Papermaking in the Parish of Ayton 1693 to 1942

John Reid
Date: 01 Mar 2017
**Forward:**

The following is a compilation of notes and illustrations on the history of papermaking in the parish of Ayton, as presented during talks given to the *Ayton Local History Society* in 2001 and 2013.

Papermaking has been important not just for the Parish of Ayton but also for the County of Berwickshire, from as early as 1693 to the present day. In the late 18th century through early 19th century Berwickshire paper production accounted for up to 14% of total made in Scotland.

Paper making has been virtually continuous in Berwickshire for 257 years, from the start up of a mill at Broomhouse near Preston by Robert Taylor in 1760 to the present operations at the Chirnside Mill by Ahlstrom who took over from Dexter Nonwovens in 2000.

**References:**

“Album of Scottish Families, 1694 - 1696” by Helen and Keith Kelsall, 1990


"Berwick Directory of 1806"

"General View of Agriculture of County of Berwick 1809" by Robert Kerr

"The World's Paper Trade Review" issue December 13, 1912

Scottish Book Trade Index (SBTI) National Library of Scotland

**Acknowledgements:**

Many thanks to Mr J A Martin, Bleachfield House, Ayton for permission to use drawings, photographs, etc. relating to the Millbank and Bleachfield Paper Mills.
Early History of Papermaking

The earliest papermaking recorded in Europe was in Spain, introduced from North Africa before 1100 but it was in Italy that most impact was made with the start up of a mill in the 14th century and paper manufacture flourished, Italy at that time being not only the centre of the church but of the civilized world.

In 1338 a mill was started in France and operated through to the 19th century. Papermaking spread throughout France, Germany and Holland but there were many restricted practices with each country being protective of their manufacturing methods, the effect of this was to restrict the spread of knowledge.

Huge improvements in printing through the 15th century increased the demand for paper but with no paper manufacturing in Scotland or England all paper was imported.

It wasn’t until the late 15th century that the first mill was started in England, a short lived venture and it wasn’t until the mid 16th century with the help of several European papermakers that the number of mills increased with a total of 37 mills starting up between 1588 and 1650.

Papermaking in Scotland lagged behind England with the first mill starting at Dalry in Edinburgh in 1590.

The Early Papermaking Process

Paper was manufactured from rags from the early days through to the start of the 19th century, many attempts were made to use alternative materials but it was only with the introduction of chemicals could “grass” and wood fibres be processed.

Hand Making Paper

Making paper by hand in the late 17th century was a skilled job and a good team of Vatman, Coucher and Laymen could produce up to 1200 reams of paper a year (480 sheets to the ream = 576,00 sheets).
Air Drying Hand Made Sheets

The stacks of damp sheets of paper are transported to drying loft house where the individual sheets are hung up to dry. The building had large open slatted walls to allow circulation of air. This work was mainly carried out by women and by children from as young as 8 years of age.

Size Room

The paper would be to absorbent to accept print and needed to be sized, the dried sheets were immersed in a "gelatinous liquid" made from cooked animal parings, tissue and bits of flesh scraped from hides and then pressed and then polished on marble slabs by rubbing each side using agate or soapstone before returning to the drying loft for final air drying.
The papermaking process stayed virtually the same from the 14th century through to the late 18th century, with the exception of one invention the Hollander Beater around 1680, and it’s introduction into England in about 1750, this machine vastly reduced the process time for rags. But at the expense of quality, in particular there was much comment about poor quality of paper used in family bibles.
The Gray Paper Mill 1693 to 1703

The earliest report of papermaking in the County of Berwick was with the start up of a paper mill in Ayton in 1693. This mill was called The Gray Paper Mill.

There is little information on the paper mill’s location, The Book of Sasines for County of Berwick, records a transfer of land, “...cum antiquo molendino di Ayton...“ 1693.

The Gray Paper Mill owner was William Home, "Blind Will Home" Laird of St Abbs, he was one of six partners of the Dalry 2 Project (1674) in Edinburgh.

In George Home’s Diary “Album of Scottish Families, 1694 - 1696” he records several visits to Lord Polwarth with “Will” Home to discuss “if his lordship could help in any way to get forward his mill” He had been promised 550 Merks but received only £10 Scots due to Lord Polwarth being committed to pay the mason for carrying out repairs to the Whiteadder bridge.

William Home was a subscriber to The Society of the White Writing and Printing Paper Manufactory Society of Scotland.

AT EDINBURGH
the 26th Day of November 1694

NICHOLAS DUPLIN Esq late Deputy Governor of the Paper and Linen Manufacture in England, Scotland and Ireland, and Agent therefor is interested in the General Joint Stock of the Paper Manufacture in Scotland, and is accordingly entered in the Companies Subscription Books at Edinburgh, in testimony whereof, the said Nicholas Duplin and David Mosse have hereunto subscribed their Marks and Seals the Day and Year first above written.

