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## Newtown's Water Mills - John Evans, Curator.

*The key to an understanding of why Newtown became an important centre for the manufacture of flannel lies in its ancient water mills. Whilst flannel production was based in the farmsteads of Montgomeryshire's hinterland, mills were crucial for the finishing stages of the cloth. Newtown, situated on a defensive loop of the River Severn and with several fast flowing tributaries was well placed to provide this service. Furthermore, as the eighteenth century gave way to the nineteenth, technological advances in water power led to the mechanisation of a number of the stages in the processing of raw wool into yarn making the water mill indispensable in textile production.*

In 1797 Walter Davies, a native of Montgomeryshire, was commissioned by the Board of Agriculture to conduct a survey of North Wales, which was published in 1810 as *A General View of the Agriculture and Domestic Economy of North Wales*. He provides us with a snapshot of Montgomeryshire in this crucial moment when production of flannel was in the process of switching from a largely domestic activity to an industrial concern.



*The water wheel at Melin Bompren, National History Museum of Wales, Sain Fagan (author)*

*Here flannel and webs on the tenters, form a pleasing contrast with the verdure of the dales. Instead of the sullen silence of indolence - the incessant monotony of looms, fulling mills, and other machineries sound more grateful, and much more profitable, music to the manufacturer's ear, than the most favourite oratorio of Handel. . . Formerly, the whole was manufactured, in the most literal acceptance of the term, by the tedious operation of the hand, by farmers and cottagers in their own houses. Of late, the powerful agency of water has been brought to their assistance: and about 40 carding, and several spinning, machines, have been erected in different parts of the*

county . . . Several at New Town.<sup>1</sup>



*Walkmills were still in operation in Ireland in the early twentieth century(Jenkins)*

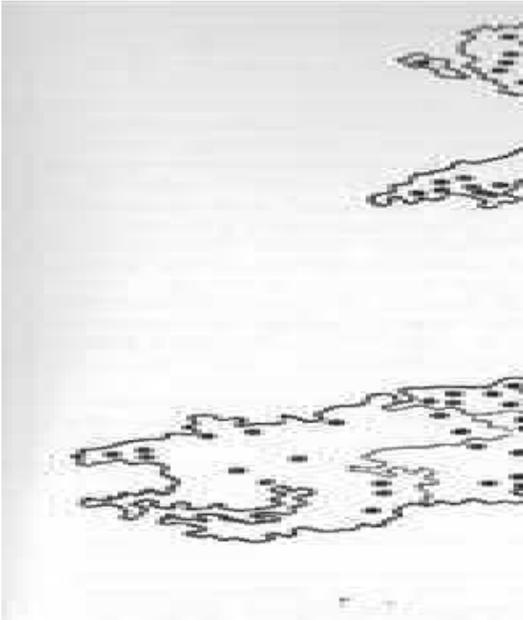
Fulling was an essential process in all woollen cloth production. It resulted in a softer and thicker finish, in which the threads of the weave were closed and tightened which helped to make the cloth more water repellent and improved its insulating qualities. For flannel, it was doubly important because, unlike other types of woollen cloth which were washed and scoured at the raw wool stage, flannel was woven 'in the grease'. Thus fulling also performed the important function of removing the lanolin naturally produced by sheep as well the dirt picked up by the grazing animal. Because urine contains ammonium salts, the cloth was whitened, or bleached, as a consequence of the fulling. For this reason, one of the mills at Mochdre was known as 'The Bleach Mill', whilst the field at Milford Hall in Newtown where the fulled cloth was pegged out to dry, was called 'The Bleach Field'. Originally, fulling was carried out in 'Walkmills' where, literally the cloth was trampled by human feet in large troughs filled with a mixture of urine, water and fuller's earth. This ancient practice is preserved in the names of two 'Walkmills' to be found in nineteenth century maps of the locality: one at Bettws Cedewain and the other at Mochdre.

