

2. Dovecothall and Busby Cotton Mills

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Water-powered cotton spinning heralded the Industrial Revolution in Scotland. The cotton mills at Dovecothall and Busby were the pioneers of the Cotton Industry in Renfrewshire.

Dovecothall and Busby were the first and second cotton mills in the County and third and fourth in Scotland. The bulk of Renfrewshire's mills were not established until at least a decade later. Recent research has revealed that Dovecothall and Busby were founded within months of each other, and were almost identical in size, machinery and water power (Table 1).

Dovecothall cotton mill was established beside an existing corn mill, on the Lavern Water in Paisley Parish, in June 1780 (1) The founders were Samuel Ramsay, John Levison and John Love merchants in Glasgow, John Clurdsey merchant in Preston and Jonathan and William Haugh, manufacturers at Dovecothall (2).

Busby cotton mill was founded on the White Cart Water in Mearns Parish in December 1780 (3.) It replaced lint and meal mills on the site, which was traditionally known as Newmill, a name which remained in use until about 1800. It was established by Glasgow merchant William Ferguson who had a textile shop in Gallowgate (4).

In March 1783 Busby was advertised in the Glasgow Press (figure A). Three months later Dovecothall was also put on the market (5). By this time the mills had been spinning for at least a year. Both were purchased by Richard Thomson, a Glasgow merchant, who was soon residing in the mansion house beside Dovecothall mill (6). Busby and Dovecothall are less than five miles apart and joint ownership and management were a practical proposition. Three years later Thomson sold Busby mill to Robert Twyford, a Manchester merchant. By 1787 Twyford had also acquired Dovecothall mill (7).

Both mills were three storeys high and eight bays long with about twenty-four windows on each elevation. Busby was rubble built with a tiled roof. One third of the mill was divided by brick partitions to provide dwelling units for six working families. Spinning was carried out on the first and second floors. The upper floor and attic were used for carding, drawing, roving and reeling (8).

The technology for these early mills was imported from the Arkwright mills in England, indeed one of Dovecothall's founders was reputed to have spied on an English Arkwright mill to gain the necessary expertise (9). Both mills predated Richard Arkwright's involvement in Scotland, which began at New Lanark in 1784. Scotland's first two mills at Penicuik (1777) and Rothesay (1778) were attacked by Arkwright for infringing his patents on merchandised spinning and carding (10).

By the early 1780's such litigation was unnecessary and an engineer from Stockport was openly advertising Arkwright-type machines in Glasgow (11). Similar machines were already in operation in the first Renfrewshire mills.

To be SOLD by PRIVATE BARGAIN,
THE NEWMILL COTTON-WORK, which goes by
 water, upon the water of Cart, near four miles from
 Glasgow. The mill is three storeys high, besides a large
 well lofted and lighted garret. Two of the storeys will
 easily hold between twelve and thirteen hundred spindles.
 There is plenty of room in the above storey and garret
 for carding, drawing, roving, reeling, &c. The mill-work
 is exceeding good, and full able to drive the house-full of
 works, and half as many more. The works for spinning,
 in all its parts, are a considerable length. One third part
 of the mill is, by brick partitions, divided into dwelling-
 houses, which will hold five or six families, all repaired
 and fit for habitation. The cotton-mill cog-wheel is
 made to drive a wash-mill, along with the cotton-works.
 There is plenty of water at Newmill all the days in the year,
 and the water is exceeding good, fit for either the bleach-
 ing or printing business, as there is little or no clay ground
 above this place. There is a good stance for another mill
 on the same ground, and the proprietor has near a com-
 plete set of list mill-graith.

The houses on the farm will hold three families, besides
 a barn, cart-house, &c. There is said to be above twelve
 acres of pretty good ground in the farm, divided into three
 parks, which the purchaser can get along with the cotton-
 works or not. It is a perpetual feu, and only six shillings
 and eight pence to pay yearly to the superior. The mill
 and works are all entirely new, and began only to work
 in July last. There is a new built smithy, smith's tools,
 wright's tools, and clockmaker's tools, made and ready
 for carrying forward the work.

