

3. Early Industry on the Gryfe: The Origins of a Mill Village

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The Upper Gryfe

The River Gryfe rises on the slopes of Creuch Hill, on the boundary between Greenock and Inverkip parishes, almost into Ayrshire. The river falls quite steeply north for two miles, before the upper catchment becomes dominated by two dams, completed in 1872. These have the imaginative names of 'Gryfe No.1' and 'Gryfe No.2' reservoirs. The reservoirs lie directly east of Loch Thom, but instead of following Loch Thom's circuitous cut to Greenock, the water from the Gryfe reservoirs flows down a deep tunnel to supply Greenock with drinking water. In the Victorian period this scheme was a great source of concern for Bridge of Weir residents as it siphoned off much of the Gryfe's flow.

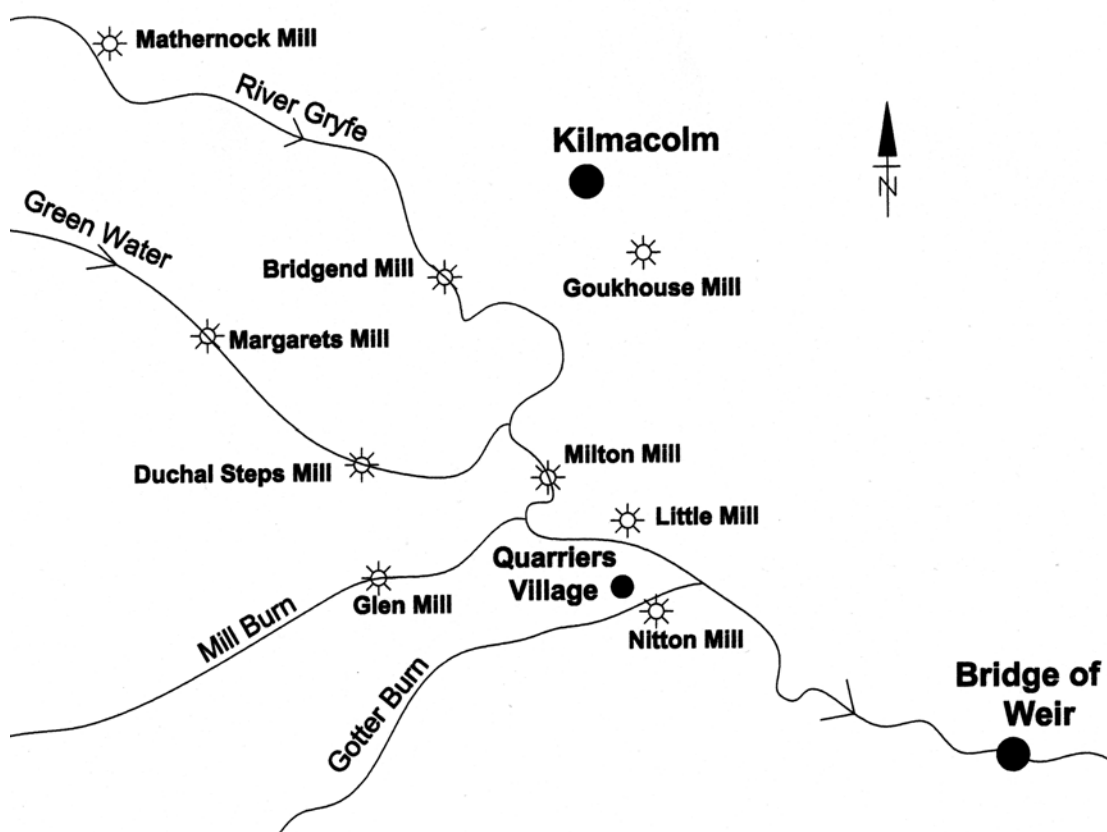


Figure 5: Sketch Map of Mills in Gryfe Catchment Upstream of Bridge of Weir

Before the Gryfe reaches Bridge of Weir, a number of lesser burns join it. The largest is the Green Water, which runs parallel to the Gryfe for many miles, before uniting at Duchal. Before reaching Bridge of Weir, the Gryfe catchment supplied at least nine mills, including grain, waulk and lint mills ¹ (Figure 5). Several of the grain mills are ancient. Although often referred to as corn mills, they invariably ground oatmeal.

