

SUFFOLK MILLS GROUP

Newsletter Number 30

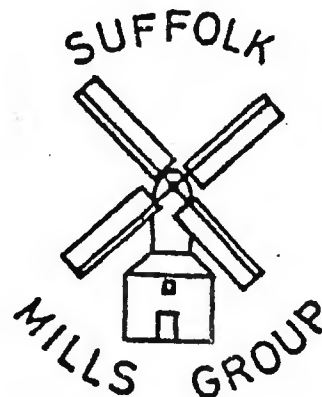
MAY 1984

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Following our successful winter meeting in February we are now planning the summer programme, which will once again focus on the Group's main project, the restoration of Thelnetham mill. Full details of the work-ins at Thelnetham are given inside. Further work is also being planned at Drinkstone. The A.G.M. on June 24th will provide an opportunity to see work at Bardwell mill, another ambitious restoration project, and also to visit the very fine watermill at Ixworth.

The next Newsletter will appear in September and will include an account of the forthcoming S.M.G. expedition to Holland as well as news of the work-ins; further material would be welcomed.

Mark Barnard

HOLBROOK MILL KEN & JENNY READ

PART 3 : CONSERVATION OR PRESERVATION?

The difference between these two terms given by dictionary definition is very slight, but when applied to buildings 'conservation' describes retention with change whilst 'preservation' retains the building in its original form allowing no change. The term 'mill' applied to a building derives from the function of milling performed in the building, a mechanical process for reducing or re-shaping a raw material.

The description of a mill is usually prefixed with an indication of its use or method of power, i.e. windmill, corn mill, watermill, hammer mill, saw mill. Function and structure are therefore very closely linked. Technical innovation on machines over centuries has changed the style of buildings which we recognise as 'mills'. A picturesque windmill or watermill is considerably different from a Lancashire cotton mill, Cranfield's computerised flour mill, or even the new 'energy mills' now being erected on the northern Scottish isles.

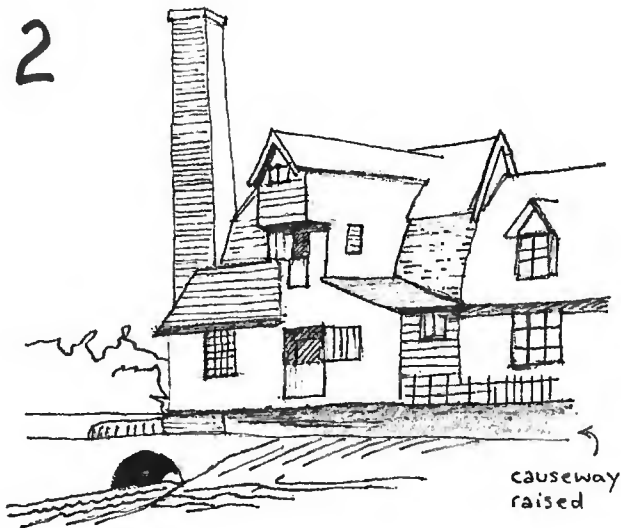
The picturesque windmills and watermills have not escaped this technical innovation. A cast iron wallower here, a steel shaft there, or even a water turbine to replace a waterwheel. All mills have suffered or benefited in this way depending on your point of view, and the overriding picture is one of conservation rather than preservation. Preservation is a twentieth century preoccupation; better communications have made us more aware of our environment, and how quickly we are destroying it. Conservation has been practised throughout centuries by numerous building owners including millers who have adapted their buildings to meet

1



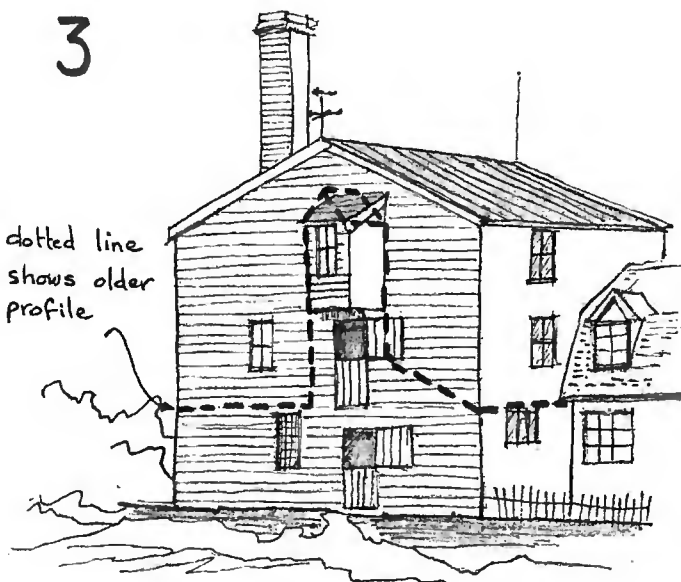
c.1700 : Pre industrial revolution

2



c.1880's : Extended & converted to steam

3



c.1900's : late Victorian addition masks piecemeal extensions

changing needs whilst retaining the essential elements. Some millers have been more successful at conservation than others, but the fact that more mills have been lost in the last 50 years than in the previous 500 years is an indication that perhaps conservation is more successful than preservation.

