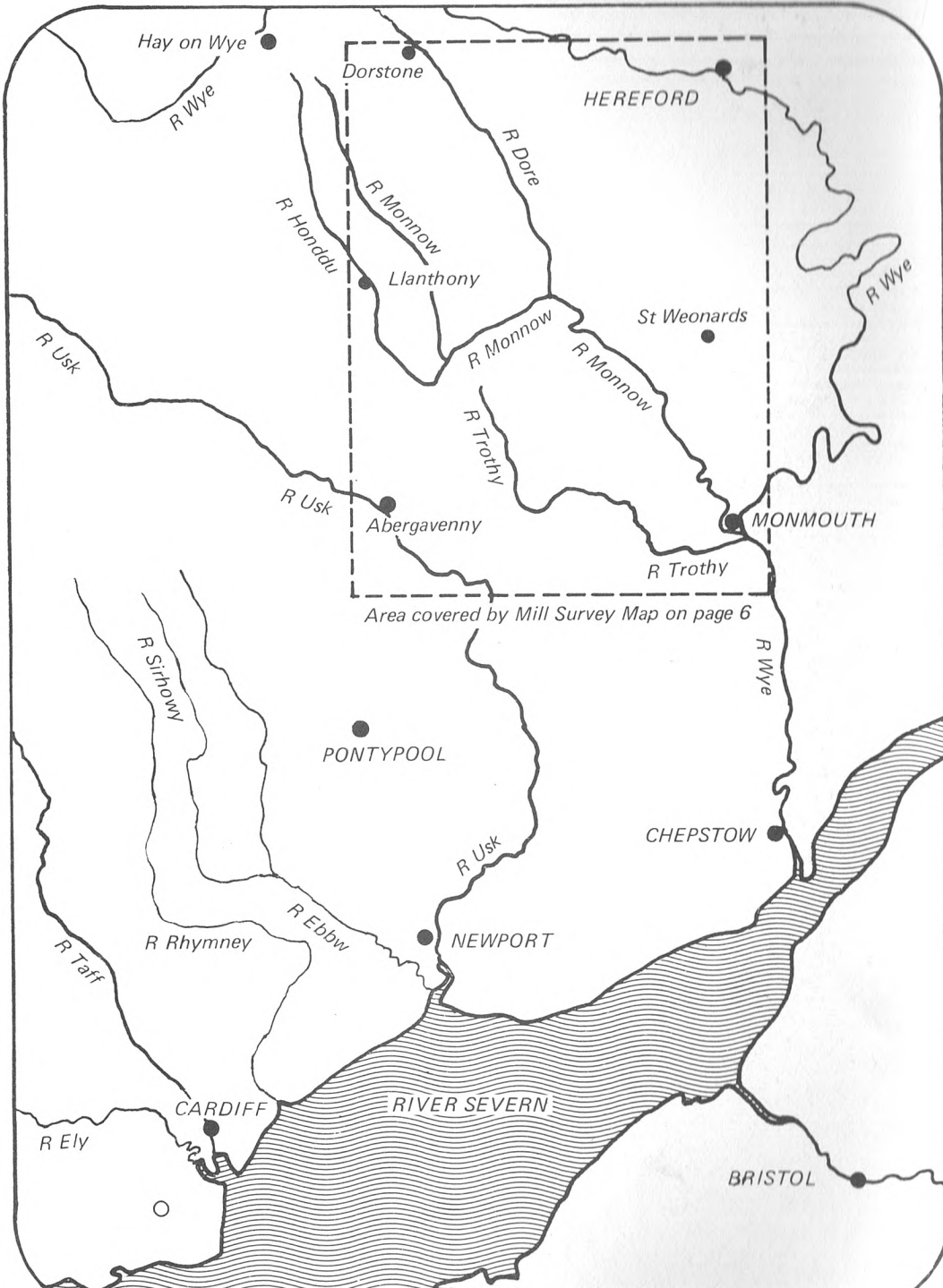


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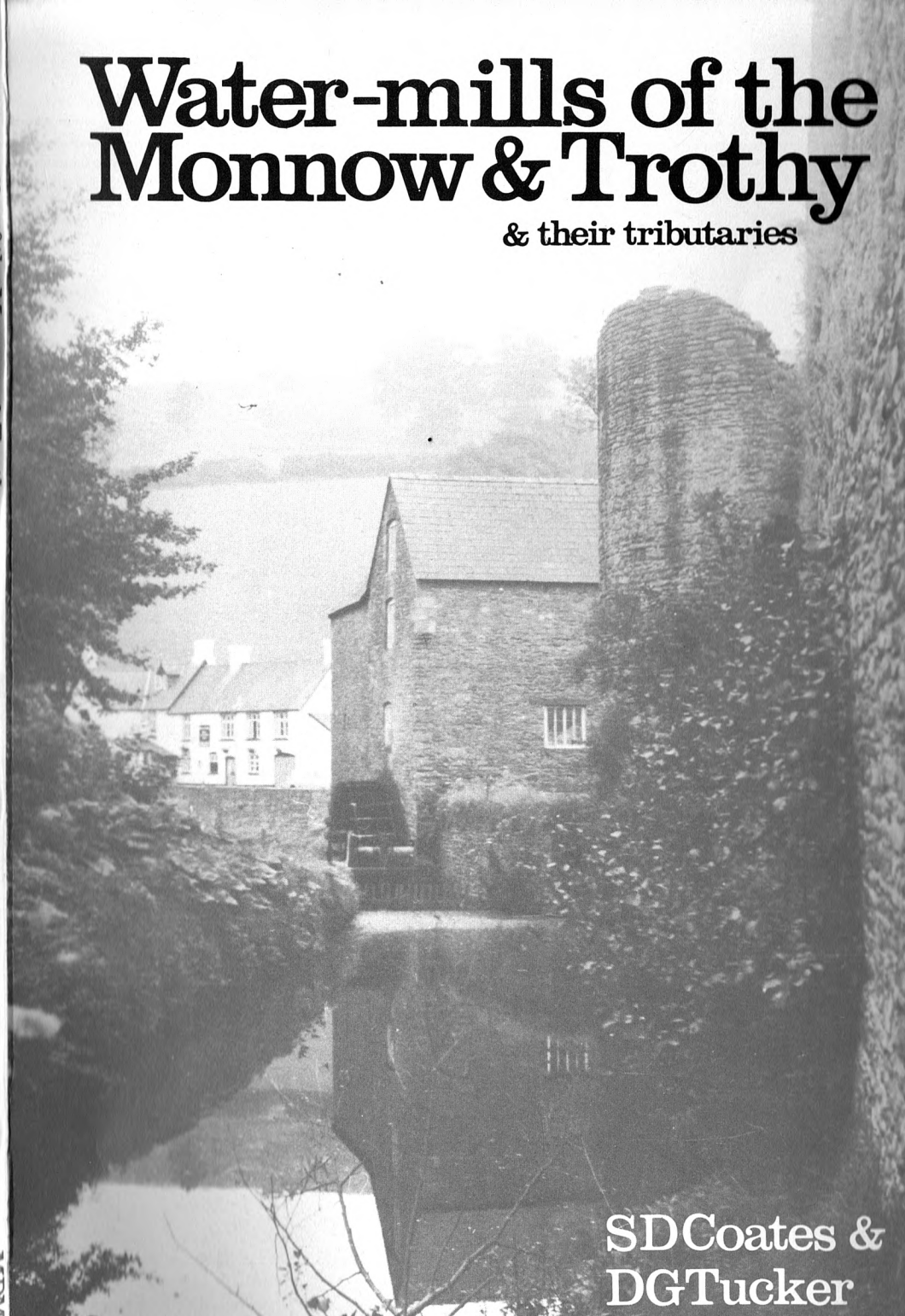
Water-mills of the Monnow & Trothy

& their tributaries

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SDCoates & DG Tucker

1991



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Many people have helped in our research, and one group where it is difficult to mention all the individuals comprises the owners or occupiers of the various buildings and sites. Without exception we have been given the maximum co-operation and wish to acknowledge our gratitude. It is perhaps reasonable to single out Mr and Mrs Robertson of Pontynys Mill, Longtown, who were particularly hospitable in aiding the detailed survey made of their mill by Mr Martin Watts and Mr and Mrs Roy Day of the Bristol Industrial Archaeology Society, whose results we are pleased to be able to use.

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Preface

There is no finality in historical and industrial archaeological research; no stage is reached when one can say that all available information has been gleaned and that a complete and accurate account of the subject can now be written. In our work on the mills of the Monnow and Trothy basins, the research looks endless; we discover new possibilities of old mill sites nearly every month, and occasionally even an actual mill the existence of which we had not suspected. There are still many old records which might yield relevant information which we have not yet examined, and many square miles over which we have not yet searched. But if publication is postponed indefinitely, our work is wasted, for it is then of no use to others. The difficulty is to decide when to publish. We hope we have decided wisely that the present is a suitable time. With 90 mills or mill-sites on our list for the comparatively small area studied, we feel that there really cannot be many more to discover.

