

Volume Four : 1970-71**Contents**

Excavation at College Farm : Raveningham	P. Durbidge	1
The Old Beach Companies and their Yawls	J. Rose	3
A Survey of Suffolk Windmills	S. Freese	6
The Tower Keep, Bungay	R.J. Kedney	7
The Southwold Railway	A. Barrett-Taylor	10
Watermills of East Anglia	P.R. Miller	12
Some Aspects of Medieval Architecture	J. Todhunter	14
British Fire-Marks and Plates	H. Halls	16
The Paving and Lighting of Lowestoft in the 19 th Century	H.D.W. Lees	21
Industrial Archaeology in East Anglia	S. Martin	27
Passing of the Country Miller and His Mill	J. Munnings	30

THE EXCAVATION AT COLLEGE FARM, RAVENINGHAM, NORFOLK

Mr. Paul Durbidge. - The Society's Field Officer

Prior to the excavations at College Farm, the Society had already had some earlier experience of Moated Sites from measured surveys. Both size and shape of these sites varied greatly, from comparatively small ones to the much larger type involving two or sometimes three adjoining moats.

Distribution in this part of the country is fairly extensive, and the use of a one inch Ordnance Survey map is of great assistance in comparing respective types of moats employed.

The majority are thought to be of mediaeval date with some earlier and while some have a building of a later period on them the vast majority are completely deserted with all traces of the original buildings long since disappeared. College Farm Moated Site is a very large example of a double moated site, it is set in meadowland and it appears that the water which fills part of the moat comes from springs situated close to the occupied area. The overall size of the site measures 487 ft. by 280 ft. and tucked in a corner of this rectangle is a further area of land 225 ft. by 116 ft. which again is encircled by a wet moat. The area was surveyed by the Society in 1966 and to the east of the site was found visible signs of shallow ditches running in line with the North and South moats, extending some 93 ft. from the present wet moat which forms the east defence of the site.

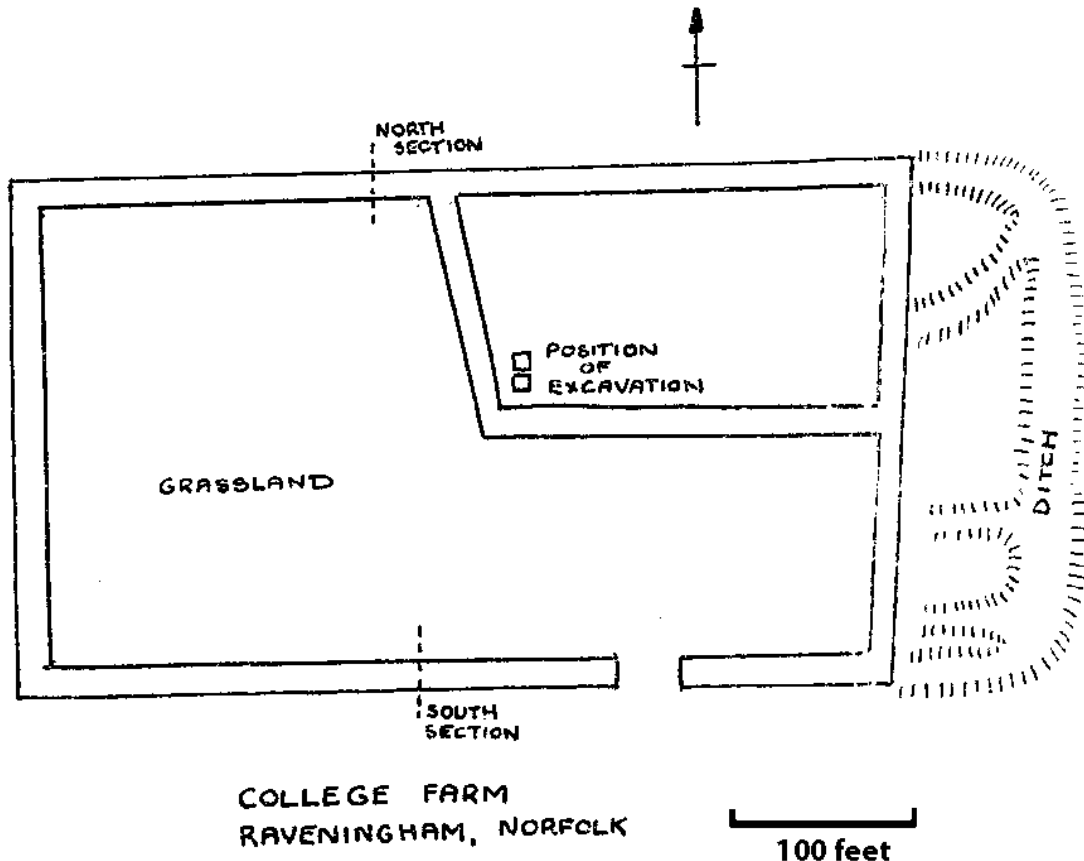
Width of the ditches varies from 14-19 ft., and although they show clearly from ground level, air cover has failed to indicate their possible composition. Several small finds of mediaeval grey potsherds have been found in a ploughed field adjacent to the North moat, also fragments of bone pieces, yellow brick and sherds of 17th. century pottery, making up the total of surface finds. Investigation of the North outer moat began in late October 1969 when a section was cut through the dry banks and across the silted up floor. Results showed remains of animal bones, domestic oxen and the jawbone of a sheep or goat, these being uncovered in the middle of a shallow gully cut in the centre of the moat.

Freshwater swan mussels, pieces of yellow brick and a grey sherd of pottery were found as the work progressed. Unfortunately by late November the fine weather had broken, so after the four successful week-ends on the section, it was somewhat reluctantly covered over, and left until the resumption in the spring of 1970.

The spring session started on May 7th. 1970, and after so much rain during the winter months, the team were not too surprised to find the north cutting under a considerable quantity of water. A second cutting was started on the outer South moat in an attempt to give the previous one a chance to dry out and it was not long before more bones were discovered together with a good specimen of mediaeval pottery rims.

The bones were encountered at a depth of 12 inches from the present surface of the moat and belong to an animal about the size of a pig. Additional bones, this time duck or mallard, were found in the same layer and now it became quite clear that the moats were readily used as a place to dump unwanted items by the early occupants of the site.

Progress was now being made, and it was decided to try two trial squares on the enclosed area with a view to picking up a made up surface or rubbish pits. The relation of these squares may be seen on the sketch plan. There were two obstacles to overcome, firstly five pheasants had nested where we wanted to dig so work was held up for three weeks and secondly the amount of nettles and vegetation was quite considerable although this part of the ground clearance did seem to get underway quite fast. With the area to be dug now clear, two ten foot squares separated by a three foot baulk were marked out and six inches of soil was removed from both of them. The removal of this and the accompanying nettle roots gave the team a chance to examine the working surfaces below and removing the soil in two inch layers, fragments of pottery began to come to light. Some was of a 17th century date while other sherds in green glaze and dark grey were clearly of a much earlier date – certainly in the region of 13th to 14th century. The uncovering of a series of flints making up a packed surface suggested that this might be one of the made up surfaces we had expected but from the small area involved more examination must be made to confirm this or otherwise.



Pottery in fragment form as well as oyster shell have been found at this level as well as slightly below it, the presence of hazel nut shells and common garden snails has also been observed at this depth. Potsherds are somewhat rolled on their edges and appear to be grouped towards the two corners of the squares, and going inwards to the site.

Some of the black sided sherds are up to a quarter of an inch thick while the green glazed sherds are much thinner, suggesting a smaller vessel(s). Iron nails with large heads and in reasonably good condition are widely scattered over the two squares and in some cases these nails have been clenched, obviously where two timbers have been nailed together.

These vary in size from 1½ to 3 inches. Since the start of the spring session the weather has been very hot, causing the boulder clay to come up more in lumps than fine granules, but in the main, progress has been well maintained. With the summer months, the Society will be extending the excavations at College Farm with continued work on the two moat sections and further examination of the enclosed area where it is hoped that further interesting discoveries will be made.

I would like to conclude by thanking all those who have assisted in the excavations, often in adverse conditions, and also my thanks to Mr. Clayton for his patience and Mr. C.G. Rye for his continued help and assistance in the project.

P.M.D.

DETAILS OF FINDS MADE BY THE EXCAVATION TEAM WHILE DIGGING
AT COLLEGE FARM, RAVENINGHAM.

Oyster shells.
 Fragments of freshwater mussel. (Anodonta).
 Jawbone of Ox. (domestic).
 Jawbone of sheep or goat.
 Bird bones (Mallard?).
 Animal bones (Pig?).
 Oddments of animal bones generally scattered.
 Sherds of 13-14th century green glaze.
 Sherds of 13-14th century cooking pot sherds. (Black sided).
 Fragment of 13-14th century green glazed handle.
 Fragment of 17th century pottery.
 Fragment of 17th century stoneware.
 One small Neolithic scraper.
 One worked flint flake.
 Iron nails.

THE OLD BEACH COMPANIES AND THEIR YAWLS

by Jack Rose

In years gone by, long before the lifeboat came into existence; the old Beachmen used their yawls to provide all possible aid to vessels in distress or trouble off the coast.

Along the coast there were many Beach Companies, most places had at least one company, others had more, the members of whom were hardy and tough seamen. These men made their living by providing help to vessels in distress, and were organised on a business basis, each member having an equal share. The greater part of their revenue came from salvage, and in a successful season the old beachmen often shared out hundreds of pounds. The East Coast beachmen were never guilty of wrecking ships on purpose, the like of which occurred around the Cornish coast, where ships were lured to their destruction on purpose in order to salvage their cargoes.

In the days of sail, casualties were of frequent occurrence on the 'Roads' and 'Sands' around Lowestoft and Yarmouth. It was a hard life, and three changes of clothing a day was not uncommon for the Beachmen. Many pilots were shipped from the shore giving the Beachmen plenty of work, who were always on the look-out to launch their boats in the face of any weather, at any time, night or day to go to the assistance of any ships requiring help or the need of stores or pilots.

It was largely owing to the old Beach Companies that ships bound for the Thames or Channel got pilots promptly from Yarmouth, Lowestoft, Southwold and Aldeburgh.

As soon as a ship flew the signal for a pilot, rival yawls, gigs and cutters would push off in a rush, each with a pilot on board; then the stone throwing would start, and the shouting of abuse to one another in an attempt to reach the vessel first. Lowestoft had their share of pilots, for on December 18th. 1866, an old Lowestoftian states that one James Barnes Swan was an ex-pilot in 1831, about the time Lowestoft Harbour was opened.

Lieutenant Matthews was the first Harbourmaster, it was he who asked if I wished to become one of the twelve pilots of Lowestoft Harbour, as the Trinity had determined upon appointing that number. The Pilots names were: James B. Swan, John Cornelius Farratt, George Warnes, James Parker, John Butcher, Robert Capps, William Capps (lost in a Yawl on January 8th. 1838), John Swan, James Farrar, Christopher Gilbey and Samuel Liffen.

On the 29th of November 1831, these men received their Pilot's licences at Yarmouth Custom House. The licence extended to Corton Pole, on the north and to Benacre Point on the south.

At the time James Barnes Swan became pilot, the sands were seven or eight feet high at low water, and people on the other side could not see the houses on the cliff.

We also learn that a Mr. Thomas Swan, a London Pilot, took the first square rigged vessel into Lowestoft Harbour and got her ashore on the 'North Point', from that time renamed 'Swans Point'.

The Beach companies generally numbered from 60 to 80 men each, at Lowestoft they numbered over 100 and more, because it was recorded on January 13th, 1894 there were 112 members in the Old Company alone. Any man wishing to become a member at the age of 18 (at times they were accepted younger, but only at the discretion of the Company members) purchased a share of the yawls, entered his name in the book and was then entitled to work the boats and form one of the crew, young men only taking half a share up to a certain age.

Everyone in those days took an interest in the Beach Companies and the almost deserted beach was soon alive when the cry of 'running down' was heard. Regular practice in going out to the assistance of ships on the sands, or requiring the assistance of pilots brought out their best as boatmen and seamen, as no weather deterred them from launching their boats from the beach.

An old Beachman was appointed by the Companies to look after the sails, gear, and the cleaning out of the shed, another member was chosen to keep the books, pay all bills for repairs etc. It was also the Beachmens law that no one was allowed to take his dole unless he was able to touch the boat, or sit in it when launching. Great risks were often run in endeavouring to be the first alongside any ships requiring assistance.

The beachmen worked in Gigs and Yawls, the latter being built mainly at Yarmouth, Lowestoft and Southwold.

There were changes concerning the Yawls, for on reading the old papers, we learn that the first Yawls were not smart craft, but were tarred all over. After a time they were painted red or blue bottoms with black top: sides. Next, white bottoms came into fashion, with a deep black top, some of the boats, such as the Yawl 'Beeswing' and others had a flag on the bow (Royal Standard).

The last Yawls were painted all white, with a black top streak.

About 1853 the smaller yawls were fitted with two lugsails only, the yawl 'Mosquito' was the first which had two sails, after which all the yawls carried them.

A gig was a light, narrow, clinker built boat which could be propelled very swiftly by sails or oars. In a place like Lowestoft where there were three Beach companies, there was plenty of competition or one should say rivalry to be the first to get to a disabled vessel to claim salvage or give help where needed, there were plenty of fights and stone throwing amongst the Companies. When the Beach Yawls were in their prime, there were hundreds of sailing ships carrying their cargoes up and down the coast, in bad weather and gales, many of these ships were left to the mercy of the wind and sea.

This gave the beachmen the opportunity of much employment and money as they loved the rough weather.

The beachmen formed their own companies and built their own sheds and Look-outs, a Look-out being a small shed built on four legs to give the man inside a good view across the sea with his telescope.

In the old sheds that they had built, adorned with figure-heads and nameplates which were trophies from the sea, the Beachmen held their meetings to discuss salvage or any dispute which had arisen amongst themselves or rival Companies; sometimes these meetings lasted many hours, and they also spent their spare time playing cards, dominoes, etc. and telling many yarns of past rescues.

The Beachmen were always ready and always willing to give their help, and were eager to pit their strength and skill against the sea, which they respected. Quoting an extract from an old 'East Anglian Magazine' we read the followings 'Prayers in Church for fine weather struck no responsive chord in the hearts of Beach Company Members, for the worse the weather, the brisker their trade.'

It was also said that their children, upon going to bed, prayed that God should send Dad a good ship ashore before dawn.

One has to wonder whether this was true or not, but in those days, anything was liable to happen. Lowestoft had three Beach Companies, known as the 'Old Company', the 'North Road Company' and the 'Young Company', each company having its own headquarters, Yawls and Gigs. When the yawls were in good strength, there were very few life-boats in existence, and many of the old Beachmen lost their lives in going out in their yawls to save others. Several of the yawls were lost, as several are down on record with tragic stories behind them, the larger yawls ranged from 50 to 70 ft in length, with a beam of from 10 to 12 ft. The smaller craft were from 55 to 45 ft long, and had a 6 to 9 ft beam. The double ended hull was clinker built of well seasoned 'English Oak' and much attention

was paid to the design, for the yawl had to have strength, yet be lithe enough for speed. The earlier yawls carried three masts, and a first class yawl had no less than 1500 sq. ft. of canvas, a rather wide spread of sail for an open boat, later on, the three masts were reduced to two, the mainmast being later taken away, though the size of both foresail and mizzen were increased to compensate.

A yawl required a ton or two of ballast, mostly bags of shingle, which had the advantage of being emptied overboard should the wind drop. The crew usually numbered not less than a dozen, some were old veterans, others young, strong and active, but learning from the older men.

The Coxswain was a man whose orders had to be obeyed, for he was in charge of the yawl, and demanded strict discipline as this alone spelt safety when heavy seas were running.

The yawls being lightly built, could be launched rapidly from the beach, and once afloat crossed over the sea with an amazing speed, some 14 to 15 miles per hour was averaged in a smart breeze. In 1864, the yawl 'Thought' left Lowestoft on an ebb tide and with an off-shore breeze, reached Yarmouth and lowered sails within three quarters of an hour. It was also well talked about for many years after, of the time when the Americans sent over their schooner the 'America'.

