a dam, but could also be a natural feature. Beyond the wall on the north bank of the brook, the ground is level with a long narrow depression running parallel to the brook. This may be a leat but it is now difficult to be certain. There is no convincing sign of the leat running further downstream, but it would have been possible to construct one as far as the forge dam, where it could have followed the line of the forge leat. The function of the wall is uncertain. It is difficult to see why the bank should be supported by a wall unless it was to protect a feature such as a leat. It may have been an abortive attempt by Whitmore to build a dam upstream of the site that he eventually chose. It may have been the leat for Hampton Loade furnace or Heth's ponds. (Previously I speculated that the dam and leat for the furnace were on the same sites as those for the forge; there is no documentary or current field evidence for or against this idea). There are slight suggestions of a dam and leat at SO 75008615. Unfortunately these are so insubstantial that positive identification is impossible.

Conclusion

The lower reaches of Paper Mill brook has been utilised since medieval times. By 1500 Brimford Mill was at work either close to the confluence with the Severn or on the site of Crow's Mill. At this date, Walter Heth constructed fish pools somewhere near the forge site. From 1641-1662, the forge site was occupied by Hampton furnace. In Alveley, Elliot's Mill was in operation at this time, possibly the successor to Brimford Mill and probably located at Crow's Mill.

From the late 17th Century, papermakers started to use the brook. It is possible that Elliot's Mill may have been the site of one of the early paper mills, perhaps even that owned by William Atwell and burnt down in 1695. Certainly by 1770 William Crow had two mills at Crow's Mill for paper and leather production. The layout of site evolved for the next hundred years as it changed use first to paper and corn milling and then corn milling alone. Milling ceased about 1900. Along the brook there are substantial remains of the forge, which probably cover Heth's pools and the furnace, the forge dam of 1786, a retaining wall of unknown function and the water courses of Crow's Mill. Whilst the site of Crow's Mill itself has been obscured by a 20th Century dam, there are remains of another mill just below it, perhaps Elliot's Mill.

Paper Mill brook clearly has had a very complicated history. The present article has shed some light on this, whilst posing new questions. It is to be hoped that more fieldwork and documentary study will answer some of these.

Acknowledgements

I would like to thank Mr Pitt for allowing me access to his land alongside Paper Mill brook, Tim Booth for commenting on an earlier draft of this article and interpreting the remains at Crow's Mill, Margaret Sheridan for providing me with details from Alveley parish registers and census returns, Peter King for discussions about Hampton Loade furnace and forge and Tim White for administrative help.

References.

- 1) A tunnel system at Hampton Loade Forge, D. Poyner, *Trans. Alveley His. Soc.*, 1999, 53-7; Hampton Loade Furnace, D. Poyner, *Trans Alveley His. Soc.*, 2000, 53-68.
- 2) Hampshire Record Office, Jervois Papers, 44M69/C/496.
- 3) Poyner, 2000, op. cit.
- 4) Shropshire Records and Research Office (SRRO), Dudmaston Hall Collection, 2922/3/34-5.
- 5) Quoted in "*A gazetteer of charcoal fired-blast furnaces in Great Britain in use since 1660*", P. Riden, Merton Priory Press (Cardiff), 1993, pg 61. Peter King is of the opinion that this list is of dubious accuracy. The earliest reference he has to a forge at Hampton Loade is 1790.
- 6) Herefordshire Record Office, Foley Collection, E12/VI/KAc/64.
- 7) The Lee family holdings and the 1770 map are illustrated in "*The History of Alveley*", A.J. Nicholls, 1994, plate opposite page 117 and maps 1 and 6. The map of Crow's Mill has north marked pointing to what is actually south and the fields on the north of the brook are too far east. The problem seems to have been a surveying error on the brook
- 8) The Alveley manor court rolls have been published in the Transactions of the Alveley Historical Society by Alan Nicholls; 1996, 50-81, (1623-1762) and 1997, 85-159 (1763-1867).
- 9) For papermaking in Alveley, see: "Paper making in Shropshire", L.C.Lloyd, *Trans. Shrops. Arch. Soc.*, 49 (1937-8), 121-187; The excise numbers of paper mills in Shropshire, A.H. Shortes, *Trans. Shrop. Arch. Soc.*, 53, (1949/50) 145-162 (and following article by Lloyd) and "*The Industrial Archaeology of Shropshire*", B. Trinder, Phillimore Press (Chichester), 1996, pp18-19, 237.
- 10) Berrow's Worcester Journal, September 1st 1806; Lloyd, op.cit., Shortes, op. cit.
- 11) I understand that the 20th century works on the brook were carried out by Mr Pitt's father
- 12) SRRO, Abstract of title to Edward Oakley's estate in Alveley, 2756/2.