The emphasis of this little book is on the listing of sites rather more than on the historical detail and technical description of the mills. The industrial mills are probably historically more important than the corn mills, and as they are less numerous, we have been able to give them fuller historical treatment than the latter while still giving them less space.

Further information from readers on the mills of the area will be greatly welcomed, and should be sent to us c/o Monmouth Museum.

We cannot stress too strongly that all the sites noted here are private property and must not be entered upon without the express permission of the owners or occupiers. Many of the mills which are still standing can, however, be seen from the public roads or rights of way, and this should give adequate opportunity for external viewing, sketching, and photography to those who are not making a serious study of the mills. Examples are Nos. 1, 2, 3, 10, 11, 12, 16, 17, 20, 22, 23, 25, 27, 28, 37, 40, 41, 44, 47, 56, 62 and 63.

and could at the present time be described as unspoilt. It was, and is, a prosperous agricultural region, the broad valley of the River Dore (tributary to the Monnow) being particularly notable in this respect and deserving of its ancient name of Golden Valley. The region's population has been fairly static over a long period. The censuses of 1831, 1861 and 1891, which gave the population figures parish by parish, can be analysed for our region as shown in Table 2. Evidently the population peaked in the middle of the 19th century, and the subsequent decline was marked; it was, nevertheless, much smaller than in many other rural areas. The population is probably not much different today. In the 19th century the region was markedly devoid of industry. The 1831 census shows only nine people engaged in manufacture outside the town of Monmouth, where there were 80; these nine comprised six in Much Dewchurch, where only the western part of the parish drained into the Monnow basin, the village itself, where the six were probably employed, draining directly into the Wye; and three in Crasswall, high up the Monnow, where there was a woollen mill. It is surprising that none were shown for the parish of Rockfield, for the Ruthlin Paper Mill is believed to have been still operating then. However, in earlier centuries there was much more rural industry in the region, as Chapter 3 of this book will show. There had been at least 11 fulling mills, two paper mills, and three ironworks (excluding Monmouth Forge), all operated by water power.

Of the 80 people engaged in industry in the town of Monmouth in 1831, probably the majority were employed at the water-powered and centuries-old Monmouth Forge, for we know from a plan of 1849 that there were 21 cottages for employees at the Forge, in addition to the manager's 'mansion'. From the end of the 19th century this site was used for the water-powered Monmouth Electricity Works. It is probable that, during much of the 19th century, at least as many people were employed in connection with the water-powered iron mills as worked at the various corn-mills in the whole region, allowing for the fact that many of the millers were part-time.

It is often assumed that a reliable list of mills can be obtained from map sources, especially the large-scale (ie 6-inch and 25-inch) Ordnance Survey maps.⁴ This we have found to be untrue. Many mills, particularly farm-mills, do not appear on such maps. Examples in our region are Home Farm Mill, Dulas; Olchon Farm Mill; Snodhill Mill; Lower House Farm Mill on the Escley Brook. Conscientious search and enquiry in the field as well as among documents is essential if the list is to approach completeness. In spite of our efforts, however, we can feel no confidence that our list is actually complete, and quite expect that more sites, and even mills, will be discovered.

It is hard to say how many mills were operating at any one time. Simmons⁵ extracted entries from Trades Directories of the 19th century, and for our region he listed about 40 operating around 1880–90. It is not possible to be precise because of confusion over names. But this did not include all farm mills.

As would be expected in an area so well provided with streams and a fairly high rainfall (100 to 150 cm a year), practically all mills were watermills. References to only two windmills have been noted in our researches, one at Monmouth in 1698⁶, and one at grid reference (approx) SO 4732 near Much Dewchurch in 1754⁷. Nothing more is known about them.

It is useful to attempt to compare this region, in terms of mills, with others. Unfortunately little suitable data is available. If we take the number of active mills in the Monnow and Trothy basins in the mid-19th

TABLE 1

Watermills in Monnow and Trothy Basins in the 14th Century

(As shown on William Rees's Map of South Wales and the Border in the 14th Century)

Location shown on map	River	Bank	Corresponding modern site	Number on our map
Monmouth	Monnow	E	Priory and Monnow Mills?	1 & 2
Rockville	Monnow	W	Perthir	5
Treget	Monnow	E	Tregate	6
Ryslin	Monnow	W	Ruthlin	8
Skenfrith	Monnow	W	Skenfrith	11
Grosmont	Monnow	W	Grosmont	16
St Keyna ¹	Monnow	W	Kentchurch	17
Ewyas Harold (2 mills shown)	Dulas	W	Pontrilas + another	21
Cheynestone	Dore	E	Chanstone	27
Peterchurch	Dore	E	Forge?	30
Dorstone	unnamed	S	Dorstone	32
Rolleston	Greitol (Cwm?)	W	Rowlestone (Upper?)	35
Michaelston (2 mills shown)	Hotheni (Honddu)	S	Llanfihangel (= Church of (St Michael) Crucorney	38
Ewias Lacy	Monnow	W	Clodock?	41
St Michael	not shown		Michaelchurch Escley	44
Troye	Trothy	S	Tuck mill at Troy House?	50
St Michael by Troye	Trothy	N	Wonastow	52
St Michael by Troye	Trothy	S	?	—
Llanvihangel	Trothy	S	?	P21?
Llanvetherine	not shown		?	—
Trerew	not shown		Trerew	60
Wernerid ²	Mynach	E	Llanvapley	63
Lancadok Lincoed	Nantyffin ³	E	?	P23?
Penros (2 mills and tuckmill shown)	not shown		Some or all of these could be in Usk basin	?

Total, say 27 mills in Monnow/Trothy Basins

Notes:

- 1 This is Kentchurch. Ekwall, in 'Concise Oxford Dictionary of English Place Names', 4th edition, 1960, gives the origin of Kentchurch as 'St Ceina's Church' (Ecclesia Sancte Keyne in 1205).
- 2 Possibly from the Welsh 'Y-wern-yr-rhyd' = marsh at the ford.
- 3 = Brook of the boundary.

century as about 50, then there was an average density of one mill to 12 sq.km. For the East Riding of Yorkshire, which had some big towns with a large population, Allison⁸ states there were 59 watermills and about 110 windmills, so that with an area of about 2300 sq.km. the density of mills was about one to 13.5 sq km. For Kent, also with large towns, Bennett⁹ says there were 137 watermills and 226 windmills, ie, a total of 363 mills, in the county area of about 3000 sq km, giving a density of about one to 8.3 sq km. In terms of population, the Monnow/Trothy basins with about 20,000 people had one mill to every 400 persons, the East Riding with about 169,000 people (in 1831) had one mill to every 1000 persons, and Kent, with about 480,000 people (in 1831) had one mill to every 1320 persons. So, although in terms of area, the density of mills in our region was only little different from the other two regions, in terms of population the density of mills was very high. This no doubt accounts for the fact that most of our mills were small. None exceeded three storeys in height, although four was common in the other districts; none had more than four pairs of stones and two or three were much commoner; only two had more than one waterwheel.

The Census Enumerations of 1831 give information on the number of millers in each county (unfortunately not in each parish). There are some surprising variations. A few selected figures are given in Table 3. The two counties involved in our region, taken together, have an average proportion of millers well above the average of the other counties examined, if the exceptional figure for the East Riding is excluded, and 10% above the average even if this exceptional case is included. But there are many difficulties in drawing conclusions from these figures. Probably only a proportion of those entered as millers were engaged full-time in that trade; many would have had other occupations as well, generally as farmers or farm employees.

It is hard to make any useful comparisons of the distribution and density of the rural industrial water-mills (as opposed to corn-mills) of our region with those elsewhere, but it is probably safe to say that there was nothing exceptional about our region.

TABLE 2

Population of the Monnow and Trothy Basins

	1831	1861	1891
Parishes in Herefordshire	7992	8117	6790
Parishes in Monmouthshire	7024	7440	5954
Town of Monmouth	4916	5217	4969
Totals	19,932	20,774	17,713

NB: Figures for Monmouth exclude the parish of Dixton-Newton, which is not in the Monnow/Trothy basins.