Bridge of Weir village lies at the junction of three traditional parishes. The main part of the village lies on the south side of the Gryfe, in Kilbarchan parish. To the north is Houston parish, which was originally separated from the old Kilallan parish by the Coutts Burn. Houston and Kilallan were united into a single parish in 1760.

¹ Mathernock Mill is covered in this volume. Margaret's Mill was recently recorded in 'Discovery and Excavation in Scotland', Vol.10 (2009).

The River Gryfe powered at least a dozen mills along a few hundred metres of riverbank through the heart of the village of Bridge of Weir. The purpose, type, and actual location of each mill is a common source of confusion. For the past two decades the author has tried to locate each mill. This has been timely, as during that time a great deal has been lost. Despite the mills being the origin and mainstay of the village, very little thought has been given to recording their sites before redevelopment. The biggest question is often how the mills originated, mostly in the eighteenth century, and this was the focus of this presentation at the conference. After an initial look at the mills upstream of Bridge of Weir, this article attempts, along with a sketch reconstruction, to clarify the origins and brief details of each Bridge of Weir mill site.

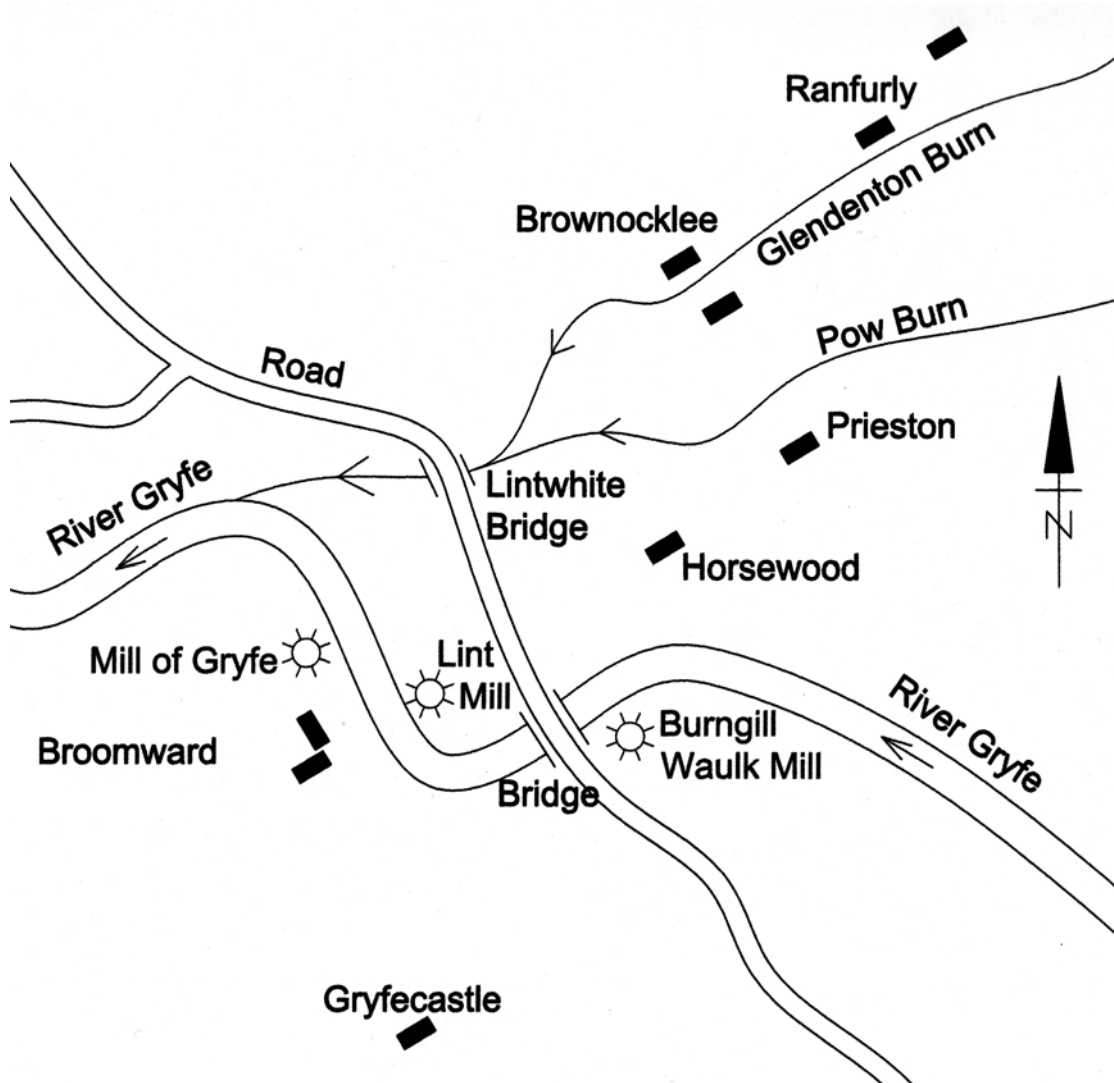


Figure 6: Sketch Map of pre- 1780 Mills in Bridge of Weir

Although Bridge of Weir lies quite far up the Gryfe, in the early 1700s, the 'Bridge' of Weir was the lowest dry crossing point of the Gryfe. Anywhere downstream from this point to the Cart and Clyde, had to be crossed by fords. This was often difficult, if not impossible when the river was in spate. Thus the bridge was a focal point of the area.

