GLOSSOPDALE & LONGDENDALE ARCHAEOLOGICAL SOCIETY

A Company Limited by Guarantee - registration no. 7595452
Registered Office - 5 Roundhill Close, Hadfield, Glossop, Derbyshire SK13 2BH

Chairman - Kath Siddall BA (Hons) - ksiddall5@aol.com - Tel. 01457 854438
Company Secretary - Roger Hargreaves MA (Cantab) MSc (Oxon) - roger.h@virgin.net - Tel. 01457 862003

GLAS is a member of the Greater Manchester Archaeological Federation and the Council for British Archaeology

HPK/2014/0182 – Brookside, Lambgates Lane, Hadfield

These are some notes on the archaeological desk-based report by ArcHeritage, no 2011/26 dated April 2011.

4.4 History of the site – C 18th -19th

Page 5

The early history of the mills in this area is exceedingly complex, and a subject into which local historians such as myself fear to tread as the published sources are all to a greater or a lesser extent incomplete, inaccurate or contradictory. The primary source for all of them is the Glossop Chronicle columnist Robert Hamnett, but *his* sources were mostly lost on his death in 1914 or when the Howard estate was sold in 1925 so it isn't now easy to resolve gaps or ambiguities in his accounts, and the three publications based on them are of very variable quality, Hamner &Winterbottom (H&W) and Sharpe ("Glossop Remembered") being much more reliable than Quayle. The Heritage Trust also has Denis Winterbottom's detailed notes which list 75 separate manufacturing sites, and the original photos of the site taken to accompany Part II of the Manchester Corporation Bill in 1952 (which sought to unravel the tangle of provisions for supply of water to mills in the Etherow valley.)

Without referring back to Hamnett, my synthesis of what we know about the early history of the site is as follows.

The earliest (pre-1767) fulling mill at Brookside/Waterside appears to have been powered directly from the Etherow, and the second (1780s) from the first mill's tailrace. However, direct extraction of water from a fast-flowing river was not thought generally to be a good idea, as a severe flood could wash away the wheel and quite possibly the mill, so the usual practice was to dam a tributary stream and get a reliable head of water from a pond or "lodge" (and as a further safeguard it was usual either to divert the stream around the lodge, or to build the lodge off the stream line connected to it by a goit, so that any floods would go safely past.) The third mill at Waterside, built by John Turner around 1791, appears to have used Padfield Brook in this way.

However, Padfield Brook in its natural state was no more than a tiny stream, little over a mile long, and it's doubtful whether it could have supported even one mill of any size, and certainly not in a dry summer. The answer was to extend it by means of the Torside Goit, 3½ miles long and fed by three powerful mountain streams which could provide a much greater and more reliable volume of water.

The Goit must have been built by the Howard estate, as no-one else would have had the resources at the time, and the Howards' motive must have been to enable mill development along the brook

(and hence increase leasehold income to the estate). When it was built we aren't quite sure, but Quayle says before 1794, and it's likely that it was in place by 1791, otherwise John Turner would not have felt able to rely on the brook. Sharpe, however, says that in 1795 it was leased from the Howard estate by Robert Thornley "to supply water to his mill."

Whether or not it was in existence earlier than 1795, therefore, it's reasonable to assume that in that year Robert Thornley perceived the need to pay for a guaranteed supply of large volumes of water, and as he had no interest in Turner's mill, or in Padfield Brook Mill, built in 1793 by Robert Lees, he must have been building (or he and his brothers, or their father John, had already built) another mill or mills in between.

The three mills in between were known locally as Thornley's (Bankbottom) Mill, White or Hadfield Lodge Mill, and Red Mill (which H&M and Sharpe overlook). Red Mill had gone by the time of the 1857 Poor Law Map (extract attached) but it's fairly clear where it was, as the lodge west of White Mill faces to the west but has no mill at the end of it. It appears not to be on the First Series One-Inch (surveyed 1839-41) and would definitely have been demolished by 1843-44 to make way for the new Station Road.

It would appear from the 1857 map that these three mills shared a common water supply, and their sites were also a single entity for rating purposes. In addition, from its name and Quayle's description of it as being "of light construction" it seems fairly certain that Red Mill was built of brick. White Mill also seems to have been built of brick, albeit later rendered and limewashed, and although we know that the later part of Bankbottom Mill was stone (since a small fragment remains) we don't know that the original mill was *not* brick.

