

## POWER IN THE LANDSCAPE AUDIO E-TRAIL SCRIPT

### Track 1: On the Bus to Colden

As you journey from Hebden Bridge, through the cobbled streets of Heptonstall and onwards to the trail start point at Smithy Lane bus stop, we will explore the beginnings of water power, the Industrial Revolution and how this area became the centre of textile manufacture. The Upper Calder Valley has been well known for its handloom weaving for over 500 years and in the 1720's Daniel Defoe described the woollen industry workers: "These people are full of business, not a beggar, nor an idle person to be seen."

Local families took every new opportunity, investing every last penny to establish thriving businesses. This spirit of enterprise was inherited by younger generations who, by the end of the 18th century, were producing hard-wearing and elastic worsted cloth - a fine but strong material - and also weaving cotton. The raw cotton for weaving was imported from America, where it was grown on plantations using African slave labour. With a ready supply of skilled labour, an abundance of water for most of the year and a high demand for cotton, there was a big incentive to develop water power to support the textile industry.

Another major advantage was that Manchester, important as a source of raw materials and as a market for finished goods, had become accessible by the canal and new turnpike roads – the motorways of the day - although it was ponies and barge horses rather than lorries that travelled these routes. The Colden Valley mills that we will explore during this audio trail were ideally suited to water power, although some innovative thinking was needed to take full advantage of this.

So for now sit back and enjoy the rest of the bus ride, before we embark on our 6 mile walk and discover 'Power in the Landscape.'

### Track 2: Hudson Fold

If you look at 18th century maps of Yorkshire you will see that this area was densely populated with many small farms. The families who lived in these farms made a living both by keeping livestock and by weaving cloth. The building in front of you tells the story of this 'dual economy'. Weaving was carried out above the living quarters on the left hand side of the building, whilst the animals were stabled in the barn to the right. The electric light outside is not an original feature!

It is common to see old cottages with a line of windows on the first floor; these are known as 'weavers' windows'. Having this many windows, although small, allowed lots of light in so that the weaver could work long hours, even on overcast days.

The introduction of the flying shuttle in the 18th century increased the speed of hand loom weaving considerably, avoiding the laborious job of passing the yarn laden shuttle from one hand to the other. At that time weaving still took place in people's homes, but by the 1830's the whole process had been successfully mechanised and power loom production took over. As a result hand loom weavers' wages were lowered and jobs became a lot more scarce. Some believed that it was right for this old domestic system to be replaced by the efficiency and discipline of the mills. Joseph Greenwood's family made their living from farming and handloom weaving and saw it very differently. Looking back on his childhood in the 1830s, he wrote:

"The weavers as a class were poor, but they had their good times, the dwellings being on rising ground where the early sunshine in its splendour and where the atmosphere was not fouled by the smoke of the factory. There was no bell to ring them up at four or five o'clock in the morning noon, nor were they bound to stay late at night; there was freedom to start and stay away as they cared.

The eighteen forties was a very acute time for handloom weavers – Joseph Greenwood describes the effects of the decline:

The sun in winter just before setting, shone over the snow and the wide expanse; then there was the clear, cold frost clear from the fog of the valleys, and the reflection from the windows of the weavers' cottages were much



brighter than the brightest electric light in our large towns nowadays. The same windows which used to be lighted after dark from within were now in darkness, and many of the houses unoccupied, the hand wool comber and the handloom weaver are not there. In the walks that one might take in the lanes and footpaths, old faces are not to be met. The old families are not known, nor have been for some time. The sound of song and the shuttle is departed.”

### Track 3. The River Colden

Imagine you were set the task of building a water-powered mill. It would need locating beside a water source, where a wheel would be placed and spun by the moving water; this in turn would drive the machinery. Despite the use of different techniques, dry summers and a lack of water meant the mills could not operate properly all year round.

One solution was to build weirs and a network of connecting channels to feed mill dams. Look back towards the farmhouse you have just passed and follow the wall with your eyes, down to the small waterfall. This, and many weirs like it down this stretch of river, captured the water, sending it along a channel called a 'goit' to storage dams. A goit is a stone lined channel and this one can be seen as the horizontal line above the river, looking like a footpath, running from the weir to the building downhill from you. Another goit would carry water from the dam to the mill waterwheel further downstream. The elevated height of the goit provided further power for the mill.

The biggest dam was in the area was built away to your right, high on the moors at Noah Dale, collecting water from the surrounding moorland. Noah Dale alone could provide an extra 8-10 million gallons of water when the river level dropped.

