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## THE LOOSE WATERMILLS, II

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### INTRODUCTION

THIS paper is the second and final part of an introduction to the industrial history of the Loose Valley. It is a continuation of Part I which appeared in *Arch. Cant.*, lxxxvii (1972), 43-79. Six watermill sites are examined in turn, beginning with Hayle Mill and finishing with Bridge Mill.

### HAYLE MILL

The first name that can be linked with this property is Ralph Bufkin who was the occupier according to the Loose Poor Assessment in 1627.<sup>1</sup> Before that date, the estate called Hayle Place, which undoubtedly included the mill, was occupied and possibly owned by at least two people.

Between 1639 and 1682, the Beale family apparently owned the property, beginning with Richard Beale from 1639 to 1663, then Mrs. Beale, 1664, Mistress Susanna, 1667, Mistress Beale, 1675, Mr. Beale, 1679, Haiward Beall Gent., 1680, and, finally, Mrs. Susan Beall, 1682. From 1683 to at least 1689, the relevant name is 'Captaine Craner'.<sup>2</sup>

The entry for 1689 and 1st October, 1691, is Sir Phinos Root. In 1692, the relevant name is Mr. Walter which, in 1703, is written Mr. Henry Walter. In 1704, the occupier is given as Richard Beale whose name continues in the lists until 26th May, 1712. Robert Hammond is then listed from November, 1712 to January, 1723. The next entry dated 30th August, 1723, is Mr. Beale. Later this becomes Alexander Beale Esq., who continued at least until 1731.<sup>3</sup>

The entry dated 25th February, 1733, gives Thomas Pine as occupier for this property and the rateable value is £30, a value which was unchanged from the early 1720s till 1770. The last entry of Thomas Pine is dated March, 1745, and the following entries up to and including 1746 give the words 'Halle Place'. On 12th August, 1747, the relevant entry is 'The Heires of M<sup>r</sup> Slingsby for Hale Place'. Throughout all these entries the property heads the lists and commands one of the greatest property values suggesting an estate of some importance.

In the assessment dated 26th December, 1747, under the section

<sup>1</sup> Loose Poor Book, 1615-1650.

<sup>2</sup> *Ibid.*, 1650-1678, 1678-1694.

<sup>3</sup> *Ibid.*, 1694-1728.

entitled Outdwellers is the entry 'Mr. Post for Hale at £30' and underneath 'D<sup>o</sup> for Clothworkers Land' having a rateable value of £4. His name is associated with both these properties up to and including the assessment dated 27th July, 1797, when the values were respectively £50 and £10.<sup>4</sup> It is very likely that 'Clothworkers Land' was where the fulled cloths were spread out to dry on poles, lines and tenterhooks, normally close by the fulling mill and often called Pole Field.<sup>5</sup>

In 1797, the entry of Clothworkers Land disappears and thereafter William Post Gent. continues to be assessed at a rateable value of £80. In 1800, the entry reads 'Late Post Esq.' and, in June, 1801, it is 'Thomas Smith late Post Gent. at £80'. Smith continues to be assessed at £80 till the entry dated 24th June, 1807; however, the next entry, dated 29th June, 1808, is valued at £70, and in the list entitled Outdwellers occurs 'Pine John late Smith £10'. The next entry, dated 25th July, 1810, reads 'John Pine, Tovil' at £45. This entry continues beside this property until 28th April, 1813. The next assessment dated 28th October of the same year reads 'John Green late Pine at £45'.<sup>6</sup> The last entry of 'John Green late Pine' occurs in April, 1818 and the next in October of that year reads 'John Green Hayle Mill £45'.<sup>7</sup>

According to the *Topography of Maidstone and its Environs*, Hayle Mill . . .

'... stands on lands formerly belonging to Hayle Place and after some difficulties, arising from the novelty of the undertaking and other causes, was completed in 1808.'<sup>8</sup>

In the Green MSS. is an extract from the *Kentish Gazette* dated 15th September, 1812, which reads:

*'Two Vat White Paper Mill on the Loose Stream.'*

To be sold by auction on Tuesday 12th October 1812 . . . Called Hayle Mill with 5 acres or thereabouts of meadow land . . . with a pen of water of about 2 acres which gives at all times full and ample power to the Mill also a copious supply of spring water which rises on the premises . . . Property has been built within 5 years . . . The whole of the machinery and fixtures including presses of all descriptions, chests, vats, copper, trebles and lines blinds and all fixed utensils will be included in the sale . . .'

This advertisement suggests that the building of the mill was finished not earlier than September, 1807, which agrees with the information in the *Topography of Maidstone*.

When the Green family took possession is not too clear. In the

<sup>4</sup> Loose Poor Book, 1755-1783; Loose Churchwardens Accounts, 1780-1812.

<sup>5</sup> *Arch. Cant.*, lxxxii (1967), The Len Water-Mills, 61, Old Mill; 65, Fulling Mill; 81, Pole Mill, 'Taynter Field'.

<sup>6</sup> Loose Poor Book, 1811-1817.

<sup>7</sup> *Ibid.*, 1817-1826.

<sup>8</sup> Phippen (1839), *op. cit.*, 86.

Green MSS. is a schedule of deeds and documents relating to Lower Crisbrook Mill, and other property in Tovil begins with a date of August, 1812, for an entry of 'Further charges' from Mr. J. Pine to Messrs. Beeching and Davies who may have been John Green's solicitors. John Green may have been in the mill before 1812 when it was advertised for sale. The present owner believes it was 1810 as the mill letter-heads indicate but no records substantiate this. The Green family had certainly been in the area some time before this date. In the 1768 *Poll for Maidstone* is John Green, miller.

According to Alfred Shorter the earliest reference to Hayle Mill in the Excise Records is in a list of mills dated 1816.<sup>9</sup>

It is interesting to note that in the Maidstone Poll Book 1832-70 the following are listed.<sup>10</sup>

John Green paper manufacturer Loose.

John Green junior paper manufacturer Otham Mill.

John Green senior mould maker Mill Street.

John Green junior paper mould maker Doctors Field.

In a later Poll, 1835, is John Green, senior, Hayle Mill. Pigot's 1840 *Directory* includes, under Papermakers, Green Samuel, Hayle Mill.<sup>11</sup>

In 1838 Hayle Mill was apparently advertised for sale:<sup>12</sup>

'Known as The Hayle Paper Mill . . . Three vat paper mill on the Langley Stream, with the valuable plant and machinery, a genteel and convenient residence, garden, pleasure ground, orchard and paddock, and six substantial cottages occupying a site of nearly six acres and a half . . .

To be sold by auction 31st October 1838 . . . by direction of the assignees and with the consent of the mortgagees of Messrs Green & Sons, Paper Makers . . . With strong undershot wheel, turned by a powerful head of water, a spacious lofty vat house with slated roof, with its complete fixed machinery, a parting salle, steam boiler with cast iron tubes, sizing house with two coppers, stone chests, press etc., . . . Engine House with two paper engines. A salle with capital screw presses, glazing rolls, a mechanical dry press etc., . . . A steam engine of six horse power by Easton, and ten horse boiler and apparatus . . . Finishing room, rag house, store house smaller ditto and leather warehouse; also a spacious double drying loft extending about one hundred feet, by a width of 27 feet and ten trebles high, heated by steam pipes and enclosed by curtains and rollers, also a windlass. In the yard a counting house, carpenters shop, warehouses and lofts and arched vault for coals. In the meadow a large well built tank, enclosed for the reception of spring water conducted through a large leaden pipe for the supply of the Mill and Premises . . .'

It is most surprising that an undershot wheel existed here at this comparatively late stage in the general development of the valley.

<sup>9</sup> Mill no. 310, John Green Hayle Mill.

<sup>10</sup> Poll on 12th December, 1832.

<sup>11</sup> Pigot (1840), *op. cit.*, 327.

<sup>12</sup> *Green MSS.*, File G-H, Doc. D, Sheet 1 and 2.



Such a waterwheel was inefficient in comparison to an overshot wheel and suggests a low head of water.

In a Day Book kept between 1838 and 1843 there are the following notes:<sup>13</sup>

1839	February 25	Paid for sweeping steam engine chimney 3/6.
1839	(undated)	Paid for Donkey collar 3/0.
1839	„	Paid for Pony's collar 1/0.
1841	„	Donkey harness £1/10/0.
1843	„	Paid Mr. Jones for catching rats 1/0.

According to Kelly's 1852 *Directory* Samuel Green was still the occupier.<sup>14</sup>

In Munkton's *Directory* of 1854 J. B. Green is given as papermaker at Hayle Mill.<sup>15</sup>

A description of various local industries made in 1881 included Hayle Mill where 'Beam, horizontal and vertical steam engines respectively perform their allotted parts, and the water wheel lends a helping hand'.<sup>16</sup>

The plans related to the 1856 Loose Valley Railway show Hayle Mill and pond. The area and shape of the pond show no change from the 1837 Tithe Map when the area was given as 2A 2R 14P, i.e. approximately 112,700 sq. ft. Oddly enough, the Tithe Map and schedule give the name of the mill as Ivy Mill, a mistake.<sup>17</sup> On the railway map a row of six cottages is shown at the upper end of the pond, possibly the ones referred to in 1838.