TABLE 3

Number of millers in certain counties, 1831

County	Population	No. of Millers	Ratio, millers per 1000 population (approx)
Herefordshire	111,211	188	1.7
Monmouthshire	98,130	118	1.2
Warwickshire (including Birmingham & Coventry)	336,610	329	1.0
Worcestershire	211,365	206	1.0
Staffordshire	410,512	368	0.9
Kent	479,155	686	1.4
East Riding	168,891	379	2.3

Corn mills

The gazetteer lists all the sites of water-mills which we have been able to find with certainty. Chapter 4 deals separately with those where our evidence is inadequate to permit an exact location or where there is no real certainty that a water-mill existed. For completeness, and for easy reference to our map, we have entered briefly in the gazetteer even those sites where we have evidence of only industrial mills having existed. The arrangement by which a head of water is provided for the water-wheel is amongst the most important data relevant to a mill, and we have given an outline of these arrangements in all cases where we have the information. It will be noted that the average length of leat is quite long, with several of a mile in length, this being due to the generally gentle gradient of the streams concerned and the scarcity of waterfalls.

Of the buildings of which at least traces remain it is safe to say that most were of stone construction, probably dating from well before 1800. On the other hand, of the machinery which remains, none seems earlier than the 19th century. We saw no wooden wheels or gears or pulleys apart from those on exhibition at Llanvapley – wooden teeth, of course, but cast-iron gears otherwise. The only brick-built mills appear to be that at Home Farm, Dulas, and Chanstone and Poston Mills. Dore Mill at Abbey Dore has some portions in brick, no doubt representing a late 19th century rebuilding. New Court Mill at Bacton had some weatherboarding. Nearly all mills were of three storeys, although a few have had the uppermost storey removed since they have become used as barns (eg Grosmont, Llanfaenor). None had lucans to provide for an external sack hoist; sacks may often have been hauled up internally through trap doors.

Most of the mills had, in the 19th century, at least one pair of French burr millstones, with generally a pair of peak stones or Welsh conglomerate stones for preliminary or fodder grinding. Some of the mills, eg Pontynys, Poston, and Rowleston Upper, had associated

bakeries, and were therefore concerned primarily with making flour for bread and so probably had all or most of their stones (4 pairs at Pontynys) of French burr¹⁰. Other mills would be primarily concerned with grinding for fodder, for which the monolithic peak or Welsh stones were adequate; but even so French burrs were often used, eg at Home Farm, Dulas, where only one pair of stones was provided.

Many of the mills were used only occasionally. Records¹¹ have survived of the grinding done at Dorstone Mill during the years 1878–85. The record for 1883 is shown in Table 4, while Table 5 shows the total amount ground each year. It is clear from Table 4 that the heaviest months for milling were January–March, and in Table 5 is shown the percentage of the year's milling done during those three months in each year. There was obviously something abnormal about 1879 and 1880, and this may have carried on through the early part of 1881, thus accounting for the low percentage for January–March 1881. In all other years, the milling done during that quarter of the year was significantly above the proportional amount of 25%. This accords well with the idea that the material ground was fodder. It would probably also agree well with the idea that water in the little Pant-y-Weston brook would normally be very short, and adequate only during January-March. What stands out most, however, is that the mill was used less than once a week. This may well have been the pattern for many of the smaller mills.

Larger mills, taking water from the main streams (eg Monnow or Dore), would no doubt work nearly every day. Several mills went over to turbines in the late 19th or early 20th century (eg Abbey Dore and Poston Mills) and introduced iron roller milling for finer flour. Poston Mill, indeed, had a gas engine and gas-producing plant as standby, thus indicating a strong requirement for daily operation irrespective of water supply. During the second World War, Wonastow Mill also introduced a turbine with disc milling.

The arrangement of the mill was very varied, as will be seen from the gazetteer:—overshot, breast, undershot, and Poncelet wheels, not to mention the later turbines; internal and external wheels; varied equipment. Some had the normal arrangement¹² of pit-wheel on the water-wheel shaft, wallower above and at right angles, great spur wheel above it, stone nuts engaging this to drive the stones. But there were also some unusual arrangements. That at Pontynys Mill is shown on p.16, and should be self-explanatory. Pontys Mill had a normal arrangement in most respects, but power take-off for the dressing machinery on the third storey was provided by two bevel gears carried on the great spur wheel as shown on p.18. In corn mills (as opposed to industrial mills) it is very unusual for the power to be transmitted from the water wheel other than by its axle, but at Olchon Farm Mill the drive is by a rim gear as shown on p.31. The reason for this, in this case, would not be to reduce the torque which has to be sustained by the driving shaft (as it is in an industrial mill), but merely to avoid having to provide a floor to the mill at the low level of the wheel.

Tentering, ie the adjustment of the gap between bedstone and runner stone, is normally effected by a screw adjustment which raises or lowers one end of the bridge tree (the beam on which the footstep bearing for

TABLE 4

Record of Grinding Done at Dorstone Mill in 1883

Month	Day	No. of Bushels	Material
January	6	24	Barley
	15	20	Beans
	20	16	Barley
	29	16	Barley
February	1	12	Beans
	8	12	Barley
	17	12	Beans
March	1	18	Barley
	3	8	Barley
	5	8	Beans
	10	12	Barley
	17	8	Beans
	20	4	Tailend Wheat
	27	12	Beans
April	3	12	Beans
	12	12	Beans
	20	12	Beans
	28	16	Beans
May	5	12	Beans
		2	Tailend Wheat
	10	12	Beans
	19	12	Beans
	27	12	Beans
June	2	8	Beans
	12	8	Beans
	23	4	Beans
July	14	4	Beans
August	4	10	Beans
	20	3	Beans
September	10	9	Beans
	18	6	Beans
October	2	6	Beans
	12	7	Barley
	16	7	Barley
	20	14	Barley
November	5	11	Barley
	13	15	Barley
	20	6	Beans
December	11	8	Beans
	18	4	Beans
	29	8	Barley

the stone shaft is carried). At Skenfrith and Clodock Mills, however, a somewhat different arrangement is used where the bridge tree is fixed, and a hinged lever is instead raised or lowered by a screw drive operated by bevel wheels, as shown on p.18.

Photographs have been taken of all the mills and sites, but only a few can be reproduced here. There are also sketches of six of the mills, a measured drawing of Skenfrith Mill and a plan of Cwm Mill, Crasswall which became exposed after it was gutted by a fire in 1976.

TABLE 5

Summary of Grinding Done at Dorstone Mill, 1878-85

Year	Total No. of Bushels Ground	Percentage of Total Ground Jan-March
1878	364	48
1879	no entries	-
1880	71	90
1881	281	22
1882	394	34
1883	422	43
1884	256	34
1885	237	35

Gazetteer of water mills with known sites

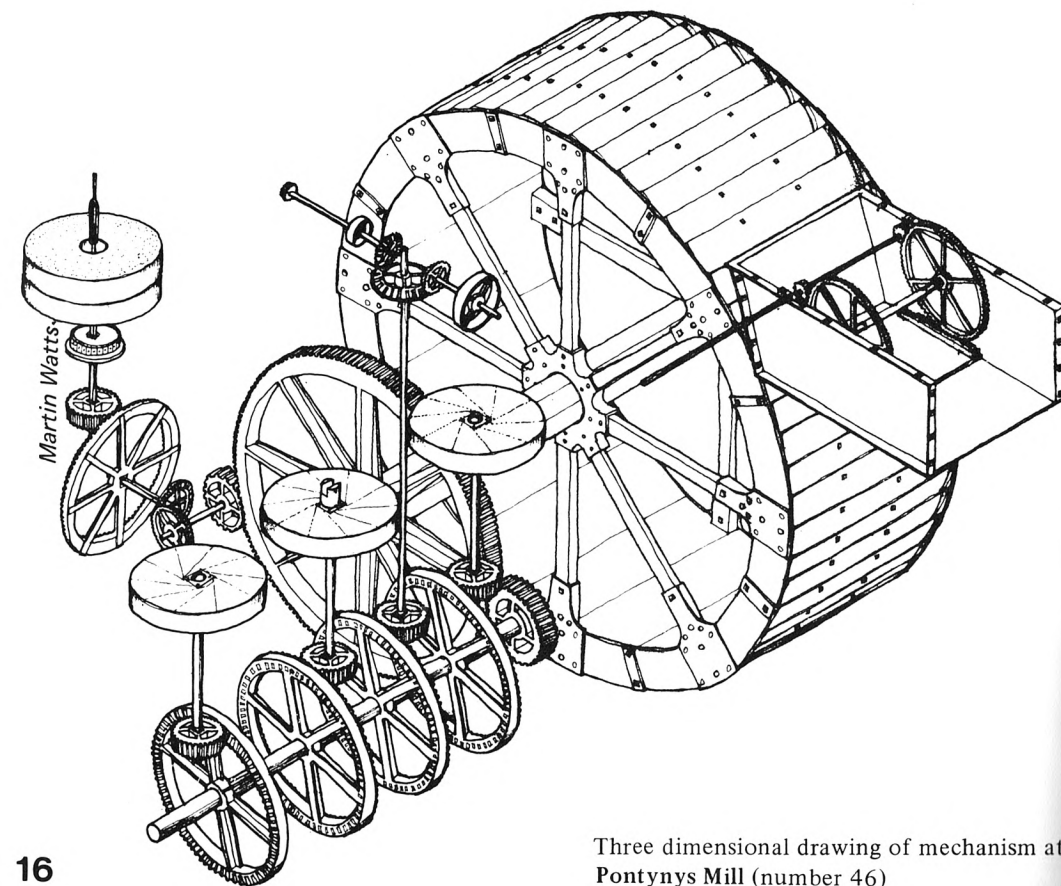
The numbers are those used on the map, and the system is to follow the river Monnow upstream from Monmouth, numbering the mills consecutively, exploring each tributary stream before continuing up the main river to the next confluence; and then to repeat the process for the river Trothy. All water-powered mills have been included in this numbering scheme, and all were corn or fodder mills except when otherwise stated. An asterisk after the number means that the mill had an industrial use for at least some part of its existence, and is therefore more fully discussed in Chapter 3.

