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MILLEND MILL – THE END OF AN ERA – PART 1

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Introduction

Millend Mill at Eastington has featured in a number of previous GSIA Journals (1-3). Mainly, these examined various aspects of its development, uses and ownership. The present article concentrates on what is effectively the closing of this chapter in the mill's long life, as in 2009, as part of a scheme to turn the entire site over to residential use, the main mill was gutted and all of its various extensions demolished.

Its deconstruction provided a unique opportunity to examine how this Georgian mill had been first constructed and how it had been adapted to a variety of other applications over the course of nearly two centuries. Thanks must go to Greystone Construction, the Clevedon-based property development company, who over the course of nearly a year, allowed the writer full unfettered access to monitor and record developments on site. Similar kindness was also extended by Smiths of Eastington, the specialist demolition firm subsequently brought in to demolish the mill's various additional wings and malting kiln, and remove half of the main mill's roof structure.

This article summarises briefly the latter part of the mill's long history and concentrates on the main stone building, built by wealthy local woollen cloth manufacturer, Henry Hicks. Part Two will examine and discuss what came to light during the clearance of the other structures on the site. At the time of writing, in several areas, this process has not yet been completed.

Site layout

Like so many other local mills, the mill's layout was dictated largely by the cramped nature of the site (NGR SO 77790537). It was hemmed in on the western side by a steep bank, and was bisected by the River Frome as well as the roads from the village to Churchend and Cress Green and beyond. At its peak, the mill comprised the main 1818 stone-built mill, plus a jumble of extensions and other structures located on both sides of the road to Churchend. Added at

Fig. 1 The rear of the mill showing part of the complex jumble of buildings added at different periods.