Mr. Green has in his possession a map which was apparently made in 1889 according to a pencil inscription. The title block reads 'Plans of Hayle Mill and Upper and Lower Crisbrook Mills, Section of Hayle Mill the property of H. Green Esq<sup>re</sup> showing the proposed Loose Railway'. It was made by Herbert Bensted, F.R.I.B.A., Surveyor of Maidstone. From the plans which scale 3 in. to 100 yds., the head-race, which is shown under the mill, scales off at 12 ft. 6 in. wide. The tail-race goes straight back under the mill for some 50 ft. and then turns through 45° back towards the waste next to the road. The intended railway appears to take the same route as that shown on the 1856 map suggesting that this map may have been the landowner's copy of the projected works.

A diary kept by C. Larkin between 1858 and 1919, in the possession of Ted Bincham of Loose, includes:

<sup>13</sup> *Green MSS.*

<sup>14</sup> Kelly's (1852), *op. cit.*, 1095.

<sup>15</sup> Munkton (1854), *op. cit.*, 65.

<sup>16</sup> *Industries of Maidstone, op. cit.*, 5.

<sup>17</sup> K.A.O. Q./Rum. 402, Books of Reference 402A, 402B; Loose Tithe Maps at Canterbury Cathedral Library, To. L9.

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'Mr. Green had new shaft built at Hayle Mill. November 1875.'

and later,

'Started new Boyler at Hayle Mill August 13th 1891.'

In Mr. Green's MSS. is the note:

'In the past it frequently happened that early Monday morning there is not enough water in the reservoir to start up. Frequently the cause of this is because Crisbrooks water wheel grating is stopped up with leaves and rubbish. Therefore the Stoker on duty at about 3 pm. Sunday afternoon should go down through the garden and clean out all rubbish from the grating above the water wheel and see that the wheel is running at the proper speed.' Dated 11th November, 1954.

'During the Summer holiday in 1955 we lowered Hayle Mill pond in order to mend cracks in the wall but before doing so we completely emptied Upper Crisbrook Pond so that any mud that comes down from Hayle Pond went down through into Lower Crisbrook. The lowest board was very rotten and could have given way at any time. We made a new bottom board out of pitch pine, creosoted it and used the old top board.

The dimensions of the boards in this gut are as follows;- The bottom board which rests on a concrete sill is made of one piece 3ft. 2ins. deep bolted with metal strips both sides. Above this is a board with a metal strip and handle 1ft. 2½ins. deep. Above this a long board going across the sill way which is about 8½ins. deep.' Dated 26th July, 1955.

A further note says that in 1946 the gut was inspected and proved to be 4 ft. 9 in. of board above mud and approximately 5 ft. 9 in. of mud below the bottom of the gut.

A note dated 3rd November, 1958, reads:

'At the moment an automatic gate is being made, so that when the pond rises the gate automatically opens and lowers the pond . . . much rain lately . . . floods the rag boiling room . . . may have to pull another board.'

There is another note, apparently for a visitor's book, that the water wheel develops about 10 h.p.

When I visited the Mill the water wheel was still in use though relegated to the mundane task of driving the cooler fan for sizing the paper and driving a felt washing-machine. Some years ago the wheel drove two small beaters.

The wheel measures a fraction over 12 ft. diameter, with eight cast-iron compass arms mounted on a square shaft with 8 keys. Three bays each 3 ft. 3 in. wide make up the width. No maker's name appears. Water is applied by two gates, an unusual arrangement, one overshot and one pitchback on the opposite side. The overshot application is closest to the pond and is undoubtedly the original method. A deflector plate is employed with the pitchback and the water serving this is no longer running and is stagnant. It was last used some twenty years ago, and the old quadrant gear that used to raise the gate is broken.

In June, 1968, the wheel was relieved of all work and now stands idle. The owners would gladly be rid of the wheel and its extensive cast-iron troughs for it takes up much valuable room in the mill. Hayle millpond is cleaned once a year in the area close to the wheel and waste, though the pond generally has some 12 in. of clear water above 5 ft. of mud. When work is required in the wheel pit a couple of buckets of ashes are thrown behind the gate to make a watertight seal. The trash rack consists of 3 in. vertical bars and the waste boards are all within the mill and can be raised by block and tackle.

#### UPPER CRISBROOK MILL

J. K. Wallenberg says that the name Crisbrook was probably originally the name of the stream, the first section of the word being Old English 'coerse', 'cresse', 'cyrse' or 'cresse'.<sup>18</sup> The earliest occurrence of the name appears to be 'de Krisbrok', in 1327.

Upper Crisbrook Mill was probably a fulling mill when William Lambarde wrote of the Loose Valley.<sup>19</sup>

Some uncertainty exists as to who occupied this mill during the early Maidstone Rate Book entries. Two possibilities exist. The first is that James Lands was the occupier in 1668, then James Downes in 1669, who was replaced in the entry dated 20th June, 1675, by Alexander Bassock.<sup>20</sup> The last entry of Alexander Bassock is dated 16th July, 1703, under 'Tovell'.<sup>21</sup> We do not know his profession although several of the Bassock family were known to have been fullers.

The second possibility is that Philip Bassock, who is listed in the first entry of the Maidstone Rate Books, may be associated with this mill. The date of this entry is 28th April, 1668. Philip Bassock, fuller, of Loose, took part in a wedding in February, 1662, and October, 1665.<sup>22</sup> The last entry of Philip Bassock is dated 28th May, 1680;<sup>23</sup> the next relevant entry is Robert Giles in 1681 who is replaced in the entry of 1684 by Thomas Jones. Thomas Jones occurs again in 20th June, 1685, following which the property cannot be traced. It seems likely that this Thomas Jones was the same as the one who worked Gurney's Mill from approximately 1678 to 1684, and later Bockingford Mill from approximately 1683 to 1746. If this is so then Upper Crisbrook was probably fulling during this period.

Aside from the foregoing assumptions the first entry which is undoubtedly for this mill is dated 14th July, 1711,<sup>24</sup> against the name

<sup>18</sup> Wallenberg (1934), *op. cit.*, 140.

<sup>19</sup> Lambarde (1570), *op. cit.*

<sup>20</sup> Maidstone Rate Book, i.

<sup>21</sup> *Ibid.*, iv.

<sup>22</sup> Canterbury Marriage Licences, iii, col. 29.

<sup>23</sup> Maidstone Rate Book, ii.

<sup>24</sup> *Ibid.*, iv.

of Matthew Chandler at £2. His name continues until replaced by James Appleton on 7th July, 1721<sup>25</sup> at £5. Chandler's profession is not known, but James Appleton was a miller. James Appleton occurs in the Rate Book against this property until 18th May, 1731<sup>26</sup> and later in 1736 and 1737. He was the occupier of the Mill Street mills in Maidstone up to 1720, though his name does not occur against this property in the lists dated 1725, 1730 and 1735.

Between October, 1731 and 7th May, 1735, William Parks was occupier of the mill, then James Appleton in 1736 and 1737.<sup>27</sup> In the entry for 13th June, 1744, it reads 'John Powell a mill'. His name is given in the list dated 1st September, 1746, following which there is a gap in the Maidstone Rate Books until 16th May, 1763,<sup>28</sup> when the relevant occupier is Robert Gentile at £12. Sometime between October, 1769, and May, 1772, Andrew Gentile took over; he, in turn, was replaced by Francis Hall just before February, 1777.<sup>29</sup> The last entry of Hall is dated 29th April, 1783,<sup>30</sup> and the list dated 5th September, 1783,<sup>31</sup> reads 'Jonathan Pillow more late Hall £15'. Jonathan Pillow's name occurs beside this property up to the last entry in the Rate Books dated 8th May, 1822.<sup>32</sup> It is interesting to note that from 1783 to at least 1802 he also occupied Lower Crisbrook Mill.

In the Kent Archives Office there is an indenture dated 1809<sup>33</sup> between the Dean and Chapter of the Cathedral and Metropolitan Church of Christ, Canterbury, and Edward Penfold of Loose which includes:

'One Corn Mill called Loose Mill and the Mills of the said Dean and Chapter in Loose and Maidstone called Crisbrook Mills . . . for the said Fulling Mills and lands thereto belonging Four Pounds and for the said Manor and Corn Mill . . . Twenty Pounds and Sixteen Pence.'

It is surprising that these mills were fulling at such a late period and particularly so in view of the likelihood that this mill was a corn-mill during the greater part of the eighteenth century.

In 1816, Messrs. Penfolds *Estates at Loose* were sold. Included were the Upper and Lower Crisbrook Mills which were described as:<sup>34</sup>

<sup>25</sup> *Ibid.*, v.

<sup>26</sup> *Ibid.*, vi.

<sup>27</sup> *Ibid.*, vii.

<sup>28</sup> *Ibid.*, viii.

<sup>29</sup> *Ibid.*, ix.

<sup>30</sup> *Ibid.*, x.

<sup>31</sup> *Ibid.*, xi.

<sup>32</sup> *Ibid.*, xii-xvii.