Where neighbouring mills shared the same stream, rows about entitlements were common. Here's a couple of examples from court records:

The owner of the White Lion Inn in Hebden Bridge claimed he was deprived of water to his premises by William Cockcroft of Bannister's Farm. The dispute was taken to the York Assizes where 'ancient persons' testified that the tenant at Bannister's farm had always had to right to divert the water during the hay season. The court agreed, but that the extraction should be for as short a time as possible, so as not to prevent the innkeeper carrying on his business.

Some people took a more direct approach to resolve disputes:

At Luddenden Foot, one mill owner diverted the brook and raised the level of his own dam, to make his neighbour's mill inoperative. In response the neighbour was said to have come 'with swords, daggers, rapiers, staves, pitchforks, gavelocks, picks' to destroy his mill dam and fill in the goit with stones. The dispute was so serious it was taken to the court of the Duchy of Lancaster.

If you look on the deeds of any house in this area, you will be sure to find a lengthy section on water rights – indicating the value and importance of water.

### Track 4: Rodmer Clough Mill and Edge Mill

Rodmer Clough Mill, also known as Lister or Clough Mill was built in 1793 by Thomas Lister. The site consisted of a cotton and worsted mill with six cottages, a farmhouse and a barn. Workshops for both a millwright, who would keep on top of maintenance and repair, and a clockmaker, who presumably kept on top of the time, were also provided.

An advertisement in the 'Leeds Intelligencer' describes the mill to be in "a populous part of town" and refers to the new waterwheel with a constant and regular stream of water, with a fall of forty foot. The mill had "ten spinning mules and 2400 spindles", which represented a fair sized business at the time.

The house on the opposite side of the river, called Salt Pye, was originally Edge Mill. Edge Mill was fed by two mill dams, which are still intact in the woods behind Salt Pye. A corn mill is first recorded at Edge in 1614, but by 1802 it was used for cotton spinning with "regular business in Manchester."



By 1830 Edge Mill is described as being “now converted into cottages or dwelling houses”. The cottages became known as Salt Pie, possibly because they had the appearance of a salt pye - a box with a sloping lid, hung by the fire to keep salt dry.

Life in the mills was tough. Long hours, poor pay and no health and safety to speak of. Mechanisation may have transformed cotton spinning from a craft to an industrial process, but it came at a cost - a human cost. Eye inflammation, tuberculosis, cancer of the mouth and of the groin (also known as mulespinners cancer) could all be caused by the working conditions in the mills. There were also plenty of machinery accidents – from loss of a finger, loss of eyesight to regular deaths.

Looking on the bright side, many workers developed an unexpected skill. The spinning and weaving machinery was so deafening that the best way to communicate over the din was to learn to lip-read and the workers became very good at it!

## Track 5: Land Mill

Land Mill once stood on the inner bend of the road. The walls have now all but gone, looms have been replaced by trees and packhorses by mountain bikers, but you can still get a sense of place. You can spot the remains of a door, or possibly a window and the ivy-clad chimney; still standing proudly 120 years after the mill was demolished.

Land Mill, built in 1796 was smaller than the mills upstream. Samuel Crompton's survey of cotton mills recorded four spinning mules and 960 spindles here. Samuel Crompton was the man responsible for inventing the hybrid 'spinning mule' – a machine that spun yarn. There were a large number of variations based on his design and because his survey showed how extensively his mules were used, parliament awarded him £5000.

In 1882 the mill was advertised 'to let' in the Hebden Bridge Times, with two cottages and one and a half acres of meadow land. The mill was said to be:

“well fitted with shafting and gearing for 52 fustian looms, nearly new, and all the necessary appliances for fustian weaving. The motive power consists of a waterwheel, which is sufficient to turn the Mill except in dry seasons, also a capital steam engine and boiler.”

Opposite Land Mill is Land Farm Garden, complete with an indoor gallery and a selection of sculptures, which according to the owner, John Williams, “reflect my feelings to various aspects of the human condition.”

Stop 6 is some way off now. When you reach the open fields look over the valley to your left and see if you can spot where you have just come from.

## Track 6: Jack Bridge Mill and the New Delight

Jack Bridge Mill, on the opposite side of the river from the pub was a 5-storey steam-powered mill built in 1861, and the last to be built in the Colden Valley.

In 1884 the mill burnt down and the site was purchased. It was described as having a weaving shed, warehouse buildings, cottages, engine house, engine boilers, shafting mill gear and millwright work.

If you need to cut this journey short then here is a good place to catch a bus back to Hebden Bridge. If it is just refreshment you are seeking then the appearance of the New Delight Inn will be a welcome sight. We are roughly halfway through our journey now, so you have earned yourself a drink or perhaps a meal at this friendly pub, well known to locals and Pennine Way walkers.