The proprietor and manager has got a sore bruised leg;
 it is thought it will be year's before it be so well as he
 can be able to manage it, which is the reason of selling
 the above.

The purchaser can get a good smith, bred to the busi-
 ness, for three years past, a well going work, servants,
 and all things ready, and immediate possession, if he or
 they please.

For further particulars apply at William Ferguson's
 shop, head of the Gallowgate, Glasgow, or at Newmill.

Figure A: Advert for Busby (Newmill) Cotton Mill, March 1783.

The number of spindles per water frame varied depending on the type of machine in use, and total numbers of spindles were not a reliable guide to mill capacity. In 1782 Dovecothall's owner estimated that his mill had a capacity of over 2000 spindles. However in an advertisement in June 1783, it contained 12 water frames running only 672 spindles, with space for a further 16 frames (12). Busby's estimated capacity of 1300 spindles seems about right for the size of building and agrees with Dovecothall's lower estimate. Many of the mills commenced spinning with only a few water frames installed. A partner in Houston, Burns & Co. writing at Johnstone in 1788, said that none of the cotton mills established in Scotland at that time were established all at once:

'Every manufacturer who attempts so great an establishment contrives his machinery so as to admit of being suited to the gradual extension of the capital and increase of hands' (13).

The early water powered mills were located not by chance, but because they required a stance with a good head of water. Busby's site was extremely difficult, perched on a widened ledge at the lip of a gorge. The waterfall, the highest on the White Cart, was increased by a further two metres by a masonry dam a short distance upstream from the falls (14). At the western end of the dam a sluice controlled the flow of water via a twenty five-metre long lade to the wheel. The lade terminated in a wooden channel, which passed over the mill's smithy, before powering the wheel. The water wheels were complimented for their safety. At Dovecothall the wooden channel passed to within an inch of the wheel's circumference, preventing injuries from workers becoming trapped in the wheel. Besides driving the water frames, Busby's water wheel cog or pit gear drove a wash mill. The 'great' water wheels were a source of wonder to everyone who saw and described then, and were the mainstay of the works.

Both Busby and Dovecothall had second mills added in the 1790's (15). By this time cotton mills were commonplace and by the end of the eighteenth century there were at least twenty five water powered mills in Renfrewshire alone (Table 2).

TABLE 1

Mill	Date	Water Wheel				Building			
		Head	Dia.	Thick	Power	Size	Frames	Spindles	Emp.
D/Hall	6/80	6m	4.9m	0.9m	20hp	8 bay (23 x 9m)	16	672	250
Busby	12/80	8m	4.6m	1.1m	22hp	8 bay	28	1300	70

TABLE 2

Founded	Mill	Owner (c.1795)	Value in 1795
1780	DOVECOTHALL	See Text	£1000 (1785)
	BUSBY Old or Upper	See Text	£9000
1782	JOHNSTONE Old	Corse, Burns & Co.	£7800
1784	JOHNSTONE Laigh	Geo. Houston	£6900
1788	LOCHWINNOCH (Calderpark)	Old McDowall, Houston, Burns & Co.	

1789	GATESIDE	Jas. & Henry Dunlop	
	LOCHWINNOCH New (Calderhaugh)	Fultons, Buchanan & Pollock.	£4000
1790	THORNLIBANK	Alex. & Jas. Crum.	
1790	BROADLIE	Cochran & Airston	£5100
	BUSBY New or Lower	James Doxon	
	LOCHWINNOCH Boghead	John Love & Co.	£5000
1792	EAGLESHAM	Wm. Montgomery	
	BRIDGE OF WEIR Old	John & Jos. Findlay	
	BRIDGE OF WEIR New(High Gryfe or Burngill)	Robertson Aiken & Co.	£4500
	LINWOOD	Linwood Mill Co.	£7000
	CROFTHEAD	Stewart Orr & Co.	
	POLLOKSHAWS	Monteith & Dunmore	
1793	BRIDGE OF WEIR Gryfe	Black Hastie & Co.	£4500
	CROSSLIE	Mcllwham Speir & Barr	£4500
	HOUSTON	Park & Houston	
	LOCHWINNOCH Boghead	Caldwell & Aiken	
1794	JOHNSTONE Hag	Geo. Houston	
	JOHNSTONE Cartside	McDowall, Houston, Burns & Co.	
	ELDERSLIE	Corses, Buchanan & Findlater	
1795	WEST ARTHURLIE	Stewart, Dunlop & Co.	£5700
1798	LEVERN (Dovecot. II)	Jas. Dunlop & Co	