<sup>33</sup> K.A.O. U36 T1645.

<sup>34</sup> *Skinner MSS.*

CRISBROOK AND MAIDSTONE  
Watermills & Premises, & Three Cottages  
together with  
3 acres 1 rood 20 perches of capital meadow and woodland  
In the occupation of Messrs. Burgess & Co. at the Annual  
Rent of . . . . . £349.10.0.  
The Lease of the Mill expires at Michaelmas 1817.

There is a footnote in this paper which reads:

'The above Estate is Leasehold, held under the Dean and Chapter of Canterbury, for the Term of Twenty-One Years, from Michaelmas, 1809, at the Yearly Rent of £24.1.4d. and the Life Interest of Mrs. Mary Penfold, aged 59, under the Will of her Grandfather, Thomas Crispe, Esq. deceased; to such Lease and every renewal thereof is the Property intended to be Sold; and the Purchaser will be bound, under the Will of Mr. Crispe, to renew the Lease from time to time out of the Rents and Profits of the Estate and the usual Term of renewal with the Dean and Chapter of Canterbury, which is at the end of every Seven Years.'

It is interesting to note the variation in the spelling of Crisbrook. The frontispiece of the above particular sheet suggests that the mills were known as 'Cresbrook and Maidstone', whereas the place was called Crisbrook. It also suggests that the upper mill was called Cresbrook.

John Bunyar, miller, was occupier of this mill from 1824 to 1840.<sup>35</sup> He may have been at the mill a year or two before 1824, and sometime after 1840. John Bunyar occurs in an assessment list made for the repairs of the Loose Highways in October, 1832.<sup>36</sup> The Loose Tithe Map of 1837 gives L. Penfold as owner and John Bunyar as occupier. The mill pond, including a short section of the tail-race and small area of 'rough', is scheduled as 2R. 24P. or, approximately, 28,310 sq. ft.

Munkton's *Directory* dated 1854 gives John W. Wilson, miller, of Tovil who is attributable to this mill.<sup>37</sup>

The 1856 plan of the Maidstone and Loose Valley Railway<sup>38</sup> gives the pond and nearby land as being in the occupation of John Barcham Green.

Kelly's 1859 *Directory* gives John Boucher, miller, of Upper Crisbrook Mill, Tovil.<sup>39</sup>

There is a picture of the Loose Valley made by William Dampier in about 1864 which shows Upper Crisbrook Mill and its waterwheel.<sup>40</sup>

A comparison of the 1856 map mill building outline with the present

<sup>35</sup> Pigot (1824), *op. cit.*, 333.

<sup>36</sup> Loose Highway Book, Maidstone Museum.

<sup>37</sup> Munkton's (1854), *op. cit.*

<sup>38</sup> K.A.O. Q./Rum. 402, Books of Reference 402A, 402B.

<sup>39</sup> Kelly's (1859), *op. cit.*, 614.

<sup>40</sup> H. R. Pratt Boorman, *Maidstone*, 189.

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fabric shows that an extension of the fabric was made on the north side of the mill. In a memorandum for Hayle Mill in the J. Barcham Green MSS. is an entry which probably refers to this addition. It is dated December, 1879, and reads:

'Price for making cement for floor @ Crisbrook Mill' . . .

The entry also includes 'new tiles' and further on,

'Cost of new job @ Flour Mill—March 29/1888  
20 yds. of Aylesford Sand  
7000 red bricks  
10000 (?) bricks  
4400 tiles'.

The extension was apparently completed by 1888 for there is a map of that year in Mr. J. B. Green's possession which shows the intended railway in relation to Mr. Green's land. Upper Crisbrook is shown, scale approximately three inches to one hundred feet, and includes the extension. The pond area was approximately 0.23 acres.

In a hand-written notebook kept by Mr. C. Larkin<sup>41</sup> is an entry dated 27th April, 1876, which reads 'Mr. Green bought upper flour mill', and a further entry in July, 1878, 'Put new water wheel in upper flour mill'.

In Kelly's 1882 *Directory*<sup>42</sup> is 'Threadgold William Moss, Miller and Corn Merchant of 9 Mill St. and Crissbrook Mills, Tovil'. Mr. Threadgold was possibly here much earlier for there is an entry in the Blue Book kept by Mr. C. Larkin 'Bought Grey Horse of Threadgold in Feb. 13th 1875'.

In Kelly's 1895 and 1905 *Directories* the name of George Burnett Blackett, miller, is associated with Crisbrook Mills.

I have been told that this mill was grinding flour before 1900 and, sometime later, fuller's earth was being worked by a man named Mitchenor.

There is in the J. Barcham Green MSS.<sup>43</sup> a specification for a water-wheel for this mill. It reads:

'Specification for preparing, making and fixing a new Overshot Water Wheel for J. B. Green.

A new iron overshot water wheel; the same to be 18ft 6ins. diameter; 8ft.3ins. wide and carrying 72 buckets. The wheel is to be made with 3 cast iron centre pieces, arms and shrouding, each centre piece to be cast in halves and fastened and secured by wrought iron bands shrunk on when hot; the same to be securely keyed on present cast iron shaft 9½ ins. square. The buckets, liners etc. to be of the best Staffordshire rolled sheets No. 14 BWG thickness fitted and fixed

<sup>41</sup> C. Larkin, 1858-1919, found in a drawer in the shop at Lower Tovil Mill, November 1959.

<sup>42</sup> Kelly's (1882), *op. cit.*, 352.

<sup>43</sup> *Barcham Green MSS.*, File G-H, doc. U.

to shrouding with all necessary bolts, stays, rivets etc. complete. The whole of the above specification to be completed in a good and workmanlike manner for the sum of £200.

Signed Alfred Sheldon  
Engineer.  
Wells Somerset.  
April 29th 1878.'

Prolonged cold spells in winter usually caused ice to build up on the wheel and mill wall. At times the ice on each arm measured some eighteen inches across, and all eight would be running against a complete ice sheet on the mill fabric until such time as the ice surfaces immediately fused solid. No amount of work with hammers and axes could free the wheel and the only course of action was to melt the ice. Everything that was combustible and disposable was thrown into the wheel and set on fire, including boxes, tyres and fencing. When the heat was raised, the penstock was cracked, and the buckets kept full while the fire was continually fed. On one occasion more than twelve hours elapsed before the wheel suddenly spun into action. After approximately 1906 the wheel was powering a pump which served Hayle Mill with spring water. Whenever the wheel froze, Hayle was very quickly brought to a standstill.

Mr. Ted Bincham, of Loose, remembers Upper Crisbrook having two or three new water-wheels in the 1920s and 30s as a result of wilful damage. He helped replace a shaft which he believes was broken by trespassers. It was 6 to 7 in. sq. and held by eight keys, four to each hub, which subsequently proved troublesome. They continually worked loose, and the wheel had to be regularly stopped, then jammed with railway-sleepers and baulks of timber while the keys were knocked home.

Downstream from Hayle the grounds are bounded by a high wall beside the road, which abuts Upper Crisbrook Mill further along the valley. The Loose stream is hidden from public view by this wall, as is the pond and waterwheel of the mill.

The mill has four floors under a tiled mansard roof, the lower two within ragstone walls with weatherboarding above. On the north side away from the pond, the fabric has been extended by some 8 ft. with red brick and a slate roof. At the top of the waste the water passes through a trash rack of vertical bars before plunging into a narrow stone and concrete chute which takes the water at a steep angle down to the island beside the mill. Stone steps curve down beside the waste and tilt against the leaning overgrown ragstone wall forming the mill-dam. At the bottom, the stream disappears into a tunnel to join the mill stream beneath the road.

The steel apron, with bolted cast-iron side pieces bearing the words

'H GREEN JULY 1884' still carries some water via the closed gate at the top of the idle wheel, which measures 18 ft. over the buckets. Three sets of eight cast-iron arms divide the wheel in two, four-foot bays and support the mild steel buckets and flanges. Originally, the arms were cast for a 9 in. square shaft with eight keys but this has been replaced by a six-inch diameter cast-iron shaft and packing pieces. Ice and frost cracked the bolted split-arms some years ago and these are now strengthened with clamped steel bars. Although idle for some seven or eight years the condition of the wheel is quite good, for the backing is only marked by one small hole through which the water trickles. No maker's name appears on this wheel or bearing plate though it seems likely that this is the wheel whose specification is mentioned earlier. The wheel now leans against the mill wall. Beneath the apron there is a walk-way between the wheel and the mill-dam which gave room to work on the wheel face.

Entry to the mill was from the road after walking back past the pond to Hayle, for the door close by the wheel was locked and the key lost. The pit wheel and all other gearing has long gone, though a depression in the wall above the barrel vault marks the position of the main driving spur. Nothing remains of the stones or their positions except some short wooden spouts with canvas lips, projecting through from the floor above, suggesting the position of the four pairs of mill-stones that once worked there. When last in use the waterwheel drove the cutter and an old water pump on the ground floor used for delivering water from a nearby spring to Hayle mill.

