

## 7th October 2013 - Neil Hopkins – Two Rivers Paper Co – Paper Making

Neil Hopkins had travelled up from Watchet in Somerset to show us how they make paper by hand and in its basic form it is very simple as Neil demonstrated.

Paper is fundamentally cellulose – long chain sugar molecules and can be made from any plant on Earth. The best material is cotton as it will not rot; some Chinese paper has been carbon-dated to over 2,000 years ago.

The cotton material can be obtained from many sources even recycled clothes. At Two Rivers Paper Mill they have a working water-powered traditional paper mill, using a 100 year old metal wheel from Wales and an 1841 Hollander Rag-Breaker. The fibres are beaten to a pulp in water for up to four hours to develop the strength of the fibre and internally sized using 2% ph neutral 'Aquapel'.

Neil had made up a pulp, a cotton and linen mix with 5% linen, which toughens up the paper, earlier in the day and poured it into a trough (vat) which was stirred as it would have settled during the day.

Neil then showed us a hand-made mould made of mahogany and a phosphor-bronze mesh with a mahogany deckle (the top bit).



The above photos are:- Neil holding the mould, the mould and deckle separate, the mould with deckle in place and finally the underneath of the mould.

Neil asked for a volunteer (guinea-pig) from the audience and Ros, our secretary, stepped up to the plate; mould. Neil told her to put the mould, which was smaller than the one pictured above, under the water, swirl it around and lift it squarely out so that the fibres in the liquid were evenly distributed over the mould.



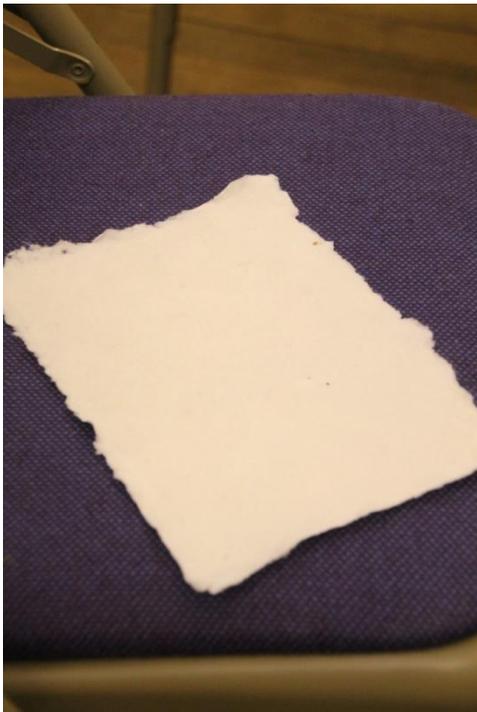
It was then brought up and drained



The mould is then turned upside down and pressed onto a Perspex sheet, the mould was removed and the paper was covered in a blanket called a 'felt'; this is called 'Couching'.



Another felt was placed on top of the paper sheet and another Perspex sheet on top of that. The whole combination was then stood on to squeeze the water out, the 'felt' soaking it up.



And that was the process; the above photo is of the completed piece of paper, albeit needing to be dried out. It was passed around to the assembled audience who were, quite frankly, amazed.

At the Two Rivers Mill all the papers are produced to archival standards using pure Exmoor water from the mill's own well and speciality fibres. These are principally cotton and linen flax but other materials such as hemp, esparto, seeds, flower petals and recycled rag are used to impart special characteristics.\*

Neil also showed us another mould which was larger than the previous one he showed us at the beginning. This one contained watermark impressions. (I always wondered how they did that)



Some final quips from Neil, the first of which is the 'Circle of Papermaking':-

Rags make Paper

Paper makes Money

Money makes Banks

Banks make Loans

Loans make Beggars

Beggars make Rags

Second:- Turner said, 'Look to your papers', when asked what could improve an artist's painting.

And Third:- Cartridge paper was originally used for armament casing with a gelatine surface; hence the name.

The mill is usually open for visitors during normal working hours but please call them at the mill on the phone number below if you are making a special trip to see them.

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(\* Paragraph source - Two Rivers website)

Jon Wright – Oct 2013