It 'swept the board' when she raced in British waters in 1851, and she sailed back to America with the cup and an undefeated record. The old Beachmen always maintained that their yawls could have beaten the schooner. It was a fact that they did issue a challenge to race against her in the North Sea for the sum of £200. The yawl that they chose to compete against her was the 'Reindeer' of Yarmouth and all were confident of her winning. They had every reason to be, as the 'East Coast' yawls were said to be capable of 16 knots off the wind, and it was claimed that when they were travelling at this speed their lee gunwale was six inches to a foot below water, but such was their speed that only a little water came inboard.

The 69 foot 'Reindeer' was the fastest of the yawls, and she was manned by a crew of 20 to 25 men to handle her sails, and to shift her bags of ballast, as she came about. 'Reindeer' had beaten all the yawls in the North Sea, and the Beachmen had no doubts that they could out sail the 'America'. On hearing that the owners of the schooner had issued a challenge to sail against any British vessel, for a sum of between one to ten thousand guineas, they readily took up the challenge.

The Beachmen said that they would match the 'Reindeer' against the schooner for the sum of £200.

The owners of the 'America' however, refused to race in the North Sea for less than £1,000, despite the terms of their original challenge, but as one can guess, this sum was far out of reach of the Beachmen. The race never took place, and ever since, it has been said that the Beachmen were confident they would have beaten the 'America' and that 'them thar Americans' had heard about the yawls and thought they would have been in disgrace had they been beaten by the Beachmen.

One could write on and on about the 'Old Beach Companies' but time and other research on 'Old Lowestoft' does not permit me to do so. On the arrival of the life-boats, the old Beachmen protested, as their firm belief was that the sands were their private property, and that buoys, beacons, lights and anything tending to reduce casualties were infringements of their rights and no better than robbery. The lifeboats remained, and the yawls gradually started to fade away, then came the steam tugs, which were more effective than the yawls when ships were in need of a tow etc. So the yawls gradually died, although they paved the way for the saving of life at sea, and many lifeboats were built on the style of the old yawls.

The Lowestoft lifeboat 'Francis Ann' – the first sailing lifeboat in England – was built on the style of the yawl and she served Lowestoft for 43 years, from 1807-1850.

Of the Old Beachmen, I think an extract from an old Lowestoft Journal summed them up, for we read: 'Lowestoft Beach People.'

The Lowestoft beach people are in every sense of the word peculiar people. From their earliest childhood, inured to hardship with contention with the cruel sea, which they regard as their natural enemy. The merciless devourer of their kindred, and the maker of widows and orphans.

'They acquire a sturdy independence of character unknown to the citizens of inland towns. They have inter-married for generations amongst their own particular class, and there are few beach families, we believe, which are not alike to the 'Highland Clans'. Engaged in wresting their harvest from the silver hosts of the North Sea, they are generally speaking quite unobtrusive folk, but when the latent "Viking" spirit is aroused in their breasts, they are like the Ocean in a Storm.'

Whilst on the subject of the beach, there were 13 Public Houses on the beach, and now all have gone.

The names of these were: 'East of England', 'Dutch Hoy', 'Waggon and Horses', 'Flowing Bowl', 'Gas House Tavern', 'Sailors Return', 'Rising Sun', 'Fisherman's Arms', 'Mayflower', 'Princess Royal', 'Suffolk Fishery', 'Balaclava', and 'Inkerman House'.

Now I must finish and express my thanks to my good friend Bob Malster for some of the above information, also to old Lowestoft Journals, books etc., where I have gained the knowledge for this article.

Jack Rose.

A SURVEY OF SUFFOLK WINDMILLS.

by Stanley Freese.

Some of the finest windmills in the world, and the largest in Britain, were to be found in Suffolk, and Messrs. Press Bros' High Mill, of Gorleston – the largest of them all, was in Suffolk for most, if not all of its life, although now it would be in Norfolk.

But to begin nearer the beginning of my story: it will be seen from my forthcoming history of the Suffolk Windmills, (covering all those known to have existed since 1800 A.D., and a few more besides) that most Windmills in this County down to 1800 were postmills, with the body, and its sails and machinery also, revolving around a great oaken post, to face the sails into the wind; a long pole being provided at the rear for pushing the mill round.

A large percentage of these had only one pair of grinding stones, and are now referred to as 'one-pair' mills; but during the last century most of them were enlarged to accommodate two pairs of stones, and many of these enlarged mills, and the majority of new mills, also had a fantail or 'fly' mounted over the stairs, as patented by Edmund Lee in 1745, for driving the mill round automatically as the wind changed.

As the installation of cylindrical flour-bolters and flour dressers in wooden cases, fitted with silk or calico sleeves, and wire-mesh or perforated gauze sleeves respectively, for the meal to pass through, became commonplace in the 18th. and 19th. centuries, many postmills were lengthened at the tail owing to limitations of space, and the two pairs of stones were rearranged in the breast side by side, while the introduction of an intermediate gear led to the rotation of the sails being reversed in order to avoid reversing the millstones, which would, have necessitated new ones, as the 'furrows' provided on the stones are tangential to the axis, and are very difficult to reverse.

Probably only half of the Postmills in 1800 had a brick-built round-house for protection of the timbered sub-structure and to provide extra storage space at ground level; but the very large majority had them later on.

A wind driven sack hoist was installed in all windmills last century and probably before; also a brake to supercede the pole jammed behind the driving wheel – a device formerly used by waggoners when descending hills – was in use long before 1800. Andrew Meikle from Kelso, who had Houston Mill, Haddingtonshire, introduced shuttered 'venetian blind' type sails in 1772, in place of the 'cloth' or tarpaulin ones which were until then spread upon sail-frames by the millwright and Meikle first adjusted his shutters by a hand operated spring on each sail; but in 1780 he controlled them by a centrifugal governor acting through a rod passing through the centre of the windshaft carrying the sails, which, said Sir William Fairbairn, the Scottish millwright and engineer, was 'the first successful automatic reefing apparatus applied to windmills', although he mentions that Sir William Cubitt, the Ipswich millwright, patented this arrangement (which came to be associated with his name) in 1807.

Centrifugal governors are believed to have been invented by Huygens for use in clocks and watches in 1657, but Thomas Mead patented the idea in 1787, having applied it to windmills around Hull; it would appear before James Watt adapted it to the steam engine.

Next to the Postmill came the Smockmill, which appears to have come to Suffolk from the fens towards the close of the eighteenth century, probably because of the fact that an octagonal structure of timber offered more security than the postmill in soft marshy ground, and also because the drainage of our fens was largely carried out by the Dutchman, Vermuyden and his men from Holland, where Smockmills were popular. They had the revolving cap which later adorned all the brick-built tower mills, but in common with the 18th. century postmills, they were usually pushed into the wind by a tail-pole, attached, in this case, to the rear of the cap; and initially the sails were of cloth, whilst most

smockmills were octagonal, with eight corner posts, in the fens some were square or hexagonal, and some were bereft of external weather-boarded cladding and were sometimes called 'frame mills' since they only supported a shaft to drive a paddle-wheel.

As corn mills, they were, of course, boarded over, and latterly had fantails or 'flies' to turn them into the wind.

No abnormally large smockmills have been recorded in Suffolk, and the 10 sided Wangford Mill may have been the largest, but was burnt down between the wars.

The High Mill, Gorleston was not only the largest brick-built Tower Mill in the County, (and ought, perhaps to have been called the highest mill since it had 102 feet of brickwork and 11 floors) but it had a lantern on top making it 120ft. high. But a miller who had often been inside it assured me that the millstones were all on one floor, and that there were only four pairs wind-driven. All the tallest and largest Tower mills in Suffolk, so far as is known, were in Gorleston, Bungay and Beccles, although this small area is more prone to the ravages of lightning – sometimes accompanied by hurricanes and whirlwinds – than any other in England, as the Millers have discovered to their cost, and as the reader will learn from my proposed book, which will deal with 700 Suffolk windmills, more than one third of which will be illustrated in working order, with their full complement of sails.

Whilst on the subject, it may be mentioned here that there are a limited number of Suffolk windmills of which the exact location is not yet known and of which further information would be greatly appreciated – at Mendham, Mettingham, Barton Mills and Reydon (Southwold) in the north; and Raydon (Boxford), Holbrook and Bredfield postmills in the south; also some particulars (type of mill etc.) of mills at Exning, Icklingham, Ixworth (not Pakenham), Kirkley (Lowestoft), East Bergholt etc. and the marshmills at Aldeburgh and in Mildenhall Fen; also any view showing any six-sailed mill in Suffolk, or of two mills together in one picture, so that as complete a record as possible may be made.

Finally, it is pleasing to record that several very good and important innovations have been introduced in Suffolk about a century ago, although not widely copied elsewhere.

Robert Catchpole's patent auxiliary shutters which were fitted to the sail tips to provide extra power and to act as a brake when the main shutters were opened, were made at Sudbury, and about the same period the Annular sail with a large circle of adjustable vanes was fitted to several corn-mills including Haverhill Mill in Suffolk whose owner, Mr. Ruffle, invented it.

A third improvement found only in Suffolk, South Norfolk and North Essex, which therefore may be assumed to have been originated in our County, was the arrangement of the stairs on Postmills; in all other counties the stairs were hinged to the rear bottom rail of the body, like the tail-board of a cart, but almost every Suffolk postmill in living memory has had the side-strings of the stairs morticed into double door posts, which provided for a roomy platform at the top of the stairs, where the miller could rest his goods whilst unlocking and opening the door, and from which he could adjust his patent sail controls and see around his yard – a tremendous asset both for comfort and safety – indeed this feature alone places the Suffolk Postmill in a class apart, from an operational point of view.

Stanley Preese.

THE TOWER KEEP AT BUNGAY

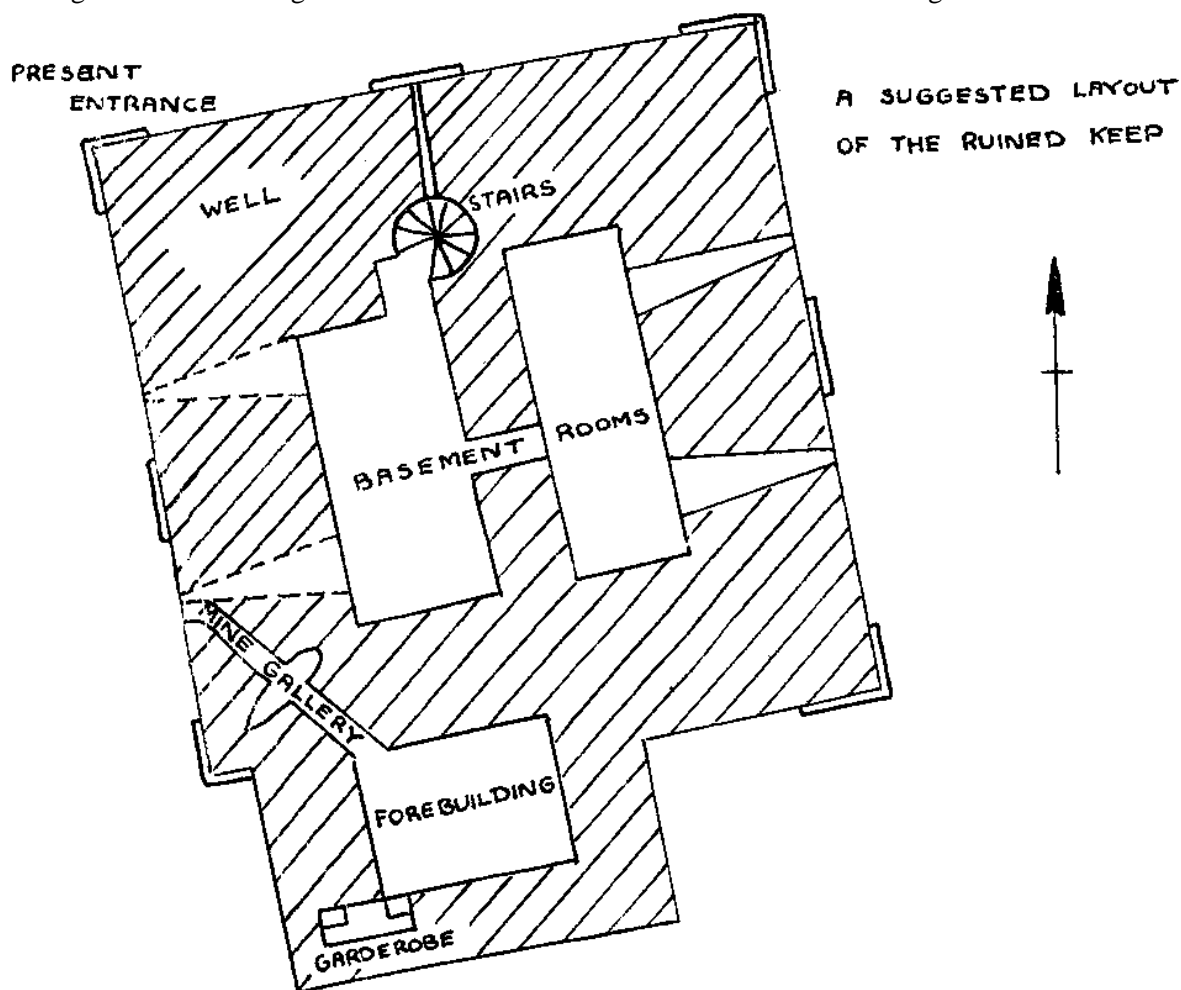
by R.J. Kedney

In its prime Bungay was the most powerful of the many castles in East Anglia and yet is probably one of the least known or understood of the many great stone keeps. The ruins that remain today are but the broken fragments of four castles built over a period of 300 years, and the greatest of these was the Great-Tower Keep that stands in the centre of the castle.

The River Waveney travels north-east from its source near Diss until it reaches Bungay where it swings round in a large loop before continuing on its way to the sea at Great Yarmouth. Within this loop is a low ridge of land on which the town has been built, defended by a natural moat on three sides. On the fourth side stood the castle closing the loop at its narrowest point and covering the approach by road from the south.

Shortly after the Norman Conquest the town was granted to William de Noyers and it is likely that he was the builder of the first castle which remains today as the mound and inner bailey, and would probably have been of the motte and bailey type. The mound or motte is most clearly seen from the

north side as on the south the moat has been infilled so that the motte appears to be linked to the inner bailey, which was used throughout the castles history as a residential area. Today it is impossible to envisage the size or strength of the motte as it was levelled later in the middle ages.



The keep today seems to be little more than a puzzling mass of masonry at first sight as that is all that remains after eight centuries of deliberate quarrying. It is ironic that Bungay like so many other great castles, built to withstand any form of attack known at the time of building, was later to fall to the efforts of local labourers. Measuring 70 feet square externally it ranks amongst the largest of the Great Tower Keeps of the later 12th century. By that time it had become the practice to build the keeps with the major rooms stacked over each other so raising the height and reducing the wall area at ground level. Previously hall keeps such as those at Norwich and Castle Rising had been built with two major rooms to each floor thus reducing the height and increasing the vulnerability of the keep.

The keep is stylistically dated to the third quarter of the 12th century and according to popular legend was sufficiently near completion for Hugh Bigod to retreat there in 1174 when threatened by the royal forces under Henry II. However Hugh Bigod thought again and surrendered before the siege was laid, possibly because the castle was not fully completed. The king then ordered the destruction of Bigod's castles at Framlingham and Bungay, but Bigod ransomed the latter by paying over 1,006 marks and so stopped the progress on the mine gallery that was being cut through the south west angles of the keep. If completed, the pit props supporting the gallery roof would have been burnt and the corner of the castle brought down. Its survival today suggests that Henry may have ordered that it should stay as a warning and so effectively neutralising the defences of the keep though it did not affect its role as a residence. The mine was however cleverly countered at an unknown date by burying the lower stage of the keep with gravel denying access to the mine. Henry also confiscated Bigod's estates but these were returned to his son, Roger Bigod in 1189 who concentrated his castle building efforts at Framlingham. Eventually a licence to crenellate the house at Bungay was requested and granted (1294) and the castle was rebuilt. The ring wall on the motte and the gatehouse towers date from this phase when the castle was rebuilt in the fashion of the day. The great keep, though no longer the defensive part of the castle was retained in part at least within the ring wall.