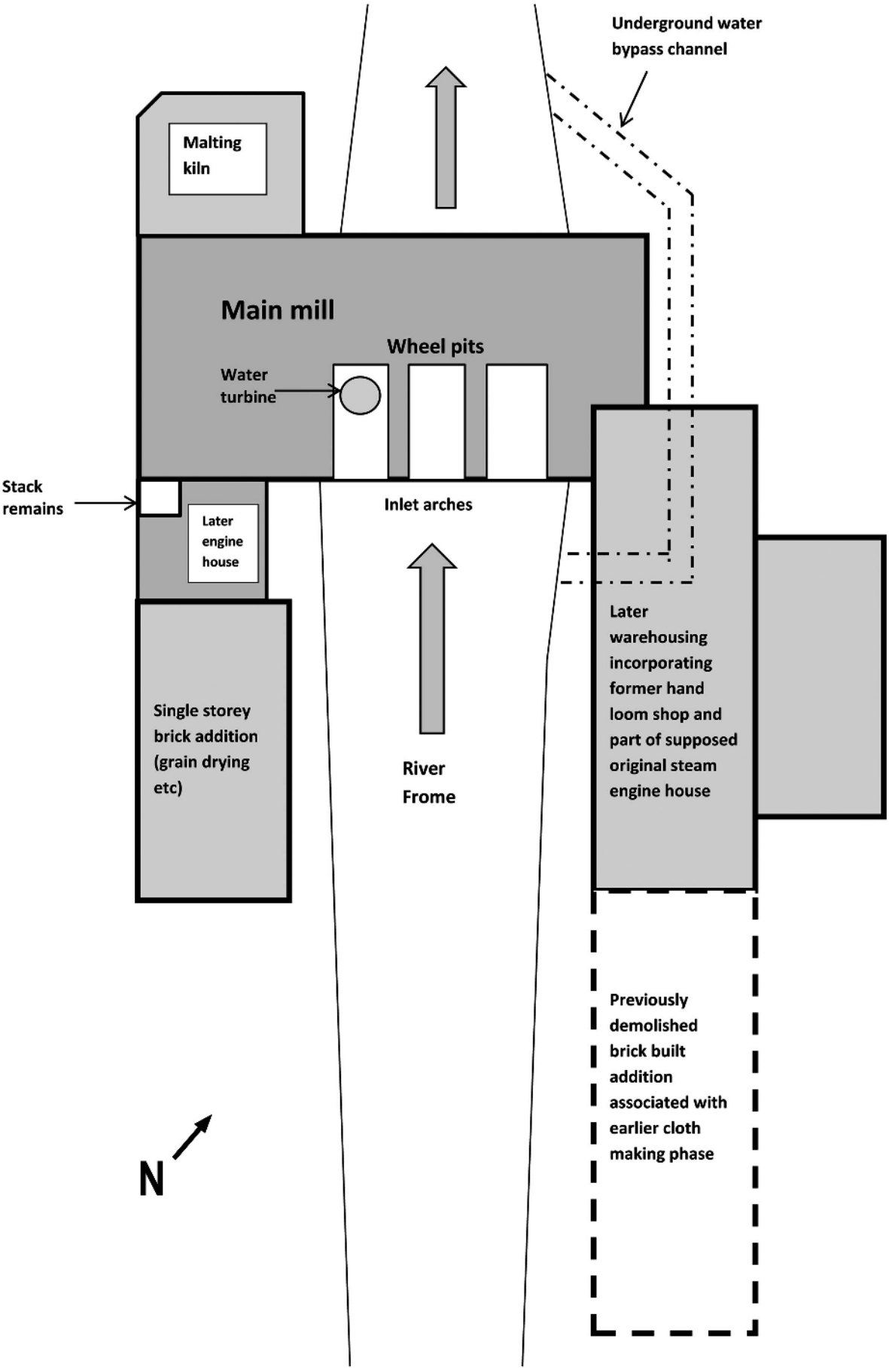

Fig. 2 Schematic showing the layout of Millend Mill

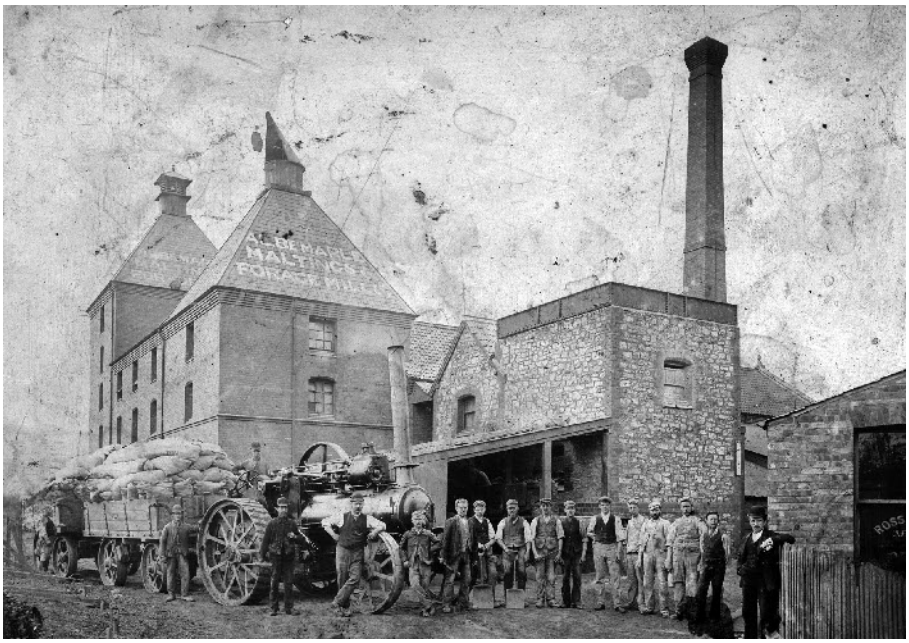

Fig. 3 The Albermarle Maltings and Forage Mill of Ross, Sleeman and Co in Taunton. The photograph was found in the attic of a cottage in Millend Row once owned by James Sleeman.

different times as business dictated, these were crammed into virtually every part of the site (Figs. 1 and 2). In some cases, extensions were themselves extended further until virtually the entire site was filled with a cluster of one and two story buildings. These are referred to in more detail in the following sections that describe the main points of interest revealed during the demolition process.

A long and varied career

The mill had seen a variety of uses since its first construction by wealthy local clothier Henry Hicks c.1818. Hicks was responsible for the construction of several local woollen cloth mills and was an early proponent of steam power (2). Over a number of years he bought and installed no less than four beam engines supplied by Boulton & Watt, one of which was installed at Millend Mill (4).

Since its construction as cloth mill, through periods of expansion and depression, the mill was re-equipped and reused on a number of occasions. At times, it was turned over to corn milling, saw milling, the production of animal feed, and grain drying (1).Throughout, although some uses were longer-lived and more successful than others, it remained a source of employment for many of the local populous. Probably the most important period to follow on from cloth manufacture came when it was taken over by the interesting Sleeman family. Under their control, it was again converted, this time to a maltings. This was to be a period marked with various innovations made to the malting process, and a slew of patents. Much of the mill's 'final' layout and configuration stems from their time at the mill.

The arrival of the Sleemans

The patriarch of the family was James Sleeman, who was born in 1853 near Tintagel in Cornwall. By the early 1880s, he was working in James Payne's Fore Street Brewery in Taunton. At the time, he lived close to the brewery in Albermarle Road. Clearly a man of drive and ambition, by 1890, he was recorded as a master maltster running his own business (5). By 1900, although the precise arrangements are not known, the business had become Ross, Sleeman and Co (Fig. 3). Over the following years, at different times, James Sleeman was described variously as a maltster, miller, and corn merchant.

In the meantime, Portishead, on the banks of the Bristol Channel had been developing into a thriving port and as part of this, new mills and maltings were built near the dockside. This included the newly constructed Baileys Mill, where James Sleeman became the manager. It was

Fig. 4 Cottages forming Millend Row in the 1920s, once owned by the Sleemans.

during his time in Portishead that Sleeman negotiated a lease for the island of Steep Holm, offshore in the Bristol Channel, of which he took possession in 1909. Remarkably, although he remained as manager of the dockside mill, his five children (the oldest of which was 21) took up residence on the island, making a living by farming and fishing. This unusual arrangement brought them a degree of celebrity, and in 1910, their way of life was photographed and described in the national press (5). It was during April of that year that James Sleeman moved from Portishead to Eastington to set up his own business in the redundant Millend Mill that he had bought previously. His purchase included not only the mill, but also the mill house, sixteen cottages, and an adjacent bakery (Fig. 4).