Reference to documentary sources are abbreviated thus:—

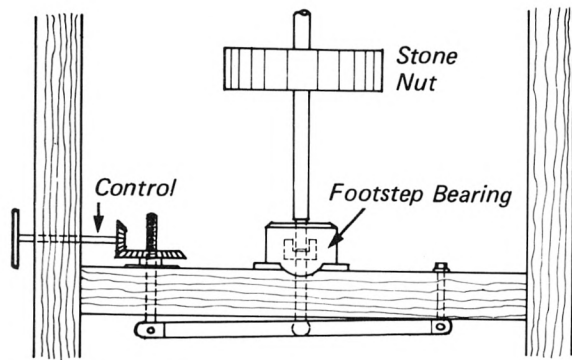
- Ta Isaac Taylor's map of Herefordshire, published 1754.
Scale 1 inch to 1 mile.
- OS c 1830 First edition one-inch Ordnance Survey maps; the sheets actually used were an original of about 1850 and the David & Charles recent reprints, but it is believed that information regarding mills dates from 1828–30 and was never revised on these maps.
- W J & C Walker's map of Monmouthshire, 1834.
Scale 0.95 inch to 1 mile.
- B A Bryant's map of Herefordshire, 1835.
Scale 1.5 inches to 1 mile.
- TM (and date) Tithe map and/or apportionment of date quoted, around 1840. Scales large but varied.
- OS (and date) Ordnance Survey 6-inch or 25-inch to mile maps of date quoted. (Dates in 1880's are First Edition; dates in 1890's and 1900's are Second Edition).
- G Documents in Gwent County Record Office (since these all appear in the Record Office's card index, no detailed reference is given here).
- H Documents in Herefordshire County Record Office (ditto).
- S Simmons Papers in Science Museum Library, London (a huge collection of data relating to mills; the files on Monmouthshire and Herefordshire comprise mainly information extracted from directories).
- HRL Documents in Hereford Reference Library.

Other sources are given in full in the gazetteer.

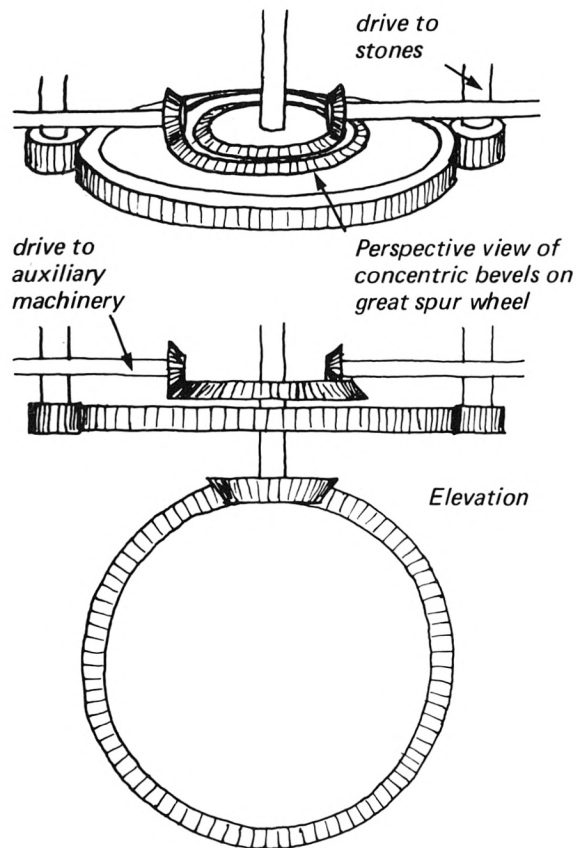
The inclusion of a reference to one (or more) of the maps in the entry for a particular mill means that the mill was shown explicitly on that map.



Three dimensional drawing of mechanism at
Pontynys Mill (number 46)



Tentering arrangement at Clodock Mill (number 41)



Rough sketch of gearing at Pontys Mill (number 43)

1. **Priory (or Castle) Mill, Monmouth**

R Monnow, SO 506 129. Building still stands, no machinery, used a store. There was probably a mill on this site in 1086 and throughout the centuries since then. In 1871 occupied by T J Baker; then for several decades in the hands of the Breakwell family, who also held Perthir and Tregate Mills. Weir in R Monnow below Castle, leat about 130 yards long, low head, wheels must always have been undershot [S; W; K E Kissack, 'Medieval Monmouth', 1974]

2. **Monnow Mill(s), Monmouth**

R Monnow, SO 508 135. Building still stands, converted to house. This was probably also an ancient mill-site. Documentation seems reliable for every century since 1448. 'Queen's Mills' in 1603. Numerous owners lessees, and tenants known. Corn-grinding by rollers introduced in 1895 previously four pairs of millstones. Two undershot water wheels about 12 ft x 3 ft according to old photographs. Weir in R Monnow and very short leat. [G; S; Ta; W; B]

3.* **Monmouth Forge: Monmouth Electricity Station**

R Monnow, SO 503 137.

4.* **Pentwyn Mill, Rockfield**

Nant-y-Gern (brook), SO 478 150. Substantial dam (about 20 ft high) exists, but no buildings. Corn-mill in 1767, but shown as a tuck-mill on Tithe Map 1842; shown on OS c 1830; shown as 'disused' on OS 1880. Stream dammed to form a pond; mill beside dam. [G; TM; OS]

5.* **Perthir Mill, Rockfield**

R Monnow, SO 483 155. No remains. Often spelt 'Perthyre'. Corn mill in 1597, subsequently also paper-mill and tuck-mill, for short periods only. Destroyed by fire 1890. Much documentation. Weir on R Monnow and very short leat. [G; S; TM; OS; Ta, W, B]

6. **Tregate Mill, Llanrothal**

R Monnow, SO 478 173. No remains, except weir. Shown on Tithe Map of 1841, although not on OS c 1830. Still shown, not disused, on OS 1903. Weir on R Monnow and short leat. [S; TM; OS; Ta; W; B]

7. **Llanrothal Farm**

On brook, tributary to R Monnow, SO 469 189. Pelton wheel, 4 ft diameter, in brick chamber, installed c 1920 to drive farm machinery then c 1940 to drive electricity generator for farm. Ceased c 1955. Still exists, but former mill-pond now filled in.