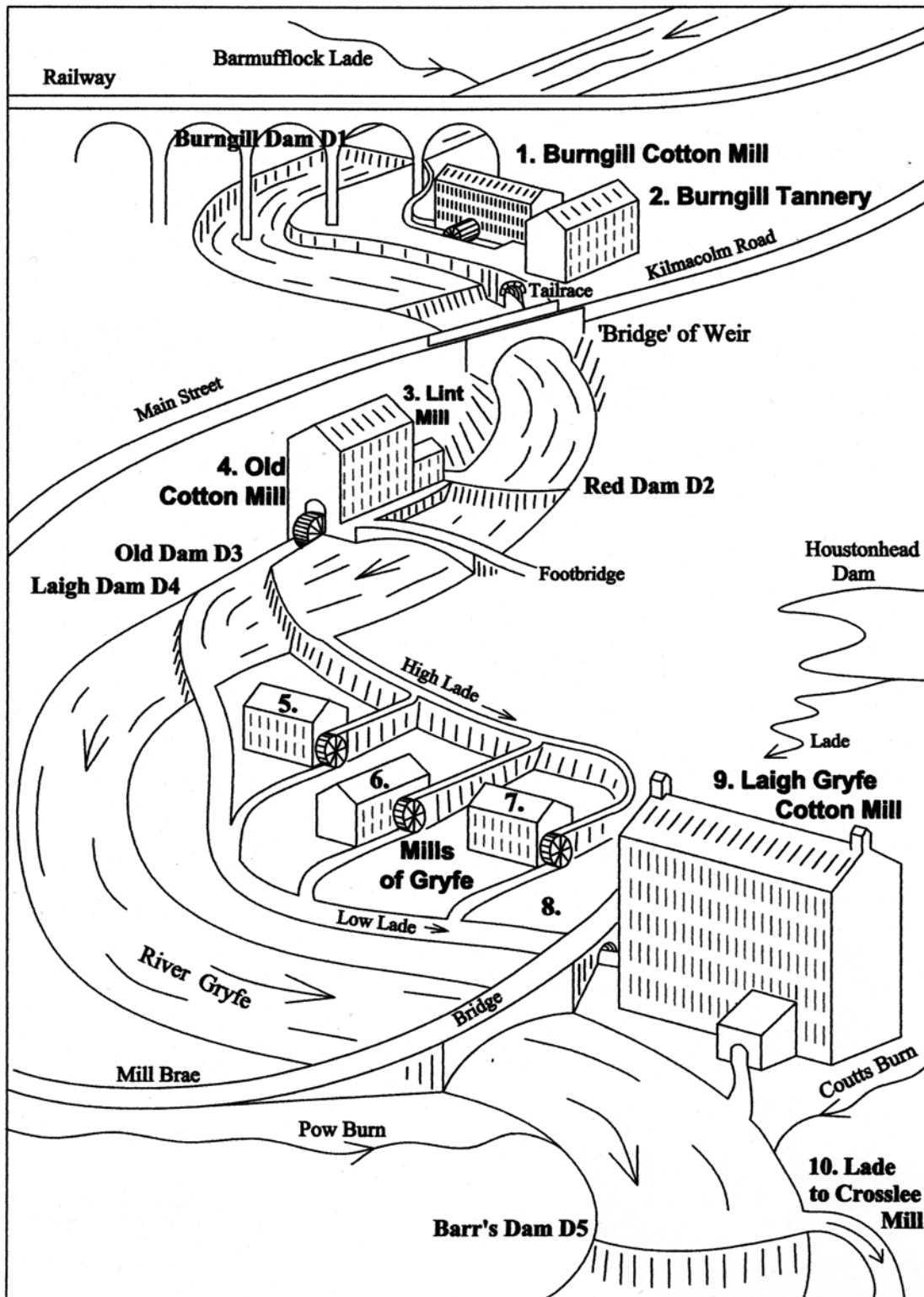


Figure 7: Pictorial Sketch of Mills in Bridge of Weir Village

Bridge of Weir Mills

The Bridge of Weir mills are fascinating for a number of reasons. They covered a wide range of mill types, ranging from small grain and lint mills, to some of the biggest cotton mills in the country. In other areas, big cotton mills were built on pre-existing mill sites, clearing away all trace of earlier mills in the process. At Bridge of

Weir the old and new mills survived side by side. This was due to clever water management by local man Peter Speirs.

The traditional bridging point of the Gryfe is at a deep cleft in the gorge of the Gryfe, which provided good foundations for the arch of the 'Bridge' of Weir. Above and below the bridge, the Gryfe falls steeply through a succession of rapids. At the dawn of water powered cotton spinning in the 1780s, and before the development of the village, these falls already powered three mills, covering the three traditional types of mill, a grain mill, a wauk mill and a lint mill (Figure 6).

On the north or Houston side of the Gryfe, the oldest mill was a traditional meal mill, the 'Mill of Gryfe', situated on the lands of Gyfecastle. In the eighteenth century this was owned by the Barr family. The second mill was a lint mill on the south or Ranfurly side of the Gryfe at Rowntrees in Kilbarchan parish, and was operating by the 1760s. The third mill was a wauk mill at Burngill, operating by 1770, also by the enterprising Barr family.

The variety and chronology of the mills is quite complex. Rather than covering them by date, they will be described in a logical order, working down the Gryfe through the village. The dam sites defined each group of mills and each mill will be covered along with its dam site.

Figure 7 shows a pictorial sketch of the water system though the village ². The natural falls through the village were controlled by a system of five main 'dams' or 'weirs' on the Gryfe ³.

Dam D1: Burngill Dam

1. Burngill Cotton Mill