In this area at that period, even one brick mill was unusual. Lowland mills were usually constructed of brick, but in the Pennines stone was almost universal and in Glossop especially so as the Howards discouraged use of brick on their land (because they owned the quarries!). Use of it before 1925 usually indicates freehold land.

What this suggests is that all three mills were built by the Thornley family, either as a group or in succession. They could not have been built before the Torside Goit, which is likely to have been in place by 1791, and it's unlikely that Robert Thornley would have built another mill on the Padfield Brook site after 1795 as by that date he and his brother John were engaged in building the very much bigger Vale House complex higher up the Etherow. However, as the family would own three of the five mills dependent on the brook it's understandable they would want the security of the lease if it became available.

A reasonable supposition, therefore, is that all three mills were built between about 1789-95. It's possible that White Mill is the "Higher Mill", worked by Thomas Thornley, Robert and John's younger brother, in the 1803 register. However, this term was never in common use locally, and its attribution must be uncertain in view of the existence of Red Mill, which would actually have been the highest of the three Thornley mills. If the 1803 register says that Thomas Thornley was also working "Lower Mill" at that date, this would suggest that that was actually White Mill, as Denis Winterbottom's notes indicate that he didn't take over Bankbottom Mill until 1824 when his brothers were made bankrupt.

The name “Hadfield Lodge Mill” which Winterbottom shows as being used in directories at least until 1863, is however unambiguous as it was then transferred to the farm which occupied the site until the 1970s, although by the late C19th it was being referred to by the owners as “White Mill” this probably being in response to prevailing local usage.

Page 6

The tall chimney on the 1810 engraving is something of a puzzle, if the date is indeed 1810. It isn’t visible on the late C19th-early C20th photo on the cover of Sharpe’s book, and even if it’s the chimney visible behind on the photo (presumably at Bankbottom Mill) it would raise the same question – what, at that date, was it for ? There being chimneys for coal fires (for heating) at either end of the building, it could only be attached to a large furnace or boiler, and it’s most unlikely that there would have been any steam power at that date, and maybe never. Steam was little used in this area until the 1830s, and the main reason for introducing it thereafter was that the site had outgrown the available water power, which would not have been the case here.

If there *was* steam power by 1810, the normal way to add it to an existing water-powered mill was by constructing an external boiler house, and possibly engine house too – beam engines were universal at that date and were too tall to be incorporated into an existing mill without major structural alteration. The boiler house was usually free-standing to minimise fire risk, and on the 1857 map there are two buildings on the north side which could well be a boiler and engine house. If this is what they are, the engine would appear to be at the opposite end of the mill to the wheel; where steam *was* added, it was normal to treat it as supplementary power and to retain the wheel, many local mills being partly water-powered right up to the end, and a normal arrangement would be to power the mill from both ends in order to spread the loads on the shafting.

The three-storey building on the east end, latterly Hadfield Lodge farmhouse, was almost certainly Thomas Thornley’s house. It appears to have a garden gate even in 1810, and by 1886 it had acquired a formal garden in front and what appears to be an orchard at the back. It was normal in the early period for millowners or managers to live on-site, and the house was sometimes built against the mill as at Padfield Brook.

Page 7

If a spinning mill had all the preparation processes the raw cotton would arrive as bales, but it would leave wound in whatever form the next customer – doubler, dyer or weaver - needed, and would be packed into baskets or crates for carriage. Whatever, therefore, is being moved in or out of the upper taking-in door in the 1810 engraving, it isn’t the finished product, and may be just the engraver’s invention.

In a purpose-built water-powered mill, the wheelpit would normally be in the basement if the fall allowed for this, as would seem to be the case here. Logically, the place to look for the wheel would be close to the head-gate, which in this case would be at the north-east corner of the lodge, so placing the wheel under the taking-in section of the mill (and the later Brookside Cottage) and probably set laterally with the shaft in line with the centre line of the mill.

This is supported by the evidence on the 1879 OS map of a cross-wall between the taking-in section and the main mill (which may be visible as a protruding feature on the 1810 engraving, although it

isn't obvious on the later photo.) The powered section of a mill had to be reinforced to cope with the torque and vibration and the weight of the machines, and had to include a strong full-height cross-wall to serve as the "gearing wall" to take the upright shaft and the gears and bearings for the line shafts. If the estimated date of 1789-95 is correct this mill was too early for iron framing, but if it was built of brick it would certainly have needed a strong wooden frame; however, non-powered parts of the mill such as the taking-in section could have been more lightly and cheaply built.