By the fourteenth century, in Wales, wooden mallets, or stocks, were replacing human feet in the fulling of cloth. The fulling stocks were operated by cams attached to the shaft of a water wheel. Such fulling mills became a common feature throughout Wales where, it has been estimated, seventy-one alone were built in the first thirty years of the fourteenth century.<sup>2</sup> Here they were more often known by their

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<sup>1</sup> Davies, Walter (Gwallter Mechain), *General View of the Agriculture and Domestic Economy of North Wales* Vol. 3, p. 392, London, 1810

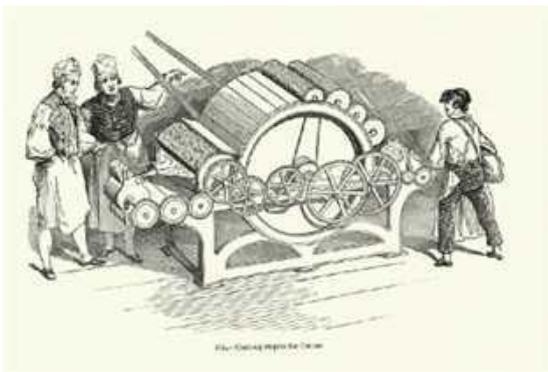
<sup>2</sup> Jenkins, Geraint J. *The Welsh Woollen Industry*, p.109, Cardiff, 1969



*Distribution of 'Pandy' place names  
(Jenkins)*

Welsh name of *Pandy* (*pannu* = to full + *tŷ* = house = fulling house). The large number of *pandy* place names throughout the country is a testament to the ubiquitous nature of the fulling mill in Wales.

The earliest evidence we have for a fulling mill in Newtown dates from 1330, in a list of seven mills formerly belonging to Roger Mortimer III, the grandson of the founder of Newtown. These appear to have been mainly corn mills, but at the Byander (Beander) Mill in the parish of Llanllwchaearn a distinction is made between a corn mill worth £22 in rent and "a fulling mill there" with a rental value of 40 shillings<sup>3</sup>. The existence of this fulling mill at such an early date is evidence of the long relationship Newtown has had with the native textile industry of Montgomeryshire. It is testimony that for centuries, woollen cloth, produced as Walter Davies suggested in 1810, in the surrounding farmsteads, was brought down to the Severn to be finished in the Byander Mill before being sold in the local markets or, later, from the sixteenth to the eighteenth centuries at Shrewsbury.



*A nineteenth century water-powered carding engine (Wikicommons)*

By the end of the 18th century, water power was being applied to the early stages of wool processing - scribbling, slubbing and carding - which resulted in the fulling mill becoming the centre of flannel production. As a consequence of new machinery being introduced, existing buildings were often enlarged, or new ones erected. Rather than continuing to be known as fulling Mills, these new structures were often described as 'manufactories' with a community of workers living in the building or in cottages close to it.

We can see this process developing in one of Newtown's mills. Milford Hall, standing on the

<sup>3</sup> Barton, P.G. *The Beander Mill, Newtown, Montgomeryshire, 1330-1851* in *Mont. Colls.*, Vol. 95, 2005.



*The Tithe Map shows the location of Tilsley's new mill race and manufactory at plot 127, with the rack field at 126. (National Library of Wales (NLW) Tithe Survey(TS), Llanllwchaearn, 1842)*



*The remains of the Milford Manufactory (author)*

western outskirts of Llanllwchaearn, dates from at least the end of the 18th century. In 1792, William Tilsley, a native of Aberhafesp, who had made his fortune in London as a linen draper and banker, purchased the property. Tilsley did much to encourage the early development of the flannel industry in Newtown and shortly after buying Milford, he built a new 'manufactory' to replace an old fulling mill of unknown date on his property. The Milford Manufactory was one of the earliest water-powered flannel factories in the town and it must have been an impressive sight and a costly undertaking. Tilsley had to negotiate with landowners on the opposite bank of the river in order to construct a weir to divert water into a newly dug channel, or mill race, to feed his enterprise. Built of red brick, the four-storeyed manufactory towered above the old fulling mill. Within the new building there was a warehouse to store the raw wool and ten carding engines<sup>4</sup> were installed to process the wool ready for the spinners who worked on five spinning jennies, two of 100 spindles each and three of 60.<sup>5</sup> Not all the machinery was water-powered, however, for there was also at least one hand loom for weaving the spun yarn into flannel. Once woven, the cloth was taken to the old fulling mill to be washed and scoured, before it was stretched on wooden tentering racks on the bleach field below. Thus, the mill complex contained all the equipment needed to process the raw wool through to finished cloth. Today, the mill race can still be clearly traced as a deep cut - probably some 10 feet deep - with a bridge of brick over the upstream end and some remnant ironwork from the stop gates. Little remains of the mill building itself other than some ivy-clad brick walls. However, 200 years ago this building represented cutting edge technology. Standing there in 1809, one would be glimpsing the future; the beginning of the factory age in Newtown.

