

Gayle Mill, Wensleydale

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Photos by Ruth and Keith Andrews

Gayle Mill, near Hawes in Wensleydale, is claimed to be the oldest structurally unaltered cotton-spinning mill in existence dating from 1776 when it was built by landowners Oswald and Thomas Routh, under licence from Richard Arkwright. It was powered by a 22ft overshot waterwheel and must have used Arkwright's newly invented technology. Before that, hand spinning was the norm.



Its water supply still occupies the original stone and timber above-ground launder, which has always been the site's most striking feature when viewed from the road bridge. The wooden section, seen here, must have been mended many times!



Water levels in the beck are often very low, as in this picture, so there was a reservoir upstream (now filled in) which would have been used to augment the flow of the river. Below the bridge there is a weir which directs water into the launder when the sluice is opened.

The weir can be seen more clearly in the middle of this picture. Beyond are some of the village houses which were supplied by electricity from the mill. The prominent plant in the foreground is probably one of the many confusing species of water dropwort.



With the advent of bigger and better mills and machinery, cotton production became uncompetitive and so the mill was converted in 1810 to flax which was used for sails and sacking. When the flax industry declined in the 1820s the mill was converted once again, this time to wool spinning for the local knitting industry. Wool ceased to be a profitable commodity by the 1840s and production ceased; the mill became a domestic property.

By the late 1800s the mill was once again converted, this time for use as a sawmill.



The waterwheel was removed and replaced with a Thomson double-vortex turbine, built by Williamsons (now Gilbert Gilkes & Gordon Ltd) of Kendal. This is thought to be the only remaining working variety of its type. The turbine which generated 10hp (7.46kW) drove a range of woodworking machinery – a rack sawbench, circular saw, planer, and lathes – by a series of belts and pulleys off a central line shaft.

In 1919, part of the mill was hired to provide electricity to the area using the turbine to drive a generator. A second turbine was installed in 1925. The mill provided electricity for the village until 1948. The sawmill operated until 1988 when it closed as a business. A third turbine was installed in 2006 and now generates electricity for the National Grid.

Fast forward to 2004 when the mill appeared in the second series of BBC2's *Restoration* programme, coming in the top three in the national finals. Restoration of the grade 2* listed mill started in the same year and works to bring the site to operational standard took four years and cost over £1 million. Funding for the renovation came from several sources including the Heritage Lottery Fund, English Heritage, and Yorkshire Forward.

The mill re-opened to the public in 2008 for tours and heritage skills training courses, with fully restored machines and turbines. Members of Gayle Mill Trust now open the mill and show people round.

When we visited it was just opening up again following further refurbishment work started in 2020 and then Covid-19 restrictions, and we had an excellent tour despite having to negotiate the wooden mill stairs in facemasks!

Machinery from the sawmill has been restored and is used by the woodcraft studio on the second floor. These two photos show a circular saw by T Robinson & Son, Rochdale (who fitted out a lot of the early roller mills), and a general view of the working area.



On the fourth storey the original floor is still preserved below a modern floor, which provides a striking contrast with the uneven window alcoves. It is intended that this room can be used for meetings, without worrying about damage to the historic floor.