Sleeman set about converting the mill for malting, adding a large brick-built anthracite-heated kiln to the front of the mill. For a century, this was to remain a distinctive landmark structure in the village. For a time, the business seems to have done quite well. By all accounts, the Sleemans were an innovative firm and patented a number of designs for improved malting equipment and procedures (6). However, it was also during their time at the mill that, in effect, the beginning of the end really began. In 1922, almost the entire mill was gutted by fire. From evidence gleaned during demolition in 2009, perhaps unsurprisingly, it appears likely that this began in the kiln, then spread into the main mill where it rapidly ignited the copious amounts of timber present. Millend Mill, like most of its peers, had been built in a very conventional manner, relying on tried-and-trusted methods of construction used for centuries in the area. Thus, timber had been used for floors and joists, roof timbers and rafters, and main supporting columns. Doubtless, much of this dated from the mill's original construction and its use as a cloth mill. As with so many other local mills of similar age and design, over years of operation, the timbers had probably been well soaked with oils and grease so that once a fire took hold, there was little chance of stopping it. Millend was no different and the mill lost most of its interior and roof. Even the later wings at the rear of the mill did not escape unscathed.

Insurance payments went some way to putting the business back on its feet, although it seems that the costs involved and the disruption to the business hit the Sleemans hard. There are contemporary accounts of James Sleeman (who was now running the business with his brother

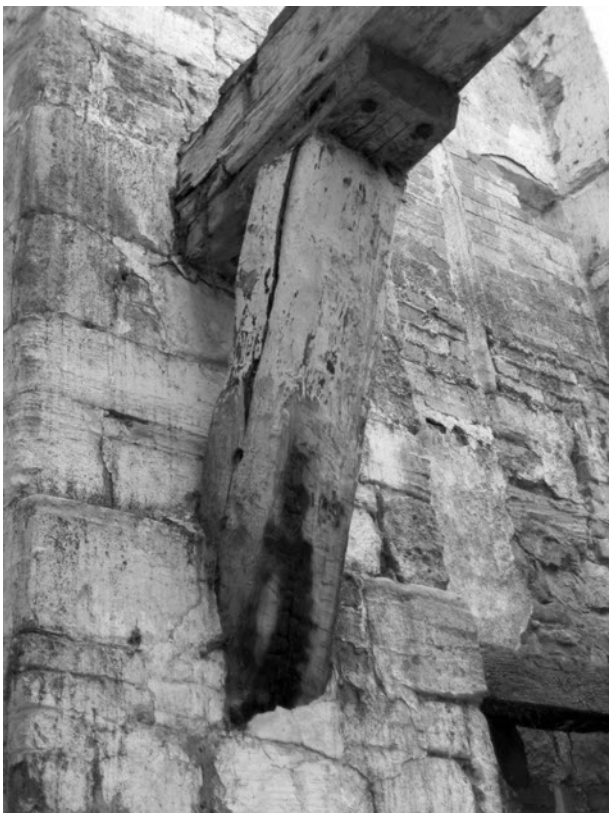

Fig. 5 Charred wooden joists, reused in the Sleeman's rebuild following the 1920s fire.

Oliver), often looking downcast and with the face of a troubled man;

[He was often seen] "walking through the village, head down, deep in thought, and not noticing anyone" (5).

It seems that money worries were to plague James Sleeman for the rest of his life. His financial woes were made worse when, in 1927, he borrowed £600 to plough into the business from a former business acquaintance running a thriving collar-making business in Somerset. A constant worry to Sleeman, it was not repaid until some years after his death in 1937. In fact, the long-standing debt was not fully cleared until after Oliver's death in 1967.

A shortage of money would go some way towards explaining why the mill was rebuilt as it was. During the demolition, innumerable examples of cost-cutting came to light. Repairs had been bodged, and even charred floor joists salvaged from the fire-ravaged mill had been re-installed (Fig. 5). Elsewhere, odd timbers, steel girders, and lengths of metal pipe had been used to strengthen and support the upper floors. In short, it appears that everything was done to re-use what was at hand and to spend as little as possible.

The end of the line and a new beginning

As the Sleemans passed from the scene, Millend Mill was turned over to various new uses although it never achieved its former importance in the local economy. Some local people still found employment in the mill, but they were relatively few in number. By the 1950s, activity seems to have been limited largely to grain drying in one of the wings, and storage. Reputedly, for a time, Erinoid of Stroud used part of the mill for the latter. However, even this limited commercial activity came to an end, and during the 1960s, the empty mill was taken over by an antiques export and restoration company. It was at this time that, presumably as a security measure, all of the windows and other openings were bricked up. As in earlier times, these were closed off using almost anything that came to hand; this included bricks, concrete blocks and many of the perforated ceramic tiles that had made up the floor of the malting kiln (most are still there!). For some years, antiques were shipped regularly out, mainly to the USA. But even this activity came to an end during the late 1980s. At this point, the mill, which was still packed with furniture, pianos, etc, was effectively abandoned by its owners. Eventually, after several years, the remaining stock, much of which had been damaged badly by water ingress into the mill, was auctioned off and the building cleared.