From the late 1770s the big new story in Renfrewshire was of cotton mills. These were far beyond the scale of earlier mills, and much bigger than any building in the area. By the 1790s Renfrewshire had half the water powered mills in Scotland. Interest gradually moved to sites which were quite remote from the centres of Paisley and Glasgow.

Although the cotton industry in Bridge of Weir is usually identified with the Freeland family, they came to the village later, after 1800, when the three original cotton mills were already up and running. The cotton industry was originated by the enterprising Barr family. The Barrs at Burngill Wauk Mill and the Speirs at the Mill of Gryfe had recently intermarried. They placed the following advert in the Glasgow press:

"Site for a Cotton Mill at Bridge of Weir, on Gryfe, apply Peter Speir at the Mill of Gryfe. This mill can never be in back water" ⁴

This advert effectively marked the founding of the village of Bridge of Weir, as it met with success, and the start of several cotton mills in the village. Burngill (or High Gryfe) cotton mill was the second and highest cotton mill in the village ⁵. It was completed in 1792, just after the Old Cotton Mill was built further downstream (see below). The founders were merchants Robertson and Aitken. The Aiken brothers had

² Based on detailed archive plans of the mills and water system. Thanks to the late Sylvia Clark and Bridge of Weir History Society.

³ A 'weir' was generally a 'dam' where the water always poured over it.

⁴ Glasgow Mercury, July 1790, abridged.

⁵ Also known as the New Cotton Mill or High Gryfe cotton mill. It was the second cotton mill in Bridge of Weir.

numerous textile interests and were later partners with Cowan & White, founders of Bridge of Weir Old Cotton Mill. The Robertsons were also textile manufacturers with bleaching and thread making interests. In the 1790s the cotton industry was quite volatile and the mills were frequently advertised. In June 1797 Burngill Cotton Mill was advertised by James Aitken, along with 13 mule jennies and 6 water frames. By the 1840s it was 44 metres long, 11 metres wide and 4 stories high, containing 6,240 mule spindles. These were driven by a water wheel four metres diameter by 3.4 metres wide, and the mill employed nearly 100 people.

