



## Windmills in Essex

Windmilling in Britain is thought to have begun in the late twelfth century, by which time water mills were already well established. By 1825 - 35 when windmilling in Essex was at its peak, there were about 285 mills in the county. One hundred years later, only a handful were still at work and by 1950 the last working mill had stopped. The decline of both wind and water mills from about 1850 followed the arrival of the steam-driven roller mill and improvements in sea, rail and road transport. Grain could be brought from abroad to the huge dockside mills and the new roller-milled white flour could be distributed easily, even to remote country areas.

- **Mill preservation and restoration**

By the end of the nineteenth century, concern was being expressed in Essex at the demolition of Great Bromley post mill and the threat of a similar fate to Upminster smock mill following severe gale damage. The year 1929 marked the first successful attempt to preserve an Essex mill at Bocking, and nine years later Essex County Council began to issue orders which prohibited the demolition of six more mills. After the second world war, the mill protection movement gathered momentum, usually just preserving the mills as scenic landmarks. Preservation was later extended to include the machinery and by the early eighties even more ambitious targets were being achieved. Four fine mills have been restored by the County Council, most being in working order. These and other mills within the county are opened to the public on a regular basis and at other times by arrangement. They represent an essential part of the county's industrial and social history and offer glimpses of rural life in a simpler and more robust age.



- **Windmill types**

Three types of windmill were commonly used in Britain and all can be found in Essex. These are the post mill, the tower mill and the smock mill. They differ in their methods of construction and in the ways used to turn their sails to face the wind. The sails only work efficiently when they face directly into the wind and so most windmills had some means of turning the sails to achieve this.

With the post mill, the sails are built into the wooden body which houses the machinery. The whole mill body is pivoted on a massive wooden post, allowing the body and hence the sails to be turned to face the wind. The body is turned either by using a long lever called a tailpole

which can be pushed around by the miller or by animal power, or else by a fantail. A fantail is a system of gearing driven by a fan mounted at the rear of the mill which acts rather like a wind vane and automatically keeps the mill facing to wind. The post mill is generally thought to be the earliest type and was the most popular. Some 185 of the mills in Essex in the mid nineteenth century were of this kind.

The main structure of the tower mill is built of brick or stone and so cannot be rotated. The sails are mounted in a separate wooden cap which is arranged so that it can turn on the top of the tower. This cap is rotated either by hand, usually using gearing worked by chain from below or by a drive from a fantail.

The smock mill works in the same way as the tower mill, using a rotating cap, but differs in that its main structure is built of timber and is usually octagonal, on a masonry base.



Post Mill



Smock Mill



Tower Mill

- **The First Essex Windmills**

From ancient manuscripts, a windmill is known to have existed at Henham as far back as 1202, with another in Purleigh believed to have been of around the same age. Pictures appeared a little later. An early English illustration of a windmill occurs as part of an

illuminated manuscript of about 1270 which has become known as 'The windmill Psalter'. Another appears in the 'Luttrell Psalter' executed for Sir Geoffrey de Luttrell in about 1340. Early mill pictures were usually of post mills of simple construction without a brake and with only one pair of stones in a diminutive mill body. However, a few metres over the Suffolk border in the church of St. John the Baptist, Stoke-by-Clare, in a window in the south transept, a tower mill is depicted in stained glass which reputedly dates from the fourteenth or early fifteenth century. The earliest record of an English tower mill is in 1285.

Archaeological evidence for medieval windmills in Essex is relatively slight. However, a recent project aimed at dating small circular cropmarks indicated that two of these, at Little Bentley and Great Bentley, were of 12th/13th century date, and possibly represent the locations of medieval windmills. A similar site has been more extensively excavated at Boreham near Chelmsford. Here the possible windmill was part of a complex of buildings and enclosures and may represent a manorial centre. Cropmarks, of circular ditches with a clear cross shape in the centre are more obviously windmill sites. The most famous excavated site of this kind in Essex, at Mucking, proved to be of late medieval/early post-medieval. In addition to these cropmark sites, mill mounds survive at many locations around the county, indicating the former presence of windmills.

From their earliest years, windmills were often built on man - made mounds. The cross trees of early post mills were frequently buried in the earth to stabilise the mill, thus constituting a 'sunk post' mill. From about 1750 the practice of building a mound had virtually died out where new sites were used. However, old mounds were often re - used, for example, at Mountnessing.

## • The Millers

The windmill is undoubtedly a picturesque blend of building and machine and this, together with the romantic picture of the village miller as a genial, free and noble artisan perhaps explains some of the windmill's popular appeal.

It is probably unwise to generalise too much about the personality or character of millers although we can safely assume that physical strength and stamina were necessary attributes.

The miller's life was hazardous; we know from numerous reports of mill accidents that windmills would, today, be seen as 'hostile working environments'. There was the risk of entanglement in rotating machinery which claimed many lives, of being struck by sails and of sails accidentally turning when a man was working on them. Because the mill depended on the most fickle of the elements it was prone to disastrous storm damage such as 'tail winding', when the wind catches the mill from behind, which can cause considerable damage, with the brake unable to cope. The mill, a very tall building, often situated on the highest point in the district, was a prime candidate for lightning strikes and with quantities of inflammable flour within a largely wooden structure, a fire was likely to ensue. Fires could result from causes other than lightning. For example, the stones running out of grain and striking sparks off each other, or the brake generating heat by being applied for a long time without being able to stop the sails in a high wind. The miller, especially after being becalmed for a long period, would want to use a strengthening wind for as long as he dared. Looking out of his mill he needed to be alert and to be able to 'read' the oncoming weather like the captain of a sailing ship, but if he became the victim of his inexperience, or courage outweighed prudence, he might have to contend with a mill running away out of control, or becoming tailwinded in a sudden thunderstorm.

Mental and physical stamina were also necessary to face the rigours of everyday work such as climbing on to common sails to spread their canvas on a wet freezing winter night when the miller's clothes would become wet through and frozen onto him before work could even begin or carrying 20 stone (127kg) sacks of grain or winding a mill by pushing it round by its tailpole. Periods of work were extended through the night or over weekends. Many millers were men of strong religious conviction who, despite the temptation of a good milling wind, would not work on a Sunday. However, starting at 12.01 am on Monday would be expected if the wind held! The tendency of millers towards religious belief is not difficult to understand,

considering that their lives as well as their livelihood depended on judgements made in their often solitary working state. In calmer periods it was this solitude which gave time for spiritual contemplation. Any Divine help which could be elicited would be welcome! It would however be wrong to suggest that piety was the hallmark of a miller. There were also the dissolute: the gluttonous Thomas Wood of Billericay, James Royce of Great Totham, a seducer and spendthrift and the inebriate 'boss' at Great Holland mill who jeopardised a millwright's life by not setting the brake firmly before work on the sails began.

As well as good judgement, courage, stoicism, self confidence and physical strength, the miller, at least in the eventide of windmilling, needed to possess the craft skills of the millwright, embracing something of engineering, carpentry, blacksmithing, and bricklaying in order to do 'first aid' repairs. Despite something of a generalised reputation in earlier times of giving short measure, by the nineteenth century, millers, once servants of small communities, had largely become entrepreneurs in their own right, often selling their products well beyond their immediate locality. They were by this time respected people of some standing in village society, often serving, for example, as parish councillors.