8.* **Ruthlin Mill, Rockfield**

R Monnow, SO 464 193. Present house converted from only remaining building of a mill complex; various remains of stone walling. Cornmill from before 1591 to c 1720; then paper mill. Much documentation. Weir on R Monnow and very short leat. [G; TM; Ta; W; B]

9. **Old Daren Mill, Garway**

Daren Brook, SO 467 208. Substantial remains. About 200 yards below the newer Daren Mill. Shown on Tithe Map 1843. Mill-pond on brook [TM; B]

10. **Daren Mill, Garway**

Daren Brook, SO 468 210. Buildings remain, substantially intact. Probably built around middle of 19th century. 'Disused' by c 1900. Various spelt Darren or Darran. Not on Tithe Map 1843. Appears to have used a natural fall on the brook, probably overshot wheel, external [S; OS 1900/5]

11. **Skenfrith Mill**

R Monnow, SO 457 203. As at 1977, still in use as mill, 'Dreadnought' disc mill driven electrically, but water wheel drives sack hoist. Stones

not now used. In 1691 there were "two watergrist mills in the town of Skenfrith". One was probably here; the other may have been Blackbrook Mill. Certainly in 1833 Joseph Brecknell was Miller and Horse Dealer of Blackbrook Park and Skenfrith. Skenfrith Mill held by Edwards family since c 1910. Two pairs of French burrs by Gardner of Gloucester. Weir on R Monnow, short leat to undershot wheel, external. [G; S; W; B]

12. **Blackbrook Mill, Skenfrith**

Black Brook, tributary of Norton Brook, SO 427 216. Building remains. References to this mill from 1687. 'Brookhouse Mill' on OS c 1830. "Blackbrook Mill, corn disused" on OS c 1880. Mill-pond and dam on brook. [G; OS; W; B]

13.* **Garway Mill**

R Monnow, SO 453 214. Building still stands. There was a corn mill at Garway in the 14th and 16th centuries, and also a snuff mill at Garway in 1773, but whether they were on this site is not known. Garway Mill on Tithe Map of 1843; held by Lloyd family for many decades from 1867. Used only as store in 1920 acc. to sale particulars (HRL, Hopton Coll). Weir on R Monnow, with short leat. [S; OS; TM; Ta; B; HRL; G Marshall, *Trans. Woolhope Club*, 1927, pp. 88-9]

14. **Hoadalbert Mill, Grosmont**

Near confluence of two brooks, SO 399 235. Only ruins remain. There is much confusion in records between this and Grosmont Mill. 'Heol Hulbert' is name of hamlet (with Mill clearly indicated) on OS c 1830. 'Disused' by 1901. The mill site is above the confluence of the brooks, on the western brook; about 130 yards above the mill this brook has a small pond to which water from the eastern brook is led by a 300-yard leat and the combined waters are then led to the mill by a 130-yard embanked leat. Overshot wheel, wheel-pit still distinct. [OS; G and S not clear; W; B]

15. **New Buildings Farm Mill**

Brook tributary to R Monnow, SO 423 274. Stone footings of mill remain, waterwheel c 1900 still in situ, clearly replacing older and slightly larger wheel. Probably originally corn-mill, latterly used for generating electricity, with rim gear on wheel. No other machinery remains. Large pond 150 yards x 25 yards, now dry, stone dam giving head sufficient for overshot wheel c 20 ft diameter. No documentary evidence.

16. **Grosmont Mill**

R Monnow, South bank, SO 410 257. Building still stands, 3rd storey removed. There was probably a mill on this site from 14th century. Definite reference 1703. Frequent references up to 1914. Weir on R Monnow with 500-yard leat. Two undershot wheels, one internal, one external, believed removed 1920.

[G; S; Ta; W; B; OS; Kentchurch Court MSS, Nat. Lib. Wales].

17. **Kentchurch Mill**

R Monnow, North bank, SO 410 258. Probable building still stands, arch for internal wheel, waterfeed arrangements not clear; may have used side stream. Ref. of 1595 mentions "weir on river Monowe and watercourse leading to mill of Kenchurche". [Kentchurch Court MSS, NLW; Ta]

18.* **Pontrilas Forge**

Junction of R Dore and R Monnow, at SO 400 264.

19. **Home Farm Mill, Dulas**

Dulas Brook, SO 377 295. Mill and machinery intact. No documentation of any sort has been found for this mill. One of the very few brick-built mills in this region, it is attached to farm buildings and probably of mid-

19th century construction. Very small, with one pair of stones (French burr). 14 ft x 3 ft 6 in undershot (Poncelet) wheel by T Bray of Hereford, internal. Wooden barrage on brook to give about 3 ft head when required; barrage now derelict. 20-yard culvert from just above barrage to wheel.

20. **Cwm Dulas Mill**

Dulas Brook, SO 361 302. Mill converted to residence. Shown on OS c 1830, and OS c 1903. Leat about 600 yards long, wheel undershot or Poncelet type, according to sale particulars of 1875 (HRL).[OS;Ta;B;HRL]

21. **Pontrilas Mill**

River Dore, SO 395 276. No trace; site possibly obliterated by road alterations. Shown on Taylor's map of 1754, Bryant's of 1835, OS c 1830. No later documentation. [Ta; B; OS]

22. **Wormbridge Mill**

Grey Valley, tributary of Worm Brook, SO 418 310. Building still stands. Shown as 'Old Mill' on OS c 1830; Bryant, 1835; and also on Tithe Map, 1839. 'Wormbridge Mill' on OS 1903. Probably rebuilt in mid 19th century. Dam, and millpond on brook, probably overshot wheel, internal, 3 pairs of stones. Possibly had steam engine 1863. [S; OS; TM; Ta; B]



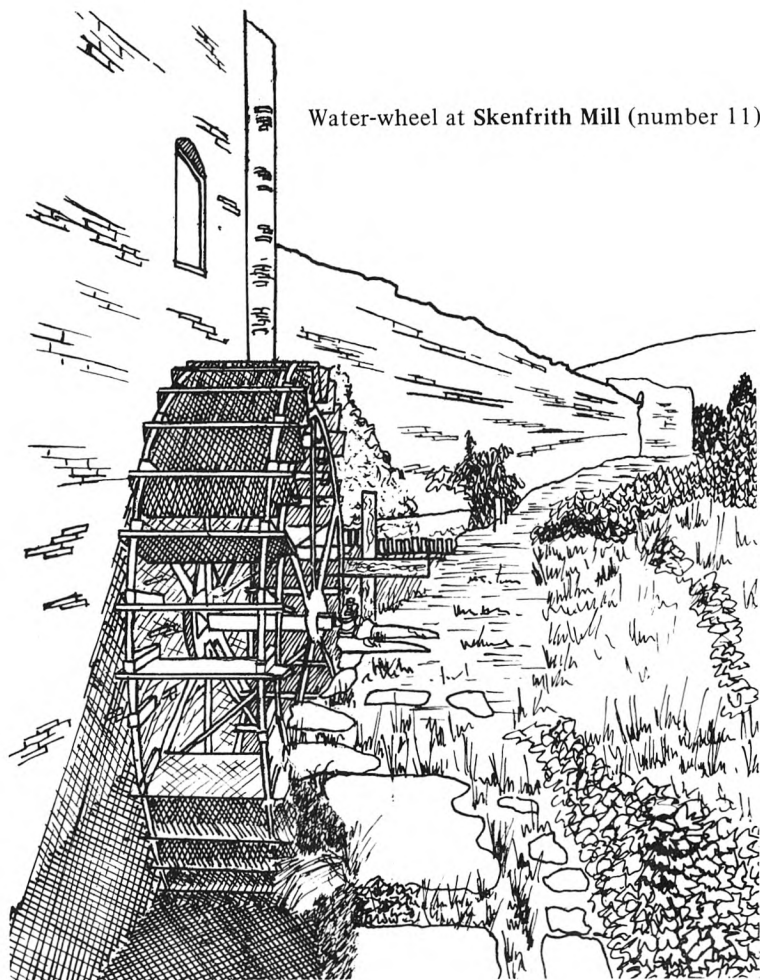
Priory Mill (number 1)

23. **Morlas Mill, Kilpeck**

Morlas Brook, tributary of Worm Brook, SO 439 298. Building still stands. 'Killpeck Mill' on Taylor, 1754; 'Moorless Mill' on Bryant 1835; shown on OS c 1830; Tithe Map, 1846; and later maps. Held by West family from 1856 to 1913 at least. 200 yard leat from brook to dam and mill-pond. [S; OS; TM; Ta; B]

24.* **Ridby Mill, Much Dewchurch**

Tributary of Worm Brook, SO 469 313. Only rear wall (forming part of dam) and header box for overshot wheel remain. Shown on Bryant's map of 1835 and Tithe Map of 1841. Converted to sawmill by c 1890, and shown as such on OS 1903. According to local directories was still corn mill up to 1859 and apparently out of use in 1876. Millpond and dam on brook, probably overshot wheel about 12 ft diameter. One pair and one single French burr stones, very weathered, and one Welsh runner stone with iron eye, lying at edge of site. [TM; B; S]



Water-wheel at Skenfrith Mill (number 11)

25. **Dore Mill, Abbey Dore**

R Dore, SO 387 305. Building and some machinery intact. This could well be an old site, so near the Abbey, but no references earlier than 1754 have so far been found. Names of millers known 1867–1941. Weir on R Dore with leat just one mile long; nevertheless the head was only a few feet and wheel must have been undershot. Turbine driving 2 pairs stones and 1 roller mill, etc in 1919, according to sale particulars, May 1919 (Hereford Ref. Lib., Hopton Collection). Reputedly the turbine is still buried in mud under the mill. [S; OS 1903; TM; Ta; B; HRL]