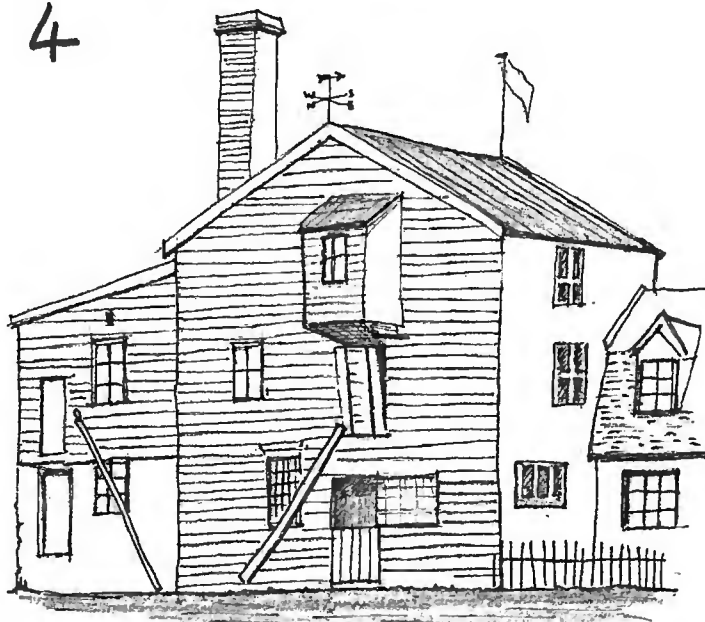
The previous paragraph is over-critical of preservation, as conservation is only possible while a continued use can be found for the building. In the last 50 years traditional milling has almost ceased to exist, therefore all the indigenous mills became redundant. Finding another use which does not destroy the fabric of the original building and equipment is a difficult task when so many buildings are threatened. Preservation is then the best course of action for a limited number of the best examples. Unfortunately preservation is subject to the law of diminishing returns. The more mills held at the point when they ceased their intended function, the more maintenance is necessary to upkeep them. The resources of manpower and materials are then not available to be channelled into further major restoration projects.

It is important therefore to select mills for preservation carefully; the best, most unusual, most important mills should be given this treatment and the remainder should be considered for conservation with possible alternative uses.

Holbrook mill falls into the category suitable for conservation. In its recorded history over 300 years it has changed in appearance and content many times as our sketches show. Traces of the original seventeenth century mill (1) show it to have been a small mansarded mill similar in appearance to the mill house today. Improving the head of water led to the raising of the causeway in front of the mill (now the B1080) and this necessitated raising and extending the lucam (2). A number of front outbuildings and a steam engine were installed by this time. The front of the building was then squared off in Victorian times (3) providing more storage space and giving the appearance as seen today. Further industrialisation and installation of roller milling equipment (4) included a two storey side extension and helical grain chutes attached to the front elevation. This finally came to an abrupt end in 1926 when Hector Stone was bankrupt and the mill was gutted of its roller milling equipment.

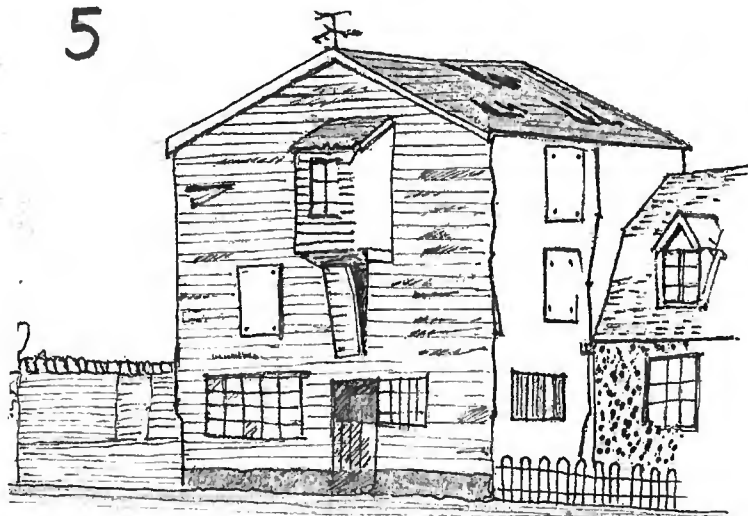
The mill is some 4,000 sq ft of floor area on four floors (approximately 1,000 sq ft per floor, i.e. each floor equivalent to a three bedroom house). Little or none of the original equipment was left on the upper three floors, even the floorboarding and some of the external wall struts on the top floor had been removed, probably for firewood during the Second World War. To put right 50 years of neglect (5) on such a large structure is no small task and will take a number of years, but by utilising the vacant upper floors for living accommodation and reinstating the tea rooms on the upper ground floor it is hoped that the building will be sufficiently economically viable to support the restoration of the lower ground floor with its turbine and two pairs of stones to a fully operational mill.

4



1920's : Competition necessitates further industrialisation

5



1980 : After 50 years of neglect

FEBRUARY MEETING CHRIS HULLCOOP

Many of our Members are well travelled and have seen mills all over Europe and far beyond. With the troubles in the E.E.C. especially in France with 'Le Chaos', etc., it was thought we should make a contribution to European harmony. We certainly had plenty of material with week-long S.M.G. trips to Holland and Denmark. Francophiles Roy Berry and Penny Paterson had seen many French mills and been particularly impressed with the restoration of the post mill at Bois de Feugères in the Beauce region. They had invited the two mill enthusiasts responsible for the project to visit them on the weekend of the S.M.G. public meeting in February. Thus our exhibition in the window of the Cheltenham and Gloucester building society in Ipswich to publicise the meeting was set out accordingly with Wilfred Clover's model turning steadily amongst photos, posters, books and drawings of mills in France, Denmark, Holland and Belgium.

The two Frenchmen, Jean-François Amary and Christian Porcher, arrived on Thursday and Roy was able to show them some mills in Kent and Essex where they were lucky enough to see Mountnessing post mill at work. On Friday we took them to see Drinkstone mills, Pakenham mills and the tower mills at Bardwell and Thelnetham.

On Saturday the weather was cold but fine and just after seven people began arriving for the meeting at the town hall. Our French friends were given a quick tour of the building and its fine paintings of former mayors and great sea battles - mainly with France unfortunately! After a brief introduction and news of progress at Thelnetham and Bardwell mills Roy Berry gave his talk on mills of the Beauce. He explained the incredible Système Berton, the French equivalent of Cubitt's patent sails, and showed us a fine series of slides on the restoration of Bois de Feugère post mill. Here the mill was blown over in a hurricane shortly after the repair work had started. In the reconstruction as much of the old material as possible was re-used. The post was not as sound as it might be and rather than make a new one it was cut in half length-wise and a special steel stiffening beam inserted and the two halves joined together again. A fine example of discreet repair to a vital original component.

