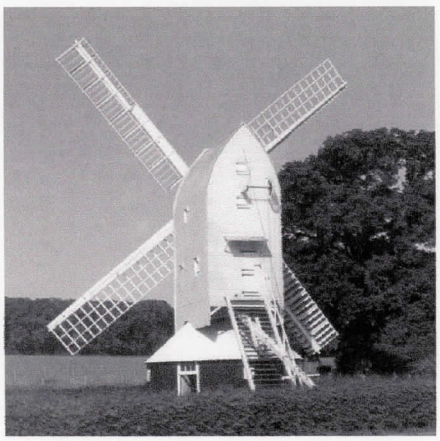


Friends of Lowfield Heath Windmill

Newsletter No 19 Spring 2004

NEWS FROM THE COMMITTEE

In the last Newsletter, we commented that the summer months would be an interesting period in the life of Lowfield Heath Windmill as a result of all the changes to the area round the mill and we expressed the hope that visitor numbers would not be adversely affected by the closure of Gatwick Zoo. It is with pleasure that the Committee reports that visitor numbers were very good on all our Open Days in 2003 and were especially so on National Heritage Day in September. Our visitors are no longer mainly those who came to the mill as an afterthought to their Zoo visit and now tend to be those who are much more interested in heritage buildings and particularly in windmills. The new "Mill Open" signs have attracted a number of passing motorists and the placing of an entry in the "What's On" section of The Guide, part of the Surrey Mirror, has also been beneficial.

Restoration and repair work continued during 2003 and the work on the new common sweeps and tailpole has been completed. The tailpole and the whips of the sweeps are now made of laminated wood and it is hoped that this will have a longer useful life than the previous timber. The mill body was completely repainted and the roundhouse re-tarred during 2003 and many visitors commented on how splendid the mill now looks. The work on the new bolter has started and should be completed before the expiry date of the Surrey Historic Buildings Trust grant. Part of the SITA (Landfill tax scheme) grant was also used to help fund this piece of equipment.

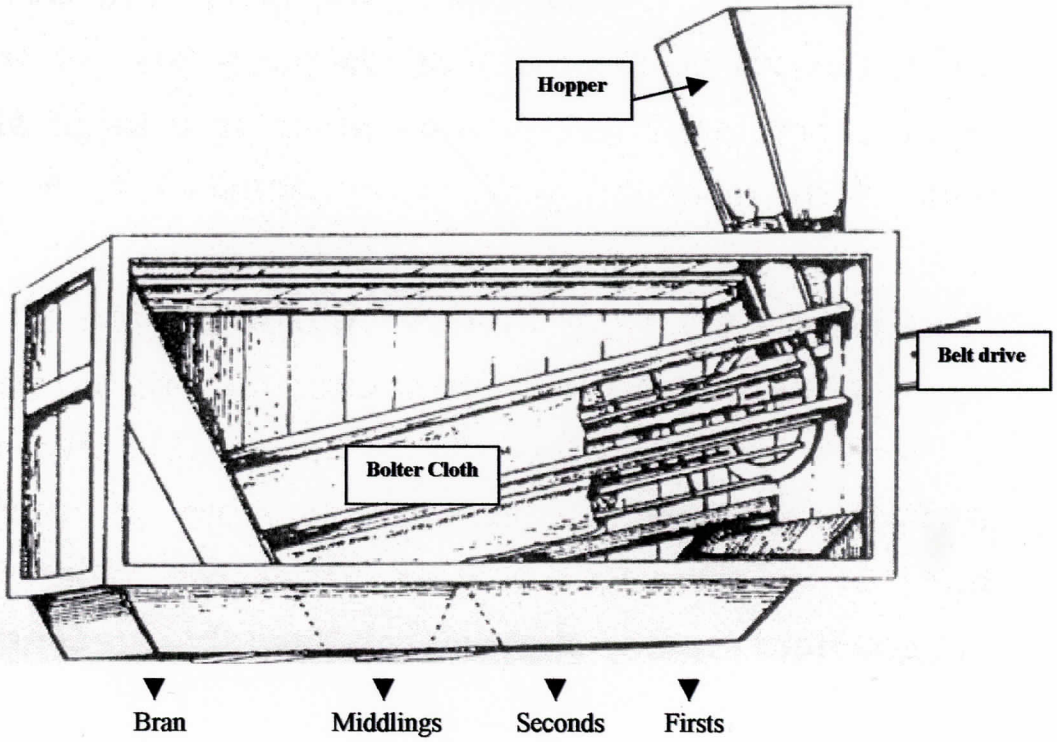
House building on the former Zoo site is now well underway and it is expected to be completed by June/July 2004 with the first houses being occupied in early 2004. The Committee discussed the idea of holding a welcome party for our new neighbours in August/September 2004 and it was agreed that this should be arranged when we know more about the completion date. General access to the mill grounds is now much improved with most of the fencing now complete and a new access gate having been put in. It should be noted however that access is slightly restricted (mainly at the weekend) until the building site security gates have been removed

The possibility of increasing TV/press coverage in 2004 has resulted in Southern TV showing an interest in producing a short TV clip about the mill in March 2004. The possibility in getting an article in the "Yesteryear" section of the Surrey Mirror is being pursued and entries in the "What's On" section will continue on a monthly basis. The publicity and information leaflet given to all visitors is being revised to remove all references to Gatwick Zoo.