Little is known of the castle's history from the 13th century until 1766 when it was bought by a Mr

Mickleburgh, a local builder, who used it as a quarry for roadstone. His men undercut the walls to pick swinging height thus giving it its strange overhanging appearance and succeeded in collapsing the west wall. However Mr Mickleburgh's finances proved weaker than the castle's masonry and the ruins were sold again. Eventually the castle passed into the hands of the Dukes of Norfolk, and is owned by them today.

The walls only stand up to the basement ceiling today so any attempt at reconstruction of their former appearance must be based to a large extent on comparison with other keeps of the same period. Rochester keep (1126-1139) has the same floor area and Hugh Braun has suggested that Bungay may have been the same height i.e. 113 feet. The pre-war excavations brought to light several archaeological details that suggest however that the exterior appearance may have been very similar to the keep at Scarborough (1158-1175). Entry to the castle would have been up the Great Staircase, now vanished, to the Great Hall at the first floor level at approximately the present height of the walls. The stairway was enclosed and defended by a forebuilding, part of which remains along the south wall. It is impossible today to be certain of the exact height of the keep but the great thickness of the walls suggest a considerable height. The ground floor would have been the basement and used for storage, the next floor would have served as the Great Hall – the communal heart of the castle. The floor or floors above this would have provided private quarters for the castellan and quarters and stores for the military as well as offices and a chapel to serve the community.

The internal arrangements are less easy to envisage but the width of the keep necessitated a cross wall in the basement. In the Great Hall support to the upper floors could have been given either by an arcade as at Rochester or a great arch as at Scarborough and Castle Hedingham. The few architectural details that have been found seem to suggest an arch but this is far from conclusive. Entry to this floor would have been on through a larger, late Norman doorway as at Castle Rising and Norwich from the forebuilding where the landing may have been defeated by a drawbridge as at Rochester. Another floor over the entrance would probably have housed the chapel as it is orientated east to west.

The keep today is entered through a gap in the north wall, originally this floor, the basement, was reached by a staircase from the floor above. The basement is divided into two rooms by a cross-wall eight feet thick, each room is thirteen foot wide and is connected by a door through the cross-wall. The nearest, the western room, is foreshortened as the outside wall thickens to twenty three feet (said to be the thickest castle wall in England). Within its width is the shaft for the castle well, now covered by a wooden shutter, and where the cross-wall joins the outer wall on the north there was a small antechamber six feet square at the foot of the spiral staircase. The lower section however was destroyed at a later date and converted into a fireplace. Each room was lit by two deeply splayed windows which were enlarged in the thirteenth century, and the stairs also have small slit windows opening out through the central buttress of the north wall. The floor today is covered by fallen masonry and vegetation but beneath this, the original layer of rammed lime over twelve foot of fine gravel lies, this was also piled up against the outside of the keep.

The forebuilding, thirty eight feet long, extend over half of the south face of the tower and projects out twenty feet. It is an unusually large and strong structure protecting what is potentially the weakest point of the keep, its entrance. Only the tower section remains today, that is the area below the Great Stairway and landing and is entered today through the mine gallery, access originally must have been by a ladder from the floor above as at Orford. Though true dungeons are rare in medieval castles the presence of a garderobe in the S.W. corner of the room makes it seem likely that it was intended as a prison. The garderobe is joined by a shaft, from the floors above and a wooden seat was found during the excavations.

Great tower keeps like Bungay were as near impregnable in their period as any defensive structure could have been, being too tall to scale and the walls were too thick for the battering ram or pick to penetrate with reasonable speed. Obviously in time the garrison could be starved into submission but usually the object was to siege and capture the castle with all speed and minimum cost before reinforcements could arrive. The square keep's weakness was its corners with blind spots where attackers could attack with picks and undermine the walls. Skilled men were brought in and set to work hacking a tunnel under the corner, and when completed they would widen it with side galleries and support the roof with pit props. At Bungay two lateral galleries were dug before the work was stopped, if work had been allowed to continue, further side galleries would have been dug and then the masonry between them removed. Finally the hole would have been filled with brushwood, bracken and on occasions pigs fat and this would have been fired by the retreating miners, and the corner of the keep would have come crashing down as it did at Rochester in King John's siege of 1215. The mine

at Bungay is the only surviving example of this form of castle warfare.

What remains of the keep today, although a mere shadow of its former greatness, nevertheless retains several features of considerable importance and interest. For a very short period it stood as East Anglia's strongest fortress and influenced the building of the royal castle at Orford which was intended as a counter measure to the threat of the Bigods and their allies. It seems too that Bungay's weakness led to the advanced design at Orford which was one of Europe's earliest round keeps.

R.J. Kedney.

THE SOUTHWOLD RAILWAY

by A. Barrett Jenkins.

This is a story of a great little railway which enjoyed a life of just on fifty years, from 24th. September 1879 to 11th. April, 1929.

We all know that the first Public Railway in the world was the Stockton & Darlington Railway which was opened on 27th. Sept., 1825, which is 145 years ago this year.

It was about 20 years later, in 1845-6 that Suffolk was connected to the extensive network of Railways, which by that time covered most parts of the United Kingdom, but it was not until 1854 that the Haddiscoe and Beccles line reached Halesworth, and then continued to Darsham, Saxmundham, Woodbridge and Ipswich.

A further 25 years went by before the Southwold Railway was opened, making it 54 years since the first public railway was opened. As the years go by, more and more of the lines are closing down, and much interest is being shown especially in the Narrow Gauge Railways, of which the Southwold Railway was one of the most interesting, and which closed down on 11th. April, 1929 after 50 years of service.

Visitors going to Southwold in the early days would travel from Darsham by the old horse-drawn omnibus to the Posting House, which was the Swan Hotel, in the Market Place at Southwold. During these early times there were several meetings with proposals and suggestions, when local agitation in favour of a Railway to Southwold came to a head at two meetings in October 1875, one at Halesworth under the Chairmanship of Mr. Charles Easton of Easton Hall, and one at Southwold presided at by the Earl of Stradbroke, both prominent landowners in the district.

The Southwold Railway was Incorporated by Act of Parliament on 24th. July, 1876 which authorised the construction of a single line between Halesworth and Southwold, a distance of about 9 miles, and the construction commenced on 3rd. May, 1878. The gauge chosen was 3 feet, making it one of the very few narrow gauge in the country, and the Company was formed with a Capital of £67,999.

Owing to the weight on the axles the speed limit was 16 miles per hour, and the time taken for the journey was 37 minutes.

Normally there were four trains out and four trains in per day with two extra during the summer. The passenger coaches had six wheels and the design followed generally the lines of single deck tramcars with side doors at each end, while the seats were covered with a strip of carpet, the only difference in the first class compartment being that blue cushions were provided, and compartments separated by a door.

As the platforms were only 9 inches high, there were steps leading up to the carriages, and in cold weather footwarmers containing hot water were provided, but on very cold days, straw was scattered on the floors.

The railway was not equipped with a turntable, so that the locomotives worked alternate journeys in reverse. The buffers were single and in the centre and connections were made with loose couplings. The only piece of rolling stock remaining is a luggage van, minus its buffers and wheels, which was rescued from a garden allotment near Halesworth, where it was being used as a garden shed. It is hoped that this van will one day find its way to The East Anglia Transport Museum at Carlton Colville, where it will be preserved and perhaps renovated.

At one time a Branch line was constructed to the Southwold Harbour Quay, but the 1914-18 War was responsible to frustrating the promoter's intentions regarding the fishing industry, anyhow it proved of considerable service in connection with Defence work on the coast at this point.

The best days for the Railway were about the time of the First World War, and here are some of the figures showing its decline.

In 1913 the number of passengers carried was 108,677 – net receipts were £1805.

In 1927 the number of passengers carried was 81,704 – net receipts were £751.

In April 1928 the bus service commenced from Halesworth to Southwold, calling at the villages on route. This caused the Railway company to reduce its fares from 2/3d to 1/6d in winter, and to 1/- from May to October.

The outcome of all this was that the Directors were compelled to close the line on 11th. April, 1929.

THE JOURNEY.

On leaving Halesworth the train travelled a short distance alongside its big brother the Great Eastern Railway, then turned to the East and followed the course of the river Blythe to the first station at Wenhaston, which was situated at the foot of the hill between the villages of Wenhaston and Blyford. When Wenhaston church was restored in 1892, a very remarkable picture of the 'Doom or Last Judgement' was discovered and placed on view for visitors to see.

Also at Wenhaston station tickets could be obtained for very good fishing in the river nearby. Leaving Wenhaston the train continued close to the river Blythe, and on approaching Blythburgh, a magnificent view of the old church could be seen as the train seemed to curve around the tower before it entered the station, where passengers would alight for Wangford and a visit to Dunwich to see the old ruins on the cliff top, and which vanished some years ago.

The main Lowestoft road crossed the railway beside the Blythburgh station by means of a bridge which has since been removed, and the road levelled. The journey from Blythburgh to Walberswick was one of the most picturesque in East Anglia and at some points Heron and other wildfowl were to be seen beside the river, and all along the line were pictures of beauty and charm, stretches of Walberswick common on one side, with the Tidal waters on the other, also clusters of fir with heather and grass, this being the most picturesque part of the journey. Walberswick station was situated in the middle of the Common, with a walk along a sandy path to the village which was an attractive place for artists with its Olde Worlde cottages and church ruins. The concrete base of the small station building can still be seen among the gorse bushes. On leaving Walberswick the train crossed a swing bridge over the river Blythe near Blackshore, and across the marshes leading to Southwold Common, then through the cutting, past the gasometers to its destination at Southwold, alongside the main road into the town.

A new Fire Station and Police Station have now been built on the site of the Southwold Station, but the remainder of the track is still open, and makes a pleasant walk over the bridge to Walberswick. Being a single line, it was worked by train staff and key system, the main key being for unlocking the swing bridge to let boats up the river. In latter years the bridge was not used in connection with navigation, but the practice of exchanging the staffs at Blythburgh was maintained as a part of the normal working. The signals were of the old pattern, the Semaphore arms working in slots in the posts; these were interlocked with the points and operated by ground levers.

During the lifetime of the railway there were two fatal accidents, one in 1883 when a lad of 17 was killed at Walberswick while trying to board a moving train, and the other on 24th December, 1927, when the Stationmaster at Wenhaston was killed during shunting operations.

There was the usual Book of Regulations of which the following two rules may be of interest.

Rule 64. The engine driver and fireman must frequently during the journey look back to see that the whole train is following in a proper and safe manner.

Rule 92. No train shall be run at a greater speed than 16 miles per hour, and the engine driver is liable to two years imprisonment if convicted of so doing.

With reference to the first of these rules, there is the true story of two school boys returning after their holiday to Eversley school at Southwold, they were looking out of the rear window when they noticed one of the couplings coming loose.

They at once informed the guard, who leaned over the guard rail and took a firm hold on the truck following, and held on until the train came to a standstill at the next station.

A Mr. Jackson was the first driver of the Southwold railway, also the driver of the first train in China, which had a somewhat hostile reception by the native population, who finally pulled up the rails and threatened the officials with violence, so that discretion was deemed the better part of valour, the

railway was discontinued and Mr. Jackson returned to England.

There was also Mr. Wright the guard who started with the Railway on its first journey and held that position for 35 years. He was quite a character and had many stories to tell, one of the best being the time when on one winter's night when the train was coming over the marshes towards Southwold Common he was stepping from one carriage to another when he slipped and rolled down the embankment. On regaining his feet he saw the rearlight of the train disappearing into the cutting. The train arrived safely at Southwold Station, where the passengers were found to be locked inside their carriages, but where was Guard Wright and the key?

A search party with lanterns started along the line and met the guard plodding after his lost train, none the worse.

THE LAST JOURNEY.

The following is an extract from a local paper, which gives us some idea of the feelings towards the closing.

'Tragedy and comedy were mixed when scores of people gathered at Halesworth today to see the Southwold Railway close down after a life of 50 years. When the frail train started on its last journey its four carriages were jammed with 150 people. As the train steamed out, the little booking office was besieged with people asking for tickets as souvenirs. The train had only gone 10 yards when a woman grabbed her small son's hat and started to collect money for the engine-driver. Everybody showered silver into the hat.

All along the line from Halesworth to Southwold there were crowds of villagers waving farewell to the train. At Wenhaston, Blythburgh and Walberwick the villagers were anxious to make the last journey to Southwold, but there was no room for them. On arrival at Southwold, a wreath was placed on the smokebox of the engine.

Villagers were keen to find souvenirs, and porters had to watch the train to see that people did not steal cushions, such as they were, from the carriages.

People did not know whether to cheer or cry, for the closing down of this railway has caused a great deal of distress.

The employees of the railway, numbering 50, received notice of its closing down only two weeks ago.'

So much interest has been shown in the Southwold Railway over the past few years that a special section of the Southwold Museum has been devoted to it. It includes a large wall map, a scale model, many relics and photographs of great interest.

WATERMILLS – East Anglia

by Philippa R. Miller.

As of course you already know, those attractive landmarks, the Tower Windmills, are now few and far between. However; some half dozen come to mind that are complete and preserved, and still delight the eye, for example, Clay, Paston, Stracey Arms and Horsey (now N.T.) and of course Berney Arms which can only be discovered by water. Further south there is Billingford and some of the most attractive mills of all, the postmills, like the one at Thorpeness and the exceptionally fine one at Saxtead Green, also preserved by the National Trust.

Many articles and books have been written on Windmills – after all they are very obvious with their arms stretched aloft to greet you, but have you ever been in search of Watermills?

Watermills hide in the most delightful places and their appeal is to the ear as well as to the eye. Even if the mill is no longer used, the sound of the mill race frothing below is a pleasant sound, and above, the mirrored stillness of the mill-pool provides a tranquil scene, often enhanced by Swans and their reflected snow-white curves.

Watermills are of course worked by water, whereas Windmills, such as drainage mills, are turned by wind, an obvious statement, not always appreciated by everyone. Every Watermill must stand astride a stream, and the flow of water is controlled by various sluice gates, allowing some to flow to the wheel and some to flow unhindered round, or under, the mill. Every mill must have access by road, now-a-days by a bridge, while Horstead provided stagings jutting into the lower mill pool, with its

beams above, to receive grain arriving by wherry or barge.

In Norfolk the upper reaches of almost every stream boast, or used to boast, several Watermills. These rivers which merge into Broadland are usually navigable up to the lowest mill site.

The first Watermill on the Waveney for example is Ellingham, and in my childhood our holidays on the Broads often brought us as far as Ellingham Lock. There are eleven or twelve mills, or sites of mills, on the higher reaches until it comes to Hoxne near Diss, Earsham is a very busy mill still, while Mendham is famous for its close association with Sir Alfred Munnings, the artist.

On the Yare the lowest mill was at Trowse, tucked behind the trees where the Lowestoft road enters Norwich. It is no longer there for it was pulled down in 1967. Above it, as the river winds round the south side of the city, we should find Lakenham, Keswick and Cringleford, the westward side there is Bawburgh and Marlingford, both unspoilt and charming places, and finally we could trace Barnham Broom's foundations and then come to Hardingham, where the mill disappeared when it was burnt down for a film sequence!

The Wensum, passing through Norwich, had both corn mills and paper mills. Beginning in the City at New Mills, and then continuing through Costessey to Lavenham where paper was once made for banknotes. Next comes Lenwade, busy producing animal feeding stuffs and which still preserves its old waterwheel. There are ten more mills sited on the Wensum, four of them still working. Bintree is surrounded by the most beautifully kept gardens and is a veritable riot of colour throughout the summer.