At half time Ernest our urn provided some very up-market Earl Grey tea, and Mrs. Waterfield brought some splendid biscuits made with flour from Bardwell mill. Millers Dolman and Waterfield set up rival stands at opposite ends of the hall, selling flour from Pakenham watermill and Bardwell tower mill. We were hoping for a price war with consumer benefits, but there must have been a miller's mutual agreement!

In the second half Essex millwright Vincent Pargeter showed us some excellent slides of mills in Belgium and the Nord of France taken some ten years ago. There is no more haunting image than a derelict windmill and there were some truly spectacular ruins. By now they must have either collapsed or been

reconstructed. As always, time ran out and Mark Barnard's contribution on Dutch mills had to be postponed. The meeting concluded with a superb slides to music presentation put together by Penny Paterson, taking the mills and landscape of the Beauce as its theme.

Those who did not have to depart immediately adjourned to Mannings where our French friends sampled English ale and were amazed at the red and green Mohican hair styles of many of the customers. We walked down to the Buttermarket to admire the exhibition, with Wilfred Clover's model still turning steadily at 11 pm.. We hastily moved on when an unruly crowd emerged from the club next door. It's just as well mill enthusiasts don't behave like football supporters and E.E.C. farmers. Chants of 'Vive la Système Berton!' and 'Cubitt Rules O.K.!' might inflame Anglo-French relations yet again. As it was we felt we had achieved just a little for Entente Cordiale.

VANISHED MILLS PETER DOLMAN

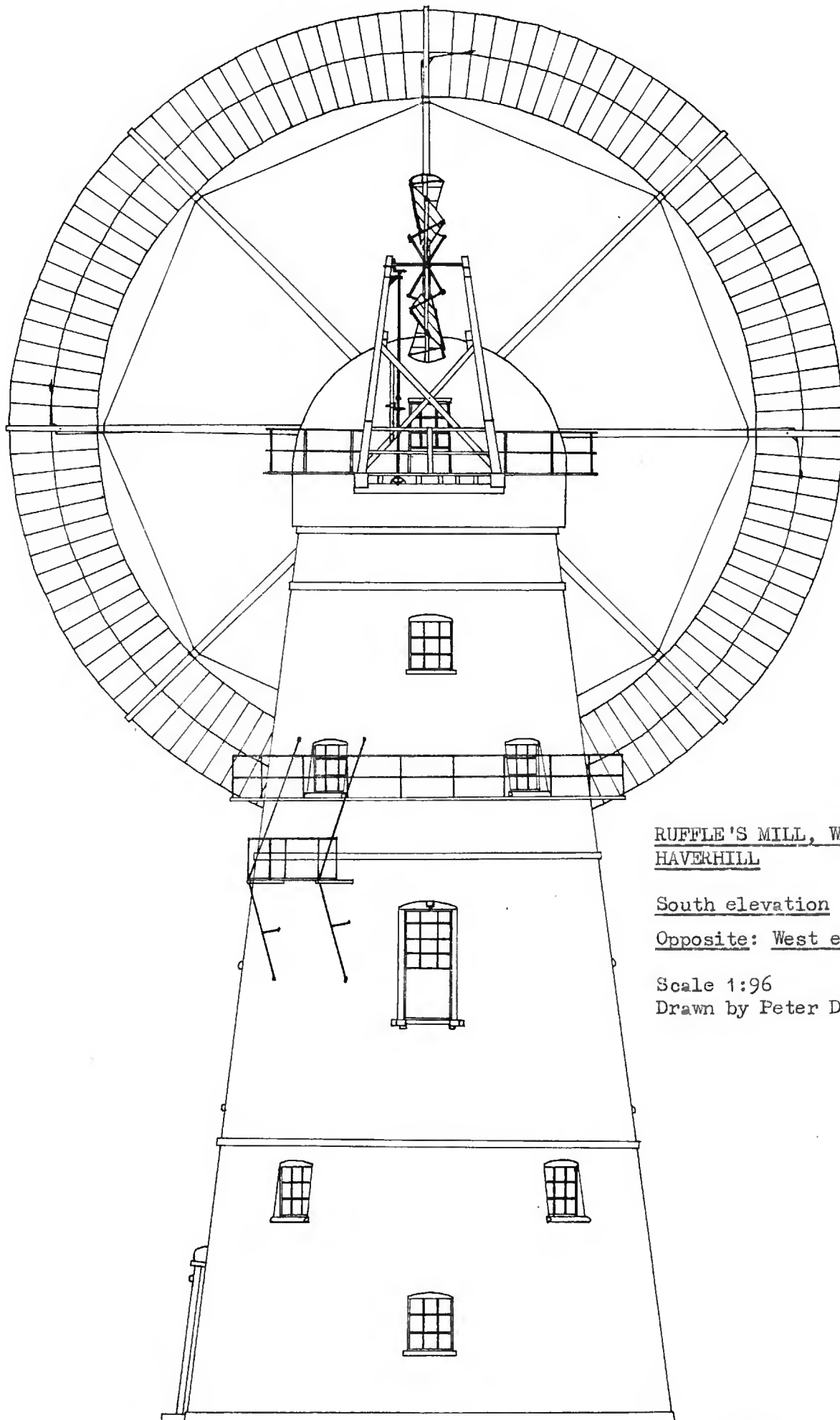
RUFFLE'S MILL, WRATTING ROAD, HAVERHILL

Of all the wind and watermills to have stood in Suffolk, this mill alone achieved nationwide fame, due to the excellence of its design which incorporated the first full-size 'annular sail' in the world.

The first map to show a mill here (at Grid Ref. TL6746,4606) is Greenwood's of 1824. This was a post mill, of probably late eighteenth century date, worked by John Ruffle in 1823. Richard Ruffle was in charge by 1839 and White's 1844 directory gives him as miller at the 'Old Mill' - differentiating it from the 'New Mill' at Burton End, a large post mill built in 1797. There was also a tower mill at Chantry Croft, worked with an adjacent post mill for a while.