#### LOWER CRISBROOK MILL

In the first entry of the Maidstone Rate Book, dated 28th April, 1668, there is written 'Richard Parsons £3'. In view of the following evidence this assessment was very probably for Lower Crisbrook Mill. The Canterbury Marriage Licences include the name of Richard Parson, a fuller of Harrietsham, who was a bridegroom on 29th January, 1628.<sup>44</sup> It is possible that this was one and the same person. The last entry of Richard Parson is dated 1677. The next entry dated 7th June, 1678, gives William Parson as occupier of this property.<sup>45</sup> On 28th May, 1680, the relevant entry is 'Robert Giles a mill £3'. In the next entry of 20th January, 1681, the name has changed again 'Johnathan Dare the mill £3'. The assessment of this property was raised in 1686 to £5 while all other property listed remains at the same value suggesting that some improvement may have been made to the property. On 2nd January, 1691,<sup>46</sup> Johnathan's name is replaced by 'Widow Dare'.

<sup>44</sup> Canterbury Marriage Licences, ii, col. 747.

<sup>45</sup> Maidstone Rate Book, ii.

<sup>46</sup> *Ibid.*, iii.



26th June, 1697, is the first entry of John Dare against the property, whose name continues until 1st June, 1717,<sup>47</sup> when it is replaced by 'The Widow Dare'. On 7th July, 1721, the relevant entry is 'Mr. Matthew Chandler' still at £5, the last entry of his name being dated 30th November, 1736.<sup>48</sup> The 11th June, 1737, entry is against 'Lady Tompson' which in 1740 is given as 'John Thompson', and on 1st September, 1746, becomes 'Sir John Thompson'.<sup>49</sup>

Between the last mentioned date and 16th May, 1763, there are no further entries because the Maidstone Rate Books for this period have never been found. The first entry after this gap that could be attributed to Lower Crisbrook is 'Robert Gentile at £18'.<sup>50</sup> It is interesting to note that he was also occupier of Upper Crisbrook mill for this period. 'Andrew Gentile' appears against this property in the entry dated 23rd May, 1772,<sup>51</sup> and continues until at least 9th February, 1778. On 26th January, 1780,<sup>52</sup> his name is replaced by James Pillow, who in the list dated 5th September, 1783,<sup>53</sup> is replaced by Jonathan Pillow who continues until at least 22nd October, 1802.<sup>54</sup> By 4th October, 1809,<sup>55</sup> the relevant entry is 'Messrs. Burgess late Pillow at £25'. This mill was apparently fulling in 1809. Andrews' map of 1760<sup>56</sup> clearly shows this mill, as does Greenwoods of 1821,<sup>57</sup> on which it is marked by a waterwheel symbol.

On 20th February, 1822, occurs the first entry of 'Wilson, Mill, Late Burgess at £20'.<sup>58</sup>

Pigot's 1824 *Directory*<sup>59</sup> gives John Bunyar and Robert Wilson, millers, both of Tovil, as occupiers of Crisbrook Mills. The name of John Bunyar is not given. A perusal of later maps reveals that Lower Crisbrook mill was in the Maidstone Parish, while the Upper Crisbrook mill was in Loose. It would therefore seem reasonable to assume that Mr. Wilson occupied Lower Crisbrook mill, a flour mill at this date.

An 1839 *Directory*<sup>60</sup> gives the following information about the watermills of the Loose stream:

'The Dean and Chapter of Canterbury have three, which are flour mills, . . . and two near Mount Ararat, called Crisbrook Mills occupied respectively by Mr. Robert Wilson and Mr. Bunyar'.

<sup>47</sup> *Ibid.*, iv, v.

<sup>48</sup> *Ibid.*, vi.

<sup>49</sup> *Ibid.*, vii.

<sup>50</sup> *Ibid.*, viii.

<sup>51</sup> *Ibid.*, ix.

<sup>52</sup> *Ibid.*, x.

<sup>53</sup> *Ibid.*, xi.

<sup>54</sup> *Ibid.*, xii-xiii.

<sup>55</sup> *Ibid.*, xiv-xv.

<sup>56</sup> Andrews Dury and Herbert, *Survey of Kent* (1769), sheet 12.

<sup>57</sup> Greenwood, *Map of Kent* (1822).

<sup>58</sup> Maidstone Rate Book, xvii.

<sup>59</sup> Pigot (1824), *op. cit.*, 333.

<sup>60</sup> Phippen (1839), *op. cit.*, 186.

Pigot's 1840 *Directory* under Maidstone Millers, gives the name of Robert Wilson, Tovil.<sup>61</sup> Bagshaw's 1847 *Directory* described it as a Corn Mill and in the trades section, under Corn Millers is the name, John Wilson, Tovil.<sup>62</sup> James Phippen in his 1850 *Directory* lists two Wilsons as millers of Tovil including John Wilson.<sup>63</sup> Kelly's 1852 *Directory* gives J. W. Wilson, miller of Tovil.<sup>64</sup> In Munkton's 1854 *Directory* two Wilsons occur, John Wilson and John W. Wilson, both millers of Tovil.<sup>65</sup> In view of the 1847 reference to John Wilson, it seems that he was working Lower Crisbrook Mill at this date.

Kelly's 1859 *Directory* does not give a Wilson under Maidstone, but includes John Down, miller, of Tovil.<sup>66</sup> The Maidstone and Loose Railway schedule of 1856 gives John Down as occupier of land and cottages close by Lower Crisbrook. Unfortunately, the mill itself did not come within the bounds of the limits of deviation on either side of the intended railway track and so was not included in the schedule.<sup>67</sup> Kelly's 1882 *Directory* includes under Maidstone, Commercial, 'Threadgold, William Moss., Miller and Corn Merchant, 19 Mill Street and Crisbrook Mill, Tovil'.<sup>68</sup> There is an entry in a schedule of Deeds and Documents in the Barcham Green MSS. of a conveyance dated 14th April, 1882, from Mr. W. M. Threadgold to John Barcham Green. By 1895 a further change in the occupier had occurred for in Kelly's *Directory* under Tovil is 'Blackett, George., Burnett, Miller, Crisbrook Mills'.<sup>69</sup> By 1905 he apparently ceased working this mill.<sup>70</sup>

Plans in the possession of Mr. J. B. Green, showing parts of the intended Loose Valley Railway, give the plans of Lower Crisbrook Mill and pond very accurately. The overall measurements of the building were approximately 72 ft. by 41 ft. though the main body was 54 ft. by 20 ft. across the stream the island formed by the waste and mill stream was 250 ft. long by 60 ft. wide at its maximum. The map is dated 1888 in pencil.

There is also in Mr. Green's possession an architect's drawing dated 8th December, 1920, entitled 'Old Crisbrook Flour Mill, Tovil', by Wm. H. Poole, London Road, Maidstone. Apparently the owner intended that the building be converted into cottages, though I am told it was never done.

The building was of four floors, including a reduced floor area of

<sup>61</sup> Pigot (1840).

<sup>62</sup> Bagshaw (1847), *op. cit.*, 55.

<sup>63</sup> Phippen (1850), *op. cit.*, 51.

<sup>64</sup> Kelly's (1852), *op. cit.*, 1095.

<sup>65</sup> Munkton (1854), *op. cit.*, 64.

<sup>66</sup> Kelly's (1859), *op. cit.*

<sup>67</sup> K.A.O. Q./Rum. 402, Books of Reference 402A, 402B.

<sup>68</sup> Kelly's (1882), *op. cit.*, 352.

<sup>69</sup> Kelly's (1895), *op. cit.*, 385.

<sup>70</sup> Kelly's (1905), *Directory of Kent*.

10 ft., consisting of brick and stone base with weatherboarding above the first floor. The waterwheel was shown as 8 ft. 6 in. wide by 11 ft. diameter and the difference in water level between head- and tail-race being approximately 14 ft. The wheel was inside the building on the west end, close to the road. On the south elevation the weatherboarding continued down to the ground being the width of the wheel, suggesting that this was to facilitate removal of the waterwheel.

A section through the building parallel to the waterflow shows that the ground on one side was lower, by the basement depth, than the other side. The apron and trough, drawn and marked mistakenly as a water tank, are level with the top of the wheel which in turn is shown some two feet above the water. The wheel was probably an overshot, but allowing for the surveyor's obvious ignorance of water-power engineering it may have been a high breast or pitchback wheel. In plan view two pit wheels are shown, one each side of the waterwheel. No machinery is shown though four pairs of stones appear on the ground floor which scale off as 4 ft. 3 in. diameter.

In the Barcham Green MSS. is an entry dated 23rd December, 1941, giving the floor areas of the mill. They are, Ground, 75 ft. by 18 ft.; First, 78 ft. by 18 ft.; Second, 52 ft. by 18 ft.; and Third, 53 ft. by 18 ft.<sup>71</sup>

Mr. Brett, who still works for Mr. J. B. Green at Hayle Mill, recalls removing the wheel in approximately 1935. He remembers the wheel had a cast-iron frame and sheet metal buckets mounted on a cast-iron shaft upon which the date 1680 was cast. It was a square shaft and turned on the journals.