Over the next decade or so, the mill stood empty. Virtually no maintenance was carried out and the mill's fabric continued to decay through a combination of rotting woodwork and water pouring in through the ever-growing holes in the roof. As a result, as the trusses rotted, part of the roof began to sag which in turn, pushed out the tops of the stone walls. Meanwhile, ivy and

other vegetation increasingly cloaked the main mill and the wings, causing further damage. Inside, the main joists on several floors failed, resulting in partial collapse of the upper floors. In places, it was possible to stand on the ground floor and see the sky through the holes in the roof!

During the latter part of the 1980s, the first in a series of planning applications was submitted. Usually, these suggested conversion of the main mill to apartments, plus the clearance of at least part of the remainder of the site and the addition of varying numbers of new houses. Over the course of the next decade, a number of proposals were made by different property developers, but, as a result of planning stipulations and the economics of the project, none proceeded.

Finally, in 2008-9, the site was bought by a Clevedon-based developer and plans accepted for conversion. Again, the main mill was to be converted to apartments, although the ground floor was not to be used in this manner due to the 'one in a hundred years risk of flooding'. All of the additions made to the main stone-built mill were to be demolished; this included a later engine house and a wing used for a time, at least partially, for hand loom weaving.

Work began on the site in 2009, initially concentrating on removal of the rickety all-wooden three-floor interior of the main mill. There was little to be saved as all vestiges of machinery had been taken out probably by the 1950s. Only a few short lengths of line shafting and belt wheels, several cast iron hangers for their support, and an assortment of iron bearing boxes set into the main outer walls survived. As the interior was removed, it became clear just how badly and cheaply the mill had been put back together following the 1920s fire.

Perhaps surprisingly, there appeared to be relatively little interest in monitoring and recording the demolition process from 'official' sources; this was limited largely to a short term watching brief by professional archaeologists. Their main interest appeared to be limited largely to evidence of possible earlier structures below ground, as opposed to the standing structures. However, the writer attempted to record and photograph as much of the demolition process as was practicable. Fortunately, Greystone Construction allowed unrestricted access to virtually all stages of the work, for which, they should be highly commended.

It was regrettable that all of the structures apart from the main mill were demolished. Although of less architectural interest, they nevertheless provided a visual record of how the site had changed and developed with the passage of time and use, charting its growth and decay in bricks and mortar; these will be examined in a forthcoming GSIA Journal. It had been hoped that at least some parts such as the engine house and weaving shop could be retained and reused in some way, but all were systematically demolished over a relatively short period. As regrettable as this was, the process did provide a unique opportunity to examine a Georgian mill as it was unpicked and pulled apart.

Demolition begins!

The main mill

Arguably, this substantial stone-built structure was the most important building of the complex. Currently, it is also the only building still remaining. As noted already, the three all-wooden internal floors and all internal features were removed during 2009. As these were taken out, it became apparent that at some point, the floor heights had been changed significantly. As originally built, the interior comprised a ground floor, plus three main upper floors and an attic floor (effectively totalling 5 floors). At some point, this had been reduced to two upper floors (plus attic floor) and the height of each increased. This had been accomplished by inserting

Fig. 6 The floor heights were increased by raising the floors on crude supports carried on short lengths of iron girders set into the original joist holes. Clearly, the timbers were re-used.

short lengths of iron girder into the original joist wall sockets, then raising the floor by means of crude supports (Fig. 6). It seems likely that these significant changes were made during the mill's rebuild following the disastrous 1920s fire. Despite being quite badly charred, a number of beams etc. had been re-used.

The eastern end of the mill

In the eastern gable wall there are loading doors at each of the original floor levels, the top one originally being covered by a lucam. At ground level, there is a substantial semi-circular (13 ft diameter) stone archway (now infilled but clearly open at some point) built into the lower section of the mill's wall. The original first floor level was just above the top of the arch. Its function is unknown but presumably, it provided access into the ground floor of the mill, the section that originally housed the internal water wheels and fulling stocks. The arched opening was built strongly as it supports the full height of the mill at this point. Interestingly, it is not centred directly in the middle of the wall, being slightly offset. Although it is not known when it was closed off, it was filled in using a combination of stone blocks and bricks. A rectangular doorway with a heavy iron door now provides access to the ground floor, although this may have been a later addition. The inside of the wall adjacent to the arch shows signs of considerable disturbance – odd pieces of wood have been let in, there is random brick infilling, plus general unevenness, atypical of the rest of the original building. This suggests changes in the function of the mill at this point, although there is no surviving evidence to determine what. It may have been associated with the later addition of the engine/boiler house and have been associated with the transmission of power from the steam engine into the building. This would have almost certainly occurred at ground level.