26. **New Court Mill, Bacton**

R Dore, SO 377 330. Building still stands. Possibly a very old mill, present building has weatherboarded upper storeys, which is unique in this region. Present owner believes it to have been out of use since c 1880, but it was not indicated as disused on OS 1903, and millers names are known 1819–1895. Disused by 1919 acc. to sale particulars (HRL, Hopton Coll.). Weir on R Dore with leat almost one mile long, water augmented by short leat from side stream. Probably a breast wheel with two pairs of stones. [S; OS c 1830 and later; B; HRL]

27. **Chanstone Mill, Vowchurch**

R Dore, SO 367 358. Building still stands, upper storey removed. Another of the very few brick-built mills of the region, shown by Taylor 1754; not on OS c 1830, but millers known 1856–1917; working understood to have ceased in 1920's. Had latterly one pair Welsh stones and one pair French burrs. Weir on R Dore, with half-mile leat and small overshot wheel. [S; Ta; B; OS (1903); present owner, Mr Parker, has lived at Chanstone since 1913]

28. **Poston Mill, Vowchurch**

R Dore, SO 351 377. Building intact, turbine and one pair stones in situ. Stone base, remainder brick. Not marked on OS c 1830 but is on Tithe Map 1845. Millers known 1856 – present, working as mill until 1947, adjacent bakery still working. Weir on R Dore, with leat 0.6 mile long, head at least 20 ft. Probably had overshot wheel originally, roller milling introduced c 1900 with 44 hp Armfield turbine, and auxiliary 36 hp gas engine with gas plant, according to sale particulars 1912 (HRL, Pilley Collection). [S; TM; Ta; B; OS (1903); HRL; present owner, Mr Hallard, has been here since c 1915]

29. **Trenant Mill, Peterchurch**

Trenant Brook, SO 345 377. Only ruins remain. Not on OS c 1830, but on Tithe Map, c 1840, and millers known 1856–1922. Still working or workable 1913 according to sale particulars (HRL, Pilley Collection). Cast-iron penstock made of plates 6 ft x 5 ft, axle of wheel remains, and indications are of overshot wheel about 13 ft x 3 ft 6 in. Leat about 1000 yards long from weir on brook. [S; TM; B; OS (1903); HRL]

30.* **Peterchurch Forge**

R Dore, SO 342 389.

31. **Snodhill Mill**

On brook, tributary of R Dore, SO 319 400. Only fragmentary remains. On Tithe Map. Directory evidence 1856–67, short (about 25 yards) embanked leat shown on 25 inch OS, 1903. [S; OS; TM]

32. **Dorstone Mill**

Pont-y-Weston Brook, tributary of R Dore, SO 309 414. Building still stands. Part of Moccas Estates, and record of material ground 1878–85 survives. Millers' names known 1856–95. On OS c 1830 and on Tithe Map, 1840. 'Disused' 1903. Leat, including long tail race, over ½ mile

long. Overshot wheel, diameter at least 23 ft as judged from rubbing marks on wall. Wheel arch in mill wall formed from segment of iron gear. [S; OS; TM; Ta; B; Moccas papers in H]

33. **Cwm Mill, Dorstone**

Pont-y-Weston Brook, SO 290 416. Building converted to house. Not on OS c 1830 but on Tithe Map, 1840. Bryant shows 2 mills here 1835. Millers' names known 1870–95. Not marked 'disused' on recent OS maps. Mill pond with 100 yard leat. Undershot wheel driving two pairs stones acc. to sale particulars 1875 (HRL, Pilley Coll.). Wheel from Cwm Mill was used at Cwm Farm, Dorstone, SO 293 417, c 1945–60 to drive farm machinery; wheel pit remains. [S; OS; TM; B; HRL]

34. **Lower Mill, Rowlestone**

Cwm Brook, SO 375 265. Ruined, few remains. On OS c 1830, and on Tithe Map 1839. Not shown as disused on OS 1904. Leat about 150 yards long; there appears to have been a mill-pond giving sufficient head for an overshot wheel. [S; OS; TM; B]

35. **Upper Mill, Rowlestone**

Cwm Brook, SO 370 270. Building still stands, with water-wheel and some machinery; associated bakery also stands. On OS c 1830, and on Tithe Map 1839. Has recently been partly restored to working order, but no stones yet restored. Originally had two pairs of stones, working until c 1930. Series of small mill-ponds and short leats, overshot wheel about 13 ft x 2 ft 6 in, external. [S; OS; TM; B]

36.* **Llancillo Forge**

R Monnow, SO 377 252.

37. **Trewyn Mill**

R Honddu, SO 335 234. Building stands, no machinery. On Taylor's Map 1754, and on OS c 1830, but not shown as mill on Tithe Map. 'Alltyrnyys Mill, on Bryant, 1835. Not shown as disused on six-inch OS 1899. Stands at junction of rivers Honddu and Monnow, with leat nearly ½ mile long from former; but tail-water flows into latter. Probably undershot wheel, dismantled 1957. Present owner believes this mill was once a woollen mill (ie tuck mill). [S; OS; Ta; B]

38. **Llanfihangel Crucorney Mill**

R Honddu, SO 324 209. The house at present on the site may incorporate parts of the mill; no other remains. Shown by Taylor, 1754. Not on OS c 1830, but known still to exist in 1850 and 1857. 'Corn Mill' on OS c 1900. Weir and half-mile leat. [G; S; OS; Ta; W; B]

39. **Cwmyoy Mill**

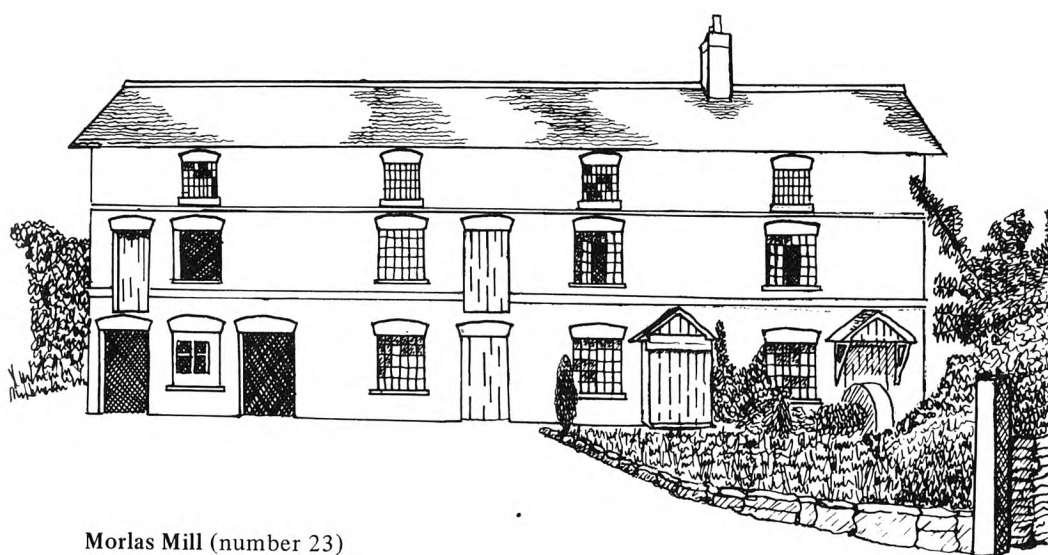
R Honddu, SO 301 227. Site detectable, no remains. On OS c 1830. On Tithe Map 1852. 'Disused' on OS c 1880. 650 yard leat from river. [OS; TM]

40* **Llanthony Mill**

R Honddu, SO 286 277. House incorporates part of mill. On OS c 1830. On Tithe Map 1852. Saw mill and corn mill adjacent on 1st edition six-inch OS, 1880 but Saw Mill only on 2nd edition, revised 1899. Miller's names known 1891–1937. Ceased working in 1930's. 1200-yard leat with pond, now not detectable. 100-yard tailrace still exists. [S; OS; TM; W; B]

41. **Lower Mill, Clodock**

R Monnow, SO 327 274. Mill intact and complete. Shown by Taylor 1754. Not on OS c 1830, nor on Tithe Map as a mill. Probably known as Pentannet's Mill and also Clodock Mill, causing much confusion in records. For sale in 1845, millers'/owners' names known 1840 to present (but with gaps). In 20th century, turbine used to generate



Morlas Mill (number 23)

electricity. Weir, 200-yard leat, external bucket-wheel, 18 ft x 5 ft 3 in, using head of about 6 ft. Two pairs stones (1 French burr, 1 Peak). [S; OS 1904; Ta; B]

42. **Olchon Farm Mill**

Tributary to Olchon Brook, SO 307 299. Mill building and wheel intact. Shown on Taylor's map of 1754 and Bryant's of 1835 (so also are two others in the vicinity, not now traceable). Millpond, dam and short headrace exist. Wheel has rim gear which enables ground floor of mill to be above wheel, which is 20 ft x 2 ft 6 in. Single French burr bedstone in situ. Stone plaque on wall of adjoining barn 'Rebuilt by J Price 1816'. [Ta; B]