<sup>4</sup> Jenkins, *op cit*

<sup>5</sup> Rackham, S. *The History of Milford Hall* in *The Newtonian*, Vol 39, Winter 2009

The 1841 census<sup>6</sup> provides us with a glimpse of the woollen community which had grown up around the manufactory. There were two slubbers, two carders, one spinner, six fullers and a flannel merchant. Interestingly, despite records telling us that at least one handloom was present in the mill, there are no instances of weavers living close to the mill in 1841. Perhaps by this time weaving was no longer carried out at here as a consequence of the growth of Penygloddfa as an industrial suburb, with the subsequent erection of handloom weaving factories, following the completion of the new Longbridge in 1827.



*The Byander Mill and its rack field is located at c. 34 and c.32 on the Tithe Map (NLW, TS, Llanllwchaearn, 1842)*

Similar developments were happening downstream at the Byander Mill in the first decade of the nineteenth century. In 1808, the owner of the Byander, another ambitious entrepreneur, George Evors of Newtown Hall, installed two carding engines, one scribbler and three slubbing billies there. Just as at Milford, spinning jennies and handlooms were added, to create a second Newtown manufactory. The Byander would later be renamed the Oversevern when it was converted to steam-power in the mid 1860s. It would remain as a flannel factory until the early twentieth century before finally being devastated by fire in the 1940s. All traces of this mill, which had stood on the banks of the river for more than half a millennia, were swept away during the building of the flood defences in the 1970s. The surviving evidence we have shows a squat three storied building, whilst the tithe map of 1842 clearly shows the long mill race and the rack-field for the tenting of the fullled cloth.



*The Byander Mill, hand painted postcard  
c. 1900*

Further downstream, another mill was undergoing similar changes. Little is known of the origins of Tibbot's Mill, situated opposite the

<sup>6</sup> The National Archives (TNA) HO. 107/1440/4, folio 32-36



*Tibbot's Mill after its conversion to a steam laundry(NLW, David Pugh Collection(DPC))*

outflow from the Oversevern mill-race on land close to where MacDonald's now stands. There is no reference to a mill or a Tibbott in any trade directories we have searched. Neither does the 1841 census mention it, but on Pool Road there is a William Davies, fuller, and what might be his brother Thomas a woollen manufacturer.<sup>7</sup> The tithe map of 1842 shows a building which is described as a "Factory and Premises". The 1861 census mentions a "Tibbott Building" on Pool Road comprising four households - Thomas and Jane Jones, carpenter and washerwoman, William Williams, spinner and wife Margaret a weaver, John Pearce, a shawl manufacturer and wife Elizabeth and daughter Jane, both flannel weavers and, finally, widow Elizabeth Andrews, and her son David, a woollen spinner, two daughters Sarah, a seamstress, and Mary, a servant, They also had a lodger, Martha Hill, who was a net maker.<sup>8</sup> The 1885 OS map names the mill as Tibbot's. By 1901 it is marked as an electricity generating station and laundry. Then owned by Pryce Jones Ltd., electricity was generated by a dynamo driven by a steam engine which had been installed. The electricity powered machines in the Royal Welsh Warehouse and Factory as well as at the Cambrian Mill, supplied by a cable running across the river. There was also a laundry and printing works attached, the latter producing Pryce Jones's mail order catalogues and all the company's other stationery needs.