Immediately above the arch is one of a number of surviving cast iron bearing boxes set into the inside of the wall; there are also others higher up. These are presumably vestiges of power transmission arrangements that, during the mill's time as a cloth mill, took power from the water wheels and steam engine to the upper floors. There is no surviving evidence to indicate how power was transmitted although it could have been via a vertical iron drive shaft with bevel gears, or more probably, by means of line shafting and leather belts, the system most commonly encountered in local mills of this period.

Outside the mill, adjacent to the arch, there is a row of blocked holes that appear to have once carried timber joists. There was clearly once some form of structure here, possibly associated with the presumed engine house (see below: The Boulton &Watt engine house).

The stair tower

Set into the inside corner of the eastern gable wall is a stone and brick built stair tower, clearly a later insertion. The tower is made of brick and has been tied into the main walls; in places, this appears to have been done quite crudely. It is assumed that the entire structure was inserted during the mill's cloth making phase, probably as a response to several smaller fires that had occurred. A fire breaking out on one of the lower floors of the all-wooden interior would have posed a serious (potentially fatal) problem, effectively trapping workers on the upper floors. A fireproof structure would obviously provide a means of escape. Quite possibly, the tower's insertion had been a legal requirement.

The individual landings are made of stone slabs. In fact, the first one comprises a single huge slab of sandstone. A short run of wooden stairs formerly linked this to the ground floor. When these were removed, it became apparent that the slab had been partially supported on two substantial cast iron sections set at right angles. Closer inspection revealed that these were actually lengths of two early (but different) iron water wheel axles. These had been re-used to provide support for the landing and are probably from mill's first water wheels installed c.1818. One section is 6 sided, each face being 5 in. wide. Its overall diameter is around 9 in. and its length, about 68 in. At its end, the profile changes to circular (6 in. diameter), presumably where it originally fitted into a bearing housing. The second axle is rectangular and set at right angles to first. Here, the sides are 6.5 in. wide. The length is around 91 in. Again, the section near the end changes to circular. Their discovery was completely unexpected and epitomises how, over the years, anything useful to hand on the site tended to be repeatedly re-used.

The water wheel pits

Demolition revealed much about the mill's original water power system, much of which had been obscured for a long time. Based on drawings produced by Boulton & Watt, the mill's internal wheels were of 15 ft diameter. These were almost certainly constructed mainly of iron (possibly with wooden buckets) and of the breastshot variety; the fall of river here would have been insufficient to support the use of overshot wheels. Water to the wheels was controlled by individual iron sluice gates and remarkably, one still survives on the bed of the river near one of the inlet arches.

Fig. 7 The inlet arches to the mill's three wheel pits. The right hand one has been bricked up. An iron flood gate lies on the river bed in front of the left hand arch.

According to early sales particulars, at one time, the mill had four water wheels. However, it is hard to understand how this could have been; there is physical evidence for only three. The mill straddles the full width of river and has only ever had three openings and wheel pits (Fig. 7). It is hard to see where a fourth could ever have existed. Possibly, someone was misled by the existence of the substantial water bypass arrangement, complete with its own flood gates and control mechanisms, perhaps assuming that this fed another wheel. This idea may have been further compounded by the existence of the large stone arch (of similar di-

Fig. 8 The excavated left hand wheel pit, narrowed and reconfigured to accept a smaller wheel of unknown dimensions and use. The function of the small internal walls is not known.

ameter to the original water wheels) set in the eastern gable wall. The arch's circumference and location has caused some observers to assume that this was the location of a fourth water wheel, although this appears incorrect. The bypass tunnel passes underground near this location, before exiting downstream of the mill. There are no other obvious potential locations for a fourth wheel, so, if there really was one, its location and use remains a mystery.

The mill's three wheel pits were uncovered in March 2009. The rough concrete floor covering them was removed in order to investigate the soundness of the underlying structure prior to the start of rebuilding work. This was the first time that these had been visible for nearly a century or more. Their exposure revealed a wealth of detail about the construction of the wheel pits, plus the wheels and their associated water control system. What came to light is considered below.

-Left hand wheel pit (looking upstream)

Here, the 8ft wide pit had been infilled and its inlet arch bricked up. Excavation revealed that at some point, the original large water wheel may have been replaced by a smaller unit. At the upstream end of the pit there was a small section of the curved wall visible, plus a central dividing/supporting wall had been inserted in the pit. This appeared to have been constructed using masonry robbed from original left hand pit wall, effectively reducing the width of the pit (Fig. 8). Recesses in the masonry of the narrowed pit walls suggested possible bearing locations. The width of the supposed wheel was around 30 in. although there were no indications as to its diameter or function. Various other brick and masonry walls had been built within the confines of the narrowed wheel pit, possibly associated with water inlet and outlet. An angled block of masonry on the outlet side seems to have been part of the outflow control system.

The pit had been filled with masonry, rubble and burnt wood, suggesting a pre-fire date. It has since been refilled and covered over again with a modern concrete floor.

-Middle wheel pit

At 9 ft wide, this pit was slightly wider than the left hand one. Unlike the previous pit, this one remained open, still being used to channel water beneath the mill. The side walls had been constructed of limestone blocks, some of considerable size (several possibly up to several tons in weight). This was particularly so in the areas where the bearing blocks for the water wheels were once located.