Mr. Bill Wickham of Tovil mill believes that the mill was last used for grinding fuller's earth. He remembers the mill was abandoned, and pulled down some time between 1950 and 1954. During this period Albert E. Reed and Company at Upper Tovil Mill rented the tail-race and mill pond and attempted to keep it cleared. Apparently the tail-race received sewage from the valley cottages, which silted the water courses until eventually the island between the stream and tail-race, which was planted as an orchard, had to be removed to increase the area of water.

Tests made by Messrs. Reeds show that the volume of water passing through the Crisbrook Pond gives a normal flow of 1,300 gallons per minute. The lowest weekly average for the five years before 1955 was 850 gallons per minute, and it was estimated during flood periods as many as 1,800 gallons per minute were flowing.

A site inspection reveals that only the foundation of the mill, very much overgrown, remains. Although the tail-race, now a long sheet of water and an extension of the pond serving Upper Tovil mill,

<sup>71</sup> J. Barcham Green MSS., File I-L.

## THE LOOSE WATERMILLS, II

### THE EMPLOYMENT OF WATER POWER ON THE LOOSE STREAM

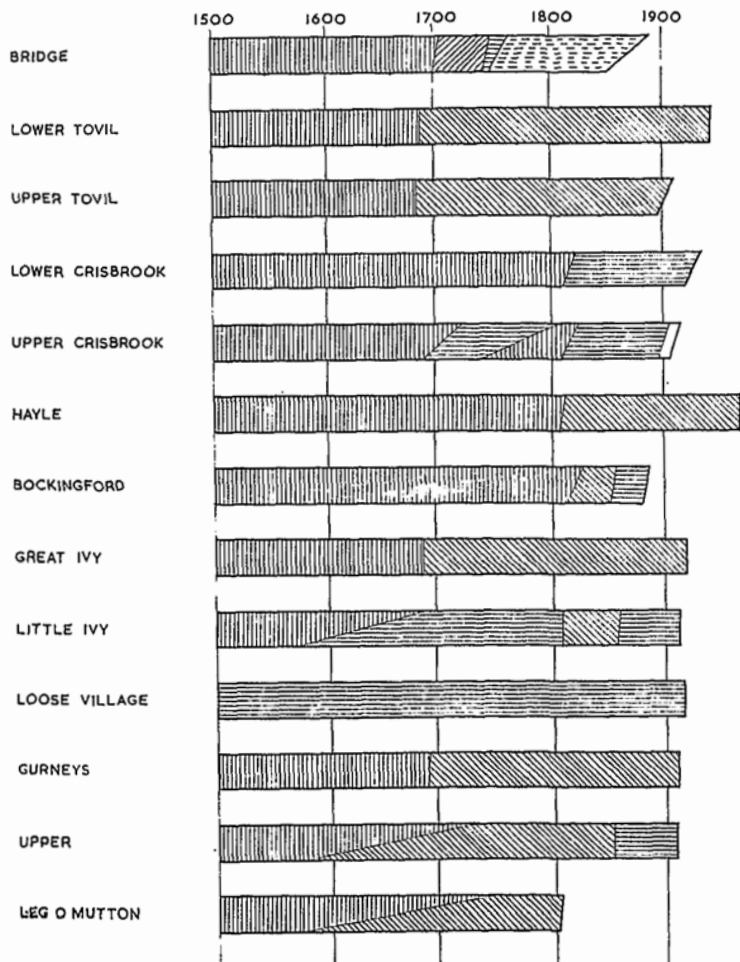
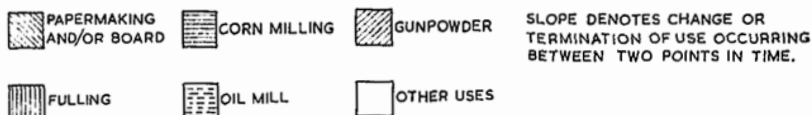


FIG. 1.

is clean and well maintained, the mill pond of Lower Crisbrook mill has caused the water level to drop, revealing great areas of mud.

#### UPPER TOVIL MILL

There is a description of the Manor of Maidstone in 1650 which includes two water mills at Tovil.<sup>72</sup>

'Stephen Fowle houldeth a mill and house and divers piece of land to the College land East to the Street and Mrs Questenbury South and West to the River North.'

One would assume that as all the Tovil property holdings in the 1650 survey are described in relation to each other and the extant topographical features, it would be possible to superimpose them onto the present geography and establish the approximate position of these two mills. In fact the task is extremely difficult. Although certain holdings can be placed with some certainty, the majority, including the Manor mills, cannot be located. As Bridge Mill is later revealed as belonging to the College of All Saints, Maidstone, which did not form part of the Manor of Maidstone, the two Manor mills must mark the sites of Upper and Lower Tovil Mills, though which is which we cannot tell.

In the first assessment of the Maidstone Rate Books dated 28th April, 1668, there is an entry against Richard Parson marked 'more late Robert Baseden £7', which, in the light of subsequent evidence, may be attributed to this mill.<sup>73</sup> The January 1676 entry shows that the rateable value of this property had been increased to £9, all other property values remaining constant suggesting some improvement to the mill. The last entry of Richard Parson for this property is dated 28th May, 1680.<sup>74</sup> It is interesting to note that he was also occupier of Lower Crisbrook Mill throughout this period.

In the assessment made in January 1681 the relevant entry for this mill reads, 'Mantiloe paper mill' against a value of £13. The first entry of his name in the lists headed 'Tovil' occurs in 1680 and it is spelt 'Manktollo' and is against an amount of £12, obviously the same property. His name continues in the entries against values of £12 and later £13 until 1720, in which year the amount was reduced to £8.<sup>75</sup>

In 1697 and 1698 Stephen Mankteloe, paper maker, took as apprentices, Thomas Warley (1697), Thomas Mankteloe, Charles Leaper and John Helbee (1698).<sup>76</sup>

In 1721 the relevant entry is 'Peter Musgrove, late Mantilow' against £8. Two years later the value of the property was substantially

<sup>72</sup> *Clement Taylor Smythe MSS.*, i, 74.

<sup>73</sup> Maidstone Rate Book, i.

<sup>74</sup> *Ibid.*, ii.

<sup>75</sup> *Ibid.*, iii-v.

<sup>76</sup> *Clement Taylor Smythe MSS.*, Apprentices List.

increased to £20, which amount continued until 1731,<sup>77</sup> when it was reduced to £18. Peter Musgrove insured his paper mill in 1727, when it was in the occupation of Thomas Gifford and George Pillchard.<sup>78</sup> Entries of Peter Musgrove continue until in 1745 the relevant entry reads, 'Wilkins late Peter Musgrove' against a value of £18.<sup>79</sup> In that year William Wilkins, paper maker, insured his mill and houses in the tenure of William Musgrove and George Pitcher.<sup>80</sup>

Sometime before 1772 the name of Wilkins is replaced by Clement Taylor. In the next year the value is increased from £39 to £83 10s. and may be related to improvements which this occupier apparently made.<sup>81</sup> In an 1839 Gazetteer it is written, 'Tovil mill is one of the largest mills in the country, was at different times almost entirely new built by Mr. Taylor, a former proprietor'.<sup>82</sup> Clement Taylor was reported bankrupt in the *London Gazette* dated 21st October, 1797. Subsequently, the mill was advertised for sale by auction in the *Maidstone Journal* on 3rd April, 1798:

'Sale by Auction by Messrs Green & Son. At the Star Inn Maidstone on Monday 16th April . . . by order of the Assignes of Mr, Clement Taylor a Bankrupt . . .

Lot 1. All that Capital Freehold PAPERMILL called Tovil Mill, and the wheels, engines, vats, presses, chests, trebles, lines, utensils and implements thereto belonging, together with the Engine-Houses, Rag-houses, extensive Drying lofts . . . and also all those several pieces or parcels of land, with their appurtenances near . . . to the said mill . . . containing by estimation 21 acres . . . (including the mill pond and . . .)

The said mill consists of 5 vats, is amply supplied with Spring water . . .'

The Rate Book assessment dated April 1799<sup>83</sup> gives the relevant entry as Edward Russell & Co., and the second assessment of that year as 'Joseph Ruse for House Land & Mill late Russell and Edmeads'. In 1802, Joseph Ruse, paper maker, insured a mill at Tovil.<sup>84</sup>

Maidstone Rate Books show that Joseph Ruse was occupier of this mill from 1799 to April 1814, when the relevant entry is given as Messrs. Ruse and Turner.<sup>85</sup>

There is at Tovil Mill a most interesting plan of the mill and its grounds, dated 1809, which was brought to my attention by Mr. Bill Whickham. A comparison between the millpond shown and later site plans reveals little change in shape and position. It is said that

<sup>77</sup> Maidstone Rate Book, vi.

<sup>78</sup> Shorter, *op. cit.*, SFIP 41763, 18th May, 1727.

<sup>79</sup> Maidstone Rate Book, vii.

<sup>80</sup> Shorter, *op. cit.*, SFIP 103693, 21st October, 1745.

<sup>81</sup> Maidstone Rate Book, ix.

<sup>82</sup> Phippen (1839), *op. cit.*, 86.