The history of the Haverhill mill and its annular sail was explained by the late H.E.S. Simmons in 1970, writing in 'Millnotes' from letters which appeared in 'Milling' in the 1880's. At some time, probably in the 1840's, Richard Ruffle converted his post mill into a composite mill, or 'bastard' mill as he called it. The post was taken out and the body set upon a three storey





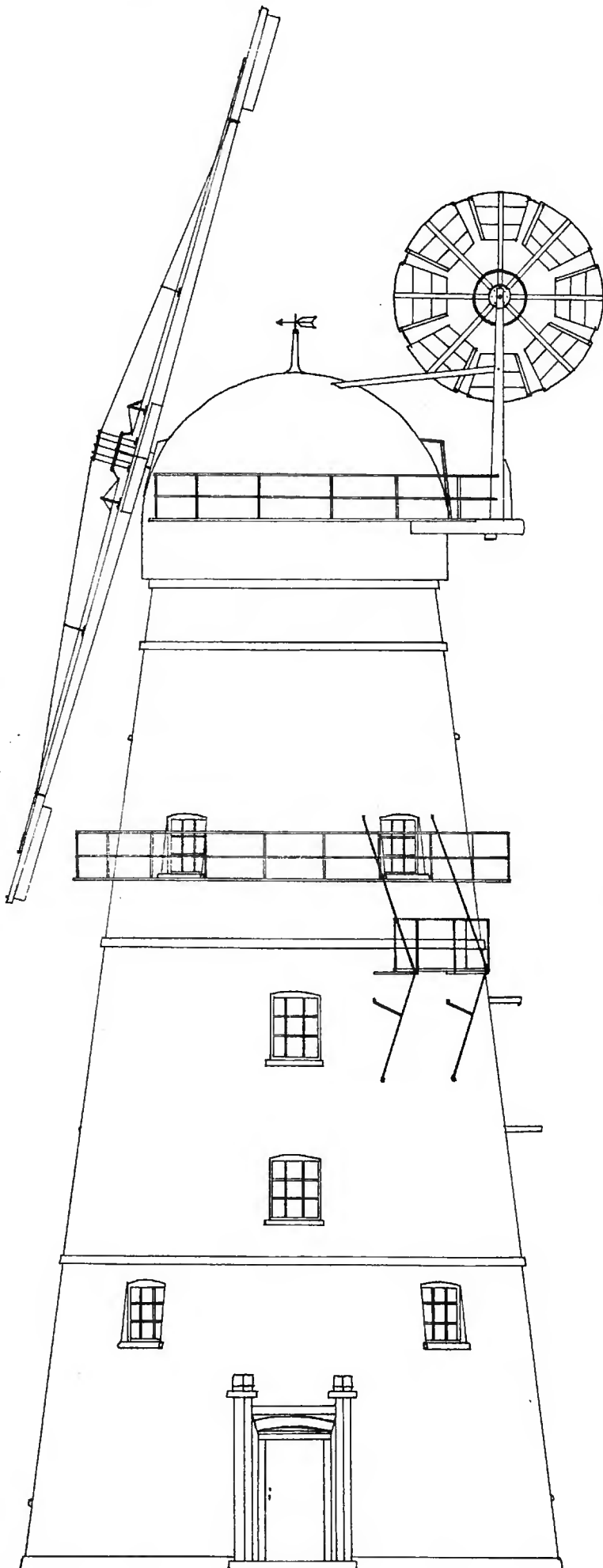
RUFFLE'S MILL, WRATTING ROAD,
HAVERHILL

South elevation

Opposite: West elevation

Scale 1:96

Drawn by Peter Dolman



brick tower. It is thought that this was the first mill to be so converted (the Monk Soham mill, of earlier date, was a 'one off', built as a composite mill and never copied). It proved successful and the same idea was applied to several other mills in East Anglia, notably at Little Laver, said to have been a copy of the Haverhill mill. It is not clear from the source material (a letter by Henry Chopping, inventor of the annular sail) whether this composite mill ever had an annular sail. I would doubt if it did, although Ruffle had experimented with the idea himself, after seeing Chopping's original model at Matching in Essex in the late 1830's or early 1840's.

The composite mill, although successful, was not to stand long as the great weight of the mill caused the no doubt inadequate brickwork under the curb to crack. In 1855 therefore, work began on Ruffle's masterpiece, the new tower mill. If this had been fitted with ordinary sails it would still have been an impressive mill, with a tower 23 ft internal diameter at the base and an overall height of about 65 ft.

It worked in conjunction with a two-pair steam mill by the mill house and remained in the Ruffle family all its life. It stopped work in the late 1920's but by this time had attracted public attention and was repaired in 1930 with help from the S.P.A.B. and

rented to a Mr. Cross, formerly of Fulbourn mill, Cambridgeshire, who worked it for a few years until a gale smashed part of the sail in 1933. It was pulled down in 1942 to salvage the ironwork 'for the war effort', an event much lamented by mill enthusiasts at the time and ever since. The mill house and steam mill building could be seen derelict in 1977 but were shortly afterwards cleared away for housing. A few years previously the mill foundations had been visible when work started on a large housing estate but they were soon broken up.

Since the mill was so well-known, it received the attentions of several mill enthusiasts in the 1920's and 1930's, who recorded its constructional details. Rex Wailes gives much information and several close-up photographs in his Suffolk Windmills paper (Transactions of the Newcomen Society, Vol. XXIII) and Stanley Freese also noted down much about it.

The tower was conventionally built of brickwork, 12 ft internal diameter with $14\frac{1}{2}$ " walls at the curb, tarred externally and whitewashed internally. It was well lit by numerous large windows. The quality of construction was above average for mill towers with a raised band of bricks at every other floor level as decoration. The main door was ornamented in white-painted brickwork and all the cills were of stone. Internally, proper stairs were used instead of the usual steps. The spur gearing was enclosed in a cog-box to keep dust at bay.

The cap was dome-shaped, covered with vertical butt-jointed boards with cover strips, all painted white. It was surmounted by a plain finial with windvane, and had an iron gallery. The 10 rollers were grooved to run on a rail on the curb, thus centering the cap (although there were also 9 centering wheels). The eight-bladed fantail drove on to both sides of the cap, an unusual although not unique refinement.