The main cotton mill building was at right angles to the pre-existing waulk mill and tannery, and directly upstream. The remains of the dam for all the Burngill mills can still be seen just upstream of the Victorian railway viaduct (not to be confused with the additional modern rubble weirs upstream provided for river management). The lade entry and sluice gate lie on the south bank under the viaduct. Six decades later the viaduct was built over the lade, which was then passed under the legs of the viaduct in a tunnel which still survives. The fall through the site provided forty-five horsepower. Most of the site is artificially built up by several metres and supported by the large retaining wall along the river bank. After powering Burngill's mill wheels and supplying the tannery, the tailrace exited from a rock tunnel, down at river level. This can still be seen down in the gorge just above the modern bridge over the Gryfe.

2. Burngill Waulk Mill/ Tannery

Although perhaps most widely known as a cotton spinning village, the leather trade in Bridge of Weir lasted longer, both predating and outlasting the cotton industry. In some case the cotton mills and leather works used the same site.

In most of Scotland, waulk mills were connected with cloth softening or 'fulling', but in Renfrewshire they were just as common for washing and dressing leather. This was the purpose of Burngill waulk mill, and this mill was the origin of the Bridge of Weir leather trade ⁶. Industry at Burngill originated at the Speirs waulk mill and tannery, built c.1770 by William Speirs, bother of Patrick (or Peter) the owner of the Mill of Gryfe ⁷. It continued in the Speirs family until 1869 when it was sold to the Muirheads of Glasgow. All the buildings were destroyed by fire in 1905, but the firm moved to the laigh cotton mill site (see below).

Dam D2: The Red Dam

3. Rowntrees Lint Mill

Bridge of Weir's cotton mills were preceded in the area by a much smaller type of textile mill, the lint mill. In the traditional linen industry, the preparation of raw flax in the linen making process was very labour intensive. The Old Statistical account notes that although 'there are great quantities of lint raised in the Shire of Renfrew, the great expense of dressing it is a discouragement' From the 1730s the Board of Trustees encouraged and funded lint mills which mechanised the 'breaking' and 'scutching' of the flax, to remove the fibre from the stems.

One of the earliest lint mills in Scotland was upstream of Bridge of Weir on the Green Water at Duchal Steps (Figure 5). In 1733 John Wilson in Duchal Steps was granted the cost of building the lint mill there by the Board of Trustees. There was a great deal of sharing of expertise and John Honeyman was brought to Duchal from Clayslaps lint mill on the Kelvin (behind Kelvingrove Museum). His brother Thomas Honeyman was also working at Barochan Lint Mill in Renfrewshire. In 1730 there

⁶ See Leather article in this volume.

⁷ The corn mill was effectively a meal mill but the 'Corn Mill' name will be used for convenience.

was another very early lint mill in the Gryfe catchment on the Gaton Burn at Nittonshiel (or Nittonhill). This was located in the centre of what later became Quarriers village (Figure 5)⁸.

The third Lint Mill on the Gryfe or its tributaries was located in Bridge of Weir on the south side of the Gryfe at Rowntrees, and was operating by the 1760s. This was powered by a dam known as the Red Dam or 'Briglinn' and was just upstream of the main fall in the village. This dam was washed away by a tremendous flood in 1861. The dam location and lade inlet can still be seen on the south bank.

This lint mill has been the most elusive mill in the village, but its existence was finally clarified through the discovery of a number of references. The mill was operating by the 1760s by flax dressers John and William Lang. By 1782 it was operated by Andrew Lang and was then acquired by Peter Speirs. In 1792 it was describe as 'being of excellent construction, and best frequented of any in the West of Scotland'⁹.

The lint mill was effectively absorbed by the Old Cotton Mill (see next mill) although it ultimately outlasted it. Much later, when the Old Cotton Mill was destroyed by fire, the lint mill persisted as a two storey building known as the 'Wee Red Mill'. By the early twentieth century the top floor was a small laundry, and the ground floor the birthplace of a mission which evolved into Ranfurly United Presbyterian Church.