The upstream end of the pit had been carefully contoured to match the circumference of the water wheel. Measurements of the pit indicated a wheel of around 14.5 ft diameter; the Boulton

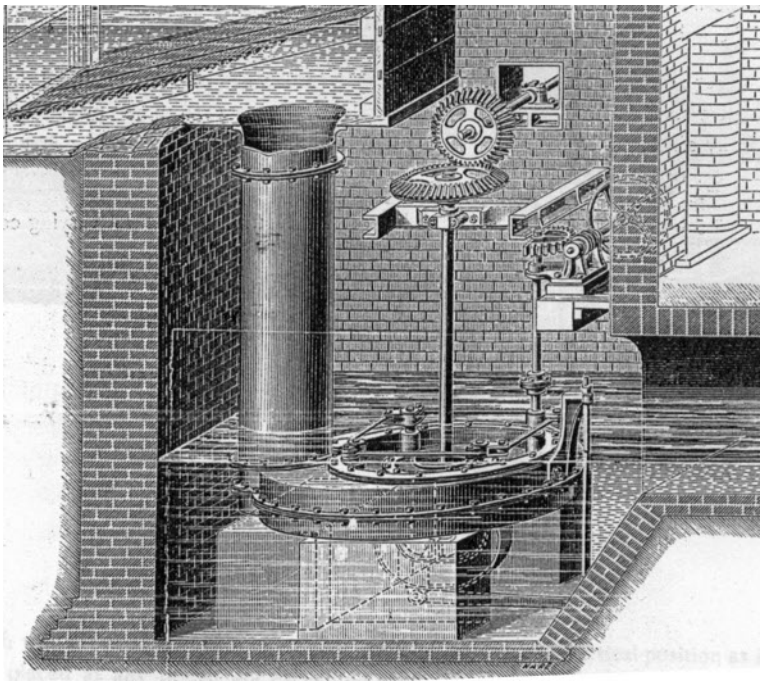

Fig. 9 A Gilkes water turbine of c.1900. From the surviving evidence, it seems that the Millend turbine was of this type.

& Watt drawings suggest the wheels were of 15 ft diameter. At the upstream end of the pit, deep curved grooves (8 in. wide and 5 in. deep) had been cut into both side walls. These were not simply scrape marks created by the wheel's rotation - they had been carefully cut in and clearly mirrored the shape of the water wheel. Their function is unknown. In several places there were a few fragments of metal fittings surviving, presumably remnants associated with channelling water on to the wheel.

At some point, the wheel had been removed and replaced with a more efficient water turbine (although not necessarily at the same time). This was a somewhat unexpected discovery as there is no known record of this installation being made. Based on the configuration and dimensions of the remaining components, it is suspected that it may have been a Gilkes unit (Fig. 9). However, there is no mention in the Gilkes company records of one of their units being sold to mill, so it is difficult to determine when it was installed. On that basis, it seems likely that the turbine was bought second hand and re-used, probably during the Sleemans time at the mill. The use of a second hand unit would seem to tie in with their philosophy of making do with whatever came to hand. Of course, it may simply have been an issue of cost, a consequence of the fire and James Sleeman's subsequent financial woes.

Fig. 10 The turbine's outer casing survives in situ, but now filled with concrete. The outlet arch behind was once blocked with a wall to retain sufficient head of water for the turbine

The iron outer iron casing of the turbine (of around 7 ft in diameter) survives in situ, but now filled with concrete (Fig. 10). The floor of the wheel pit has been similarly raised so that it is now level with the top of the turbine body. Presumably, this was done when the turbine went out of use and was to ensure that water could pass unhindered through the, now unused, wheel pit. It may also have helped minimise the risk of blockages resulting from the inevitable

Fig. 11 The right hand wheel pit and inlet arch following removal of the 1920s concrete floor. The middle pit (to the left) has already been recovered with a new concrete floor.

detritus carried down the river. The depth from the top of pit down to the top of concrete infill is 64 in.; the depth to the pit's original surface is 79 in. Therefore, the turbine's outer casing is 16 in. deep. The Gilkes sales catalogue of 1900 lists a low head unit of 6ft 10 in. diameter, so this matches the diameter of the surviving turbine casing. This sized unit should have a depth of between 15-16 in., adding further weight to the conjecture that this was a Gilkes turbine.

Downstream of the turbine, as part of its water control mechanism, a 'wall' (5 ft 8 in. tall) had been inserted across the arch of the outflow tunnel that channelled water out of the pit and under the mill. This was presumably removed when the turbine went out of use, although remnants of the system survive. The 'wall' was retained by 6 inch wide slots cut into the masonry blocks that formed the end of the pit's sidewalls. The wall was used to hold back the water in the pit, so that an appropriate head of water could be created for the turbine to operate successfully (see Fig. 9). Various vestiges, such as bolts and fastenings set into the masonry, survive.

-Right hand wheel pit

When the poor quality concrete floor covering this wheel pit was removed, it was discovered that it had been supported on a motley collection of bits of iron work, timber, even several old doors (complete with hinges!). On this basis, it seems likely that this floor was put down after the 1920s fire. Shoddily and cheaply constructed, it smacks of cost saving. It is nothing short of a miracle that it had not collapsed at some point. Like the middle pit, this one remained open but still retained its full depth, although at 10 ft 8 in. in width, it was slightly wider (Fig. 11). All three pits appear to differ slightly in width.