## Track 7: Hudson Mill

A mill of one variety or another has stood on this site for over 700 years. In the early days it would have been a corn mill, forming part of the “Manor of Rawtenstall with Blackshaw” that stretched from “Coldeynmythm to Blackshawhead”.



A reference to a fulling mill on or near the site appears in 1571, in the will of Thomas Hudson. A fulling mill was where wool was cleaned to remove oils, dirt and other impurities, making it thicker. Slightly rounded hammers, driven by a waterwheel, pounded the wool and gradually turned it, so all the cloth was the same thickness. In Roman times, fulling was carried out by slaves, standing ankle deep in tubs of cloth and human wee! Urine helped in cleansing and whitening the cloth, and was so important to the fulling business that it was taxed!

The final process was to carefully dry the wool so that it didn't shrink. To do this the fuller would place the wet cloth on a large wooden frame or 'tenter'. The perimeter of the cloth would then be attached to the frame using hooks so that it would retain its shape and size.

From this process we derive the saying 'being on tenterhooks', meaning to be held in suspense.

Anyway, returning to Hudson Mill, it was rebuilt after a fire in 1802 and was then used both for cotton spinning and 'the shelling of oates'. In later years it became a mill for weaving, dyeing and finishing fustian cloth.

According to an article published in 'The Outfitter' in 1893, there were 135 looms in operation at the mill and 50 workers – a large enterprise. The trade journal commented that the owner's trademark was very well known and that the firm had earned its reputation from what were known as 'partridge cords'.

There also used to be a toll house here, but for the last 100 years the road has been closed to traffic. Much of the mill has been demolished – what remains is now a private house and the site of the mill dam.

## Track 8: Hebble Hole Clapper Bridge

After you have crossed over the bridge and taken the path down to the right, look out for the rusty metal grill on the riverbank, this is the beginning of the next part of the water system leading to Bob Mill, our next stop. As you continue along the stream you will be walking on top of this water system, as local walker Richard Peters explains:

"You are now walking on the edge of a 200 year old double mill dam several metres above the river. You have to imagine that when this system was working in the 19th century there would have been hardly any trees; the dam would be full of water – continually coming through from the river and somewhere underground goits would be feeding further dams below. What I find fascinating about this is the complexity of the system which is an amazing feat of engineering. If you can manage it, when you get to the far corner of the second dam, just look over the edge at a fantastic bit of drystone walling which even after 200 years it's still perfect.

## Track 9: Bob Mill

In 1805 the 'Leeds Intelligencer' describes a 3 storey cotton spinning mill along the course of "a powerful stream called Colden Clough" - this was Bob Mill built by William Greenwood. It describes the mill as being 60 feet by 30 feet and supplied by "an excellent dam and a good and large reservoir with a considerable fall and a constant supply of water". It also described a house adjoining the mill and a further four houses "fit for the reception of workpeople."

When the mill came up for sale 4 years later, an advertisement in the Halifax Journal read: "the supply of water is constant in all seasons and seven yards of extra fall may be made at little expense."

In 1851 Grace Greenwood was living at the mill with her daughter, son in law, and three young grandchildren. She is described in the census return of that year as a 'pauper and hand loom weaver'.

20 years later the mill was said to be in ruins but the dwelling house at the end of the mill still had tenants. It would be nearly 100 years before the remaining walls of this mill were demolished - by a group under the direction of their probation officers! Unfortunately a rare plant, the pinkishpurple flowering melancholy thistle, was also destroyed at the same time.



The tell-tale signs of the next section of the water system should be easily recognisable as you make your way down to Upper Lumb Mill, your next stop.

## Track 10: Upper Lumb Mill

You are now standing on the site of the five story Upper Lumb Mill built around 1800 by Gamaliel Sutcliffe and described in a lease to Titus Gaukroger and Sons:

“All that cotton mill at Lumb with the newly erected warehouse, together with water wheels, steam engine, steam pans or boiler, gas and gearing apparatus and pipes, main and cross shafting and gearing.”

Take your time to explore this area there's lots to see - you should be able to make out the remains of the flagstone mill yard and a mysterious arched stone vault.

Like many mills, steam power was added later at Upper Lumb to supplement water power. Can you spot the date stone on the fantastic stone chimney? The letters 'TS' stand for Thomas Sutcliffe.

The circular pit to the right of the mill steps which you've just walked down was a gas holder which consisted of a dome shaped container, sealed with water in this pit to trap gas. The mill wanted their own gas supply to provide lighting so that they could keep working in the mill overnight.