<sup>83</sup> Maidstone Rate Book, xiii.

<sup>84</sup> Shorter, *op. cit.*, SFIP 729657, 27th February, 1802.

<sup>85</sup> Maidstone Rate Book, xiv, xv.

Ruse enlarged the head of water at considerable expense,<sup>86</sup> so that this map suggests that the work had been completed by 1809. A small island is shown in the northern arm of the main sheet of water which does not appear on later plans or maps. The position of the waste has not changed from the present day, and on the map is indicated by the words 'tumbling bay'. A further bypass was supplied close to the wheel. The wheel position is given with the words 'water wheel' which measures in accordance with the scale approximately 18 ft. diameter and 15 ft. wide.

In 1816 the proprietors of the mill were Ruse, Turner & Welch.<sup>87</sup> Various documents are kept in the Kent Archives Office which show watermarks bearing the names of W. Turner & Son (1815), G. & R. Turner (1824), R. Turner & Son (1822), which may have been manufactured at this mill. The last entry of the Rate Books, dated May, 1822, gives 'Turner & Welch',<sup>88</sup> which agrees with Pigot's 1824 *Directory*. Pigot's 1840 *Directory* gives Richard Turner as occupier of Tovil Mill. He is described as a manufacturer of white and brown paper.

Samuel Bagshaw writing in 1847<sup>89</sup> shows that George Francis Giles was at this mill. Munkton's 1854 *Directory*<sup>90</sup> gives Messrs. Hook & Simpson at Upper Tovil Mill. Kelly's 1859 *Directory*<sup>91</sup> gives William Simpson as occupier only, the other partner having taken over Snodland Paper Mill further down the Medway valley. It was during Simpson's occupation that the mill used straw for paper-making, one of the earliest to do so. For a while the mill was called Strawmill and still is by some of the locals. Legacy of this is 'Strawmill Hill' which is close by the mill.

In 1871 the mill was owned by Simpson and Hargreaves and in the following year by the bankers, suggesting bankruptcy.<sup>92</sup>

The Barcham Green MSS. include a hand-written notebook of the period which gives an entry:

1875 13th February. 'gave supper to the workspeople in the new building at STRAW MILL TOVIL'.

Kelly's 1882 *Directory*<sup>93</sup> gives the firm Tovil Paper Coy. Ltd. as occupying this mill.

In 1896 the mill suffered a disastrous fire after which Mr. Albert E. Reed, who became owner about this time, rebuilt, refitted and modernized it.

<sup>86</sup> Phippen (1839), *op. cit.*, 86.

<sup>87</sup> Excise General Letter, 8th October, 1816.

<sup>88</sup> Maidstone Rate Book, xvii.

<sup>89</sup> Bagshaw (1847), *op. cit.*, 71.

<sup>90</sup> Munkton (1854), *op. cit.*, 65.

<sup>91</sup> Kelly's (1859), *op. cit.*, 614.

<sup>92</sup> According to the late Jack Ralph of Aylesford Paper Mills.

<sup>93</sup> Kelly's (1882), *op. cit.*, 352.

In 1894 a conveyance plan of the mill was made<sup>94</sup> and this has been compared with the above-mentioned plan of 1809. By employing a suitable scale, it has been possible to superimpose directly one drawing upon the other. Various common data, e.g. clearly identifiable building and boundary points, reveal that the plans have a maximum linear error of only 3 per cent. Allowing for a very small difference in orientation, the comparison of the mill ponds shows that the north end of the main sheet of water has lost the island and its bank had been somewhat straightened.

Since the 1894 drawing was made the smaller pond has been back-filled and built on. Mr. Whickham believes this was done before the Second World War, probably in the 1930s. Water-power was probably dispensed with about the turn of the century. The main water-race still passes under the mill and is used as a drain. With imagination it is almost possible to see the 'fresh' plasterwork where the barrel vault was. The water level in the tail-race, now a drain, was some ten feet below floor level, which, added to the height that the head-race is above the floor level suggests a total drop of some 25-30 ft. which confirms the large diameter of the wheel. When Reeds took over a steam engine was installed which, Mr. Whickham informs me, drove in the opposite direction to the waterwheel, suggesting that the wheel may have been abandoned at this time.

#### LOWER TOVIL MILL

The earliest reference to this mill occurs in the description of the Manor of Maidstone mentioned in the history of the previous mill, Upper Tovil. From that extract it is clear that either the Earl of Salisbury or Stephen Fowle occupied this mill in 1650.

The first entry in the Maidstone Rate Books to be associated with this property is dated 28th April, 1668, and the occupier given as William Lanes.<sup>95</sup> Later, in 1672, the property was assessed at £1, then in the list dated 28th May, 1680, the figure was raised to £4.<sup>96</sup> A year later Henry Lanes was the occupier; the last entry in that name occurring on 20th June, 1685, when the value is given as £12, a substantial increase on the previous year's value of £4.

In the Canterbury Marriage Licences there is a record that a Henry Lanes, millman of Loose, took part in a wedding on 6th February, 1623.<sup>97</sup> It is not clear what function a millman held, possibly an assistant in a corn or fulling mill. On 10th August, 1674, a William Lane

<sup>94</sup> Held by Bill Whickham of Tovil Mill.

<sup>95</sup> Maidstone Rate Book, i.

<sup>96</sup> *Ibid.*, ii.

<sup>97</sup> Canterbury Marriage Licences, ii, col. 918.



Junior, fuller of Loose, was married.<sup>98</sup> The bondsman at this wedding was William Lane, senior, fuller of Loose. It seems likely that this was a fulling mill.

In 1686 the occupier of this mill was Peter Musgrove and the value £20.<sup>99</sup> Apparently, he was a papermaker, for his name occurs in the Apprentice Papers held in Maidstone Museum,<sup>100</sup> with a reference to this year. His name continues until a list dated 5th December, 1701, which gives 'Peter Musgrove's widow at £20'.<sup>101</sup> The following year, the entry is again Peter Musgrove but the value was increased to £25. This was very likely his son of the same name, who had earlier been apprenticed to his father in 1692. The last entry of Peter Musgrove is dated 7th July, 1721.

The 1722 entry reads 'Musgrove, now William Gill', and the following year 'John Robbins late Musgrove at £25'. John Robbins' name is last given in the list dated 14th May, 1725. In 1726 the relevant entries are 'John Robbins now Gill' and later 'Mr. Gill'.<sup>102</sup> The name of Mr. Gill is given against this property for the last time in 1728. Later in the same year, his name is replaced by 'Mr. Pine late Gill' with the value still as £25. In 1730, the relevant entry reads 'Mr. Thomas Pine late Gill'.

In 1731, a paper mill was destroyed by the blowing-up of a powder mill at Tovil.<sup>103</sup> From the evidence at hand related to Bridge Mill it is clear that the paper mill concerned was Lower Tovil Mill. No change in the occupier or value occurs in the Rate Books throughout this period. In 1741,<sup>104</sup> the assessment was on Thomas Pine Senior, whose name continued until 13th June, 1744. The following year it was Thomas Pine, junior. Alfred Shorter has recorded that Thomas Pine, junior, papermaker, insured a mill house, drying house, etc., in Tovil.<sup>105</sup> The Maidstone Rate Books between September, 1746, and May, 1763, are missing. In 1763, Simon Pine was the occupier assessed at £30.<sup>106</sup> Similar entries continue until 1780.<sup>107</sup> In 1781 the name of John Pine is entered against an amount of £50. From 1795<sup>108</sup> the entry reads John Pine & Co. In 1796, the value was increased from £50 to £65.

<sup>98</sup> *Ibid.*, iii, col. 283.

<sup>99</sup> Maidstone Rate Book, ii.

<sup>100</sup> *Clement Taylor Smythe MSS.*, i, Apprentices List.

<sup>101</sup> Maidstone Rate Book, iii-v.

<sup>102</sup> *Ibid.*, vi.

<sup>103</sup> *The Gentleman's Magazine or Monthly Intelligencier*, i, July, 1731; *The Kentish Post or Canterbury News Letter*, July, 1731.

<sup>104</sup> Maidstone Rate Book, vii.

<sup>105</sup> Shorter, *op. cit.*, SFIP 103461, 30th September, 1745.

<sup>106</sup> Maidstone Rate Book, viii.

<sup>107</sup> *Ibid.*, ix, x.

<sup>108</sup> *Ibid.*, xii.

The entry dated 28th January, 1803, identifies the property as 'House, Mill and Land'.<sup>109</sup>

In 1802 there was an accident at John Pine's paper mill at Tovil.<sup>110</sup> The last entry in the Rate Books deposited at Maidstone Museum is dated 8th May, 1822, and the relevant entry is John Pine at £65.<sup>111</sup>

According to the *Victoria County History of Kent*<sup>112</sup> Lower Tovil Mill was destroyed by fire in 1814.

Pigot's 1824 *Directory* gives John Pine, papermaker, at Lower Tovil. By 1839, John Pine had left the mill and Messrs. Smith and Allnutt were occupiers. The owner was then H. Allnutt, Esq.<sup>113</sup> A *Directory* of 1847 gives Smith & Allnutt<sup>114</sup> but later, in 1852<sup>115</sup> it becomes Henry Allnutt & Son, and then two years later<sup>116</sup> it is recorded as Allnutt, Henry, Tovil and Ivy Mills.