Witness

[Signature]

[Signature]

MEMORANDUM the three Pound Sterling per each Share by the Article is to be paid at several years even and equal Payments, to the Treasurer of the White-paper Company for the sum being at Edinburgh, as follows. First is to be paid the sum of one Pound Sterling more, being the first Payment, to be paid on the first Day of May next ensuing the Date hereof, or within seven weeks then next following. If not paid, then the second Payment, is to be paid on the first Day of November next following, or within seven weeks then next after. The like sum of one Pound Sterling more, being the second Payment, is to be paid on the first Day of May next ensuing the Date hereof, or within seven weeks then next following. If not paid, then the third Payment, is to be paid on the first Day of November next following, or within seven weeks then next after, which will be the Year of Our Lord 1695.

Note, The Treasurer is to give his Receipts for each Sum he Receives from the Subscribers.

Share in "The Scots White Paper Company"

He was also a shareholder of The Scots White Paper Company (1693 to 1703) which was owned by The Marquess of Tweeddale with mills at Braids, Edinburgh and Giffordhall on his Yester estate supplying the Bank of Scotland with banknote paper.
The Dalry No2 Mill closed sometime between 1684 and 1699 and more than likely at the time of the death of one of the partners, Alex. Daes, in 1693, this would tie in with William starting up the Gray Paper Mill in Ayton Parish that year.

The Gray Paper Mill was the 9th paper mill to start in Scotland and in 1693 was one of only three mills actually in production. The other mills were at Cathcart in Glasgow (1686 to 1835) and at Upper Spylaw, Colinton, Edinburgh (1681 to 1707).

From the first mill in 1590 to the end of the 17th century only 12 mills had started up with the majority being short lived ventures.

**Scottish Paper Mills Pre 1700**

1) Dalry No1 (Edinburgh) 1590 - 1605  
   Mungo Russell, Gideon Russell

2) Canonmills No1 (Edinburgh) 1652 - 1683  
   John Paterson, Peter Bruce

3) Dalry No2 (Edinburgh) 1674 - 169_  
   Alex. Daes, **William Home**  
   Archibald Home, James Home  
   William Stevenson, John Bertram

4) Upper Spylaw (Edinburgh) 1681 - 1707  
   James Lithgow

5) Canonmills No2 (Edinburgh) 1682 - 1683  
   Peter Bruce

6) Woodside (Glasgow) 1683 - 1686  
   Peter Bruce

7) Restalrig (Edinburgh) 1686 - 1693  
   Peter Bruce, James Home  
   James Hamilton

8) Cathcart (Glasgow) 1686 - 1835  
   Nicolas de Champ

9) Gray Paper Mill (Ayton) 1693 - 1703  
   **William Home**

10) Braid (Edinburgh) 1695 - 1714  
    Nicolas Dupin

11) Yester (Gifford) 1695 - 1774  
    Nicolas Dupin (to 1702)

12) Gordon’s Mill (Aberdeen) 1696 - 1700  
    Patrick Sandilands
Millbank Paper Mill circa 1785 to 1868

The earliest record found of a mill at Millbank is circa 1757, a grain mill was started up by William Outerson, the map below is circa 1770 showing a Saw Mill and the earliest evidence of a Paper Mill is circa. 1785. This may also have been the site of The Grey Paper Mill (1693 to 1703)

Map circa 1770 Saw Mill at Millbank

Millbank Paper Mill (painting 1802)
Original painting at Bleachfield House
Millbank Paper Mill was being operated by John Taylor between 1785 and 1793, he was possibly related to Robert Taylor from Berwick who started up a mill at Broomhouse near Preston, Duns in 1760.

The mill was rated as being of considerable size with an insurance value of £4,000 by 1793.

The mill along with the Broomhouse Paper Mill accounted for approximately 14% of the total Scottish paper production through the years 1785 to 1811 and was extremely important to the local economy.

Ref. the Berwick Directory of 1806, “Robert Kerr was proprietor of a capital paper mill at the halfway bridge”

Robert was the son of James Kerr the last MP for Edinburgh, he was educated at Edinburgh High School and Edinburgh University, he became Surgeon of The Edinburgh Foundling Hospital, a Fellow of the Royal Society of Edinburgh & Society of Antiquaries of Scotland. For some reason he decided to become manager of the Millbank Paper Mill.

A chapter is devoted to Manufacturing in Berwickshire: “Paper mills at Broomhouse, Ayton and Allen-bank. Total employed 200 excluding wives and infants. Total Excise duty paid £4,000, with total sales of £25,000, most production going to London. There is always work for wives and children.

Earnings: journeyman papermaker 3/- per day, besides lodging and coal money, say £50/year. Women, boys and girls 6p to 1/- or even 1/6p per day. Earnings of families depending on number of children and their age, 1 to 2 guineas per week.

There has been concern about the affect manufacture has on local rents. It has been the case that manufacture has induced high rents across Scotland. There has been prejudice among country gentlemen that manufacture will increase the expense of maintaining the poor. The reporter (author) with 14 years experience of the Ayton Mill, the poor fund of Ayton parish has been materially relieved since the start of manufacture, although two deaths have happened in recent years due to famine.

Boys and girls working in the mills have constant work in all weathers. Boys when their times of servitude expires they become journeymen or move away to find other work while girls go out to service.