On the Bure the lovely building at Horstead was gutted in 1963. Beyond it we find Buxton Lammas mill which is still using Norfolk wheat, and Burgh, its site a Doomsday one like so many others is busy and prosperous. Here the great iron wheel is still turned by water and the mill-stones used for grinding. The top mill on the Bure is at Thurring, a romantic lonely spot completely off the beaten track and almost impossible to find. The mill is in imminent danger of collapse I am sorry to say.

Even on the Ant there were as many as nine mills to be found. Eldridge near North Walsham is the only one still working, and the various locks to be found on the North Walsham and Dilham Canal are all derelict now.

On the North Norfolk coast there appears to have been two unusual mills for Norfolk, overshot wheels that were turned by water pouring over the top, normal in hill or mountain country, but foreign to our flat county. In this case the wheels would have turned clockwise, whereas most watermills in the Eastern Counties are 'undershot' and turn anti-clockwise

Many of the smaller rivers, Chet, Glaven, Thet or Wissey for example – not to mention the Mermaid, have had mills upon them. Gimingham on the Mun is still working, but the strangest of all is surely Hingham, which although disused, was once worked by water issuing from a pond fed by a score of springs. The water having passed under the road and through the mill was never seen again.

Before the age of steam, wind, and more frequently water provided the only source of mechanical power. Mills were used for endless purposes, corn-milling, papermaking, forging and fulling, for the grinding of powder for wigs or guns, for lifting hammers to pound metal or leather (hence the formation of hammer ponds) and for many other things.

The huge water wheel, sometimes 12 feet in width and 17 feet or more in diameter would turn a cogged wheel, parallel to itself within the mill and this in turn, by a system of gears turned the grindstones and the great crown wheel above.

The arrangement inside a Windmill was not dissimilar, although the drive of course came from the top.

When my friend and I first became interested in Watermills, while exploring the river valleys of Norfolk, we discovered, that the mills on the Tas seemed to be about 2 miles apart – one must have six foot or so fall of water – but there was a missing link in the chain, at Caister St. Edmund. We searched most diligently and finally found a mill stone embedded in the mud in the bank at Markshall Bridge. Now Markshall is a lost village, the mill equally so, it seems!

This year an early ordnance survey map, dating from 1830, has been reprinted, and to my delight, although many more important mills were not recorded, there was quite clearly marked, a watermill near the Roman Camp, only half a mile from Markshall Bridge. Now we shall have to redouble our

efforts to locate other links in the chains.

My friend and I had a marvellous year following up all the clues, and calling on anyone and everyone connected with Watermills, meeting delightful people and seeing most attractive and out-of-the-way places, the result of which is I hope an out-of-the-way book. I sincerely hope that someone will set out to explore the delights of Suffolk in the same way, after all there is Hoxne and Baylham and Flatford for a start.

Philippa R. Miller. April 1970.

*'In Search of Watermills' by Philippa R. Miller is on sale at Waller's Restaurant, Oulton
Broad. Price 15/-*

SOME ASPECTS OF MEDIAEVAL ARCHITECTURE.

by John Todhunter

Until Mr. John Harvey set to work and published his books on 'Henry Yevele' (the mason who designed the Nave of Canterbury Cathedral and Westminster Hall, together with many other works still extant) 'Gothic England' and, above all 'English Mediaeval Architects', nothing was known about the designers of the great Cathedrals, the Parish Churches, the Castles and other works which have come down to us from the Middle Ages.

Their names were buried in old account books, such as the Royal Accounts, Cathedral Accounts, the Accounts of Winchester School, Eton, Oxford and Cambridge Colleges, Abbeys and otherwise from which John Harvey had to dig them out. This information is supplemented by chance references here and there but this is a task for scholars which is for many reasons beyond most of us. It can hardly be doubted that there is still much to discover in the documentary way. There are two limitations. First, records are sparse as we go further back; second, many of the buildings to which the records relate have been destroyed or altered beyond recognition. Especially unfortunate for us is the loss of the Abbey Church of Bury St. Edmunds which was largely rebuilt in the mid-fifteenth century by the Abbey Mason, Simon Clarke, after a great fire in 1466. It is known that in later life he was engaged with his partner, John Wastall, (who designed most of the Chapel at King's College, Cambridge and the Bell Harry tower at Canterbury Cathedral) on designing the nave at Saffron Walden Church and the nave and tower at Lavenham.

Such chance facts are known about some churches, but about the majority of Parish Churches, the only indication one can hope for is to look. For instance, looking at the South Porch of Beccles Church one can see at once especially in the upper part (which looks as if it was added after an interval) the same hand as at Lavenham. Nor is this surprising for Simon Clarke was all his working life Abbey Mason at Bury St. Edmunds, John Wastall was a Bury Man and the Abbots were patrons of the living at Beccles.

An architect of local interest to us here was Richard Russell of Dunwich. With Adam Powle of Blythburgh he contracted in 1425/6 to build the tower of Walberswick church which was required to be like that at Tunstall with windows like those of Halesworth. It can therefore be surmised that Russell had designed these towers also. Actually, that at Walberswick is much the grandest, and that at Tunstall relatively simple.

But all have one distinctive feature in common which is, that in the re-entrant angles of the buttresses, there is a vertical strip of freestone. This may easily be seen in the tower at Kessingland where the bottom 30 ft is presumably a design by Russell. Later, another designer took over, and the re-entrant angle is treated in another way, which is also more common. It is interesting to note the contrast, Russell lived until at least 1441, and there must be many other works by him. One that I would call a possible is the elaborate porch at Snape. There are actually a number of porches of this general type, and it would be worth while to note them.

The architect of the clerestory of the choir of Norwich Cathedral is said by John Harvey to have been Robert Woodhurst.

This was built in the 1360s, and amongst the benefactors was William, 1st. Lord Morley, and it was presumably he who built the church at Swanton Morley where he lived, and which is known to have been built a little later than the Cathedral choir clerestory. Swanton Morley is a very grand church and rather original. When Lord Morley resolved to begin he would certainly have looked for a first rate

designer and mason, and one may surmise that he would at once have thought of Woodhurst. That would be most natural and when we go to Swanton Morley to look we feel the strong suspicion that this is just what Lord Morley did. Woodhurst lived until 1401, and his home was in Norwich; and if this account of Swanton Morley is right, then we may suspect that he designed the tower of St. Giles, Norwich where the vast belfry windows seen at Swanton Morley appear again.

Reginald Sly was engaged by Henry VI to design and carry out the vast project at King's College and he began the Chapel. Before the work had gone far the Wars of the Roses began and very little work was done at King's until the early sixteenth century when John Wastell built most of which we now see. Reginald Sly's only recorded work before he was engaged for King's was a staircase at Peterhouse which still remains and is something that any competent mason could have done. If that was all he could show, it was odd that he should be engaged for King's which was to be one of the great Buildings of the century. The clue may lie in the fact that he was a Norfolk man (he had a connection with Bungay) and it looks as if he may have been apprenticed to one or other of the Norwich Cathedral masons who followed Woodhurst and was possibly engaged on work for the Duchy of Lancaster (then in the hands of the King) which had many masons in North Norfolk. Be that as it may, two characteristics of Sly in his work on the side chapels of King's Chapel have a sort of horizontal bowl-like quatrefoil design at the head of the window tracery, and his way, when designing a pier in an arcade, of making the internal shaft beneath the arch not a single shaft but a group of three very slender shafts each with its own little capital. The bows can be seen in the North aisle windows of Catfield church and in the windows of Hevingham church. There is no documentary evidence connecting either with Reginald Sly. The great church at Burwell near Newmarket is traditionally supposed to have been designed by the architect of King's College Chapel. It has both the bows and the treble shafts. This church was being built about 1467. Sly died in 1471. Both the bows and the treble shafts may be seen at Cavendish in Suffolk, which was in course of erection in 1471.

One must of course remember that these designers of renown had apprentices and masons working under them who might naturally adopt some features of their masters' style.

Thus, in Long Melford Church in the South chapel of the chancel and in the Lady Chapel, built long after Sly died, there are in the one case the bows, and the other has the treble shafts. Such men were likely to be inferior to their masters, and perhaps it was such a one who was employed at Cockfield church in Suffolk which is distinctly reminiscent of the Clarke/Sly style but inferior. Stylistic and other reasons would lead to the surmise that Simon Clarke was the main designer of Hescett Church near Bury St. Edmunds where there is later work in the same vein, doubtless by a mason who had worked for Clarke or Wastell.

It was sometimes the practice for masons to leave their moulds to a favourite fellow worker or apprentice and this would provide material for study. To draw the profile of a moulding is very difficult. Some recommend lead tape which can be bent around the hollows. I have tried to do this but it has been clumsy; perhaps four hands would do it better than two! One could by these means see what mouldings say Richard Russell favoured and this would help to trace his work.

Up to now we have been considering finding more work by designers in whose cases we can point to buildings with which they are known to have been concerned. But in Suffolk, for instance, in the fifteenth century there are many superior works which are certainly not in the way of the Bury St. Edmunds school of Clarke and Wastell, not in that of Russell, not of any other designer whose work we know. Yet there are other big men whose names and dates are known, but to whom documentary history assigns nothing. Such a one was John Foster of Bury St. Edmunds who died in 1494 after sixty years in the trade. John Harvey says he was apprenticed to William Layer an important Bury mason who died in 1444, having possibly designed the nave of St. Mary's, Bury.

How can we discover anything these men did? There is no way, but chance may give a clue some day. What is possible is to classify our Perpendicular churches in groups according to stylistic similarities, then we could say 'this group is by X, that by Y'. If the clue then turns up, it may be that Foster is X and we shall have a catalogue of his works ready made.

The names of many carpenters are known, but only in one case that I can recollect has a named carpenter been associated with an extant work in the East of England.

This was Thomas Loveday, carpenter of Halstead who made the very handsome hammer beam at Festingthorpe, Essex. All we can say at the moment is that Norfolk, Suffolk and Cambridgeshire (roughly) have distinctive types of design. The carpenter of the great octagon of Ely cathedral was William Hurley, but this work seems too specialised to enable a judgement to be made whether he

founded a school of carpenters who later designed ornate roofs.

Where did our wonderful East Anglian fonts come from? So many, varying in detail but all showing marked similarity of concept. The evangelical symbols alternating with angel-borne shields or sometimes with lions round the bowl; wild men or lions sejant round the base? Some have proposed Norwich, but for myself I would prefer somewhere in East Suffolk which is more central to the places where these fonts may chiefly be found.

In such directions as I have named there is much that can be done without great technical knowledge to back it, and the simple skill of being able to take the odd photograph or make a rough sketch. This is certainly one field of archaeological observation where little has been done, so that what is now done will be a very real addition to knowledge.

BRITISH FIRE MARKS & PLATES.

(With special reference to the Lowestoft area.)

by Henry Halls

The earliest Fire Insurance Societies came into existence during the three decades following the disastrous losses of property and goods which occurred in the Great Fire of London in September, 1666. Three of these were the 'Fire Office' founded in 1680, the 'Friendly Society' which came into being shortly afterwards and the 'Amicable Contributors for Insuring Loss by Fire' (later known as the 'Hand in Hand' Office) which commenced business in 1669.

It was at this time that Fire Marks were first manufactured. Each company had found it necessary to its economic wellbeing to employ, train and equip its own fire-fighting organisation in order to reduce the risk of widespread damage from fire in the properties which it insured. When private houses and business were insured by a company it was essential that the Insurer's firemen could readily identify the properties, so that it became the practice for a Company to 'mark' the properties it insured. Thus fire marks came into use. These were metal plaques, generally of lead, bearing a device which would indicate the Insurance Office or, alternatively, the Company's name or both. The device frequently surmounted a panel on which the policy number of the insuring office would be impressed.

Along with the problem of identifying insured properties, Fire Insurance Companies had also to prevent fraudulent claims being made upon them – the affixing of the distinctive Mark of the Office to the exterior of the promises covered went far towards reducing such a risk especially as marks were normally sited at first-floor level and therefore out of the reach of pilferers.

Marks differed greatly in design, size or shape and as the emblems they carried were frequently gilded or coloured, they were both readily visible and easily recognised. The marks, being fashioned in metal, remained durable and their presence served, as the 'Friendly Society' stated in 1684, 'to prevent any fraud in getting a policy by indirect means after a house is burnt'.

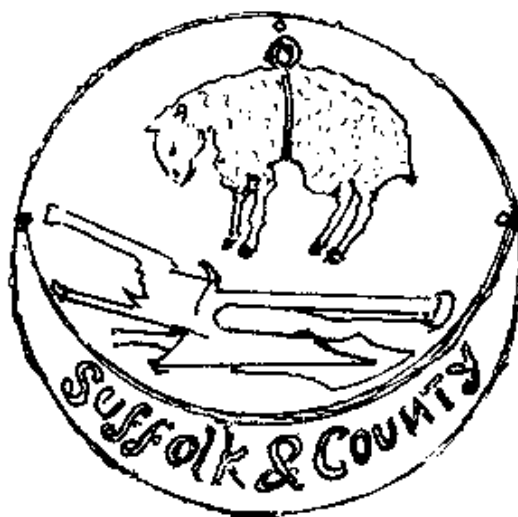
New Fire Insurance Offices came into being during the first quarter of the eighteenth century. Examples of these, which have continued down the years to operate until the present day, are the 'Sun' Insurance founded in 1710; the 'Westminster' established in 1717; the 'Royal Exchange' Assurance Corporation formed in 1720 and the 'London' assurance in 1721. The last third of that century witnessed the growth and expansion of many strongly competitive Fire Insurance concerns, often local in origin and character. The number of such offices increased as the century drew to its close – a development which continued, well into the first half of its successor.

Local Offices frequently pursued their business solely within their regional limits and their activities were controlled by a series of Rules and Regulations, often promulgated and accepted in a form known as a 'Deed of Settlement'. This document contained specific reference to the issue and use of the Office Fire Marks enjoining that every insured person should, hold 'a policy issued by the Office in respect of the property covered and should display the mark of the Office upon the exterior of the insured premises or on or near the places where goods and merchandise were housed'. Many Offices made a condition that the premises or property to be insured would not be held secure until the mark had been effectively sited in accordance with the Deed of Settlement's terms. Similarly, when a policy had expired, or had been cancelled, an Office often retained the power to take down and remove all marks relating to such an insurance.

There were, however, differences in the terms of the various Deeds regulating the activities of Offices

and these came to have an important bearing on the numbers of marks issued. For example, if the property or premises at risk were not deemed to be insured until properly 'marked', an Office had, of necessity, to issue at least one mark with every policy written and was, as a result, likely to be less able to introduce flexibility into this approach to the issue of its marks and plates.

In cases where an Office made no provision for a representative to undertake the task of affixing the mark to the premises insured and the Office was quite content to leave this duty to the discretion of a policy-holder without any loss of effective insurance cover, that Office would no longer be committed to the continuous issue of Fire Marks. This might well, in an area predominantly rural in character and having no really large towns, react to an Officer advantage by preventing the preparation and issue of marks and plates from becoming an expensive and relatively wasteful item encumbering its activities.



The earliest Fire Marks were made of lead. They were cast in a mould, and the policy number to which a mark referred would either be stamped or impressed upon a panel at the base of the plaque. In one instance, that of the London Assurance, the lead marks had an additional refinement, a small pendant below the number panel, which bore either a 'G' or an 'H' the former denoting that goods were insured, and the latter a house. By the end of eighteenth century the price of lead had increased

so that Fire Insurance concerns commenced to manufacture marks of different metals, such as copper and tin. Hence the early years of the following century represent what fire mark historians have defined as 'the era of the thin copper mark'. Coppermarks and plates were indeed thin and of light weight, the Company's device being prepared in the form of a die and design being pressed on to the metal.