The sail, which rotated clockwise when viewed from the front, was built upon eight wooden arms of 50 ft span, carried in an eight-armed cross on the iron windshaft. The rim was of angle iron and the shutter pins ran directly in it. The 120 shutters were slightly tapered, from $14\frac{1}{2}$ " to $12\frac{1}{2}$ " wide by 5 ft long. The cranks were fixed to the centre web of the canvas-covered wooden frames, linked to a continuous flat iron striking 'ring'. To accommodate the inevitable slack and backlash springs were used in the connection to the radial striking rods (through bellcranks). There were four of these, connected to a conventional spider. Control was from inside the cap, probably via a striking wheel. A large centrifugal governor was used at one time to keep the speed constant although this seems not to have remained in use for long. (It is interesting to note that if contemporary with the mill i.e. 1855, this pre-dates the patented 'sweep governor' system found in Sussex.) A complex system of bracing and tie rods was provided to brace the sail against the wind. The sail was exceptionally successful, for it put all its sail area at the

point where it was doing most good, unlike conventional sails which might as well not have the inner half of each sail at all for all the power it produces. Another advantage was the even running, with no sudden pulse as each sail passed the body or tower. The overall effect was that the mill could work in a lighter wind than ordinary mills and would drive three pairs of stones when other mills might be struggling with two pairs.

The internal machinery was equally well fitted out. The brakewheel was of iron, keyed to the shaft, with eight segments each of 13 iron teeth, 8 ft 4 ins diameter. The wallower was iron on an iron upright shaft. The stones were on the fourth floor, at which level was an iron stage, reached from the stone floor windows, giving access to the shutters for maintenance. There was also a rather unsightly gantry built out from the mill to reach the furthest extremity of the sail. Four pairs of French stones were fitted, three of 4 ft and one of 3 ft diameter, all underdrift. A stone lifting crane was provided. All the drives came off the iron spur wheel, which had wooden cogs. The stone nuts were iron, two being raised out of gear by yoked levers operated by screws and two by independent twin screws. An iron bevel ring under the spur wheel drove several layshafts; from these the sack hoist was driven two floors up in the usual slack-belt way, and various smaller machines on the floors below were also driven by belt such as a bolter, a smutter, a grindstone and an oat crusher. The governors, which controlled all four pairs of stones, were driven by belt from a pulley on the spur wheel.

At spout floor level (the third floor) two doors on opposite sides of the mill gave an indication that had the annular sail not been a success, conventional sails could have been fitted, for here was provision for a stage, never actually required. One of the doors had a hoisting point immediately over it, but for what purpose it is impossible to say now.

Only four annular sails were built on 'traditional' windmills, which have been often referred to by windmill writers; it is tragic that the first, and also the last to survive, should have been lost.

THE PENTLOW WATERMILL INVENTORIES (2) KEN FARRIES

INVENTORY completed 8th September 1877

Schedule of contents of mill, etc.

An 18 feet by 4 feet 4 inches Wood Water wheel, Wood clasp arms, Oak floats (faulty) Oak shaft 12 feet 6 inches long 24" X 24" hooped ends, Gudgeons, 2 chains and brasses, holding down bolts, 2 pillar (altered to pillar from pillow) blocks 6' 0" X 0' 11" X 0' 11". 6 sleepers 5" X 9" all fixed and in good going order complete.

Breast - Staple posts secured in brickwork, 2 Cast Iron rabbetts screwed on same and the staple post shut on gate 5' 0" X 2' 6" X 0' 4" in good order and complete.

Capsill Rod - pulley and chains (extra pulley and cord and fixings)

A 12 feet Oak pit Wheel Rim 12 X $5\frac{1}{2}$ Facing on ditto $8\frac{1}{2}$ X 5 geared with 120 oak cogs, Clasp Arms $14\frac{1}{2}$ X 4 hung with wood keys, Iron cast segment on edge of ditto, cogs 6" wide $3\frac{1}{4}$ pitch fixed and in order complete.

Cast Iron trough 12 feet long, 2 feet wide, 5 feet deep, fixed complete.

Cast Iron Wallower nut 2' 6" diam. 26 cogs $5\frac{1}{2}$ " deep $3\frac{1}{4}$ " pitch turned pitched and trimmed.

Cast Iron upright shaft 10 feet long $4\frac{1}{2}$ X $4\frac{1}{2}$ Iron bridging tree and brasses with 4 sets of screws, toe brass $4\frac{1}{2}$ " X $4\frac{1}{2}$ ", Timber under the Iron bridge tree, and Iron gearing for striking out chair and brasses top of upright shaft with oak fixings and bolts all complete.

A 4 feet wood Crown Wheel with cast plates and bolts hung on upright shaft with Iron keeps, and geared with about 60 wood cogs $2\frac{1}{2}$ " pitch, Cast nut 18" diam. 20 Iron cogs 5 inches long working in Crown wheel, as fixed complete.

One Cast Iron lay shaft, 10 feet long $3\frac{1}{4}$ X $3\frac{1}{4}$, one cast bracket chair and brasses and bolts, wood fixing and Iron brace. Wood bray 4 feet long 5 X 5. Cast Iron chair and brasses 7 feet oak upright 5 X 5 and sole for ditto and cap and bolts and 3 Iron stays and bolts complete.

A 2 feet 10 inches Wood wheel 6 inches thick, cast iron plates and bolts, hung on lay shaft with Iron keeps, 2 Iron hoops and rivetts geared with 46 wood cogs 4" wide 2" pitch.

A Wood drum hung on lay shaft 2ft. 6in. diam. 16" wide with Iron plates, and bolts and Iron keeps to drive flour mill.

A Wood Pulley 18" diam. 7" wide with cast Iron plates and bolts hung on lay shaft with iron keys to drive sack tackle.

A 3 feet 6in. Wrot (i.e. Wrought) Iron intermediate Shaft 2" X 2" turned bolt and two Iron chairs and brasses to same.

