

Thorpeness Mill: A Report on the Work as at end of December 2014.

The restoration of the mill is now complete, as envisaged at the beginning of the job in 2011. The mill is turning itself to the wind by the fantail, and the sails are complete with a full set of shutters. The mill body is now levelled and weatherproof.

A few smaller items still need to be finished off, mostly problems that have arisen during the course of the work:

1. **Lightning conductor.** The mill's lightning conductor system should protect it from damage if a lightning strike happens. It may even prevent a lightning strike by bleeding the electric potential to earth before it can build up to a strike. The rods along the sails have been renewed, but the path to the two earth electrodes is presently ineffective.

There is a copper-faced steel ring suspended under the mill body, just above the top of the roundhouse roof. This is contacted by two bronze "brushes" on top of the roundhouse roof, each held in close contact with the ring by a steel spring-loaded device. Due to the salty seaside atmosphere, the steel components had rusted very badly, jammed and become distorted. Both brushes were about $\frac{3}{4}$ " away from the ring.

I have removed both the brush devices, cleaned, freed them up and repainted them. The springs themselves had rusted beyond repair, and I have ordered some new ones. I will re-assemble and refit them when the new springs arrive.

The copper-faced steel ring has rusted badly, causing the copper facing to become "bumpy" where the rust has built up between the two metals. I need to remove this ring, clean it up and maybe get it galvanized to prevent future rusting. Needless to say, all the steel fastenings have rusted solid and won't be easy to get undone! I'll replace them with stainless steel or brass.

The two brushes are connected to down conductors and earth electrodes each side of the roundhouse. Once I have finished work on the lightning conductor system, it would be wise to get a lightning conductor engineer to check the continuity of the system, and the effectiveness of the earth electrodes with a Megger meter.

2. **Patent sail striking gear.** You will remember that, in the summer, we had difficulty in opening and closing the shutters in the sails. I have, so far, been unable find the cause of this, having waited until the shutter fitting was complete before investigating. I was hoping that a good run in a strong wind might "clear" the problem, but if anything, it has got worse!

I was told that the striking gear had given trouble in the past, so when rebuilding it, I tried to eliminate any potential problems. I found a couple of areas that might be causing problems, and put them right, so I was particularly annoyed when the shutters wouldn't work properly!

All the visible parts of the striking gear show, apparently, no faults, so I suggest that it may be an *invisible* part that is causing trouble: The striking rod itself. The rod seems to be tight at its rear end where it emerges from the tail bearing carriage. My current theory is that there may be a foreign body of some kind inside the bore of the wind-shaft. The wind-shaft is angled downwards, and the bore tapers, so any object inside will tend to (a) Move towards the tail end due to gravity, and (b) Get more jammed against the rod due to the taper, when the shaft is turning. I haven't dropped anything into the bore of the shaft, but a previous restorer may have done.

Another possibility is that the assembly of the wind-shaft tail thrust flange, tail bearing "brass" and the cast-iron tail bearing carriage have become misaligned due to the mill body having been "squared-up" i.e. the former distortion being eliminated. A real puzzle!

The mill is O.K. for the time being, so I will make a proper investigation when the weather gets a bit warmer, check everything in a logical way, and put matters right.

3. **Pigeons.** Unfortunately, the local pigeons have taken a liking to the Mill. Although now excluded from the mill's interior, they roost on top of the roundhouse roof, just under the mill buck, and have nested there as well. They settle on the porch above the buck door, and like to perch along the ridge of the buck roof. Their droppings make a horrible mess, form a damp breeding ground for wet-rot, and act like paint stripper, degrading the paint film. This obviously isn't a new problem, as old netting exists under the buck floor, and I have found bits of plastic anti-bird spikes lying about.

Ideally, the pigeons should be shot and killed, but anyone doing this needs to avoid hitting the mill! In addition, I suggest renewing the netting under the buck floor, and fixing plastic spikes on the porch and buck roof. I will do this when I finish the necessary work to the lightning conductor.

4. **Roundhouse roof tiling.** I have renewed all the tiles broken in the course of the restoration. However, I have found more cracked tiles that I will repair when the weather gets warmer. The tiles have been painted in the past to make them an even colour, as some were previously black. The paint is peeling, and the roof would look better if prepared and painted again.
5. **Repainting the Mill.** In 2015, it will be nearly 4 years since the mill's woodwork was painted. The paint is thinning, and would benefit from a repaint

now. I would recommend this, and suggest that Tim Whiting would be keen to do the job next summer. We are now using a different make of paint, which may last better than that which we used last time. It is still a linseed oil based paint, but is of a more even quality.

6. **Steel clamp under “Samson Head.”** At the top of the post, just under the crown-tree, a steel clamp has been added at some time, probably in the 1960s. The clamp is made in 2 pieces bolted together, and is screwed to the head. The exact reason why it has been put there is not known, but maybe the cast-iron “Samson Head” became loose and started to rotate a little each way when the mill buck turned. The clamp doesn’t fit very well, and I think it might be a good idea to take it off, modify it and re-fit it.
7. **Roundhouse windows and doors.** The wooden frame of the window facing the hedge is now rotten and needs to be renewed. The frame of the large doors into the roundhouse is also getting rotten, but this will be renewed if the length of the lean-to extension to the roundhouse is reduced as I have suggested. No doubt you will be carrying out work soon extending the roundhouse on the other side too, and these repairs could be included.
8. **Trees.** The mill is now surrounded by trees. Look at photos taken in the 1930s and you will see what I mean! I don’t think any of these are on your property, but it would benefit the mill greatly if they could be removed or “topped.”

The mill’s paintwork is starting to go green, and this is being caused by the proximity of the trees, which encourage lichens and algae to grow on the white paintwork. Eventually this will form a green slime making the steps slippery etc.

The wind is also blanketed by the trees, and I had great difficulty getting the mill to work in the summer when all the leaves were on. The trees also obscure distant views of the mill, preventing visitors enjoying the sight of the mill in its juxtaposition with the House in the Clouds.

The worst offending trees are those belonging to the House in the Clouds, bordering the road. These are mostly sycamores, which are very common trees and grow and propagate like weeds! These trees have multiple stems, and have obviously been cut down to ground level in the past (coppiced), and have regenerated. They are getting “leggy” now, are not acting as a hedge, and are blanketing views of the House in the Clouds, encouraging visitors to enter the property to take photos. Why not gently ask the owners to cut them down to ground level again? This would cause them to regenerate from the stumps, forming a dense, low hedge, which could be kept low by further cutting.

9. **Pump.** The summer/autumn period of the year was almost windless, and the nearby trees didn't help, but I managed to run the mill a few times. The pump rod was going up and down merrily, but I couldn't make the pump work. I tried priming it with water, but it made no difference. I assume there must be a problem with the piston seal or valves. Would you like this to be investigated, or are you happy with just revolving sails?

End of Report.

V.G. Pargeter

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