The advent of the copper and tin plates brought to an end the linking of a mark with a certain policy numbers no longer appeared. The plates, nevertheless, continued readily to 'mark' the property and premises insured by an Office. Somewhat later, there arose a steady growth in co-operation between fire brigades belonging to competing Offices and there was thus less need for promises to be marked for purposes of identification. Competition between Insurance Offices in the Eastern Counties did not preclude some form of common action and effort in the face of particular problems. Two examples must suffice. In November, 1805 *{? typing poor}* costs involved in extinguishing a blaze in Colchester were shared, by mutual consent, in proportion to the sums insured which each Office hold 'near the premises where the fire happened' by the 'Essex and Suffolk'; 'Sun'; 'Suffolk'; 'Phoenix' and 'Royal Exchange'. Secondly, these Offices again linked their resources to reduce the possibility of losses from incendiarism in East Anglia and to apprehend those committing arson during the violence of agricultural unrest which swept across the countryside during 1816/1817.

One effect of such upheavals may have been shown in an increased demand for fire plates by the farming community, for the presence of a mark upon the exterior of a building was a reminder that its occupants would suffer little financial loss from fire and might, indeed, prove a safeguard from isolated acts of incendiarism. Such a demand may have been the motive behind the preparation in 1818 of the last consignment of fire plates ordered by the Essex and Suffolk, whilst in the course of the fire-raising which occurred in farming areas during 1830 the Atlas Assurance decided that its plate should be affixed to any property the Company insured which was not already displaying a plate.

The growing degree of co-operation between fire Offices did not, by any means, terminate the issuing of metal plaques to policy-holders because the plates themselves remained a ready medium for advertisement. When, by the 1850's, a considerable number of smaller concerns had either ceased to operate or had been absorbed by more powerful competitors the utility of Fire Plates declined and their issue ceased. Later, however, the underwriting of foreign Fire Insurance led to a renewed demand for the issue of plates for use overseas, but these relatively modern specimens were frequently made of tin and were brightly coloured.

One noteworthy feature of Fire Marks and Plates is the number of 'variants' prepared by certain Offices. A variant must show some variation (however slight) in the design of the Mark or Plate or some difference in the metal from which it is made. Thus a tin, copper or zinc plate all bearing the same type of design represent three distinct variants of the plate. A second point of interest is the existence of 'differences' in variant – for example, a painted as opposed to plain plate of similar type. Sometimes differences go further than this, with variations in the colourings used on painted plates.

The variants issued by the Suffolk and County Amicable Insurance office, established at Ipswich and Bury St. Edmund in 1799 and actively operating by 1802 are of more than passing interest. There were three variants:-

1. A rectangular lead plaque bearing raised block lettering in three stages – at the top INSURED followed by a comma; in the centre SUFFOLK sloping slightly to the right and FIRE OFFICE with a fullstop at the foot.
2. A circular copper plate depicting in the upper third a ram's fleece bound around its centre and tied a staple-ring. A plough occupies the middle portion of the plate and below this is a crescent-shape panel carrying the words Suffolk, an ampersand and COUNTY with its letter 'N' inverted. The Office, in preparing this plate, employed a design directly associated with Suffolk – the fleece being an apt reminder of the woollen industry which brought a prosperity to the County lasting from medieval days into the nineteenth century and the plough as a symbol of its thriving agricultural economy.
3. Another circular plate bearing a seven-pointed star standing out from its surround above an oblong panel carrying the word SUFFOLK in block letters. The metal used is copper; the design simple yet most effective.

Thanks to the efforts of Insurance Company historians the names of some of the personages who were either responsible for or associated with the manufacture and/or gilding of Fire Marks are now known. For the London Assurance, lead marks of pleasing design were made in its earliest years by Henry

Ball, Lukin Betts and Humpleby Joseph whilst Robert Ross and Richard Waller were responsible for painting the finished products. A lady, Mrs Pitkethley, found herself in the somewhat unusual or unlikely occupation of making copper plates for the Atlas Assurance shortly after its formation in 1808. The Essex Equitable (later the Essex and Suffolk) arranged for its copper mark to be manufactured in Birmingham but its Directors appointed Joseph Wallis, a Colchester ironmonger and one of the signatories to the founding of the Society, to act as intermediary between the Society and the maker of the marks. The same Company also placed certain of its marks during 1806 and 1807 and again between 1813 and 1815 into the hands of James Dunthorn, an aged limner of Colchester, for gilding and painting.

To turn to the question as to which Fire Marks and Plates are most likely still to be found in the vicinity of Lowestoft leads directly to a study of the growth of fire insurance within the neighbouring parts of East Suffolk. Some of the Offices formed in London soon appointed Agents to accept risks on their behalf in East Anglia. The 'Sun', founded in 1710, had issued its first Policy in Colchester as early as July, 1713. On the 22nd June, 1720 both the 'Royal Exchange' and the 'London' received their Charters – they were not long in appointing Agents within the Eastern Counties and the 'London', commencing active business during 1721 had by 29th September of that year 'elected Henry Nash to serve in Ipswich and the County of Suffolk' [1]. The 'Phoenix', established in London in 1782, had, within a year or so, extended its operations to Chelmsford and thence to Colchester, whilst the 'Norwich Union', commencing business in 1797, entered both East and West Suffolk from the north. Then came two local Fire Insurance concerns – the 'Suffolk' and later, the 'Essex Equitable' which was formed in Colchester on 22nd November, 1802. This latter Office, as a result of a suggestion put forward by an influential group of insured persons from the neighbourhood of Bury St. Edmunds incorporated 'Suffolk' into its name during 1806. It had, by then, already appointed several agencies active on its behalf in the County's southern, eastern and central districts.

The 'Royal Exchange' had, by the last quarter of the 18th century, a firm foothold within East Suffolk. In 1784, Miss Smith, a milliner by trade, acted as its agent in Saxmundham whilst a decade later John Bolton, plumber and glazier of Halesworth, had been appointed to serve on its behalf. Within the next four years, Thomas Clayton, an attorney, had become its agent at Great Yarmouth. Soon after 1800 a spreading network of fire insurance agencies can be discerned throughout the County, reflecting the competition not only between the London based concerns and locally established Offices but also between both of these and provincial fire companies located far afield. This development is clearly revealed for the north-eastern corner of Suffolk in the following disposition of fire insurance agencies during the two decades between 1820 and 1840 [2]:-

Year	Town	Number of Agencies	Number of Companies Represented
1822 - 24	Beccles.	3.	3.
	Bungay.	4.	4.
	Lowestoft.	4.	5.
	Saxmundham.	1.	1.
	Southwold.	1.	1.
	Yarmouth.	11.	11.
1830 - 31	Beccles.	5.	5.
	Bungay.	5.	5.
	Halesworth.	4.	4.
	Harlestone.	7.	5.
	Lowestoft.	5.	5.
	Saxmundham	3.	3.
	Southwold.	3.	3.
Yarmouth.	17.	15	
1839 - 40	Beccles.	12.	11.
	Bungay.	5.	5.
	Halesworth.	5.	5.
	Harleston.	5.	4.
	Lowestoft.	8.	7.
	Southwold.	2.	2.
	Yarmouth.	19.	16.

By 1839 the Fire Insurance Companies most frequently represented in the area comprised:-

Atlas.	Phoenix.
British.	Protestant Dissenters and General.
Essex and Suffolk.	Royal Exchange.
Guardian.	Suffolk.
Norwich Equitable.	Sun.
Norwich Union.	Yorkshire.

Details of the names and occupations of the Fire Insurance Agents in Lowestoft included within the lists given above may prove to be of some local interest:-

Year.	Name.	Occupation.	Comp. Rep.
1823/4.	Henry Scarle.	Bookseller, Stationer and Printer.	Atlas.
	Robert Browne.	Grocer and Cheesemonger.	British.
	John Brown Chaston.	Linen Draper.	Guardian.
	Stephen Gowing.	Bookseller, Stationer, Printer Watchmaker and Silversmith.	Royal Exchange. Suffolk.
1830/1.	Henry Scarle.	Bookseller, Stationer, Printer & Circulating Library	Atlas.
	Robert Browne.	Grocer and Tea Dealer.	British.
	George S. Gowing.	Twine Spinner and Rope Maker.	Crown.
	John Brown Chaston & Daniel Chaston.	}	Guardian.
	Stephen Gowing.	}Linen and Woollen Drapers. Bookseller, Stationer, Printer, circulating Library, Glass Dealer, Jeweller, Silversmith and Agent to London Genuine Tea Company.	Suffolk.
1839/40.	Thomas B. Bird.	Academy proprietor.	Atlas.
	Robert Browne.	Grocer and Tea Dealer.	British.
	John Chaston.	Linen & Woollen Draper and Agent to Gurney's Turner & Brightwen, bankers.	Guardian.
	James Wigg Hickling.	Attorney and Agent to National Provincial Bank of England.	Norwich Union.
	Thomas Pratt.	Linen and Woollen Draper.	Protestant Dissenters and General.
	William R. Seago.	Attorney and Agent to East of England Bank.	Norwich Union.
	Stephen Gowing. Reeve and Norton.	Bookseller, Stationer, Library. Attorneys.	Suffolk. Sun.

(Every agent at this time was located in Lowestoft High Street with the exception of Thomas Bird who could be found at the 'back of the Theatre'.)

The distribution of the Lowestoft agencies possesses further interest as indicating the type of person whom a Company sought to act as its representative. There was, for instance, as time went on, a distinct preference for attorneys as members of the legal fraternity and, as might be expected. Companies tended to select persons having close contacts with the public and some degree of business experience. Not surprisingly therefore, many agents were shop-keepers, tradesmen or professional men. Lady representatives were consequently few and far between and in the years under review Deborah Seaman of the Post Office, King Street, Yarmouth was one of two examples – she being doubtless the widow of Thomas Seaman, whom she succeeded as agent for the 'British'. A similar instance is that of Miss Allock who, in 1844, was a 'Suffolk' agent in Halesworth – she was probably daughter to John Turrill Allock who, fourteen years earlier, had been a solicitor and Clerk to the Commissioners of Taxes for the Blything Hundred as well as agent for the 'Suffolk' in that town.

Within those parts of East Suffolk in the vicinity of Lowestoft, Marks and Plates still remain in the towns and villages and, it may be, that on a rare occasion two variants of a Company's mark may be found upon the same building. To search for marks one must not be in haste – the approach should be steady and unhurried and they can probably be best seen during either walks around the countryside or

whilst travelling on the upper deck of a bus. Their numbers are becoming scarcer and those remaining actually affixed to promises are now relatively small – wear and tear, the ravages of war, apathy and redevelopment have all taken their toll.

As surviving specimens diminish numerically, so every effort should be made to leave them affixed to properties – often the very presence of a mark upon a building indicates a history well worth investigating and recording by local historical societies. Once a mark or plate is removed from the premises to which it has been affixed, it automatically loses much of its interest, and the fact that demolition or clearance of properties becomes necessary from any cause then every effort should be made to preserve marks or plates before the actual work begins. A place should, if possible, be found for them within a local museum or, failing this, they should be held on behalf of a local History Society by one of its responsible officials. In either case, the location of the fire marks before removal should be clearly recorded and retained alongside it.

In what other ways might a Local History Society assist in preserving these items unharmed within the district it serves? The interest and vigilance of its members could become a factor of prime importance in ensuring that a specimen continues to remain firmly affixed to the fabric of a building and the Society itself might undertake any negotiations required with either the owner or occupier of the premises so as to ensure such security. Secondly, a Society's members might be willing to compile a register of marks to be found in the locality. This list would provide, additionally, a means whereby the distribution of marks and plates issued by particular Fire Offices could be made available for research purposes and, if a copy were forwarded to the Fire Mark Circle [3], it could become part of a centralised record of such information. Lastly, Fire Marks and Plates are now being recognised as material of some antiquarian consequence, being, as they are, relics of an earlier and, at times, most interesting age in the economic history of our country, so that local History Societies can assist in fostering interest in these symbols of bygone Fire Insurance concerns and in spreading knowledge as to the real value and intrinsic worth of those particular survivals from the past.

Henry Halls, M. Sc. (Econ); B. Com.

References.

- [1] The London Assurance – A Second Chronicle by Bernard Drew, page 48.
- [2] Within the following Directories:-
 - Pigot's London and Provincial Directory, 1822/3 and 1823/4;
 - Pigot's General Directory - Edition 'A', 1830;
 - Pigot's London and Provincial Directory, 1839.
- [3] The Fire Mark Circle, founded in 1934, has a growing, world-wide membership. It encourages the preservation of Fire Marks and Plates and stimulates study and research into their history. Its Honorary Secretary is:-
 - J.J. Williamson, Esq., F.C.I.I., F.I.A.S.
 - 21, Winstone Drive;
 - Bexhill-on-sea;
 - Sussex.

THE PAVING AND LIGHTING OF LOWESTOFT IN THE EARLY NINETEENTH CENTURY

by Hugh D.W. Lees

The story opens in the time of George III, in the year 1810 when we find the 'Treasurer's Account with the Commissioners', opens with this entry, under the date of July 5th. which runs:-

'Paid R. Reeve bill for soliciting the ACT for Paving and lighting the Tow: . . . £433. 9s. 11d.

On October 25th. the same year, one John Green was paid £18. 18s. 0. for 'valueing the encroacht'. The next item of expenditure, is dated November 12th. – 'Mr. Robinson for Northumberland Glass Co. for Lamps Burners - £43. 12s. 0.' and the last entry for the year reads Dec. 8th. : 'William Barber, freight of Lamps £3. 16s. 4d.'

1811 February 20th. 'Paul James Simonds Lamp Irons - £10. 2s. 6d. and the next item is dated May 7th. 'Paid Simon Norman. Lamp lighting to Lady . . £15. - 1d.

The 26th. March 1811 was no doubt a Red Letter Day for the Town. For we read of the following expenditure viz. 'Beer allowance this day to the paviors when the first curbstone was laid at the

Northend, by the Rev. F.G. Spurgeon'. On May 21st. Robert Cann was paid £1. 1s. 0. for carting old paving stones from the street into the old market. These stones were sold by Auction, for we find the following item entered in the Accounts – 'April 16th. B. Lane for sundry parcels of old Flagstones sold by Auction after deducting expenses – £8. 7s. 9d. and on April 27th. a similar entry for the sale of Flagstones amounting in this case to £2. 10s. 6d. B. Lane bought some more of these on Auction on May 27th. for which he paid a like amount.

The account for the new stones was paid for on Sept. 18th. that year, the item reads 'Messrs. Popjoy, Stevens & Popjoy on account for new paving £500.'

To lay down this new paving it was necessary it appears to compensate the Owners and Occupiers of the various shops and houses in the High Street, for we read in the next entry this, under date of 1811:

'Paid sundry persons, the estimated expense of removing their Bow windows and other encroachments. Altering steps taking down shutters, signs as appears in a schedule thereof . . . £139. 12s. 6d. Another item, this time a Receipt, for that year, dated November 27th. records 'Received of Thomas Curtis, towards paving the footway in front of the south part of his house, the Commissioners merely intended to lay down one row of Flagstones . . £3. 0. 0.'

In the July of that year, some hurdles were acquired, for we find the following entry therein, 'James Huke for hurdles to temporary road . . £7. 4s. 0d.' In the November there is an interesting entry 'Paid November 20th. For crying sale of hurdles used for temporary road . . £1. 1s. 0.'

Another interesting entry reads, 'Received November 18th. of Robert Strowger for negligently breaking a lamp in High Street . . 8s. 6d.' The information having been paid, is revealed in this item of expenditure viz. 1811 November 20th. 'Paid James and Susan Hughes for giving information of R. Strowger having broken lamp and for preserving the top etc. 2. 6.

The other items under this year's expenditure are given as follows:-

'Paid Sept. 18th. John Farrer Jnr. for oil for Lamps. 10th. August - £36. 1. 6.' and on October 21st. 'Paul Philip Ward for List for Lamp Irons . . 11. 8.

Under the year 1812, we find the following entry – Received 'The Trustees of the Turnpike a donation as being exonerated for future repair to the High Street . . £100.' Also this year we find the balance of the paving Bill; of the High Street paid off viz.: Messrs. Popjoy & Co. the balance of the Bill for paving £2,460, and a later entry reads '1812 Paid Messrs. Popjoy & Co. on Account for Paving work in the Blue Anchor Lane etc. £24. 14. 7. Mr. John Woods for old paving material used £5. 6. 8. John Farrer was paid £31. 1. 1. for oil to the 18th. March 1812' and 'William Baley the like 6. 9.' 'Simon Norman payments to Lamplighters superintending List . . .'