NOTES

I acknowledge Sylvia Clark's valuable assistance in compiling this table, particularly with the Lochwinnoch, Bridge of Weir & Levern Mills. Any errors are mine. Apologies to local researchers for the generalisations necessary in a subject of this size. Basic information for owners/values is from Sun Fire Office Insurance Policies for the year 1795., except Johnstone Laigh & Lochwinnoch Old which are for 1796 (policy refs. in Economic History Review, 23, 1970). Best general sources are Shaw, J., Water Power in Scotland; Taylor, The Levern Delineated; 'Parliamentary Papers, XX, Factory Commission Report on Children in Mills' (1834) which give data on several mill origins; 'Cairn of Lochwinnoch Matters' (Paisley Central Library); Renfrewshire Sasines, and The Old Statistical Account. The following mills appear in the 18th C. Glasgow Press: JOHNSTONE GC Jan 1789; GATESIDE/LEVERN GM 25 Nov 1794; BRIDGE OF WEIR GM Jul 1790, GM 20 Jun 1797. GC Jan 1798; CROFTHEAD GM 5 Apr 1791; THORNLIEBANK GM 6 Jul 1789; HOUSTON GM 19 Aug 1794, Sept 1795; LOCHWINNOCH GM 7 Mar 1792: ELDERSLIE GM 1 Apr 1794; WEST ARTHURLIE GM Apr 1791, Jul /Sept 1797.

REFERENCES

1. Semple, History of the Shire of Renfrew (1782): the site was rented from 1779 (G.M. 7 Nov. 1787).
2. Ibid.
3. R.S. 1 Dec. 1780 (Preparation of the site began as early as 1778, see Semple).
4. Glasgow P.O. Directory 1787-99, G.C. 19 July 1798: Ferguson later owned a textile factory in the Calton.
5. G.M. 25 June 1783
6. R.S. 1 Sept. 1784.
7. Busby: R.S. 30 Dec. 1786; Dovecothall: G.M. 14 Nov. 1787.
8. General descriptions: Semple op. cit., which was partly sponsored by the owners of Dovecothall & Busby and also outlines the beginnings of Johnstone Old Mill;

Busby: Guildhall Library, Sun Fire Office Policy No. 500923 MS 11936/327 (22 Jan. 1785).

9. Taylor, C., *The Lavern Delineated* (1831).

10. Shaw, J., *Water Power in Scotland* (1984)

11. G.M. 13 Feb. 1781.

12. G.M. 25 June 1783.

13. S.R.O. *Corse v. Houston*, 1788, transcript in *Economic History Review*, 23, 1970.

14. Level survey by writer; Busby Upper & Lower Mill dams: see *Lanarkshire Sasine* 26 Mar. 1790.

15. Busby Upper Mill (James Doxon): GM 22 Sept 1788, GM 9 Mar 1789, GM 7 Dec 1793, GM 23 Mar 1794, 'Busby & Its Neighbourhood', Ross, Wm. (1883); Dovecothall II (Lavern Mill) see Taylor, *op. cit.*

KEY

GM Glasgow Mercury; GC Glasgow Courier (both Mitchell Library); RS Renfrewshire Particular Register of Sasines (Scottish Record Office). I am indebted to the Glasgow Room, Mitchell Library for permission to reproduce the Busby advert from the 'Glasgow Mercury' and also for assistance.