*The ruined Craigfryn, c. 1970 (NLW, DPC)*

<sup>7</sup> TNA HO. 107/1440/18 folio 8

<sup>8</sup>TNA RG. 9/4250 folio 66

Manufacturer'.<sup>9</sup> A plan of the Craigrfryn dated 1824 shows the fulling mill with three water wheels.<sup>10</sup>



The Craigrfryn and its weir 1885 O.S. Map (National Library of Scotland (NLS))

In 1841, the census mentions 'Craig Fron' in the St Giles area occupied by Meredith Pugh, a woollen carder and wife Margaret.<sup>11</sup> His 20 year old son is a woollen slubber. There is no reference to the Craigrfryn in the Tithe Map of 1842, but it is marked as a Flannel Mill in the 1885 OS map. At that time it was run by the family of James Buckley and the mill was frequently referred to as 'Buckley's Mill'. The building seems to have been shared with a tannery on the lower floor(s) with Buckley's wool business on the upper floors. Mill work came with attendant perils, according to a report of an accident in early May 1881 in 'The Montgomeryshire Express'. Another accident in Dec 1881 reported that a young woman sustained serious injuries after falling through a trap door. The building itself survived until the 1970s before being demolished.



Aberbechan fulling Mill is shown at D133 on the Tithe Map (NLW TS, Llanllwchaearn)

As well as the four water mills on the River Severn, there were others in the outer districts of the parishes of Newtown and Llanllwchaearn, as well as in the parish of Mochdre to the west.

The Bechan brook served five mills between Tregynon and its confluence with the Severn at the tiny hamlet of Aberbechan.<sup>12</sup> Here, just in the parish of Llanllwchaearn, where the recently dug canal was taken across the Bechan's course

<sup>9</sup> Jenkins, *op. cit.*, p.35

<sup>10</sup> Jenkins, *Ibid*, p.134

<sup>11</sup> TNA HO. 107/1440/18 folio 8

<sup>12</sup> Jenkins, *op.cit.*, p.164

by aqueduct, was situated its lowest mill at the junction with the Severn. The tithe map shows that it was served by a long mill-race originating to the north of Aberbechan Bridge on the Newtown road. The tithe schedule merely names it as 'Fulling Mill' (a name repeated on the 1885 O.S. Map) and records it in the possession of Evan Watkin. Evan was born in about 1790 and married Elizabeth Owens in St Mary's Church, Newtown, on 25<sup>th</sup> June 1812) and is described in the 1841 census as a 'Flannel Fuller' living at the mill with his wife Elizabeth and their five children. Richard, the eldest at 15, was also a fuller and his younger brother, 14 year old Thomas, is described as a miller. There was also another 31 year old fuller in the household named Griffith Hughes. Such detail might indicate that the mill was a flourishing concern. The 1851 census shows that Evan also farmed six acres of land, so it is possible that he reared his own sheep for flannel production. By the following census, Evan had died and the business had been taken over by his unmarried son, Richard who was assisted by his three nephews, 11 year old son, Evan, 13 year old Manchester born, William, and 23 year old John Jones of Welshpool, all described as fullers.<sup>13</sup>



*The Dingle Factory, 1842 Tithe Map (NLW TS, Newtown 1842)*

The Dingle Factory, situated on the Middle Dolfor Road, just below the modern bypass, was an old corn and fulling mill with carding machinery installed in the early years of the nineteenth century. In Pigot's Trade Directory of 1828, John Owen, a woollen carder was operating from there. The Newtown Tithe map shows it at plot 381 as a collection of buildings situated on the western bank of the Dingle and is named as a "Factory, cottages, pond, watercourse, Gardens and premises", owned and occupied by Jeremiah Williams and others. Williams is also listed in Slater's Trade Directory of 1844 as operating at the Dingle. The 1841 census indicates that the "Dingle works" was, in

<sup>13</sup> TNA RG. 9/4251, folio 81

reality another small community of woollen workers.<sup>14</sup> In addition to the mill, there were six cottages. William Jones was a spinner and David Evans was a 50 year old weaver living next door. A carder lived in the third cottage, another spinner in the fourth and two weavers in the fifth and sixth.