This same year, one John Green, was paid '£17. 9. 1. for measuring pavement etc.' and paid 'Sundry Labourers sorting stones for Paving Blue Anchor Lane etc. loading them £7. 15. 9.' and a further payment to 'Sundry persons removing soil from thence amounting to £6. 3. 3. – paid 'sundry persons the estimated expense of removing their projections as appears in an account thereof £123. 19. 5. 1815 under 'Receipts' we find the following entries of 'Jm Simmons for 4 bushels of old paving stones, taken from the Old Market Place 2/-.' and of 'William Winson penalty for altering pavement in Blue Anchor Lane without leave . . £2. 0. 0.' and of 'J. Peart for damaging foot pavement by cutting channels etc. against Baptist Meeting House.'

1813 'Paid various persons barrowing stones for paviers . . £7. 18s. 7½d.'

In 1814 'Mr. J. Reeve for 4 bushels of paving stones)

Mr. Brown for 2 bushels " " ") 18/-'

And Receipts that same year record the following entries of 'William Hicks for old lead . . £2. 7. 5.' of 'William Jarvis for a lamp negligently broken . . 10/-' of a 'brewers servant penalty for damaging foot pavement 5. 0.' 1815 receipt included the following entries – of 'Jabas Aldred penalty for altering the pavement without leave – £2. 0. 0.'

And under 'payment' for the same year we find these entries . . 'Paid Thomas Webb for oil £46. 2. 9.'

The receipts for the following year include 'of William Pullock for a lamp negligently broken by him.' and under payments for 1816 we find 'Action brought by J Starry' amount to £23. 16. 9. following by another entry 'Simon Norman payment to Lamplighters' of £21. 9. 5. Even in those days oil was a recurring item of expenditure for we read this item entered in the accounts. 'Thomas Webb for oil £60' and 'J. Clarke was paid for repairing lamps £16. 11.'

It cost 18/- for oakham which was obtained from W. Curtie. Another repair bill was 'Robert Boyce

repairing Lamp Irons . . sixteen shillings and twopence halfpence.’

Carpenters work carried out by one William Cleveland amounted to £4. 13. 1.

Robert Tripp’s paving Bill came to £3. 2. 4.; one of the last entries in the account for this year was ‘John Woods altering window £5. 5., quite a big sum for those days it seems.

Under the payment for 1817 we find the following items viz. Informer for notice of Lamps negligently broken:- one shilling and Simon Norman received for ‘Attending laying information 15/-. Another entry reads thus ‘Simon Norman superintending Lamp Lighters and receiving payment for oakham etc. £3. 12s. 6d., while another entry for this year reads , ‘Mark Wilson Lamp Lighter £13. 10. 0., more oil was paid for, it had been obtained from John Farrer at a total sum of £41. 8. 9. John Bennet received 4/6 for Lamp Iron while John Clarke was paid for repairing lamps – 14/6 and Peter Rackham was paid for carriage of lamps £1. 14. 6.

William Cleveland received a further sum of £18. 14. 1. for carpentering work and Robert Tripp was paid £5. 11. 8. for Bricklayers work while James Swatman’s bill for repairing drain came to only 1/10. The next item of expenditure was quite a large one, for we read the following entry viz. ‘James Simmons New Barrel Drain – £44. 2. 9.’ and another entry reads ‘William Bayes stone for footway against Engine House . .’

William Cleveland payment for supply paving stones and he also received £51. 1. 1½. for ‘Disbursement for Labours and likewise an amount of £1. 8. 3½.’

Samuel Manning was paid £2. 14. 0. for ‘Carting stones’ and another entry reads ‘William Bayes in Account for new paving £40.’ Amongst the payments for 1818 we find the following ‘Simon Norman attending laying information etc. for which he received the sum of 13/-.’ Another item entered in the accounts regarding him is ‘superintending Lamp Lighters and disbursement etc. £3. 4. 6.’ Mark Wilson was paid ‘Lamplighting to Lady, 1818 – £5. 2s. 0.’

Thomas Webb for oil was paid £47. 14. 5d. and James Callow received for ‘repairing Lamplighters ladder’ 1/6. While William Clarke received for ‘repairing Lamps 16/-.’ Another payment for this year reads:- ‘James Ward, Oakham £1. 1. 7.’ and The Northumberland Glass Company was paid £11. 10. 6. for ‘New Globe Lamps’ and Peter Rackham received £1. 2. 6. for ‘Freight and carriage’ for the same.

An interesting entry under the heading of ‘Payments’ runs thus:- ‘Mr. Robert Yeo frontispiece of his house’ which came to £8. 0. 0.’

James Simmons was paid £5. 15s. 5. for a ‘Brick Drain’ and William Bayes charged £165. 1. 9. for ‘new paving’. The last item in this years expenditure ‘for paving stones’ amounted to £6. 0. 2½. and £5. 19. 7. respectively paid to William Cleveland.

Under the year 1819 there is this entry; Simon Norman superintending Lamp lighting and disbursements for lists and Lamp Irons – £4. 1. 8. and another item states ‘Disbursement payment to Mark Wilson for lighting lamps 1818/19, £14. 2. 0. While John Farrer’s account for supplying oil the same period came to £41. 2. 5. William Clark charged £1. 0. 5. ‘for repairing lamps Irons’ and Samuel Johnson’s bill for ‘painting lamp Irons’ came to 13/1.

Another account this year was William Cleveland stones £1. 12. 3½. and James Simmons was paid £22. 14. 0. ‘for paving back streets’. Whilst the lamp lighting account for the year 1819/20 came to £15 3. 6., John Farrers Bill for oil for 1819/20 totalled £14. 0. 0. In 1821 the Northumberland Glass Company received £10. 3. 0. for ‘Globe Lamps’ and a further sum of £9. 19. 0. Pater Rackham was paid 18/- for ‘freight and carriage’. William Clarke for repairing lamps £2. 17. 9. and Samuel Johnson was paid a matter of 14/- for a similar job and Walter Curtis was paid the sum of 13/6 for Oakham for Lamps. Thomas Swatman’s bill for repairing pavement came to £22. 2. 9.

In the year 1822 we find this entry ‘Benjamin Lane, letting 5 pieces of old lamplands by Auction 9th. October – £1. 1. 0. And Simon Norman received ‘for payment to Lamplighters’ covering the year 1821/22, the sum of £16. 0. 0. and ‘For superintending the lamp lighting’ he himself had £2. 2. 0.

For the year 1821/2 John Farrer was paid £57. 4. 11. ‘for oil’ and James Ward’s account for ‘supplying oakham’ for the same period came to £2. 5. 9. The account for the Northumberland Glass Company that year came to £16. 13. 0. and William Day charged £1. 3. 6. ‘for repairing lamps’ and a further 18/9 ‘for cleaning globes and fixing up.’

Samuel Abbott was paid £9. 15. 4. ‘for repairing lamps’. Another item recorded is ‘William Nelson, painting lamps, £2. 2. 0. and James Callow charged 17/8 for lamp lighters ladder.

The last item of interest for this year ends as follows:- James Simmons ‘for painting 5/7 and 3/6’.

Under 'payment' for the year 1823 has this entry:- 'Simon Norman payments to lamplighters' £14. 0. 0. he received a sum of £2. 2. 0. 'for superintending lamp lighters and a further sum of 11/4 for taking down lamps.'

Samuel Johnson 'for supplying oil' for 1822/3 came to £39. 5. 9.

It seemed that John Ward had died since his last account was paid for we read of the following entry: 'assigns of J. Ward for oakham for lamps £1. 15. 6.'

Samuel Abbott was paid £6. 5. 4. for 'blacksmiths work to lamps' and James Cooper received 13/- for 'lamps irons.' Also this entry appears 'Thomas Titlow List Lamp Irons in 1822 16/8' and a further sum for the year 1825 of 13/4.

The following entry is rather interesting, it runs:-'John Bennett for lamp purchased of him 14/-'. During this year (1823) the following accounts were paid:- Thomas Aldiss repairing lamp irons 3/8, – William Hicks glazing and painting lamps 6/6, – Robert Drane for cleaning lamps 12/-, – William Scarll repairing lamp lighters ladder 11/3. The account with the Northumberland Glass Company this year came to £19. 6. and William Albrow was paid £1. 2. 6. for 'carriage of lamps.' he also received 6/- in respect of 'freight' on them. Another item reads 'John Hall freight of lamps £1. 2. 0.' and John Goldsmith was paid 5/- for carting same.

The last entry of interest for this year reads, 'Robert Barrett allowance for repairing footway 7/-.'

In 1824 under 'Receipts' we read of John Pells of Ringsfield for 'lamp negligently broken 7/6', and under the heading of 'payments' the following entry viz. Simon Norman payment to lamp lighter for 1823 £14. 8. for superintending this matter, our friend received the usual £2. 2. 0. for his trouble. And a further entry regarding Simon Norman says 'Received for preserving lamp tops blown off 4/6.'

The Lowestoft Parish Register 1815-1840 (Transcribed by H.D.W. Lees and M. G. Greengrass (1962) under 'Baptisms' on page 61 record the only entry of a lamplighter and in the Parish Register it reads as follows:-

1824 Dec. 28. DRANE John Charles s. of Robt. and Ann (M N Lacey) Cordwainer and Lamp Lighter.

*(Note of foot of page) This should have been Robert instead of John. There was another son died, John, he was baptised April 4th. 1825. Inserted after enquiry. The next item refers to the storing of the Lamps, during the summer months – Robert Drane taking down and cleaning Lamps 7/6 and for putting up lamps 10/-. Jn^o Sterry (Jnr) was paid for oakham for lamps 1825 the sum of 9/- and Samuel Johnson for oil for public lamps 1823, £46. 10s. 6d. and to Elizabeth Abbott was paid a matter of £7 19. 1. for Blacksmiths work to lamp while to James Cooper for Ironwork to lamps 1823 - 3/6d.

We now come to the year 1825 and find Samuel Johnson's Bill for oil £44. 15s. 0. and Robert Drane received £14. 8. 0. that year for lamplighting and a further 7/6 for taking down lamps and cleaning. Together with our friend Simon Norman's usual £2. 2. 0. and he also received 5/10 for preserving Lamp tops.

In 1826 this entry appears under the heading of 'Payments' which runs 'of John Woolnough for 50 bushels of used paving stone 6/3 and Thomas Swatman paid £10. 8. 8. for paving'.

The next entry is of much interest, it reads thus:- 'Payment' James Simmons, paving Tylers Lane £18. 11. 6. One wonders where exactly was this lane(?) and another repair to it appears in the accounts i.e. 'Robert Drane lighting lamps in Tylers Lane whilst paving 13/6'. Also this year we find another reference to the stones sold to John Woolnough, for we read 'Payment to Leggett measuring 50 bushels of stones', he got 1/6 and Simon Norman received his usual £2. 2. 0. for superintending Lamp lighting and a further item reads:- Simon Norman received for preserving lamp top 3/8 and he also paid over to B. Drane for lamplighting, the sum of £10. 10. 0. Samuel Johnson's account for oil and paint this year amounted to £47. 8. 7. The last item for this year of interest to us relates to 'Northumberland Glass Company - Globe Lamps £21. 0. 0'. Peter Rackham having been paid a matter of £1. 15s. 0. 'for freight and carriage on the same'.

Under the heading of 'Receipts' for 1827 we find this entry of 'William Hicks for Glass Globe 10/6' and this of William Hicks for 'Top Rim and Burner 6/6'. The payments for this year include 'Thomas Swatman for Paving Stones – £13. 12. 0.

Simon Norman paid over the sum of £14 8. 0. to 'R. Drane for lamp lighting' and Simon Norman received for preserving lamp tops 3/8, and for superintending the lamp-lighting he had his usual £2. 2. 0. While Robert Drane received 'for putting up lamps' the sum of 12/- and William Leggett 'Taking down lamps 7/6'. The cost of oil for the year 1826/7 from Samuel Johnson amounted to £47. 17. 10.

Elizabeth Abbott was paid 'for repairing lamps £2. 17. 5'.

The payments for the year 1828 included this entry: 'William Briggs – paving flagstones £22. 13. 4. and Nelson Carver charged £1. 3. 0. for carting same. Thomas Swatman received £9. 8. 1. for paving and James Balls, stonemason charged for 2 pieces of stone 9/5.

Elizabeth Abbott's account for repairing lamps etc. came to £5. 1. 7. and cost of oil from Samuel Johnson was £40. 19. 7.

The Northumberland Glass Company for glass globes was paid a total of £21. 9. 0. and William Taylor for lamp-lighting £11. 4. 0. he also received for cleaning and putting up lamps 12/6 and a further sum of 7/6 for taking down lamps.

Simon Norman had his usual £2. 2. 0. for superintending lamplighting and a further sum of 3/- for preserving lamp tops.

In the year 1829 under 'Payments' this entry:- 'William Albrow freight of 13 tons of portland stone £1. 12. 6.' and 'T. Tyerell for 75 bushels of paving stones £1. 5. 0.'. Peter Rackham carting gravel in 1827 £2. 7. 0., Thomas Webb was paid 'for lamp oil etc. to March 1829' £41. 4. 3. and J. Jackson was paid for oakham for cleaning lamps 7/- and Richard Hott also received 4/- for a similar job. While William Taylor had 'for lamp lighting £11. 4. 0. and he also for cleaning and taking lamps down March 1828 7/6 and for cleaning and putting up lamps September 1829 the sum of 17/-.

Simon Norman received his usual £2. 2. 0. this year too and 3/2 for 'preserving lamp tops', and so ended the accounts for the year 1829.

In 1830 Thomas Swatman, bricklayers work and paving came to £2. 9. 2. and John Goldsmith charged for carting paving stones 9/-.

Elizabeth Abbott's bill for repairing lamps came to £4. 11. 9. and William Hicks was paid 14/11. for painting lamps 1828 and 1829, whilst Samuel Johnson's account for 'Oil etc. from Sept. 1829 to April 1830 amounted to £47. 16. 6. Two other items follow i.e. "William Taylor lighting lamps during that period £11. 4. 0.'" and the said William Taylor 'taking down lamps from warehouse in April 1830 7/6' and for replacing lamps in warehouse to Sept. 1830 he was paid a further 7/-. The account with the Northumberland Glass Company for new Globe Lamps amounted to £16. 7. 6. and J. Johnson received £1. 0. 0. for freight of same. In 1831 we find Elizabeth Abbot's account for Blacksmiths work regarding the repair of lamps came to £3. 11. 4½. and for painting lamps William Hicks Painter totalled only 6/5. While Henry Hogg the Tailor 'List' for Lamps Irons was 15/1 this year. James Fisher 'for oil for public lamps (1830 and 1831) came to £42. 2. 5.

William Taylor was paid for lighting lamps from 9th. Sept. to 1st. April the sum of £11. 4. 0. and he also received 'for putting up the lamps etc.' 17/-.

We now come to the year 1832 and under the heading of 'Payments' is entered 'S. Burton freighted carriage of lamp Globes £2. 1. 0.'. Another entry reads: Elizabeth Abbott repairing lamp irons etc. £5. 5. 1.

James Tripp was paid 'for taking care of lamp Globe and top' 2/- and William Hicks received £1. 0. 1, 'for painting lamp tops'. William Taylor for 'taking down and cleaning lamps 7/6', he also received 'for lighting 8 lights at 28/- = £11. 4. 0. and a further sum of 17/- for 'putting up lamps'.

William Scarll received the sum of £11. 7. 11½. respecting lamp lighting. Another entry reads 'Bellman giving notice of Meeting to receive tenders 2/-'. James Fisher's account for oil for 1831/32 totalled £50. 7. 11.