4. The Old Cotton Mill

The next mill downstream, was the first cotton mill in the village, the 'Old' Cotton Mill, also known as the 'Red Mill' or 'Findlay's mill'¹⁰. It was built before 1792 on the south side of the river, below the lint mill, and sharing its fall. The owners were Paisley merchants and yarn dealers Cowan and White. This mill was six stories high and occupied a narrow and rocky site. Within a few years the cotton mill was sold to an enterprising family of textile manufacturers, the Findlay brothers, William, John and Joseph. William also ran one of the first steam powered cotton mills in McDowall Street in Johnstone. Another brother David owned a jenny spinning works and weaving shop in Paisley and married the daughter of Patrick Speirs of the Mill of Gryfe.

Being the earliest mill site on the south bank of the Gryfe, the original Lint Mill on the site held valuable water rights. This affected the mills downstream, particularly the biggest cotton mill in the village, Laigh Gryfe Mill (see below), which could not raise its fall higher than the:

"tail water of mill or mills that Peter Speirs might have standing westwards of the Broomward Park (on the north side of the Gryfe), as high as surface of sole of the ark of the present Lintmiln of said Peter Speirs".

Between the Red Dam and Old Dam was a footbridge across the Gryfe. This no longer exists although remains can be seen on either side of the river. Immediately below the old cotton mill were the next two dams on the Gryfe. In quick succession, these were the Old and Laigh dams. The tail water from the Old cotton mill exited in a deep cleft known as "the gulley", bypassing the third dam (the Old Dam), and pouring into the south end of the fourth dam (the Laigh Dam). This supplied water to the

⁸ The mill is denoted on a survey by John Watt in 1730, and both mill and lade are shown on William Roy's map thirty years later.

⁹ Old Statistical Account, Kilbarchan Parish.

¹⁰ Named "Red Mill" on Ainslie's survey of Renfrewshire (1796).

Laigh mill, and was a feature of the Bridge of Weir mills, where water was recycled for a succession of mills. However some mills were losers in the system, and the tail water from the Old Cotton mill bypassed the 'old' dam serving the mills of Gryfe, effectively reducing their water supply.

Dam D3: The Old Dam

5. West or 'Gryfe Grove' Cotton Mill

The next group of mills relied upon the main fall of water in the village, the Old Dam. This was the original fall, used by the earliest mill in the village, the 'Mill of Gryfe'. This fall is more of a natural 'dome' of rock than a vertical drop. The natural rock was latterly topped by a timber weir which directed the water into the high lade. This provided a four metre high fall. Various sluices and overflows still survive and the lade entry was partly restored in the 1980s as part of the river walkway.

The mills were supplied with water from the high lade. As part of Bridge of Weir's ingenious water management system, the water passed through the mills, giving them power, then exited into the low lade, then was used again to power the Laigh Gryfe mill downstream.

The first mill along the high lade, Gryfe Grove mill, was a later addition, built in 1822. This was a modest two-storey cotton spinning mill, also known as the West Mill, built in 1822. It tapped into the old corn mill's High Lade, using a four metre diameter water wheel to power around 1500 spindles. This mill was burnt down in 1883.

6. East or 'Shanks' Cotton Mill

The next mill downstream was initially for carding or preparing wool for spinning. It later became a medium-sized cotton spinning mill, with about 1,500 spindles. The founder, Mr. Shanks, was absorbed by the Gavins, who also owned Gryfe Grove mills, and the water wheels were replaced with more efficient turbines. By the 1920s the East Mill was disused and acquired for expansion of the tannery further downstream at the Laigh Cotton Mill site.

Although the East and West mills are gone, their brick-arched tailraces can be seen exiting into the surviving low lade. The east mill tunnel survives for some distance under the site.

7. The Mill of Gryfe

The Mill of Gryfe (or Old Corn Mill) was the oldest in the village, probably dating from medieval times. It was the third cotton spinning mill in the village and owned through the eighteenth century by the Speirs family. In 1727 Patrick Barr was the owner and in 1754 his daughter Elizabeth had married Robert Speirs, merchant at Burngill mill. As noted earlier, the Speirs family initiated most of the late eighteenth century mills in the village, through advertising, family connections and clever water management. This preserved the family's existing water rights at the Mill of Gryfe, but was flexible enough to cater for much larger mills directly adjacent.

The Mill of Gryfe was used well into the nineteenth century. Apart from the dwelling house, the buildings were mostly demolished in the 1920s as part of the later tannery expansion. However an early wall with window openings survives directly beside the lower lade.