The main development of the mill site was the addition to the south-east, on the Padfield side of the brook, of two large brick sheds, which survived until clearance in the 1970s. These appear to be on the 1857 map, and by the time of the 1879 survey had been joined by other smaller buildings forming a L-shape. Their function is not readily apparent from their form, but Winterbottom's notes indicate that whilst the owners (the Platt family) were in 1835 described as "cotton spinners, Hadfield Lodge" by 1850 they were "cotton spinners and manufacturers, Hadfield Lodge" and by 1855 "spinners, doublers and manufacturers of cotton goods", indicating that doubling and weaving had been added, which was often the case at this period.

This was often the point at which mills acquired a steam engine, but it's quite possible that this annexe was also powered by water only. The brook appears to have been diverted to run under it, and there was a lodge on the 1879 map. The lodge is rather small, as is the one immediately adjacent to the main mill, but a large on-site store of water would not have been necessary as in 1843 the millowners had jointly built a reservoir at Windy Harbour to hold water from Torside Goit. The Red Mill lodge would have been of no use to White Mill as it faced the wrong way, but would have provided an additional head to Bankbottom Mill.

Although the mill was "disused" in 1898, it's quite possible that it had a further working life, as the Heritage Trust has a business card of "Wm Sargentson, cotton waste dealer and manufacturer of all kinds of cleaning waste, White Mill Hadfield" and Quayle indicates that the Sargentson family were also operating a cotton waste business at Padfield Brook Mill from 1878 to at least 1928. Although it's clear from the photo in Sharpe's book (? early 1900s) that the eastern part of the site had by then become a farm, the main mill building may still have been in use for storage.

4.5 20th century

Pages 10-11

We can't be certain, without confirmation from deeds, that Brookside bungalow "had been built by 1921" – what appears on the map may simply be the surviving end section of the mill building after demolition of the centre section. Although it can't now be pursued further since the bungalow has been completely demolished since 2011, I think it's more likely than not that it was adapted from the surviving mill structure – it was still being referred to locally in recent years as "White Mill" or "the former White Mill" and it was a very strange-looking building, with small low-set windows and proportions and appearance quite unlike that of a typical 1920s or 1930s bungalow.

Summary

- Most likely date of construction 1789-95
- It was part of a group of three mills under the same ownership and sharing a common water supply

- It may, or may not, be the "Higher Mill" in early registers
- It's most likely that the wheelpit was in the basement under the later Brookside Cottage

Local context

Glossopdale was one of the very first areas to develop a factory cotton industry, the earliest dated cotton mill being Cross Cliffe in 1782-3. Thereafter, the industry expanded very rapidly in large part due to the encouragement of the Howards, who invested heavily in improvements in water supply, initially at (Old) Glossop then by building Torside Goit, probably around 1789-91, to create a new site for mill development along Padfield Brook. In due course that led to the development of the Waterside Mills complex into the largest in the area and possibly in the whole cotton industry by the early 1850s.

The key was a plentiful supply of water power. Local coal was expensive and of poor quality and imported coal not available until the railway opened in 1844, so steam was little used until the 1830s. Even after that, most mills continued to use whatever water power they could get right up to the end of the industry, although usually replacing wheels with turbines.

However, having started early, so the industry declined early. Development after the 1820s focussed on just a few sites, four of which became very big indeed, and many of the smaller mills had ceased production before the end of the C19th. The rest of the industry then declined very rapidly from 1921 onwards and had virtually gone by the early 1960s.

This had the consequence that very few sites were documented before demolition and redevelopment, and very little has been preserved. In particular, there is now very little evidence of original water power arrangements, even though this was the dominant feature of the early industry. On the sites which expanded, they were extensively modified or built over, and the smaller sites were largely cleared and redeveloped before there was any requirement to record the archaeology.

In this context, White Mill is very important, as it is the last undeveloped mill site from the early period, and there is a good chance that the wheelpit has survived under the ruins of the former Brookside Cottage.

Particular issues

- Was there steam power in 1810, or indeed ever ? Any evidence for this, in the form of the remains of a boiler and engine house or the engine base, should be at the northern end of the development site.

- Why brick ? Brick isn't the ideal material for a powered mill if you have access to high-quality quarried stone, which they did just a couple of hundred yards away. At a rough guess, a mill plus house of this size would require about 1200 tons of brick, and there was no local source so it would be carted in from a distance over roads which were mostly unimproved at that date. If original bricks can be recovered, they can often be dated and sourced.

Roger Hargreaves