As with the two others, water flowed into this pit via a stone arch. This was channelled in over a wide ledge made of stone slabs. Again, the upper end of the pit had been contoured to match the diameter of a 15 ft diameter water wheel. Cut into the masonry forming the lower part of the one side wall is an almost circular recess (around 2 ft 6 in. in diameter) with the shape of a small section above and adjoining it (almost a figure of eight) – the function of this remains a mystery.

The width of the dividing masonry wall between this and the middle pit is around 3 ft. There are two notches cut into the upper faces of the side walls, presumed to be evidence of bearing boxes for the water wheel axle.

The Boulton &Watt engine house

Tantalisingly, a drawing of c.1815 in the B&W collection shows the outline of a typical tall narrow beam engine house attached to the eastern end of the new mill. There is also what appears to be a single storey porch-type structure in place, over which a hand written note notes:

Fig. 12 Excavation of the unusual kiln base arrangement revealed after more than a century. Removal of a post-malting concrete floor revealed the structure.

"to be pulled down to make room for the engine and boiler house".

It had always been impossible to examine this part of the mill in detail because of the presence of later buildings added in the 1930s or 1940s. It was hoped that their clearance would provide further information on this early phase of the mill's history and help establish the precise location and dimensions of the engine house. The opportunity finally came when the newer additions had been demolished and this corner of the main mill was finally exposed. From features uncovered in the stonework and other evidence, it became apparent that some form of earlier structure had once been attached to this corner of the mill. Its location appeared to coincide with the Boulton & Watt drawing.

By comparing the dimensions of the main mill on the drawing, coupled with measurements taken from the newly exposed area, the dimensions of the supposed engine house were calculated. This suggested external dimensions of around 34 ft long x 14 ft wide. The independent Boulton & Watt engine installed at Millend Mill was similar to that in Henry Hicks' other mill, close by at Churchend (Kingsley, 1990). This raised the question as to whether the dimensions of both engine houses might be similar. Those of the Churchend Mill engine house were obtained from other more detailed drawings in the B&W collection, coupled with early photographic evidence, prior to its demolition (1-2). At Churchend, the internal dimensions of the engine house were 10 ft wide by around 31 ft long. On the basis of a wall thickness of 3 ft, external dimensions were therefore 14 ft x 34 ft – this matched almost precisely those of Millend, thus, the footprint of both engine houses appears to have been almost identical.

Fig. 13 Ray Wilson, Amber Patrick and the writer examining the kiln remains. Excavation revealed burnt malting floor tiles, brick rubble, pieces of anthracite and even grains of barley!

At Churchend Mill, the boiler was housed in a separate building (3). Because of the differences in the individual sites, the arrangement at Millend appears

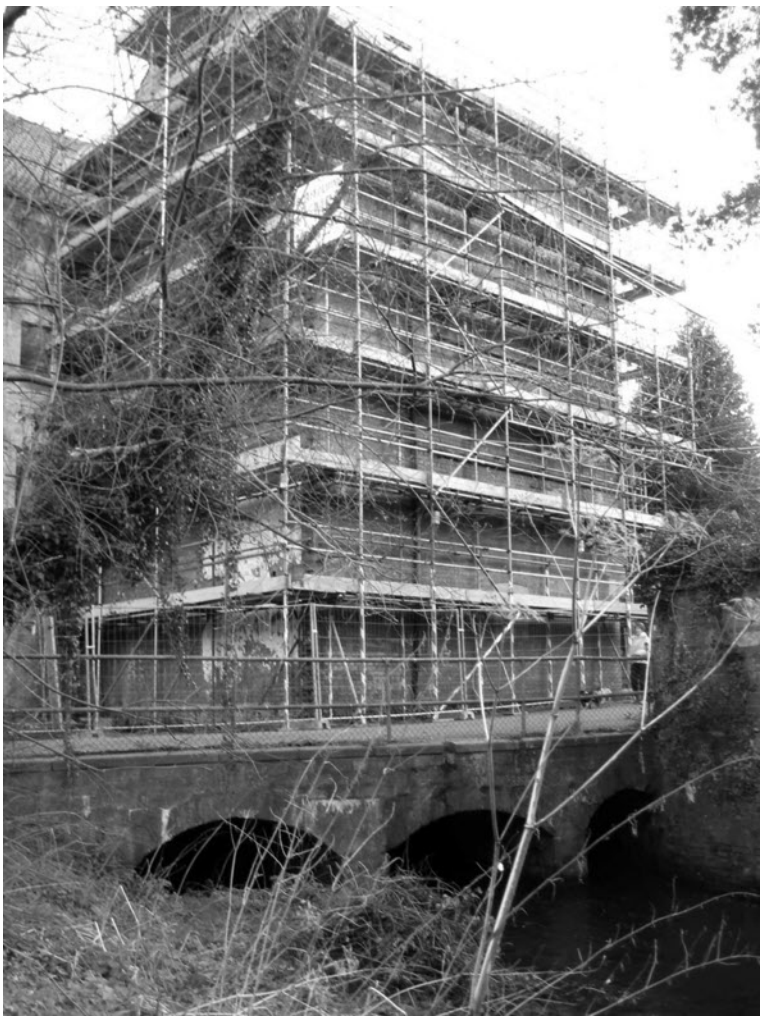

Fig. 14 The malting kiln prepared for demolition.