In *Industries of Maidstone*, dated 1881<sup>117</sup> it says, '... one of three picturesquely located mills of which Mr. J. B. Green, of Tovil House, is the chief owner ...' but Kelly's 1882 *Directory*<sup>118</sup> gives Allnutt, Henry & Son, Lower Tovil & Ivy Mills.

In the Green MSS. it says that Lower Tovil Mill belonged to the grandfather of Mr. J. B. Green, present owner of Hayle Mill, who gave it to his son Lawrence. Also in the MSS. is an entry 'Tovil Mill was never owned by Mr. Lawrence Green, but this is a mistake for Lower Tovil Mill which he had but we doubt whether he had it any earlier than 1872'.<sup>119</sup>

In a Day Book kept by C. Larkin between 1859 to 1919 now in the possession of Mr. Ted Bincham there are several entries related to this mill:

'1860 Sept. Putting new Boyler in at Tovil'

'1861 Feb. repairing upright Boyler'

'1861 Nov. Enlargening Mill head at Tovil'

'1862 Nov. Piper put new iron water wheel shaft in at Tovil and new geared the Pet wheel.'

'1863 Mar. took lower machine water wheel out Tovil.'

'1865 May Jonathan put in new Boyler 46 horsepower and turned old one round at Tovil.'

'1873 1 Jan. Mr. Green took possession of Mills.'

'1871 Feb. Potter repaired steam engine up at Tovil.'

<sup>109</sup> *Ibid.*, xiv.

<sup>110</sup> *Kentish Chronicle*, 28th May, 1802.

<sup>111</sup> Maidstone Rate Book, xvii.

<sup>112</sup> *Victoria County History of Kent*, iii, 418.

<sup>113</sup> Phippen (1839), *op. cit.*

<sup>114</sup> Bagshaw (1847), *op. cit.*, i, 71.

<sup>115</sup> Kelly's (1852), *op. cit.*

<sup>116</sup> Munkton (1854), *op. cit.*, 65.

<sup>117</sup> *Industries of Maidstone* (1881), *op. cit.*, 4.

<sup>118</sup> Kelly's (1882), *op. cit.*, 352.

<sup>119</sup> *J. Barcham Green MSS.*, Doc. J, Sheet i.

- '1873 5th & 6th July Harrison put new arms in farther side of water wheel at Tovil.'  
'1875 13th August. started gas engine at Tovil.'  
'1881 June. Put new steam Boyler in at Tovil.'  
'1889 19th Oct. Lower Tovil paper mill burnt down.'

Apparently during this period when the mill was owned by the Green family there existed a common maintenance arrangement between Lower Tovil and Hayle Mill.

In another notebook<sup>120</sup> apparently kept by a builder, entitled 'Memorandum for Tovil and Ivy Mills' there are the following notes:

'New Steam Boiler put to work June 8/82 @ Lower Tovil Mill. Still 14 days.'

'June 1883—Pit Wheel Geared water side at Lower Tovil.

Wheel striped @ Midnight of Friday June 22nd 1883. Wheel started again June 27th 1883. Worked long days.'

'Gas Engine sold Aug. 28/83 Price £250.'

Kelly's 1895 *Directory* gives Allnutt Henry & Son paper manufacturers.<sup>121</sup>

The Kent Archives map of the proposed Maidstone and Loose Railway<sup>122</sup> shows Lower Tovil Mill buildings and waterways very clearly. It confirms that this mill was not served by a mill pond.

Mr. Ted Bincham of Loose moved to Lower Tovil in 1924 and retired in 1966. He remembers the waterwheel as being overshot, 18 ft. diameter and 14 ft. wide mounted on a solid square cast-iron shaft constructed with cast-iron radial arms and steel buckets and flanges. It was last used in 1932 when it was driving agitators in pulp chests. At that time a new process or production required a greater agitator speed and every effort was made to make the wheel turn faster, but to no avail, and subsequently a steam engine was put in to take over its task.

When the wheel was in use the task of regulating and controlling the wheel was undertaken by the old hands of the mill whose experience and skill resulted in the most economic use of the mill-stream. Lower Tovil Mill is built on a bank and the wheel was deep down inside the mill completely under cover. It was not served direct from the stream but fed by an eight-inch diameter cast-iron pipe from Lower Crisbrook mill pond. The origin of this peculiar arrangement was apparently connected with ancient water rights which this mill held. When the gate in the trough above the wheel was lowered the water was diverted sideways into a red brick pocket where it entered an 18-in. diameter cast-iron bypass pipe.

Imported greenheart was used elsewhere for the wheel cogs, which

<sup>120</sup> *Ibid.*

<sup>121</sup> Kelly's (1895), *op. cit.*, 386.

<sup>122</sup> K.A.O. Q./Rum 402, Books of Reference 402A, 402B.

was very difficult to work. In Kent, however, applewood was popular. Between the pit-wheel and the vertical agitator shafts the drive took a rather peculiar line, involving three lay shafts with bevel and spur gears, including one shaft which was inclined in an unusual plane.

In 1941 the owners allowed the wheel to be used for scrap metal for the war effort. Mr. Bincham remembers the shaft as weighing two tons five hundredweights and being some 14 to 15 in. square. Some time later the cast-iron gut was removed. On one of its sections was cast the date of 1785 and the name of its maker, Medway Foundry, Peter St., Maidstone. He distinctly remembers the gut section being very thick, of excellent cast-iron and in remarkable condition, though the bolts were badly corroded and snapped like carrots.

### BRIDGE MILL

In a grant to Sir George Brooke, Lord Cobham, dated 29th February, in the fifth year of Edward the Sixth's reign (1551), there was included a fulling mill at Maidstone in the occupation of George Pyend, described as late belonging to the College of All Saints, Maidstone.<sup>123</sup> Five years later in 1556 an indenture from Sir George Brooke to others included:

'And all that our tenement called Tovell, and all lands, meadows, feedings and pastures, and all its appurtenances, let at the annual rent of £21. And all that our fulling mill, in Maidstone aforesaid, now or late in the occupation of Simon Pien . . .'<sup>124</sup>

In 1562 Lord Cobham, let to John Jackson, citizen and founder of London, by contract at a rent of £45, the site of the College and other messuages and lands in the tenure of John Bennet, William Green, George Peene, and Simon Smythe.

A description of the Manor of Maidstone, dated 1650,<sup>125</sup> includes various Tovil properties which were bounded by College property. However, as the College was not part of the Manor no details of it were given and consequently it is not possible to determine where the property lay.

The College fulling mill is mentioned for the last time in 1698 when an Act of Parliament was passed for vesting certain lands and hereditaments in Maidstone and elsewhere in the County of Kent, in trustees, for the benefit of Diana Cecil and her heirs, including:

' . . . all those two parcels of meadow ground next Peen's Mill Stream, containing 4 acres . . .'<sup>126</sup>

' . . . and all that messuage, tenement, and fulling mill, in Tovell, and all thereto belonging.'<sup>127</sup>

<sup>123</sup> Beale Poste, *All Saints College Maidstone* (1847), 61.

<sup>124</sup> *Ibid.*, 71.

<sup>125</sup> *Clement Taylor Smythe MSS.*, iii, 74.

<sup>126</sup> Poste, *op. cit.*, 75.

<sup>127</sup> *Ibid.*, 76.

The area called Tovil could be said to extend up the valley to include Lower Crisbrook Mill, which to our knowledge has been in the hands of the Dean and Chapter of Canterbury since the Dissolution. Between that mill and the River Medway are three other watermill sites, called Upper Tovil, Lower Tovil and Bridge Mill. Both Upper and Lower Tovil Mills may be identified as being paper mills several years before 1690. The foregoing evidence strongly suggests that the fulling mill at Tovil immediately before 1700 was Bridge Mill.

The name of Simon Peene occurs in the first two Maidstone Rate Books<sup>128</sup> under Tovil. For many years he was assessed for two properties and his name consistently headed the Tovil list suggesting that if the assessors made their entries in a logical order working generally upstream, that this property was close to the river. Symon Peene's two properties were valued, in the first entry of April 1668 as £11 and £4. Subsequent entries reveal that the £11 entry did not include a mill. It is likely that the £4 entry was for Bridge Mill. Other mill assessments of this period show that such a value would be of the right order, viz. Richard Parson at Lower Crisbrook in 1668 being for £3; William Lanes at Lower Tovil in 1679 was assessed for £4; and Philip Bassock probably for Upper Crisbrook in 1668 for £4.