Find where the river disappears through a tunnel. The tunnel meant that the mill could be built over the river

Somewhere in this locality the Sutcliffes opened a one-room factory school. This was because in 1845 the Factory Acts said that children had to spend a certain number of hours in education if they were to continue working in the mills. 34 girls and 17 boys were taught reading, writing and arithmetic at Lumb.

There are several references in the prescription books of a Dr Thomas of Hebden Bridge, to the boys and girls who worked at Lumb, trying to clean up the mess created. They may have reduced the risk of fire by cleaning up cotton dust and fluff but their fingers, arms and knees often got injured in the process.

Although some millowners made efforts to improve their terrible safety records, conditions in local mills were found in a Parliamentary enquiry to be appalling. In addition to all the other risks, flooding was often a hazard. On the 1st April 1898 Augustus Beedle who lived at Bob Mill drowned trying to open the clew (or sluice) at Lower Lumb Spinning Company's Mill dam, a further 100 metres downstream.

As you make your way past the bridge to stop 11, look out for the second magnificent stone chimney for Lower Lumb Mill.

## Track 11: Upper and Lower Eaves Mills

Upper and Lower Eaves Mills were huge – five and six storeys, dominating the area of Mytholm for nearly 100 years. They obscured the view right in front of you until 1925, when they were demolished by the District Council to make way for new housing.

Originally built for cotton spinning, they were soon converted into silk mills, spinning waste silk, which was a fairly new process. The firm of George Binns and Co specialised in this process and employed several hundred workers in the area. Workers who had learnt their skills at the Binns' family silk mills, near Halifax, were also drafted in. If your name is Taylor, Wilson, Whopp, Bottomley, Bates or Blackburn, you may have ancestors who came to Hebden Bridge from one of the mills in the Ripponden Valley.

Silk spinning provided a way of recycling waste or damaged fibres that could not be used for fine silk garments, but could be used for ribbons and bandanas.



Records show that George Binns was always at one or other of the firm's mills, in Ripponden or Mytholm, and "as he walked through the village you could see he was a man of importance, dressed in black cloth with a sparrow tailed coat and silk hat."

Wages are thought to have been higher than at other mills, and from about 1850 the firm organised annual teas for their workers at the Neptune Inn, in Hebden Bridge, to foster harmonious relations.

Like other mills, they reported to the Rivers Pollution Commission in 1868 that the effluent went straight into the river and the report went on to note the use of four tons of soap a year. By this time, river pollution was a real problem in the area and no doubt the waterways were full of soap bubbles!

The Mills were sold to the interestingly titled 'Eaves Self Help Manufacturing Company'. They ran it as a cooperative during the Hebden Bridge Weavers strike of 1906-8, following a pay dispute at another mill.

## Track 12: Bankfoot Mill

A short distance from the centre of Hebden Bridge, we have reached our last mill site and last stop. Looking down at the small housing estate on your right, it is difficult to make out the exact site of Bankfoot Mill, which once stood here. The main clue is that you have just been walking along the goit that fed the water to the waterwheel.

There seem to have been a number of mills on this site (or possibly the same mill was renamed several times), called Upper Bankfoot Mill, Lower Bankfoot Mill, and Bankfoot Old Mill.

In 1808 William Patchett, Gentlemen, let the mill to Abraham Hollinrake, Cotton Spinner:  
"All that mill or factory now used as a cotton mill known as Bankfoot old mill with water wheel upright shaft, tumbling shafts, dam mill, mill races, goits, streams of water belonging, this was for a yearly rent of £147."

A steam engine was later installed at Bankfoot and was probably used initially to supplement water power but by 1833 the water wheel had been removed altogether. If you look carefully up the hillside above you, you may be able to spot the chimney from Bankfoot Mill hiding in the trees.

That same year James Bent a 'cotton spinner, manufacturer, dealer and chapman' went bankrupt. The commission of bankruptcy heard how he had resorted to hiding from one of his creditors, James Patchett, probably the innkeeper at the White Lion. Mr Patchett came asking for money and was told that Mr Bent was out. It turned out he was hiding in the parlour a few yards away.

From 1884 to 1959 Bankfoot Mill was used for dyeing and finally in 1971 it was demolished.

Here we end our trail – you now have two choices. Turning left along the main road will bring you to the welcoming Fox and Goose pub, famous for its character and real ale. Alternatively, pass on by the pub and head back into the centre of Hebden Bridge.

Whichever route you choose think about the significant impact that the textile industry had in this valley, thanks to Power in the Landscape.

Finally, we really want to know what you thought of this e-Trail, good or bad, so that we can use your feedback for future trails. Visit the Pennine Horizons website, listed in your booklet, where you will be able to give us your views.