Two Uprights with caps and sills roller and leathers, wood nut 2 feet 4 inches diam. $6\frac{1}{2}$ " wide, Cast Iron plates and bolts hung on intermediate shaft with Iron keys, 2 hoops and rivetts, geared with 36 wood cogs 4" wide $2\frac{1}{4}$ pitch.

Wood pulley hung on intermediate shaft with Iron keeps 3ft. 6in. diam. 7" wide with wood flanges, Iron plates and bolts.

One pair of 4 feet 4in. French Burr stones for wheat on water wheel side, nearly new.

Cast Iron stone box, 2 brasses, Grease wedge, piece of wrot plate and 3 bolts one ring and mace.

One pair of 4' 6" French Burr stones (not good) on house side.

Cast Iron stone box, 2 brasses, Grease wedge, wrot plate and bolts Cast Iron cross bar and mace.

Two wrot stone Spindles 4 feet long 3" X 3", 2 wood stone nuts 22" diam. 8" deep geared with 24 wood cogs, wrot plates, hoops and bolts, hung with wrot keeps, 2 Cast bridging boxes with screws and holding down bolts, 2 square toe brasses 4 X 4.

Pair of Octagonal Vats with hoppers and wood bearers and shoe, 2 Shoe brasses and 2 wrot damsels.

Two Corn Screens 5' 0" X 1' 2".

Two lips, 4 poppets and brays and two balance dishes and cords.

The Hurst for 2 pairs of Up Stream Stones. 8 Oak uprights 10 X 8 with sills and bearers. Stone floor &c. 2 Oak bridge trees with 2 lighting irons, nuts, and spanners, all complete.

Seven tread board (sic) steps to Hurst

2 Oak Meal Spouts, 2 feed Jacks & Cords.

1 Sack holder and Chain, 2 Stone saddles & bolts, blocks and handles.

Meal trough 7 feet long 3' 0" X 2' 0".

Stone roll and rope, 3 brackets and bolts complete.

2 Iron Crow bars.

One Oak Counter Shaft 10ft. 6in. long 13" X 13" with hoops and wing gudgeons, 1 chair, 2 brasses and bolts.

Two Wood counter wheels 6 feet diam. with clasp arms 7 X $3\frac{1}{2}$ Rim 12 X $3\frac{1}{2}$ geared with 70 wood cogs each hung with wood keys and cleats. Cast Iron spur nut 2' 10" diam. 36 iron cogs 7" wide turned, pitched and trimmed work in pit wheel and hung on counter Shaft with wood keys.

Oak upright 7 feet long 7 X 5 and cap on ditto.

Two ditto 5 feet long 6 X 6

Oak Cap 7 feet long 11 X 7

Inch iron bolt 7 feet long.

One pair of 4ft. 4in. French Burr Stones (good)

One pair of 4 feet ditto (fair)

2 Cross bars and maces, 2 Curbs around stones, 1 Saddle and bolts and 2 blocks, 2 wrot damsels, 1 short corn spout, 2 sets of clamp irons.

2 Octagon Vats with bearers, hoppers and Shoes.

2 Wrot stone spindles, 6ft. long 3" diam. Cast cones keyed on 2 cast bridging boxes, screws and bolts, 2 square 4" X 4" toe brasses, 2 cast stone nuts 20" diam. 6" deep, 25 Cogs turned, pitched and trimmed and bored and keyed.

2 Sets of Irons to raise Stone nuts.

Cast Iron counter shaft 9ft. long 5" diam. 2 Cast chairs and brasses and bolts.

2 Cast counter wheels 4' 6" diam. geared with 70 wood cogs and wood keys hung on Shaft with 8 keys.

2 Wood bridge trees 4ft. 6in. X 9" X 9"

2 lighting Irons, nuts and Spanners.

The Casing around hurst about $1\frac{3}{4}$ squares and two spouts.

2 feed cords and Jacks.

Meal trough for down stream Stones 6' 0" X 3' 0" X 2' 0"

2 wood cased flour Mills with reals and partitions complete and 2 wood pullies on spindles.

2 Spouts and lips.

2 feed cords and Jacks.

Flour Machine. 4ft. 6in. cylinder 6 single hair brushes, 16" cylinder. Hopper and casing, Shoe, Feed cord & Jack and pulley, Brass on Shoe, 3 spouts, hooks, cords & Jacks.

An Iron Intermediate Shaft 2 feet long $1\frac{3}{4}$ X $1\frac{3}{4}$ - 2 Chairs, brasses and bolts, 7 feet upright with cap and case, bray on Flour Machine.

One Iron wheel geared with 36 wood cogs and wood keys, hung on Intermediate shaft, 1 cast Iron nut on Machine Shaft turned and pitched, and trimmed with 16 cogs and wood pulley on Intermediate shaft 20" diam. X $7\frac{1}{2}$ " with wrot plates and bolts and hung with Iron keys complete.

Five leather driving straps and bands (74 lbs) ($\frac{3}{4}$ good).

Sack Chain and Tackle as fixed complete, viz. about 20 yards chain, 8 feet wood roller 6" X 6" with hoops and gudgeons, 4 Oak uprights, 7 feet long 5 X 4. 2 Oak brays 5 feet long 4 X 6. 2 brasses, bolt and wood cleats.

One 3ft. 6in. X 7 Wood pulley 2 flanges and keyed on Sack tackle roller, 1 wood purchase shaft and wood rigger and strap to lift bray with cleats and fixing 20 feet casing.

3 Iron Chain Sheaves and fixing and chain trough about 17 yards, pulling in Cord 5 pullies and fixing all complete.

Catch Mill, hooks, Cords &c. (as flour mill)

One pair of 3 and 4 Sheave wood pullies with Iron bands and hooks.

One wood sack jigger, chain and hooks.

One Iron ditto.

SHEDS for Steam Machinery

An Engine Shed 18 feet long, 14 feet wide, Span roof (pantiled) 2 weatherboarded sides fitted with folding doors and 1 studded and boarded end.

Small lean-to over fly wheel and brick pit for wheel.