The first entry of interest to us the following year 1833 refers to Northumberland Glass Company – Globes Lamps £16. 0. 0. William Taylor received for taking down lamps 7/6 and another bill of James Fisher for 'oil for public lamps to 22nd. April came to £40. 2. 9.'.

William Taylor was paid for '8 lightings at 28/- from 14th. Sept. to 22nd. April £11. 4. 0.'. R. Precious repairing ladder 3/6 and James Callow, carpenter charged 13/2 for ladder and William Scarll also repaired a ladder for which he received 1/4.

William Hicks was paid 'paint for lamps 6/6' and B. Taylor received the sum of 3d. for 'taking care of lamp top'. Under the heading of 'Receipts for 1834 we find these entries:- of John Lurkins for a lamp accidentally broken 5/6 and of Mr. William Cleveland for 24 bushels of old paving stones 4/1½.

And under Payment for the sane year we read 'John Jones lamplighter taking down lamps 5/-'. There are several items of payments for used paving stones as under:-

George Peak, 16 tons 5 cwt. paving stones £7. 1. 0.
 A. Blyth, 6 tons 4 cwt. paving stones £1. 14. 0.
 Samuel Pettitt, 23 tons paving stones £6. 18. 0.
 " " 12 tons. 15 cwt. paving stones £6. 18. 0.
 and £10 to Thomas Salter superintending measuring.

While John Gibbons the Pavior received £38 for his work and 2/6 for Beer.

Another entry reads 'Paul Man for watching drain broken 2/-.' And John Jones was paid 'Lamplighting from 14th. Sept. 1833 to May 1834 9 lightings £10. 2. 0.'. Robert Precious repairing lamp tops £4 10. 11. and William Hicks was paid 10/- for a similar job. James Gallow charged 9/9½ for repairing ladder. And John Fisher's account for supplying oil came to £46. 19. 0. while the Northumberland Glass Company account amounted to £16. 1. 3. this year.

This entry appears too in this year's accounts, 'Fees paid Magistrates Clerk when two boys were committed for breaking lamps 8/-. John Jones was paid £1. 4. 6. for putting up Lamps and extra lighting.

We now come to the year 1835 and under the heading of lamps we read of John Fish for lamp negligently broken 6/- and of Walter Carver for another lamp broken 5/- and Nelson Carver for the like 5/-. This is an interesting entry too, which reads of Mrs. Spurgeon for six years lamp opposite her house £3. 14. 0. and of R. Reeve the like £3. 14. 0. Samuel Pettit 21½ tons stones at 6/- £6. 9. 0. and one John Butcher for measuring stones 3/- and Michael Roe carting gravel £6. 15. 0. We now come to James Fishers account for oil £48. 3. 6. and Paul Golder taking care of lamp top 6d. and also John Jones cleaning and putting up lamps 15/- and he received also the sum of £10. 4. 0. for lighting lamps from 15th. Sept. to 2nd. May @ 24/- and a further 7/6 for extra lighting and taking down lamps.

We now come to the year 1836 when it was proposed by the Vestry that the town should be lighted by Gas as seen further on.

During this year the following entries were made regarding the usual expenditure for providing the oil lamps in the town.

John Abbotts Tinsmith received in respect of the year 1834 £1. 4. 2. and Robert Precious Blacksmith lamps £1. 2. 1. for 1834.

William Hicks painting lamps 1834 6/6 and a further sum of 6/2. John Foreman Tinsmith was paid for his work in 1834 £2. 11. 4. and James Gallow carpenter, Ladder 1834 2/3. It seems these tradesmen had to wait some while before getting their money in those days!

Samuel Abbotts account is entered thus:- on account £10. residue £37. 2. 1. Total £47. 2. The Northumberland Glass Co. 'Globes £14. 12. 6. and J. Salter 'freight of lamps £1. 16. 0'.

The next entry is interesting it reads 'A boy taking care of lamp top 2d'. The reward was getting less, may be lamp tops were not now so important as gas was coming!

John Jones lamplighter 12 Sept. to 23rd. April, £10. 0. 0. he also received 'for taking down lamps 5/- and a further sum of 15/- for cleaning and putting up lamps'. In this year one William Norfor received for 'Estimates' £2. 2. 0. and Joseph Bennet was paid £12. 2. 11. for flagstones' and for carting flagstones Robert Tripp the sum of £2. 0. 8. and George R.N. Bi received for 'flaging a matter of £5. 10. 3. James Pettit 22½ tons stones and measuring £6. 17. 6. and for a like weight also £6. 17. 6. for 6½ tons £2. and for 22 tons £6. 14. 6. and for 21½ tons £6. 11. 6. These were busy days for these people for we read 'Michael Roe 3 tons stones and carting £1. 7. 0. And Ben Kirk 6 tons and carting £1. 17. 6. And a bill for 1834 from Charles Carver for 'carting stones' £7. 6. 7. An entry reads:- 'Ward and Block' sorting old paving stones 8/9 and this entry John Gibbons pavior on account £21. 10. 0.

The last entry of interest to us on the eve of the turn over to gas reads Michael Roe carting on account £21. 6. 10½.

A move towards lighting the Town by Gas was made in the year 1836 for we find the following recorded in the Lowestoft Vestry Book (1827 - 1850) which reads thus:-

At a meeting held in the Town Hall on Thursday 26th, May, 1838 in pursuance of a Requisition to the Minister and Churchwardens:

Revd. Francis Cunningham, Chairman

The following Resolution was agreed to:-

That is in the opinion of this Meeting that it is expedient to Light the Town with Gas, provided it can be accomplished without going to Parliament for an Ammended Act. And provided the expense will not exceed £25 per annual beyond the cost of lighting the Town with the present oil lamps. And that the Commissioners of the Paving Act be applied to, to carry this resolution into effect under their present powers.

*(signed) Francis Cunningham,
Chairman.*

In the 'Treasurers Account with the Commissioners for paving' under the date of 1837 we find the following entry regarding the above which reads:

1837 Money of E. Nortons Bill relative to Gas Lighting and . 14 . .

Contract with J. N. Peckstan £17. 14. 3.

Clarks Bill for attending Meetings £11. 18. 11.

It appears things moved quickly for in the account with the Commissioners for the following year we read this entry:-

1838 'James Malam – Gas lighting – £103. 15. 0.' James Malam we learn from Pilots National and Commercial Directory for 1839 had a 'Gas Works' on the Beach of which he was the proprietor. Whites Suffolk for 1844 states that it was built in 1837 at a cost of £2,500 and had a gasometer of the capacity of 8,000 cubic feet.

James Malam continued to supply the Town with Gas from the year 1838 to light our streets until The Lowestoft Water, Gas and Market Company was incorporated by Act of Parliament in 1853. The Act empowered them to purchase the old gas works, to construct waterworks for supplying the town and suburbs to erect a Market House in the old part of this Town; to regulate the Market and fairs and to levy tolls so records Whites Suffolk for 1885 adding 'The (Gas) works were enlarged in 1877 at a cost of £3,000 and cover an area of 2 acres. There are three holders capable of holding 280,000 cubic feet of Gas'. The company charge 4/2 per 1,000. In the town are 800 street lamps.'

But to return to those early days we find in the year 1839 James Malam was paid the sum of £124. 9. 6. for Gas lighting. In the year 1840 it cost the town a matter of £126 and it had risen to £143 by 1841 and £148. 5. 0. was paid to James Malam for supplying 'Gas Lighting' in the following year.

And now after 132 years of Gas lighting in the town, the last gas lamp was put out in lighthouse score by Mr. James Hood of 46 St. Margaret's Road, on November 11th. 1969 who had tended the lamps for 39 years.

For the past three years he has been the only gas lamp lighter in Lowestoft. Before the war four were employed on the task of lighting 100 lamps each using poles. After the second world war, the lamps became automatic.

There could be seen a short while ago, in Maltster's Score two lamps standing side by side, one gas the other electric, before the change-over was completed.

As photography did not come into use before the year 1845 we have no pictures extant of those early oil lamps in use in the Town.

HUGH D. W. LEES

INDUSTRIAL ARCHAEOLOGY IN EAST ANGLIA*by Susanna Martins*

Industrial Archaeology, or the study of the period of the 'Industrial Revolution' from its material remains, has only begun to arouse general interest during the past ten years. Recently, groups for the study of Industrial Archaeology have been started, all over the country. A recent television programme⁽¹⁾ on the subject showed that interest is not confined to the areas that were developed as a direct result of the technological changes of the early period of industrialisation. Steam power, coal mines, woollen mills and iron foundries are not the only subjects to attract attention. The affects of the 'Industrial Revolution' were felt throughout the whole social and economic structure from about 1780 onwards, and all these aspects can be studied by the Industrial Archaeologist. It is because of this that the subject is of interest to those living in the rural areas of East Anglia, as well as those living in the potteries of Staffordshire.

There is an urgent need here, as elsewhere, to study and record all possible information concerning sites developed as a result of the 'Industrial Revolution' before they disappear.

Sites of interest to the Industrial Archaeologist are very vulnerable to destruction because they are very often of little architectural merit and frequently have great scrap metal value. The inherent charm of water and wind mills as part of the East Anglian landscape is now being recognised, but there are few who are prepared to campaign for the preservation of gasworks or workhouses. As the rate of destruction is so high, it is important that those interested in helping in the task of recording buildings and other remains associated with developments during the period of the 'Industrial Revolution' should know what to look for.

East Anglia is an area of small market towns serving a mainly rural hinterland, and with a coast line boasting some of the most important ports, both for export to northern Europe and for the import of fish. Here we have plenty of scope for the study of Industrial Archaeology.

East Anglia's wealth was in her agriculture. This was able to develop so that a smaller percentage of a rapidly increasing population was able to provide food for the new towns and industrial areas. New methods of farming firstly meant new layouts for fields and farm buildings. The great improving estates of Holkham and Raynham rebuilt farms and outbuildings, as well as labourers cottages, and their examples were followed elsewhere. The plans of these model farms with their great barns and cattle yards and elegant farm houses with easy access to good-sized rectangular fields, are the visible evidence for the early Agricultural Revolution and the much publicised 'Norfolk' system. On the lands of the improvers, great stress was laid on the care of the soil. Not only was a rotation of crops introduced, but land was marled and limed. The number of marl pits that remain show the importance of marling and a few limekilns can also be seen.

Changes in farm layout and management were followed in the early nineteenth century by rapid improvements in farm machinery which have continued until the present. There were many agricultural implement makers working in East Anglia, of whom Ransome's is the most famous. Examples of all those works need preserving and the value of this early machinery to the agricultural historian is often forgotten. When old trade catalogues have long been destroyed the only available evidence for types of machinery produced and used may be the actual machine itself. These need to be used in one of the local museums concerned with agricultural history. With the necessary modernisation of farms, horse-drawn equipment is being scrapped or burnt. Farmers cannot afford to have sheds full of obsolete equipment when new expensive machines need a roof.

The need for more intensive farming in the early nineteenth century resulted in the Broadland area along the Norfolk-Suffolk border being more effectively drained. The marshes were mostly enclosed in the early nineteenth century and with enclosure, more drains were dug and drainage Mills set up. After 1850 some of those windmills were replaced by steam pumps, but now both forms of power have been replaced by electricity. Mills are derelict and the only surviving steam pump is to be removed. Documentary evidence for the history of drainage is fragmentary and more field work is needed before all the drainage mills have fallen into such disrepair that neither their machinery can be studied and its efficiency ascertained, nor the date of the original building be determined.

Improved agriculture meant increased output of corn which then had to be ground into flour. By 1750, most of the good sites for water mills were already occupied, but steam power for milling had not been developed. The only other source of power available was wind, and between 1750 and 1880 many brick tower and wooden smock mills were built on hills and along the coast of East Anglia. The existence of many post mills at an earlier date is shown on the seventeenth and eighteenth century

maps and a few still remain, but those are far less permanent structures and most have disappeared. It is worth visiting known sites of post mills, so that a typical windmill mound may be recognised and may then be recognised on sites which cannot be identified on maps.

Watermills as well as windmills have now mostly been superseded by steam, gas and now electric roller grinders. Although the building may be preserved, the machinery is not so well protected and needs surveying and photographing before it is too late.

An important aspect of the history of the period of the 'Industrial Revolution' is the great increase of population that took place. More people meant more houses and these were nearly always built of brick in East Anglia. By the 1880's brick kilns existed near most towns and villages. We know that for some large buildings the bricks were burnt on the site. Few brick kilns survive, but where they do, they are worthy of attention.

Improved and more intensive methods of farming, alongside an increasing pressure of population meant misery for the rural labourer in the early nineteenth century as the many riots against enclosure, low wages and the introduction of machinery show. An increasing number of the poor had to be provided for from the poor rate and the only way seemed to be to build workhouses. Many parishes or groups of parishes built workhouses before 1835, but after that date parishes were grouped by law into Unions which then had to build their own Union workhouse, large enough to house between 300 and 500 paupers. These austere buildings on the edge of the market town chosen as the centre of the Union have survived until recently as a grim reminder of the nineteenth century solution to the problem of social security. In many cases they are being demolished today.

When Defoe visited the Eastern counties in the 1720's, he noted that the most important industry in much of Norfolk and Suffolk was weaving, but now we can see little evidence for this except the occasional large first-floor weavers window. It seems difficult to believe that no looms survive and if one can be found for a local museum it would add much to the Industrial Archaeological interest of the woollen industry.

Many towns became important centres for consumer industries in the nineteenth century, serving the agricultural areas around. Huge breweries, often the most imposing building in the town, were built. These old breweries are often now being taken over by large companies. They are then gutted and sold for other purposes. Corn Halls were built as meeting and marketing places for the local farmers. They have now outlived their usefulness and are a white elephant in the hands of the U.D.C.s. Iron foundries and agricultural implement makers existed in most towns, which would also have had their own mill.

The increasing unrest and political awareness of a wage-earning proletariat began to convince the employing classes that education was necessary if revolution such as that experienced in France was to be avoided. From the early years of the nineteenth century until 1870 the two rival denominational societies, the British and Foreign Bible-Society for the propagation of Christian Knowledge, were setting up schools for elementary education and after 1870 this duty was taken over by the School Board. These schools are now being replaced by more suitable buildings, or in small villages, they are being closed altogether. Yet the buildings provide much information on the development and growth of schooling and the changing ideas as to necessary facilities for an elementary education. What was the school environment of the 1850's and how did it differ from that of 1880's?

With the rise of an independent working class which could find little comfort in the Established Church of the gentry and employers, we see the growth of non-conformity, and by 1890 every village, however small, had at least one, if not two or more chapels. These too are fast disappearing, but need looking at as they played an important part in the life of the town and farm labourer. How simple was the architecture of the Primitive Methodist Chapels and how many were they built to house. When did the evangelical zeal with which each sect began, give way to introvert communities more interested in improving their meeting places than going out to find more converts. Is there a distinctive country or urban style?

The industrial structure of the ports of East Anglia has changed greatly since 1918. Fish has largely given way to oil or passengers ferries. The centres of the towns are being redeveloped, but the evidence for the old fishing industries need recording.

The net making houses and fish curing houses are an important part of the History of the East Coast ports and few remain today.

The 'Industrial Revolution' would not have been possible if transport methods had not improved. Food had to be got to the towns. Agriculturalists had to visit East Anglia to see the improved

methods. Roads in Norfolk were not turnpiked until the 1790's, but there are toll houses and mile stones as well as coaching inns as evidence of this. Toll houses are often small and unsuitable for improvement they stand on the corners of busy roads and are often demolished for road widening. Road widening is also one of the causes of loss of old milestones,

Canals had little effect on this rural area with few heavy raw materials to move and no shortage of navigable rivers. The Norwich/Lowestoft canal was a financial failure, but its course can still be traced today,

Railways made it possible for the produce and people of East Anglia to reach the towns and for the townspeople to reach the East Coast resorts. The closure of many lines means the loss of much evidence for the early development of steam and the railways deserve a study in their own right.