43. **Pontys Mill, near Longtown**

Escley Brook, SO 335 311. Mill complete with machinery, but derelict. Shown by Taylor 1754, though not by name. Shown as 'Pontygwylodau Mill' by Bryant 1835. On Tithe Map as Pontyrkerthorian, but not specifically indicated as mill, 1840. Not on OS c 1830. Ponty's Mill on OS c 1904. Millers' names known 1891–1913. Weir and 350 yard leat; external overshot wheel 14 ft 6 in x 3 ft 7½ in. Two pairs of stones (1 French burr, 1 Peak); great spur wheel has two concentric bevel gears for driving auxiliary machinery. [S; OS; TM; Ta; B]

44. **Michaelchurch Escley**

Escley Brook, SO 315 345. Building and wheel intact. Interior arrangements not inspected, as entry could not be obtained. Shown by Taylor 1754. Not on OS c 1830. On Tithe Map 1844. Millers' names known intermittently 1830–1929. Not shown disused on OS c 1903. Weir and 350-yard leat, with pond; internal overshot wheel about 14 ft x 3 ft 6 in. [S; OS; TM; Ta]

45. **Lower House Farm Mill, Michaelchurch Escley**

Escley Brook, SO 309 360. Building stands, minus top storey. 'Mill Plock Yard' shown here on Tithe Map, 1844; shown as 'Little Mill' by Bryant, 1835. Leat 300 yards long and terminal pond remain; no other sign of use as mill. [TM; B]



Postin Mill (number 32)



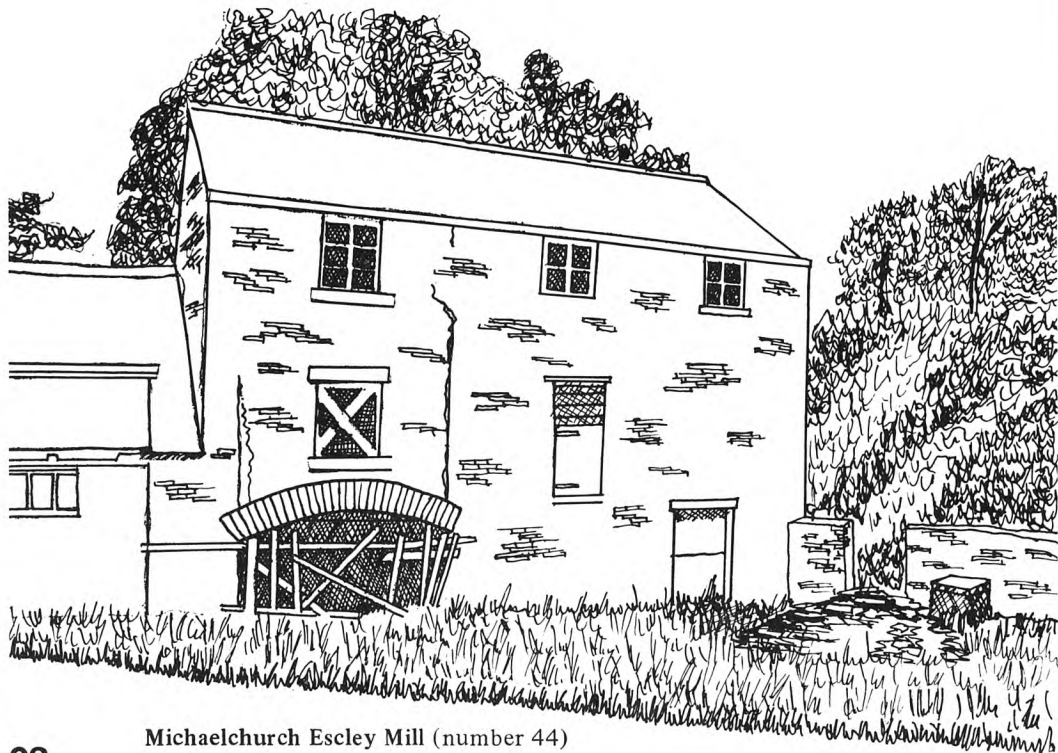
Arch supported on segment of gear at Dorstone Mill (number 32)

46. **Pontynys Mill, Longtown**
R Monnow, SO 327 288. Building and most of equipment intact. Not on OS c 1830. On Tithe Map 1840. Believed working until 1939. Bakery building. Operated by Miles family at least 1863–1900; by Bridgewater family at least 1905–1939. Weir and $\frac{1}{4}$ mile leat; external high-breast wheel, four pairs French burr stones. Unusual gearing arrangements. [S; OS; TM]
- 47.* **Cwm Mill, Crasswall**
R Monnow, SO 302 329. Building stands, partly destroyed by fire 1976, no machinery. On OS c 1830. On Tithe Map 1840. Not shown as disused on OS 1903. Millers' names known 1863–1909. Believed to have been textile mill before becoming corn mill (See Chapter 3). 1 pair conglomerate and 1 pair French burr stones, plus 2 French burr runners standing against wall. Weir and 130 yard leat, internal overshot wheel. [S; OS; TM; B]
48. **Forest Mill, Crasswall**
R Monnow, SO 295 342. Reputed mill building exists, but if it is the old mill, it must have been much altered. Leat still distinct. On OS c 1830. On Tithe Map 1840. Occupier in 1867 was Wm Shaw, 'farmer and blacksmith'. Probably ceased to work as water mill in early 19th century. Leat about 200 yards long. [S; OS; TM]
49. **Old Mill, Crasswall**
R Monnow, SO 290 352. Fragmentary ruins remain. Was 'Old Mill' apparently in 1840, since Tithe Map shows Old Mill Farm. Leat quite distinct, probably 10 ft head at mill. Shown on OS 1903 as 'Old Mill'. [OS; TM]
- 50.* **Troy House Tuck Mill**
R Trothy, SO 508 116.
- 51.* **Tuck Mill, Mitcheltroy**
R Trothy, SO 502 112.
52. **Wonastow Mill**
R Trothy, SO 494 106. Building still stands, working until 1965. References in 1563, almost certainly to this mill site. Not on OS c 1830. About 1940, turbine used to drive disc mill. Weir on R Trothy, leat (destroyed during construction of new road 1965) about $\frac{1}{4}$ mile long including tail race, formerly undershot wheel about 12 ft x 3 ft according to old photograph. [G; S; W]
53. **Cwmcarnvan Mill**
On Cwmcarnvan Brook, tributary of R Trothy, SO 484 074. Extensive remains of stone walling and 25-yard leat. Only known documentary evidence of site: 'Mill Wood' shown on large-scale OS. But deeds mentioning mill at Cwmcarnvan from 1665. [OS; G]
54. **Dingestow Mill**
R Trothy, SO 458 105. There is a building on the site, but almost certainly not the mill building. Deed of 1580 mentions "Grate dove mille in Dingnestowe", while deeds of 1602 and 1710 refer to 'Dingestow mill'. The latter at any rate, was near the "Bridge of Dingestow" and so almost certainly referred to this site. Shown on OS c 1830, still on OS 1881, but apparently demolished by OS 1901. Leat from R Trothy about 1000 yards long, but head was small and wheel must have been undershot. [G; OS; W]
55. **Little Mill or Tregare Mill**
Nant Wechan, SO 441 125. Mill building now a house, much altered. Shown on OS c 1830, and later maps. Millers names known 1884–1910. Weir on brook, leat about 400 yards long. [S; OS; W]

56. **Little Mill, Llanfaenor (in Llangattock-vibon-Avel)**
 Llymon Brook, SO 426 173. Mill building exists, third storey removed. Early references (eg 1706) to mill in parish of Llangattock-vibon-Avel cannot certainly be attributed to Llanfaenor as Ruthlin Mill was also referred to as being in the parish. Shown (as 'Felin fach') on OS c 1830. Still shown as corn mill on OS 1901. Miller's name known 1891-1906: Wm Williams of the nearby farm. Leat from brook took the form of a mill-pond about 100 yards long; wheel was internal, probably high-breast. [G; S; OS; W]

57. **Tal-y-Coed Mill**
 Tributary of R Trothy, name not known, SO 415 152. No remains. This mill is just in parish of Llantilio-Crossenny, adjacent to boundary with Llanvihangel-Ystern-Llewern. Llantillio Mill (q.v.) is not in parish of Llantilio-Crossenny. Thus possibilities of confusion in early records is great. However, there was almost certainly a mill here from 16th or 17th century. Shown on OS c 1830; rather uncertainly on Tithe Map, c 1840; as corn mill on 1st edition 6-inch OS 1880-2, but undesignated on 2nd edition 25-inch OS 1901. Weir on brook, leat about 1100 yards long, small terminal mill-pond. [G; OS; TM; W]

58. **Llantilio Court, Llantilio Crossenny**
 On brook, tributary of R Trothy, SO 398 147. Water-wheel driven pump, to supply well-water to house. Installation intact in underground chamber, overshot wheel 6 ft 9 in x 8 in, pump by R Warner & Co. Weir on brook about 200 yards above wheel with leat in culvert.