8. Saw Mill

Around 1800 the Speirs added a sawmill east of their old Corn Mill, about which little is known. It may have been no more than a lean-to added on the side of the mill, with

a circular saw powered by the mill wheel. The whole area became an early industrial estate, with numerous industries collected beside the river to extract power.

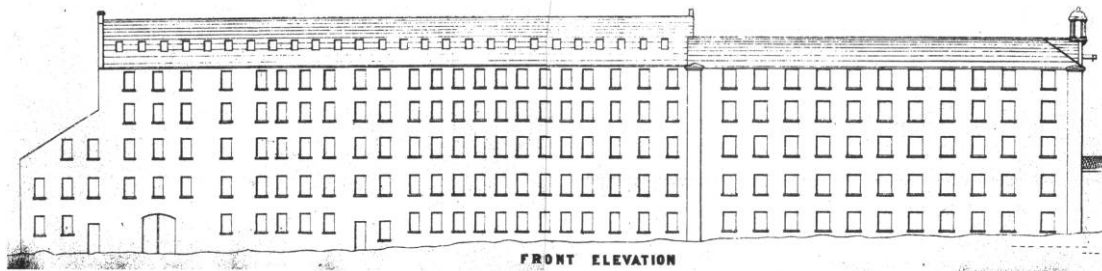


Figure 8: Laigh Gryfe Mill

Dam D4: The Laigh Dam

9. Laigh Gryfe Mill

The lowest and largest mill in the village was Laigh Gryfe mill, or simply 'Gryfe' cotton spinning mill. This was built in 1794 by Black Hastie & Co., on the lower end of the Mill Lands of Gryfe. The site terminated at the Coutts Burn, the old boundary with Killallan Parish. In 1806 the mill was sold to the Freeland brothers who became the main benefactors in the village.

By the 1840s the mill was 60 metres long by 11 metres wide, containing 18,000 spindles. It was driven by an iron water wheel 6 metres diameter by 3.6 metres broad, and the mill employed 260 people.

Surviving plans and elevations of the mill demonstrate the spectacular frontage and vast scale after it was doubled in length and widened in the 1820s (Figure 8, 9). The fall generated 40 horsepower and the mill latterly added a steam engine, for use during droughts. This engine was located directly beside the water wheels and could be coupled and uncoupled by a gearing system. Drawings show drive shafts carrying the power from this point to all areas and floors of the five storey mill. After powering the water wheels, the tailrace passed under the centre of the mill, discharging to the Gryfe through a brick tunnel which still existed in 2001.

During the decline of the cotton industry in Scotland in the 1860s, the Laigh Gryfe Mill was used for a few years to produce blankets (the 'Blanket Mill') and included a bleachfield in the adjacent Broomward Park.

The entire mill was burnt down to its lower stories in 1898. It was then sold, along with Burngill cotton mill upstream, which by this time was in the same ownership. Around 1906 the owners of Burngill tannery began development of the Laigh mill site as another tannery, rebuilt gradually from the cotton mill foundations. Latterly known as the Clydesdale Works, the buildings were demolished again early in 2005 when the tannery relocated to the Locher Water, between Bridge of Weir and Kilbarchan (see Leather Works article)¹¹. The Laigh Mill site was then redeveloped with flats and houses. Unfortunately, despite the importance of the site to the origins and development of the village, as its main employer for two centuries, the lade was filled in. Despite attempts by the author, no archaeological investigation or recording of was carried out. The lower lade was built over, although a branch from Houstonhead Dam (see below) still carries water under the site, and continues to discharge water to the Gryfe from a pipe in the river bank.

¹¹ The author is grateful to Michael Whiteford for access to Clydesdale Works and its archives, when the leather works was still operating in 2000.