STEAM MACHINERY

An 11 feet wrought Iron shaft 4" diam, and turned both ends. 2 Chairs with brasses and bolts.

A 5 feet fly wheel 6" wide on face and turned and bored.

A 3 feet Iron under pulley 5 $\frac{1}{2}$ " rim.

Wood blocks 8 X 2 $\frac{3}{4}$ with hook and bolts and fastenings.

Six feet 8" X 8" Oak sill.

Cast Iron nut 2 feet diam. 6 inch wide geared with 34 wood cogs.

Iron segment on Counter wheel 6 feet diam. bolted on (not trimmed)

5 feet timber 9 X 9 and shifting Gear all complete.

Fixtures in Mill House

Parlour 36" Register stove, Lock on door, Shelving in Closet, Lock on Closet Door.

Keeping Room Stove and blind roller.

Counting House Stove, Lock, Shelving.

Kitchen Cooking Range, Washing Copper, blind roller.

Scullery (Brown's House) Lead sink, Washing Copper, Grate, Shelf.

Back Lobby Meat Safe, Shelving.

Back Kitchen A Stove.

Best Bed Room Stove, Lock, spline and pegs.

Middle Chamber Stove, Fire board, Shelf.

Front Entrance Door latch and key. Bell.

Wash House, Dairy and Offices Grate and Shelving.

BOOK REVIEW PETER DOLMAN

'ESSEX WINDMILLS, MILLERS AND MILLWRIGHTS Volume 3: A Review by Parishes, A-E' by Kenneth G. Farries. Published by Charles Skilton; 1984. Price £12.

The long-awaited first part of the Review by Parishes has appeared in this massive work (now extended to five volumes). The letters A to E include the county town, Chelmsford, with disappointingly few windmills, and Colchester, with nearly as many as Ipswich. The book aims to cover every windmill recorded since 1700 and each mill, or more specifically site, is accorded at least a paragraph.

Obviously some mills will have far more documentary material than others: for example the unsuccessful entrepreneurial mill may appear in sale adverts every other year whereas the one in stable family ownership may never be sold at all. The temptation is to write down as much as possible and thereby create a dreary catalogue of a dull mill. Ken Farries' concise style cuts through any such notion, picking out salient points to illuminate each mill. When a photograph exists

(and many superb old pictures are included in this and previous volumes), any noteworthy points are brought out in the text, showing Ken's great skill and knowledge in interpreting photographic evidence. A few of the mills in the Parish Review were visited by the author or one of his colleagues such as Denis Sanders. In these cases, a comprehensive technical description accompanies the historical matter. Particularly impressive is the section on Birch mill, with several interior photographs of this huge post mill which lingered on into the 1960's. I was also impressed with the section on Gibraltar Mill, Great Bardfield, which gives a most convincing account of this strange mill's pedigree (and lays several myths to rest!).

My only possible criticism is aimed not at the author, but the publisher. The work has now, without warning, blossomed into five volumes from the original four. This effectively puts up the price by 25% at a stroke! The fifth volume will also contain an addenda to Farries and Mason's 'The Windmills of Surrey and Inner London'. Necessary as this item no doubt is, I cannot see what relevance it has to Essex windmills, especially as not everyone who buys 'Essex' will have a copy of 'Surrey and Inner London'.

I was also disappointed, as a connoisseur of John Whitmore's tower mills, that the section on Bradfield didn't mention that the tower mill there was unquestionably the work of the master from Wickham Market. It was also identical to Hasketon mill, Suffolk; even the adjoining granary was remarkably similar to those at Hasketon and Buttrum's Mill, Woodbridge. Perhaps as Whitmore doesn't seem to have built many new mills 'south of the border' Ken was unfamiliar with his work. The White Roding mill, being very late, and indeed not by John Whitmore at all, is untypical of his practice.

In conclusion, I must emphasise the sheer readability of this book, which is well written, well illustrated and well produced. It is a pleasure to handle and indeed a pleasure to read about some obscure mill in a rural backwater for even these spring to life from the pages. It is also good value at £12 for such a specialised subject (notwithstanding my moan above).

NEWS

NATIONAL MILLS DAY

A total of 11 mills in Suffolk were open on National Mills Day (May 6th): Bardwell tower mill, Herringfleet, East Bridge windpump and Alton watermill at the Museum of East Anglian Life, Framsdon, both Pakenham mills, Thelnetham, Thorpeness, Woodbridge tide mill and Letheringham watermill.

James Waterfield of Bardwell mill writes: 'We had about 70 visitors, Mike Bryant at Pakenham (windmill) a deal more than that. We were grinding with the engine and at Pakenham the sails were turning so it does seem as though National Mills Day will go from strength to strength which I, for one, am very pleased about.'

Mark Barnard and Chris Hullcoop ran Herringfleet mill: 'Conditions on National Mills Day were ideal with a stiff breeze and bright sunshine. The mill turned steadily all afternoon on full cloths and, because the water level in the dykes had been raised, visitors were able to see the scoopwheel in action. We had about 100 visitors in all, on what must rank as one of our most successful and enjoyable open days at Herringfleet so far.'

CROSSWORD RESULT

There were some 20 entries in the crossword competition which appeared in the last Newsletter. The prizewinners, as drawn at our public meeting in February, were as follows: 1st prize (£12 book token) to Peter Hill; 2nd prize (print of Woodbridge tide mill) to Richard Seago; 3rd prize (14lbs of Bardwell flour) to Rosemary Dennis. The solution is:

ACROSS: 1 Cavier 4 Bollard 7 Benenden 9 Screener 11 Trestle 14 Reydon 15 Tree
16 Stamps 19 Annular 22 Cracking 25 Reel 26 Eling 28 Iron 29 Bolster
31 Lawn 32 Keyingham 33 Tide

DOWN: 1 Cubitt 2 Vince 3 Raddle 4 Bins 5 Lacey 6 Runner 8 Green 10 Crown
12 Trap 13 Eye 15 Toll 16 Sack 17 Mace 18 Sail 19 Auger 20 Noria
21 Ruston 23 Arkley 24 Keston 27 Giant 30 Elm

PROGRESS AT THELNETHAM

There hasn't been much visible change lately at the mill: brickwork has been repaired, a certain amount of setting up of machinery has taken place, a new window has been made for the stone floor (only one more to make!) and two open days have been and gone - the first moderately successful, the second rather disappointing, with about 15 people turning up, mostly relatives or friends of the mill owners!