It is not possible to do more in one short article than point to some of the types of site which need studying. Those interested in doing detailed fieldwork might be interested in the pamphlet, 'Notes for field work in Industrial Archaeology', written for those working in East Anglia – available, price 6d, +4d postage, from Mrs. S. Martins, Eastgate Street, North Elmham, Dereham, Norfolk.

A project based on any one of the many lines of enquiry suggested above would be of great value and could be tackled in the Lowestoft region by just such a group as the Lowestoft Archaeological and Local History Society.

⁽¹⁾ Chronicle BBC2 March, 1970.

Susanna Martins. June 1978

THE PASSING OF THE COUNTRY MILLER & HIS MILL. RIVERS STOUR & WAVENEY.

by John Munnings.

The following was pronounced over forty years ago:- These graceful adjuncts to the English scenery, familiar throughout the country for many a generation, are rapidly being depleted of the fond emblem of brisk life and prosperity, the once busy mill edged out of existence by the giant Port Roller mills. Vast numbers of the venerable rustic weather-boarded mills have fallen into ruin, many have fallen from their high state of flour making to that of Animal Feeding Stuffs, though others, as a last resort, fitted roller plants, replaced, their water-wheels with turbines, where the fall was sufficient, introducing auxiliary steam power and later suction gas or diesel engines, hoping to carry on for a while, at least.

A large number of mills fell into decay, when the Flour Mills Control came off after the 1914-18 War, there are now no water driven flour mills left in Suffolk. No one stops to think. In one night during the last war, 15% of the milling capacity (mainly port mills) was destroyed by bombing, but then there were some country mills operating – what now!

The mills that were giving out that cheerful sound which fell merrily on the ears of the miller and his men, now they are all gone, the sound of the old wheel is hushed, the dusty miller no longer casts his watchful eyes along the reed lined banks of the Mill Lade, to look at the water lilies, flowery rushes crowfoots, the Ducks, Dabchicks and Swans, and the innumerable beauties given us by nature. The millers and their men, not forgetting the millwrights, have served their generation well, and a so called new order of things is upon us, yet looking back from the horrors of the present day one cannot help thinking or rather knowing that life has lost much of the happiness of the good old days.

In late harvest time, when the horse drawn mowers were cutting the beautifully scented marsh hays, the country lanes were alive with horse drawn wagons carrying new wheat to the mills, (farmers often threshed wheat off the fields, for a little ready cash). One can almost hear the whistle of the horseman, as he drove his wagon up to the mill, sometimes with 20 sacks, drawn by three or four horses.

The old millers were generally of independent spirit, they spent their days in peace, and the memory of their simple lives should be cherished.

The picturesque old mills where their lives were passed, the retired nooks where –

Echo in her airy round,
Over river, marsh and hill,
Cannot catch a single sound,
Save the whirr of yonder mill.

These memorials of a busy past day here and there attract the eye, or absorb for a moment, the attention of the few surviving millers, but beyond such silent recognitions of a once flourishing industry, thus quietly but surely passing away, the change seems to progress to its close unnoticed, unless by those who may eventually suffer by it.

Great inventions usually end up by helping a few, and sounding the death knell for a lot. The first was in 1786 when the ill-fated Albion Mills in London were built, driven by two Boulton & Watt beam engines, hitherto the steam engine was used to pump water, from the top of the mill to the head, so to keep the wheel running. The second being the introduction from Hungary of the Bucholz System Roller Mills in 1862 at Joseph Fison and Co's Eastern Union Mills, Ipswich, and in 1867 at Jeremiah Stannards Mill at Nayland.

No mention of Suffolk mills, or any mill for that matter, should ever be made, without mention of the famous firm of Whitmore and Binyon of Wickham Market, until the turn of the century they had worldwide reputation, employing over 300 men in the manufacture and erection of waterwheels, turbines, sluice gates, steam engines and all the milling machinery and furnishings. Some of the finest machinery ever made was manufactured here, they made up machinery to fit mills, and every job was done to perfection, any old millers still alive will verify this. The 16 ft. waterwheel at the Deben Mill, Wickham Market with its 'Depressing Gate' is still in use, the steam engine from this mill which ran for 70 years, now in Abbots Hall Museum, Stowmarket, and a diagonal Roller Mill in the Bridewell at Norwich. The great mill on the River Stour at Dedham, which replaced Constable's mill in the 1860's was built and furnished by Whitmore and Binyon, which included a steam engine, unfortunately this fine mill was destroyed by fire in 1908. I recently noticed some floor supports in the present mill (one of the few independent country flour mills still in operation) had Whitmore and Binyon's name on them as is on the sluice gates.

A 3½ sack roller plant at the Kings Mill, Great, Shelford near Cambridge ran trouble free from 1890 until the early 1950's.

A small plant made to fit Letheringham Watermill had rolls 12" x 6" the smallest ever made. Their downfall was caused by something that doesn't happen today, their work was too good, and they were too conscientious.

Domesday Survey shows about 178 mills in Suffolk, it would be difficult to trace all the sites today, as some would be 'Winter Mills' i.e., mills on small streams which only flowed in the winter. The two main rivers being the Stour and the Waveney, although both being boundary rivers, most of the mills were on the Suffolk side. On the Stour, the only mills in Essex being Dedham, Langham, Boxted (both demolished), Wormingford destroyed by fire 1920, Great Henny now a residence, Borly disused, Liston now part of Stafford Allens Chemical Works, Pentlow and Ashen. On the Waveney only three were on the Norfolk bank, Ellingham, Ditchingham and Earsham once had a 7 sack turner plant, but as the result of 'take overs' the usual happens, it is now a provender mill, but the turbine is little used.

The River Stour and its tributaries had over forty mills at one time, and as well as driving mills, there was until about 1916 a large number of Barges and Lighters operating to Sudbury through 15 sets of locks, commencing at Brantham, as late as 1874, when competition from the Railways was growing, there was over 6000 tons of coal transported to Sudbury each year, mostly on Robert Allen & Sons, barges. Most millers on the navigable part had their own barges and lighters. However Clover's used lighters to Dedham Mill until 1930, when the late Mr. Percy Clover paid the last toll to the Navigation Company, so ended a great era which lasted over 200 years.

The lowest mill on the Stour is, or rather was, at Cattawade, Brantham, a brick-built mill, used for Flour Milling until the last war, then used for grinding spices etc, the water power being rather dicey owing to the tides, this mill was destroyed by fire a few years ago.

Flatford Mill needs no introduction.

Dedham Mill still making flour, 14 sack plant, mostly Henry Simon machinery, originally had a turbine, but now no flow of water, thanks to the South Essex Water Companies pumping stations at Stratford and Langham.

Stratford Mill, a large white brick and slated building erected about 1840, no information about its origin, it was mainly used for making macaroni, it had a large beam engine as well as waterpower, one of the macaroni runners (large granite millstones) from this mill stands beside the ruins of Nayland Mill in Mill Street, being transported there by barge about 1900.

Langham Mill in a beautiful setting, in possession of the Boreham family for many years, ceased work in 1925, and was demolished by the Water Company to make way for a pumping station.

Boxted Mill was demolished many years ago, it belonged to the Munsen family.

The great mill at Nayland, the largest in Suffolk, stood in the centre of the village; it was the biggest watermill in Suffolk, being six stories high and over 200 feet in length, stretching down the street, and had two large beam engines, up to 1867 when a partial roller plant on the Bucholz system was fitted, using under runner millstones for final reduction, there were 16 pairs of millstones in operation. The locks here were about a quarter of a mile upstream, so the barges had to be floated backwards down the mill-lade to the bridge, the mill lukim was extended over the main road, by this means the barges and lighters were loaded and unloaded, when one thinks of the output of this mill in the heyday, 700-800 sacks (280 lbs) of flour a week, and a big percentage of this and incoming wheat was by river, standing on the bridge there today this seems almost impossible. The mill was for many years in the hands of Jeremiah Stannard, my grandfathers cousin, and his brothers Robert and William, he was a great man for trying out anything new, but as usual the first people seem to have all the troubles, as he did with the early Bucholz rolls, owing to difficulties with the adjustments, he eventually fitted up a complete roller plant, with Whitmore and Binyon, Samuelson and Turner machines, the mill eventually closed down about 1905, however in the early 1920's a Mr. Hines, a retired grocer, took over part of the disused mill, removed the wheel, and fitted a turbine and generator, supplying Nayland with electricity until the National Grid came in 1935.

Wissington Mill, also owned by Stannard, is a fine weather-boarded mill and has been well preserved. Clovers used this mill after Stannard, where they used to take in wheat and clean it, then lighter it down to Dedham, until navigation got too bad at Boxted in 1916.

Wormingford Mill (Essex) one of the first mills in these parts to manufacture Sussex Ground Oats, was destroyed by fire, about 1920.

Bures Mill, a very old weather-boarded mill with a mansard roof, has now been very much rebuilt, but has retained its character, originally had a 4 sack roller plant but this was replaced for the manufacture of Sussex Ground Oats when Wormingford was burnt. Although the river is now diverted, the mill is busy making feeding stuffs, there generations of Hitchcocks have been and still are millers here.

Great Henny (Essex) picturesque old mill, now a residence.

Great Cornard, a flour mill until recently, still a busy provender mill. Owned by the Baker family for over 100 years.

Sudbury Mill, a large weather-boarded mill, with white brick extensions, was making flour until last year, the water wheel was still useable, it now stands a silent sentinel over the wide expanse of marshes.

Bandon Mill, now a private residence, a picturesque mill. It had a 2 sack roller plant until the 1920's. Thomas Good the miller used to sell all his flour in Sudbury.

Berley Hill (Essex) disused but in good condition.

Liston Mill (Essex) now included in Stafford Allens Chemical Works, up till recently used its turbine.

The other mills, Withingdale, Long Melford, Pentlow (Essex) Patrish Mill, Cavendish, one mill left out of three that were at Clare was used until recently, Ashen in Essex, Baythorne End, Wixhoe and Kedington all disused or gone.

Tributaries of the Stour (Suffolk side). There is a Silk Mill at Glemsford on the River Glem, but water power is no longer used. On the Chad Brook, the Old Hall Hill at Long Melford is now demolished, and Alpheton is disused. The River Box, Thorington Street Mill at Stoke-by-Nayland used until recently and kept in good condition, Polestead disused for many years, but now an attractive residence, Bosford Mill a beautiful weather-boarded mill with a mansard roof, was destroyed by fire in 1936 and now rebuilt.

The River Brett once had some busy mills, at Higham only the site is left, at Roydon the Victoria Roller Mills, belonging to the Green Brothers was destroyed by fire in 1916. When William Green moved to Brantham Mill, his brother Walter had previously moved to the Castle Mill Beccles, the ruins were bought by a Mr Keeble, who built up part of the mill, he found the turbine intact, and until recently used this to drive 2 pairs of millstones. Layham Mill had a roller plant previous to the war. Two of the three Hadleigh mills, Toppesfield and Bridge Street both had roller plants until Dan Alderton retired and sold out in 1937. Bridge Street Mill was demolished for road widening, and Toppesfield, a fine weather-boarded mill was destroyed by fire in 1952. Aldham or Peyton Mill is kept in good order and used by the farmer at Peyton Hall. Kersey or Cosford Mill, once a picturesque gabled mill, now almost a ruin. Semer has disappeared, but Nedging and Monks Eleigh have been

preserved.

On the River Waveney – there was once a mill by Geldeston Lock. I once saw a print of this but I cannot remember when or where. Ellingham Mill, stands on the Norfolk bank, once one of the most up to date mills on the river until 1930 when flour milling ceased, one of the few country mills using plant sifters instead of centrifugals. There were two turbines here, one a small German made of 10 h.p. fitted about 1895 and a large Armfield turbine of 90 h.p., this proved too big and could only be used to full capacity when there was a good head of water and the tail water was low, the mill continued as a provender mill but soon after the war it was involved in a ‘take over’ which is generally the beginning of the end, the mill is now a residence. There was a mill at Wainford until about 1885, water power was once used at the maltings there.

Bungay Mill was originally a paper mill which was destroyed by fire, the site was bought in the 1870’s by the late Charles Marston’s father and rebuilt. He fitted a roller plant in the 1890’s. This was in turn destroyed by fire about 1900, when Marston’s took over Earsham Mill, and rebuilt Bungay as a provender mill. Gilbert Gilks & Gordon of Kendal fitted a turbine here once, only on agreement with Marston that if it wouldn’t do the work of the waterwheel the wheel had to be replaced, in the end the turbine had to come out, a common place example of a miller knowing more than a manufacturer.

Ditchingham Mill has been gone for a hundred years, this was on the Norfolk bank as is Earsham.

Homesfield Mill, something of an odd man out, I sometimes think, was demolished in 1927, after the river broke away at the weir. It had a wooden water wheel with straight paddles or buckets, and a spur wheel for a pitwheel, (most other mills have a bevel pitwheel and wallower on an upright shaft, with a spurwheel to drive the stone ‘nuts’, and a crown wheel on top to drive other machinery, most mills on the Waveney had these type of wheels and gearing, mostly cast at Knights & Stacey’s foundry at Harleston) the spur wallower being on a horizontal shaft running along the centre of the mill, with three large bevel gears to drive the stone ‘nuts’ and another spur gear for driving the hoist and dressing machinery, this mill ran ‘left handed’ or ‘Widdershins’ an old millers term for dressing stones ‘against the sun’ or left-handed.

Limbourne Mill Homesfield, or Wertwell Mill as it is sometimes misnamed, until the 1930’s there was a small roller plant here about ½ sack capacity, it ceased its milling career about 20 years ago and is now a residence.

Mendham Mill had a new water wheel and gearing in 1861 from the Harleston foundry, the building was enlarged in 1871, it was then owned by George Chase, a grasshopper beam engine made and erected by Holmes & Sons Norwich at that time, this engine ran continuously for 50 years mostly day and night and was driven by one man, James Souter for the whole period, no one was allowed to interfere, when the engine was dismantled in 1921, the old man died of a broken heart, it was his life. My grandfather came here into partnership with George Chase in 1872, having served his apprenticeship with his cousin Jeremiah Stannard at Nayland in 1854, and was there for 18 years. Chase and Munnings also had Weybread Mill. Chase was killed in 1887, when he was thrown out of his dogcart in Harleston, my grandfather kept Mendham Mill on and fitted a partial roller plant, keeping 4 of the 8 pairs of millstones for under-runners, and a complete Turner 3 sack roller plant in 1905. Flour was carted to Bungay Staithe, where it was taken to Yarmouth by wherry, and shipped from there to London and Newcastle. My late famous uncle Sir Alfred Munnings K.V.C.O. P.P.R.A. was born here in 1878, to join Constable and Rembrandt as famous millers sons who became great artists. My father carried on the mill, flour milling ceased in 1932, and provender milling was carried on until 1938 when the mill was turned into a private residence.

There was once a paper mill on the ‘old river’ near Mendham Church.

Weybread Mill, a fine mill which enjoyed the highest fall on the river, about 7 feet, there were two wheels, the biggest being 20 feet in diameter and 12 foot wide, the other some bit smaller. Before the roller plant was fitted there were 10 pairs of millstones, which with a good head of water could be driven by the waterwheels, leaving the steam engine to drive the cleaning and dressing machinery. After George Chase’s death in 1887, John E. Button of Diss took over the Mill and later fitted a 4½ sack roller plant, it was a good mill, and unfortunately it was destroyed by fire 6th February 1920 and never rebuilt.

Needham Mill, this mill stands in Weybread, a small brick building which had 3 pairs of millstones was in use until the mid 1930’s, now disused but kept in good order.

Lucks Mill Weybread, only the site of this mill is still discernable, but I could never find out any details.

Syleham Mill, a picturesque old weather-boarded mill was converted to Drabbet making in 1839, and was in continuous use as a clothing mill until it was burned down in 1928.

Hoxne Mill ceased working as a mill about 1930. It contained a Tattersall Midget Roller Plant, which was always in trouble. This mill has been well preserved and is still in working order.

I have taken too much room for these two rivers, but to my mind they were the most important. I shall have to leave the Rivers: Lark, Gipping, Blackbowne, Deben and sundry smaller rivers until another time.

John Munnings.