to have been somewhat different. Based on what has so far been revealed by the demolition, it appears that at Millend, the engine and boiler may have been installed in a single L-shaped building that wrapped itself around the eastern corner of the main mill. If this was the case, presumably, the engine was located outside the eastern wall of the mill, with the boiler 'around the corner' at the back, adjacent to the mill race. In the back wall of the mill, at first floor level, there survives a large blocked radially headed doorway. This has always been a bit of mystery – it was the only doorway of its type in the mill and its shape and dimensions are reminiscent of the type of door and window openings so characteristic of early engine houses. It may have once allowed access to the boiler house, possibly to an upper floor used for drying purposes, an arrangement encountered widely.

At the foot of the eastern wall of the mill is a large relatively modern slab of concrete. This covers the entire area where the engine house stood. Unfortunately, this has not been removed hence, what lies beneath has yet to be revealed. Because of the inevitable stresses and strains imposed by a beam engine, foundations and footings for an engine and its ancillary equipment tended to be both deep and substantial. It is hoped that evidence of the engine and engine house may remain in situ beneath the concrete.

Closing comments

Although it was regrettable that the interior of the main mill was gutted and all other structures on the site demolished, it did provide a unique opportunity to examine the construction of the different buildings as they were cleared. Useful information on the methods of construction was obtained on a range of structures dating from the early 1800s to the 1950s. To a degree, from the bricks and mortar of the site, it has been possible to follow how businesses came and went, and flourished and decayed. A lot of valuable archaeological evidence was gleaned that, when combined with written records, added a great deal to the understanding of the site. For instance, demolition of the kiln revealed an unusual arrangement of flues, firing holes, etc (Figs. 12 and 13). The demolition process also revealed several other interesting aspects that drew parallels between other mills built by Henry Hicks, particularly his two other mills in Eastington.

Fig. 15 The front of the main mill during demolition of the malting kiln, exposing the front wall for the first time in nearly a century. Interesting details were exposed, even a fragment of an original leaded window complete with glass, presumably dating from the mill's construction.

The apparent similarity between the engine houses at Millend and Churchend Mills has already been noted. However, other similarities between the main mill buildings themselves have also become apparent. At Millend, when the large malting kiln was removed (Fig. 14), it became possible to visualise the scale and configuration of the original mill (Fig. 15). It then became clear that there were significant similarities with Hicks' third mill, Meadow Mill, also built in Eastington, c.1810 (7). As first constructed, Millend and Meadow Mills, both stone built, proved to have been of similar dimensions and almost identical in terms of window placement and openings. Built within a few years of each other, it seems likely that the same blueprint was used for the design and construction of both. Remarkably, the similarities even came to extend to the additional brick built wings added later in the life of both mills. In both cases, although of different lengths (reflecting the more constrained site at Millend) these were of almost identical dimensions and configuration.

Both mills were originally built to use only water power, but again, both were later equipped with steam power. In Millend's case, it appears that steam power was being considered even as the mill was being built. It was a few years later that Meadow Mill received its engine, possibly because of its better water supply. But because of Hicks' enthusiasm for steam, both were to operate using a combination of steam and water for much of their working lives.

Overall, there are a remarkable number of similarities between Hicks' three Eastington mills, with major elements replicated at the three sites. It is quite possible that the same builder was used for Millend and Meadow mills, and possibly even the rebuild of the earlier Churchend Mill.

Postscript

Although Millend Mill's industrial and commercial life is at an end, there remains an interesting possible North American link. In Guelph, Ontario, Canada, there is the large Sleeman Brewery Ltd. In 1834, John H. Sleeman began brewing beer here and the firm continued in operation for almost a century. However, towards the end of the prohibition era, in the early 1930s, the Sleeman brewery went out of business when its liquor licence was revoked for

bootlegging, specifically, smuggling beer into Detroit, Michigan. The brewery was eventually restarted in 1988 by John W. Sleeman, the great great grandson of John H. Sleeman. The company's current products are based on the family's original recipes. In 2006, the brewery was purchased by Japanese brewer Sapporo Brewery.

'Sleeman' is an uncommon family name, and the links both in the UK and Canada with malting and brewing seem rather too much of a coincidence. This opens up the possibility of an interesting line of research exploring possible Sleeman family connections and their links with Gloucestershire. However, that is an avenue to explore on another occasion. bootlegging, specifically, smuggling beer into Detroit, Michigan. The brewery was eventually restarted in 1988 by John W. Sleeman, the great great grandson of John H. Sleeman. The company's current products are based on the family's original recipes. In 2006, the brewery was purchased by Japanese brewer Sapporo Brewery.

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