Manufacturing is seen as providing a local market for farm produce and hence higher price, this is better than incurring transport costs and the charges of others in handling.

Virtually every Scots journeyman paper-maker is a member of a flourishing benefit society, whereby widows allowances are funded and funeral costs defrayed.”

From 1812 to 1837 the Millbank mill was under the ownership of Ebenezer Martin who had previously operated the Pool mill at Otley, Yorkshire. He was a member of a long line of papermakers. The family originated in Ireland where they also operated paper mills.
A major improvement was made in 1826 when a papermaking machine, the 11th in Scotland, was installed replacing the traditional vat machines. This greatly reduced the manpower requirements and increased the output from the mill, 16 years ahead of the start up of the Bleachfield Mill and Trotter's new mill at Chirnside.

Further improvements were made with the installation of steam heated drying cylinders as shown in the drawing below this eliminated the need for loft drying sheets and enabled the introduction of on-line sizing of the sheet at a later date.

In 1837 the mill was operating under the joint ownership of William Martin and John Innes. This partnership was dissolved in 1859 by William's widow May Martin (Brodie) (William died 1849).

On Saturday 7th November 1868 the Millbank Paper Mill was destroyed by fire. (ref. report in The Scotsman)
ALARMING FIRE AT MILLENBANK PAPER-MILLS, NEAR BERWICK.—Late on Saturday night a most alarming fire was observed at Millbank Paper-Mills, situated between Ayton and Eyemouth, and about ten miles from Berwick. The mills are in the possession of Messrs Martin & Co., and are of considerable extent. The mills were stocked with a large quantity of paper, rags, ropes, &c., and were consequently a feeder for the fire. A great number of people living in the neighbourhood hastened to the place as soon as the fire was discovered, and gave their assistance. They found, however, that there was no chance of saving the building in which the fire had originated, and they therefore concentrated their efforts in endeavouring to save the adjoining buildings and a number of cottages occupied by the workmen. Mr Martin, one of the proprietors, who was speedily at the place, offered 10s. to any person who would attempt to sever the buildings, and thus prevent the fire spreading to a drying-house, in which was stored a large quantity of paper. This offer was readily accepted, and a fisherman from Eyemouth with some of his companions at once ascended the building, and after considerable difficulty and at great risk gained the object, and thus prevented the fire from spreading. Between twelve and one o'clock, a messenger was despatched to Berwick for the fire-engine. The engine was immediately got ready under the superintendence of Mr Miller, Surveyor to the Local Board of Health, and Mr Ronaldson, the Superintendent of Police, and taken to the North British Railway Station, where a special train was in waiting to convey it to Ayton. The train also contained about fifty people from Berwick. At Ayton Station there were no horses in readiness, and the engine had to be dragged by the men to the scene of the conflagration, a distance of two miles. By the time the engine reached the place the roof of the building had fallen in, and the vast and valuable machinery lay a confused mass among the raging flames. There was a plentiful supply of water, and the engine was soon in full operation, and was kept continually working until ten o'clock yesterday (Sunday) morning, by which time the fire had been completely subdued, and all danger past. The buildings, with all, or nearly all, the valuable machinery, are completely destroyed, and the loss will amount to several thousand pounds. How the fire originated is not yet known, and probably never will. The loss is, we understand, covered by insurance. The fire-engines and the party reached Berwick from the fire about noon yesterday.
The original mill owners house shown on the hill in the 1802 painting forms part of the existing Millbank House. Mitchell-Innes of Ayton Castle extended the house in 1874, demolishing the buildings shown in red and constructed a new lodge house and stables.

There is little evidence remaining of the mill buildings on the site, some roof tiles and brickwork under the bank of the river, much of the materials would have been used in the construction of the existing house, lodge and stables.

The detail in the 1860's photo which includes the existing road bridge allows some scaling of the buildings to be made and it highlights how restricted the site was.
**Bleachfield Paper Mill 1842 to 1942**

The Berwick Directory of 1806 states that there was a large bleach-green for linen cloth, operated by Mr Brodie, Ayton” (perhaps a family connection with William Martins' wife May Brodie)

In the statistical account for Berwickshire 1825-26 John Reid was the proprietor of the Bleachfield site.

Prior to 1842 the Bleachfield site was used for bleaching linen. Flax was being grown locally and there were many weavers in Berwickshire.

In the 1841 account, “The bleach field at Ayton had been given up and was now bleaching rags and reducing them into “Half stuff” for use in the mill at Millbank”.

From 1842 the Bleachfield paper mill started up with a 60” wide paper machine and 2 vat machines under the ownership of William Martin the son of Ebenezer Martin. The combination of a paper machine and two vat machines was unusual in Scotland, the vat machines likely to have been relocated from William Martin's operations at Allanbank and Chirnside which closed down around the time of the startup of the Bleachfield Mill.

The machine was manufactured by the Bertram brothers at their St Catherine's works at Sciennes in Edinburgh, (1821 - 1985) and would have been similar to the machine installed at Trotter’s new mill at Chirnside Bridge in the same year.

Production at the Bleachfield mill continued until 1942.