Other items the Committee discussed have include the possibility of providing light refreshments (e.g. cold drinks, teas, biscuits) for visitors on Open Days and any suggestions as to how this could be undertaken would be welcomed. Also sources of grants to allow the building of, for example, a granary suitable to house a reception area/museum, refreshment area and toilets are being investigated.

Finally, we include a very sad item of windmill news about which you may have not heard. The splendid white, open trestle post windmill at Chillenden, Kent, which had undergone a major restoration in 2001-2, collapsed on 26.11.2003. Photographs of the mill show major damage to the structure, suggesting it has little chance of repair. *Addendum* It has just been reported that, as it was insured fully, it WILL be re-built.

The work on the new bolter is progressing nicely, the frame,the top and the right hand end (as we look at it below) are complete. We are now working on doors, at the lefthand end and on the front, along with the back so as to enclose the whole thing and keep the flour dust from covering the whole of the mill.



What is a Bolter?

You will have seen mention in some recent Newsletters that a bolter is being made and that this will be installed in the mill soon. Perhaps you have wondered what a bolter is and what function it performs in the milling process? Without a bolter, a miller is only able to produce wholemeal flour and animal feed and he thus has a very limited range of products to offer his customers. In modern terminology, a bolter gives him several added value products.

As early as Roman times, the millers and bakers knew that by sieving the millstone meal, the quality of the flour for making bread could be improved appreciably. In the Middle Ages, the miller or his boy would have carried out the process by hand using a sieve or temse but by 1502 a German called Nicholas Boller had invented a mechanised sieving machine and this was rapidly adopted by corn millers throughout Europe. Gradually, improvements were made to this machine, now called a bolter, and it became an essential part of the daily life of a corn miller.

A bolter is operated by an auxiliary pulley belt drive taken from, in the case of our mill, the brake wheel. It consists of a wooden frame or reel, about 6ft by 2ft, set on an inclined shaft or spindle that is driven by a pulley wheel at its upper end. The reel is covered with a silk cloth made up in the form of a sleeve. The first or upper section of the sleeve is finely woven, the second section is of a slightly coarser weave whilst the third section is even more coarsely woven. The sleeve is kept in place on the reel by leather straps or reinforcements. Outside the rotating reel, there are static longitudinal beaters. When the millstone meal is fed into the upper end of the rotating reel, it gradually passes down its length. The weight of this meal causes the sleeve to belly out and when this bulge hits the beaters the flour is forced through the silk meshes. The whole of the moving parts of the bolter are encased in a wooden box, the bottom of which is divided, usually, into four small hoppers which allow the miller to take four products from the sieved meal.

These four products are Firsts, Seconds, Middlings and Bran. Firsts, the finest and the whitest flour, is also known as First Grade or Patent Flour. Seconds is also known as Standard Wheaten or Wholemeal Flour. Both of these products are used to make bread, cakes and other bakery products. The Middlings are sometimes used to bake a coarse household bread and they are also the source of semolina, the hard particles of wheat. Middlings are also called Sharps, Supers, Thirds or Toppings. The final product from the bolter is the bran, which is the very coarse pieces or flakes of the wheat grain and is used as animal feedstuff.

There is another type of sieving machine, known as a dresser or wire machine, patented in 1765 by John Milne, which is also in wide use in mills. The principle of operation is similar to a bolter but instead of a rotating silk covered reel, the dresser has a static wire mesh covered cylinder with the wire mesh having three (or more) aperture sizes along its length. Inside this cylinder, there is a spindle on which several brushes are mounted. The spindle and brushes are driven round by a pulley system and brush the meal through the wire meshes producing the range of products described above. The dresser or wire machine has two major advantages over the bolter; first, the wire mesh is much less susceptible to damage by the brushes than the bolter's silk cloth is by the beaters; and second, it is capable of a much greater throughput rate because it can be run at about 350-650rpm as against 30-40rpm for the bolter. Both machines find wide use in wind and water mills with bolters generally being installed in small country mills where a high throughput rate is not essential whilst wire machines are generally found in the larger town mills where it is necessary to maximise output.

From our Treasurer

Although we have a healthy sum set aside for maintenance, our income from Open Days, donations and talks still does not match the insurance premium of £876, which we have just paid. We effectively have had a shortfall of £262 this year. So we **do** still need funds.

We were fortunate enough to receive grants during the last financial year from SITA, the Gatwick Airport Community Trust and the John Bristow & Thomas Mason Trust. This enabled us to replace the rotten common sails and tailpole and having the whole structure repainted. A new bolter is presently under construction using materials purchased with some of the monies from these grants.

We rely entirely on our visitors' donations (and other generous donors) for our income. Although when the zoo closed we feared the worst actually our visitor numbers increased. This was probably due to better advertising for our open days, plus the fact that visitors were specifically visiting the windmill rather than the zoo, with the windmill as an afterthought.

You could help us save money!

If you have e-mail, you could receive the next Newsletter on the Internet. This would cut our printing, packaging and postage costs. If you would like to hear about the mill's activities in this way please send an e-mail saying as much, to mhrowgarth@aol.com (Mike Harrison - Secretary)

Would YOU like to get involved?

We are looking for volunteers to help 'man' our Open Days.

This is only for an hour or so per month on a Sunday afternoon, during the summer.

Visitors enjoy it and we think you will too!

No technical information is necessary, as experts are on hand to provide this!

If you are interested in the mill and would like more information or are able to help out please contact:

Peter James (01293 409845) or **Mike Harrison** (01293 862374)