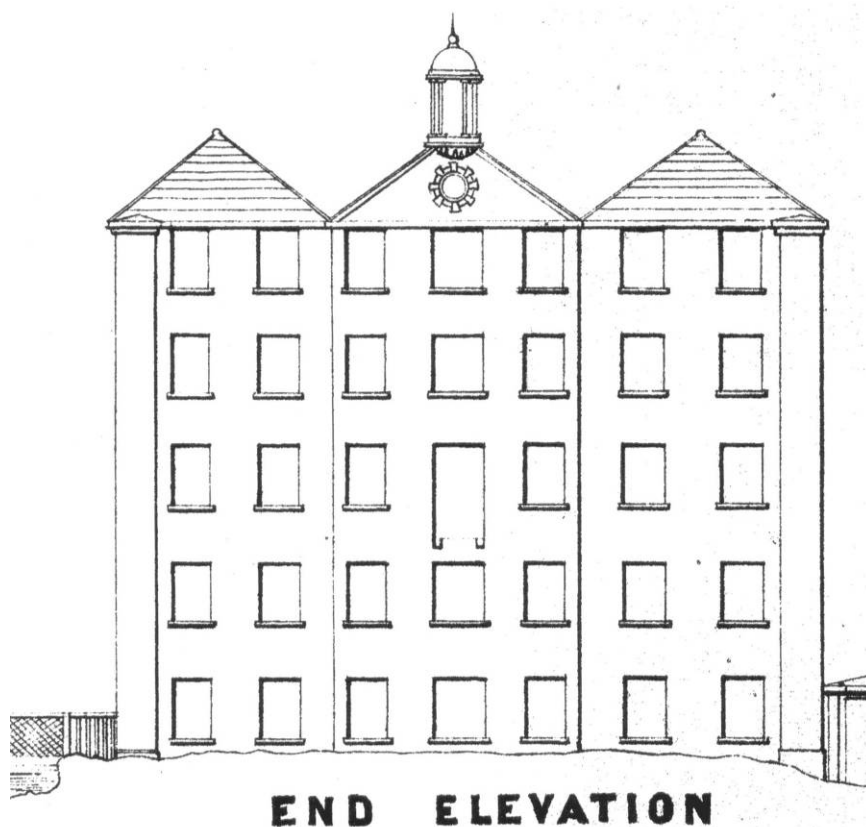


Figure 9: West Gable of Laigh Gryfe Mill

Dam D5: Barr's Rumbling Linn Dam

The Mill lands of Gryfe ended at the Coutts burn, immediately below the Laigh Cotton Mill. Just below the burn are a set of rapids in the Gryfe, aptly named the Rumbling Linn. In 1793 a large curving dam, known as Barr's Dam was built to supply Crosslee Cotton Mill, a considerable distance downstream. Crosslee mill had one of the longest lades in the country, which continues for more than two kilometres to create a fall of fifteen metres, providing sixty horsepower.

Barr's Dam was destroyed by a flood in February 1903 and replaced by the present smaller dam, a short distance downstream. A few courses of the original Barr's dam, and a square opening, cut into the initial lade tunnel still survive. Crosslee Mill was burnt down in 1858. A smaller munitions factory was built on the site in the early twentieth century, but was also demolished. The lade path remains a popular route for walkers, although the lower end of the lade has sadly been filled in for housing.

Water Storage Schemes

Barmufflock and Houstonhead Dams

The Bridge of Weir cotton mills jointly developed two supplementary water storage systems, for when flow in the Gryfe was low.

The first was based on the catchment of the Pow Burn which runs through Ranfurly. As the Pow Burn falls into the Gryfe below the Laigh mill dam, its water was of no benefit to the Bridge of Weir mills. However a large dam was built at Barmufflock and a lade was built, diverting the Pow Burn into the Gryfe just above Burngill dam. As all

the mills benefited from the scheme, they financed and maintained it jointly, in proportion to their relative number of spindles. The spectacular Barmufflock dam still survives, although it is now dry.

Laigh Gryfe mill had its own personal supplementary water supply. The Coutts Burn was dammed to form Houstonhead Reservoir, which still survives. The water from the reservoir was diverted into the main lade immediately upstream of the Laigh Mill water wheel.

Although virtually nothing upstanding remains of the Bridge of Weir mills, much of the lades and tunnel system remains, bearing hidden testament to the role of the Gryfe in founding and driving employment in the village.

Notes re specific sources:

More detailed sources may be found in the author's PhD thesis, published as "The Rise of the Cotton Factory in eighteenth Century Renfrewshire", (Archaeopress, 2008). The physical remains of the mills are also covered in 'Discovery and Excavation in Scotland', eg 2002 p.97 and 2009 p.160. See also the author's "Bridge of Weir Lade System – Hidden Power from the Landscape", Archaeology Scotland, Vol.5 (Summer 2009). W.H. Lyle's "History of Bridge of Weir" (Paisley 1975) provides good twentieth century background.