It is quite possible that the Symon Peene of the Rate Books was an alternative spelling of Simon Pine, who was a fuller at Tovil.<sup>129</sup> He was born in 1634 and died in 1681 which agrees with the last entry of Symon Peene in the Rate Books, dated 28th May, 1680.<sup>130</sup>

The next list gives 'Widdow Peene' as the occupier of the relevant property. Similar entries continue at least until 1684. The assessment dated 20th June, 1685, gives the name of Stephen Fowle in place of Widow Peene and the rate is £6. The last entry of his name is dated 26th June, 1697.<sup>131</sup>

The Canterbury Marriage Licences list a Stephen Fowle, fuller of Maidstone, as bridegroom on 19th January, 1634.<sup>132</sup> He was probably the occupier of the College Mill in 1650 and father of the Stephen Fowle occurring in the Rate Books. Some time, probably after 1698 and before 19th January, 1704, this fulling mill was replaced by a gunpowder mill since the assessment of that year<sup>133</sup> includes an entry of 'The Powder Mills'. It is doubtful that the old mill was pulled down, but more probably converted in part or whole, for the falling stocks of the fulling apparatus were very similar in construction to a stamp

<sup>128</sup> Maidstone Rate Book, i, ii.

<sup>129</sup> Russell, *History of Maidstone*, Errata and Addenda applicable to text pages 152 and 155.

<sup>130</sup> Maidstone Rate Book, ii.

<sup>131</sup> *Ibid.*, iii.

<sup>132</sup> Canterbury Marriage Licences, ii, col. 363.

<sup>133</sup> Maidstone Rate Book, iv.

mill. In place of the water-fed troughs were mortars in which a few pounds of powder would be beaten at a time by heavy *lignum vitae* pestles.

In July 1731 the inevitable happened, for through somebody's negligence or design there was an explosion at the mill. Maidstone at this time did not have a news-sheet but the event was recorded in at least two papers, *The Kentish Post or Canterbury News Letter* and *The Gentleman's Magazine*. The *Gentleman's Magazine* or *Monthly Intelligencier* described the occurrence in their list of Deaths and Casualties:<sup>134</sup>

'23. (July). A powder mill at Maidstone in Kent blew-up, by which two Men and a Child were killed; A Paper-Mill and a House adjoining were destroyed; The Tiling and Windows of Several Houses, and the Windows of a Church at a great distance very much Shatter'd.'

A hundred years after the event it was recorded for the second and last time in a local history book:<sup>135</sup>

'This, many years ago, was a gunpowder mill, and tradition has preserved the memory of a severe explosion occurring here, occasioning the loss of several lives; by which the farm-house on the opposite bank of the river was so much shaken, the direction of the wind concurring with the force of the shock, as to require part of it to be supported with props for many years afterwards, and which indeed was done till lately, when it was pulled down.'

A considerable quantity of powder must have been ignited for besides the destruction of nearby property the church in question, at Tovil, stands on a slight rise some 1,000 ft. from the site of the old powder mill. It is possible that the mill was employing edge stones for the working of the powder in quantities of 40-50 lb. at a time and thus the stocks close by would have been far greater than those of an old type stamper mill.

I have examined all the Overseers Accounts for 1731,<sup>136</sup> particularly the sections entitled 'Extraordinaries' with the hope that some relief may have been given to those who suffered from the explosion, but no such entry is forthcoming. Clearly the responsibility for such action was entirely private.

It is surprising that even though two assessments were made per year the destruction of this mill and damage to other tenements is not reflected in the rate figures in any way. The entry 'Powder Mills and Meadow £10' continues until the year 1741.<sup>137</sup> How long the site remained derelict is anybody's guess though I imagine rebuilding of the

<sup>134</sup> 1731, i, 309.

<sup>135</sup> J. Smith, Printer and Publisher (1839), *Topography and Directory of Maidstone*, 87.

<sup>136</sup> Maidstone Rate Book, vi.

<sup>137</sup> *Ibid.*, vii.

new mill would have begun fairly soon after. In 1742 the relevant entry is 'Mr. Dickaford'. Similar entries continue until September 1746, when it became 'James Appleton late Dickaford'. It would appear that this mill had been converted to corn milling for James Appleton was a miller, who earlier worked Upper Crisbrook and the Church Mills at Maidstone.

Sometimes following September 1746 and before July 1755, the mill was converted from corn milling to the production of oil. On 30th July, 1755, Richard and John Day of Montague Close, Southwark, insured an oil mill with two wheels turned by water situated at Tovil.<sup>138</sup> Each wheel probably powered a set of iron-shod stampers which crushed the linseed or rape seeds in mortars beneath. The paste was then placed in bags of horse-hair and pressed between iron plates and wooden wedges by other stampers. The oil obtained ran out through holes in the trough to containers or barrels beneath. Other substances from which the oil was difficult to obtain using stampers were prepared by crushing under edge stones.

The reference to two water wheels at this mill is interesting. Were they fed by separate ponds? It is unlikely that the owners of the new oil mill acquired the paper mill nearby. The Rate Books certainly show no change of occupancy before 1746. However, the assessments from 1746 to 1763 are missing. During this period it is probable that Lower Tovil Mill was occupied by the Pine family who controlled several local paper mills and a corn mill. With the growing demand for paper and the consequent exploitation of new water-mill sites together with the conversion and extension of existing mills, it is most unlikely that the Pine family would have sold or leased the site to the new seed crushing venture close by. The indication from the reference is that a single oil mill had two wheels. The distance between the tail-race of Lower Tovil Mill and the Medway is approximately 550 feet. On the 1865 Six-Inch Ordnance Survey map there is a millpond immediately downstream from the Tovil-West Farleigh road which crosses the tail-race of Lower Tovil Mill, and beside its western bank a large building noted as Oil Mill.

If the mid-eighteenth century mill had buildings on both banks they would have probably appeared on the 1865 Ordnance Survey map for factories rarely contract in floor area. It seems most probable that one of the waterwheels was therefore placed in front of the other and fed from the same millpond by an extended mill race.

In 1763 the relevant Rate Book entry is 'Day & Co,'<sup>139</sup> and in October, 1769, 'John Day & Co.'. Later in 1772<sup>140</sup> the entry is 'Richard

<sup>138</sup> Harold W. Brace (1960), *A History of Seed Crushing in Great Britain*, 27.

<sup>139</sup> Maidstone Rate Book, viii.

<sup>140</sup> *Ibid.*, ix.

Day' and similar entries continue until January 1801.<sup>141</sup> In October, 1802, the entry is 'Jonathan and Robert Stone'. The Stone family continued in occupation until 1820,<sup>142</sup> when the entry reads 'Day, House and Mill. The last entry in the Maidstone Rate Books, dated 8th May, 1822, reads the same.

In 1776, Seymour wrote of this mill as being famous, where the workmen were employed night and day in the manufacture of linseed oil, the seeds being imported from Archangel.<sup>143</sup>

By virtue of its position in the valley, this mill, being the furthest downstream, received a greater water throughput than any other. It also had the advantage of employing the River Medway to carry its raw material and products. But being near the river had its disadvantages. In winter the lower Medway regularly floods. The premises of Bridge Mill must have been flooded on many occasions, stopping the water wheels and submerging the mill floors. A description of the mill in 1881 included:

'... flooding causes considerable disorder in the warehouses, and I am informed that in the last few years the river caused considerable damage to the buildings now marking the site.'<sup>144</sup>

Pigot's *Directory* of 1824 gives William Thomas Steinmetz as being a seed crusher at Tovil. This was Bridge Mill. In 1834 the mill was reported as making linseed oil and oil cake.<sup>145</sup>

In 1858, the mill passed to Thomas William Brook. By 1881 the mill was using linseed (or flax seed), rape (or French turnip) seed, and cotton seed for making oil and cattle cake which was occasionally used for manure on farm land.<sup>146</sup> Sometime after the middle of the century the mill was converted to hydraulic box presses. At that time there were two separate buildings, called Upper and Lower Mills each containing five sides of four box presses, the total crushing capacity being about three tons a week.<sup>147</sup> The 1865 Ordnance Survey map only shows one building, however.

Mr. T. W. Brook died in 1877, and in 1899 the mill was closed down because of intense competition, and Alfred Brook, son of T. W. Brook, went to Gainsborough. In 1889 there was a fire at this oil mill.<sup>148</sup>

Shortly after 1899 Albert E. Reed took over the mill and converted it to the manufacture of paper. When water power was abandoned is not clear. No memory of a waterwheel exists at Reeds. Perhaps it is

<sup>141</sup> *Ibid.*, x-xiii.

<sup>142</sup> *Ibid.*, xiv-xvii.

<sup>143</sup> Seymour (1776), *Survey of Kent*, 547.

<sup>144</sup> *Industries of Maidstone* (1881), *op. cit.*

<sup>145</sup> S. C. Lamprey, *Maidstone & its Environs*.

<sup>146</sup> *Industries of Maidstone* (1881), *op. cit.*

<sup>147</sup> Brace (1960), *op. cit.*

<sup>148</sup> J. Barcham Green MSS., C. Larkin's notebook, 1858-1919.



significant that in 1881 the iron rollers, stones and presses were all worked by three steam engines totalling 80 hp. The wheel may have been abandoned by this date, certainly for powering the larger items of equipment, although usually some small task is found to keep the wheel moving.

For the last few hundred feet before entering the Medway the Loose stream is lost to view excepting a short stretch which can be seen beside the pulp stacks close to the river bank. The final entry to the river is made through a three-foot diameter concrete pipe running through the bank.

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