*The Mochdre Valley in 1885 (NLS)*

Another community of flannel workers was located on the western edge of the parish of Newtown. Here, the fast flowing Mochdre Brook provided sufficient water to power not only the Mochdre Corn Mill but the wheels of six different flannel mills. The 1841 census lists four specialising in fulling. Two of these were located higher up the valley at Dolau and Stepside (this one referred to as the Bleachmill in the 1885 OS map). Two other fulling mills were located lower down the valley at Mochdre Bridge. These were called the Middle and Lower Fulling Mills respectively.<sup>15</sup> Both 1841 census and Tithe Map also refer to two 'factories' located either side of the bridge. In the census these are called the Middle and Lower Factories. They are shown on the 1885 OS map as The Red Factory (probably with a later extension known as the Middle for carding) and The White Factory. They latter seemed to have specialise in carding. John Lewis, a woollen slubber occupied the Lower Factory in 1841. He employed a millwright and four fifteen year olds as carders and 'engine feeders'. The Lower Factory also had four cottages attached where a further 13 woollen workers were living.

Various sources in the nineteenth century refer to the six mills in different ways. The following chart summarises these:

<sup>14</sup> TNA HO.107/1440/18, folio 32- 39

<sup>15</sup> TNA HO.107/1439/3, folio 5-11

Census	Householder	Tithe	Occupier	1885 OS
<b>Dolau</b>	Richard Jones	439 Fulling Mill Bags, Pond, etc.	Evan & Richard Watkin, Jane Hamer, Susannah Hamer, Charlotte Hamer & Ursula Hamer.	Vicinity of White Cottage
<b>Stepaside</b>	Elias Evans	470 Fulling Mill, Garden, etc	Richard Morris & Others	Bleachmill
<b>Middle Fulling Mill</b>	David Morgans	474 Flannel Factory, Pond, Dwelling, Garden & Meadow	Richard Morris & Others	Red Factory
<b>Middle Factory (Carding)</b>	William Parry	474 Flannel Factory, Pond, Dwelling, Garden & Meadow	Richard Morris & Others	Red Factory
<b>Lower Fulling Mill</b>	Richard Morris	478 Factory, Mill Pond & Garden	Griffith Lewis	Bridge
<b>Lower Factory (Carding) NB this entry is next to Glandulas</b>	John Lewis	Glandulas Factory 182 Factory & Garden	Thomas Lewis	White Factory



*James Leach's Flannel Mill (NLW, DPC)*

In 1841, there were some 600 souls living in Mochdre parish with 153 people listed as employed, mainly as farmers, agricultural labourers or servants. But 55, or a third of the working population, were directly employed in flannel production, making this small community heavily dependant on wool. By 1861,<sup>16</sup> the numbers had dropped to 22, perhaps because of competition from the larger Newtown mills. But flannel production survived in Mochdre long after it ended in Newtown. James Leach, a native of Oldham, had arrived in the parish and was operating as a carder at The Red Factory in 1861. James had a large family. His eldest son, 29 year old John was a wool slubber, married to Sarah a dressmaker with an 11 month old son. James's three other sons were also employed at the mill as slubber, engine feeder and fuller respectively, whilst his youngest, 15 year old David, was a carrier. James's great grandson,

<sup>16</sup> TNA RG. 9/4249, folio 14-83

Seymour Stanhope Leach was still producing flannel blankets and rugs a hundred years later, before the mill finally closed in 1964.



*One of Seymour Leach's flannel rugs, early 20th century (NTM)*

In total there were some twelve watermills devoted to woollen cloth production in operation in the vicinity of Newtown during its flannel period. As mechanisation advanced in the industry, the mills took on an increasing role in the production of the textile, developing from isolated business concerns handling the essential finishing stage of the product to integrated enterprises processing the raw wool, converting it to thread and weaving it into cloth on the handlooms which were installed for ease of production. In this sense, the watermills were the first manifestations of the factory age in Newtown, attracting communities of specialised workers around them. As Newtown's success increased as a manufacturing centre, weaving, which continued to remain a manual occupation, was taken out of the mills and into the new handloom factories sprouted up in the town in the first forty years of the nineteenth century. Nevertheless, the mills retained their importance throughout Newtown's age of flannel some even adapting to steam in the second phase of integrated production which accompanied the arrival of the power loom.