The biggest progress has been away from the mill. The fantail is coming along nicely; the brakewheel is rumbling along very slowly but steadily; Cranes Ltd. have been busy making iron castings from the lovely patterns made by Chris Hullcoop (it was a shame to put them in that horrible, dirty sand!).

The other major item of progress is the forthcoming 'work-in' by the apprentices of Eastern Electricity Board, which will take place in mid July. They will be doing work to the stand-by diesel engine, repointing the brickwork, putting a drainage trench around the mill and wiring it up properly. There will be two teams of 15 youngsters, plus supervisors, camping in the mill paddock in successive weeks. There will be some overlap with the first S.M.G. work-in, so for a while there could be as many as 40 people on site!

I must now put out my usual plea for helpers during the S.M.G. work-ins (July 21st-29th & August 18th-26th). Several regulars have already signed up for another stint; how about some more of you coming along? This will be the last year of work-ins at Thelnetham so now's your chance if you haven't

been before. Camping facilities at the mill are now quite civilised, and for non-campers digs can be arranged locally.

Projects for this year are to make two laminated timber stocks, four sail frames and four clamps; to install the fantail and its gearing; to install (and if necessary, finish) the brakewheel; to repair the 'back' door to the mill; yet more repointing and other tidying up jobs. If sufficient labour is available, further installation of machinery and fittings will be tackled.

If all goes well, the end of the second work-in in August should see the mill turning to wind with its sails almost ready for hoisting, which will hopefully take place in October. (Peter Dolman)

BARDWELL NEWS

Soon after the last Newsletter was published, the mortised engine drive bevel stripped its cogs when I was grinding some hard rye one day (rye is tough old stuff to grind at the best of times). I managed to get some second-hand cherry wood and persuaded a friendly local joiner to rough it out for me with a bandsaw so all I had to do was fit and trim the cogs. We had the mill going again four days after the mishap.

I got the flour dresser set up in early March. It is wired 60 mesh per inch for the white flour going down to 30 per inch at the end. I got the wiring slightly wrong at the tailings end and as a consequence produce two grades of semolinas! Not too useful. The white flour is proving a good seller, there being very few mills producing this sort of thing any more.

We took the second-hand pitch pine for our sail whips over to the Duke of Grafton's sawmill at Euston and had it trimmed down to size; the kind co-operation of the Estate was much appreciated. I hope a start will be made on mortising the whips in the near future.

The mill is at present roofless, as we have had the old cap craned off to remove the rollers and centering wheels and to work on the curb. Good elm seems to be like gold dust at the moment so the new curb is to be made in iroko by a local joinery firm. Iroko is a very hard wood akin to teak and is still relatively cheap. I think it is likely that our new brakewheel will be made in the same timber as, once again, there just doesn't seem to be the elm about.

Jays foundry in Norwich have been busy casting the vane cranks and gudgeons as well as the stump irons and triangles and I am very pleased with their work. I will have the spider for the striking rod fabricated in mild steel, as for a one-off it isn't really worth the pattern making.

Richard Seago our millwright has been fitting the curved weather beam and the cap circles and making a start on the fan gears and bearings so hopefully the new frame may be here by the time of the S.M.G. Annual General Meeting in June. (James Waterfield)

EVENTS

S.M.G. ANNUAL GENERAL MEETING: SUNDAY JUNE 24th 1984 at THE TITHE BARN, BARDWELL starting 11 am.

This year's Annual General Meeting will be held at The Tithe Barn at Bardwell. This is located just round the corner from the windmill, one house away from the 'Dun Cow' public house and opposite the village post office. Following the meeting there will be a chance to inspect the windmill, and in the afternoon we have arranged a visit to nearby Ixworth watermill, by kind permission of Mildred Rogers, the owner. This mill, although now disused, is still complete and has several features of interest.

Bring a pic-nic lunch, or else pub lunches are available at the 'Six Bells' in Bardwell. We hope to see a good turnout!

BUTTRUM'S MILL, WOODBRIDGE OPEN JULY 8th & JULY 14th

As part of the Woodbridge Festival Fortnight, Buttrum's Mill will be open to the public on these two days, from 11am-1pm and 2.30pm-6pm. Hopefully by this time the new sails will be in position and the mill should look a fine sight.

S.M.G. WORK-INS: THELNETHAM MILL; SAT. JULY 21st - SUN. JULY 29th and SAT. AUGUST 18th - SUN. AUGUST 26th.

Our main practical project this year - see p.14 for further details.

REPAIR WORK TO DRINKSTONE MILLS

We will again be working on both the mills and lots of timber, paint and protim await us. Last winter saw considerable deterioration in the roundhouse roof of the post mill and about a fifth of the roof is now close to collapse. Patching an old tiled roof is very tricky as it is difficult to dovetail in the new work but we will have to try. Anyone interested in helping please contact Chris Hullcoop on Ipswich 715161. Does anyone have access to several hundred plain peg tiles? They don't have to be very old ones.

New S.M.G. Members since Newsletter 29

WARD, Richard
Paycocke's, West Street, Coggeshall, Colchester, Essex

WARD, Roy,
Abbey Mill, Coggeshall, Colchester, Essex

YEARSLEY, Ian
256, Elm Road, Leigh on Sea, Essex

Changes of Address:

L.E. Ball : 5, Clayhall Place, Acton, Sudbury CO10 0BT

S.T. Crick : 46, Richard Avenue, Wivenhoe, Essex

A. Loasby : 44, Alfreton Road, Wigston Fields, Leicester LE8 1FB

J. Salmon : Abbeyfield, 57, The Close, Norwich NR1 4EH