Michaelchurch Escley Mill (number 44)

59. **Llantillio Mill**
 R Trothy, SO 398 145. Building still stands. This mill, while adjacent to the village of Llantilio Crossenny from which it takes its name, is actually in the parish of Penrhos; hence confusion in records mentioned above. However, there was probably a mill here in 1557. Shown on OS c 1830; Walker 1834; and on Tithe Map, 1847. Leat from river about ½ mile long, head perhaps 6-8 ft. Wheel-pit (external) about 7 ft wide. Probably ceased work during World War 1. Miller's names known, with inconsistencies, 1884-1914. [G; OS; TM; S; W]

60. **Trerew Mill**
 On Trerew Brook, tributary of R Trothy, SO 374 176. Extensive but fragmentary remains. Shown by Walker, 1834. Leat about 1/3 mile long. [W]

61. **Lower Town Mill, Llanvapley**
 Pant Brook, SO 366 129. No remains. Shown on OS c 1830; Walker 1834; and on Tithe Map, 1838. Shown as 'Disused' on OS 1881, although millers' names quoted 1871-1891. Leat from brook about 700 yards long, with 100 yard-long terminal pond. [S; OS; TM; W]

62. **Llanddewi-Rhydderch Mill**
 Pant and Mynachdy Brooks, SO 350 133. Building exists, no mill equipment; now used as dairy. Shown on OS c 1830 and by Walker 1834; 'Disused' on OS 1901. Weir on Pant Brook feeds 550-yard leat which is joined near beginning by Mynachdy Brook. Small terminal pond. Tail race not shown on maps nor traceable now. William Leck in occupation 1871-1906 at least. [S; OS; W]



Pontynys Mill (number 46)

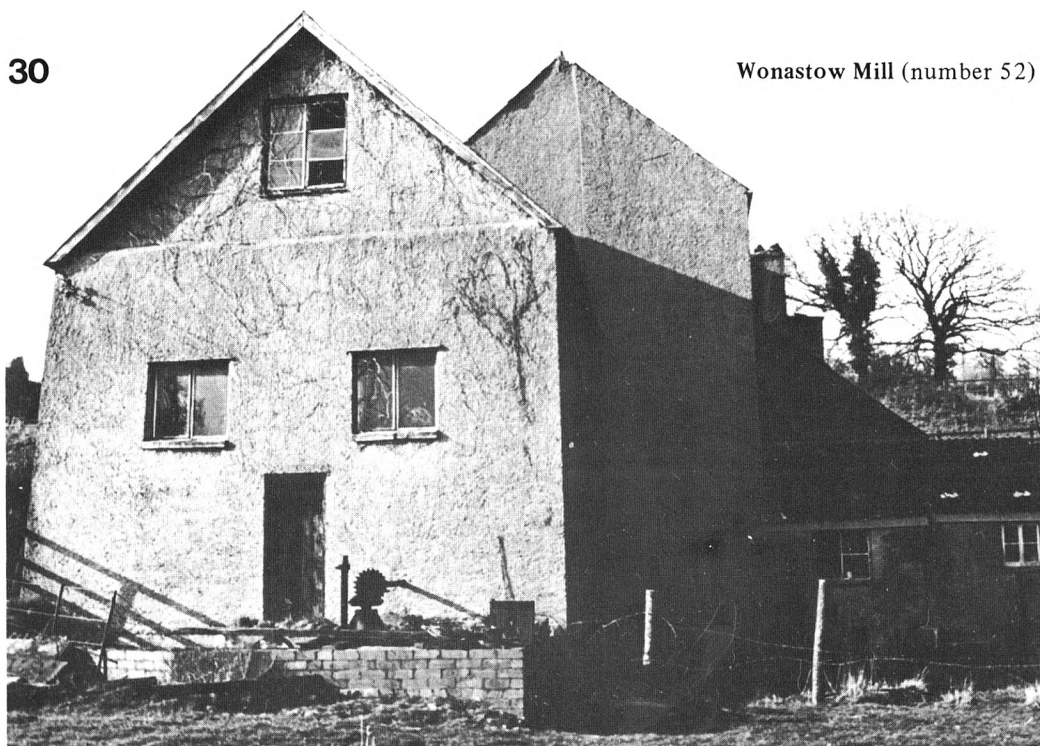
63. **Llanvapley Mill**

Llan-y-Mynach Brook, SO 364 141. Building still stands. Reference in deeds from 1648 to 'Llanvapleys Mill'. Not shown on OS c 1830, nor Walker 1834, nor on Tithe Map, 1838, although leat and terminal pond are shown. Shown as 'Corn Mill' and not disused on OS 1901; and millers' names known 1871-1914. Leat from brook 600 yards long, widening to pond at mill; head at least 20 ft, so probably overshot wheel. [G; OS; S. TM]

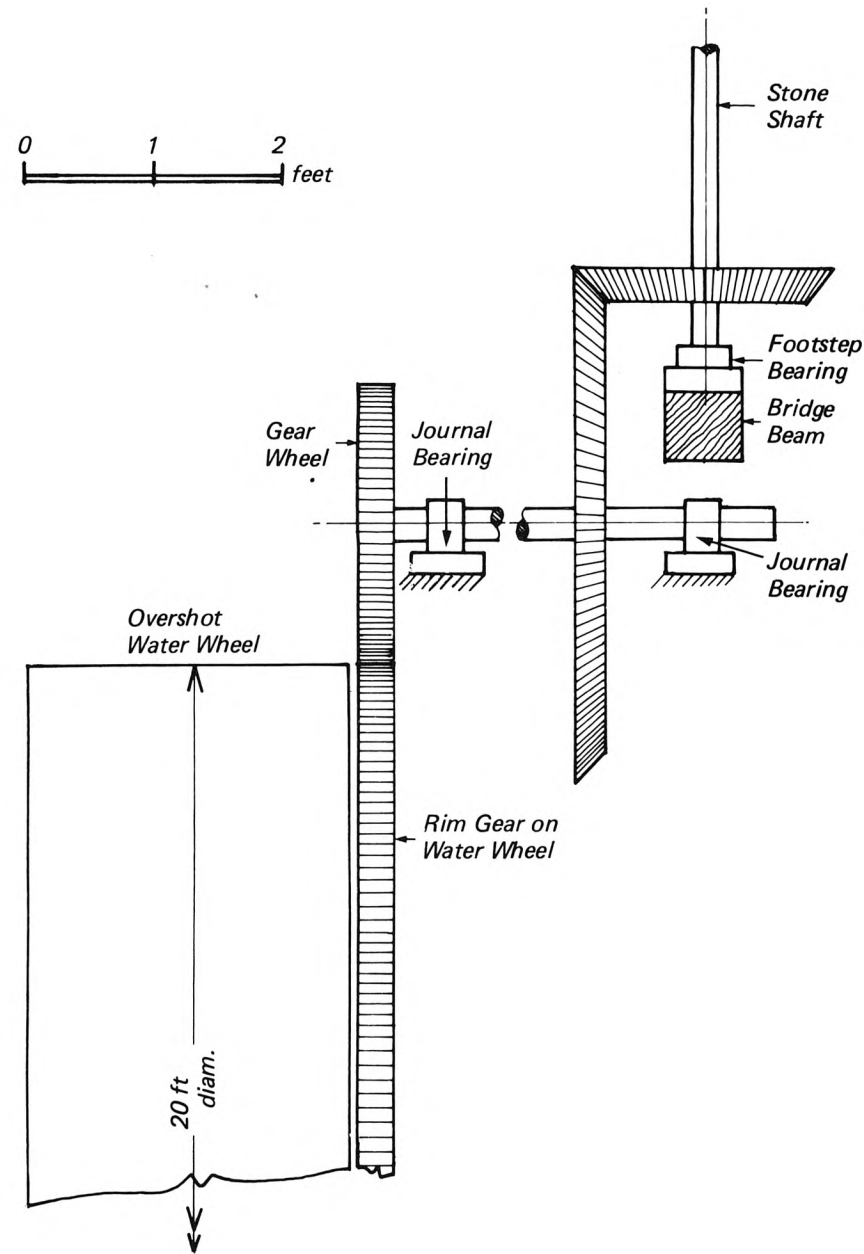
64. **Little Mill, Llanddewi-Sgyrrid**

Llan-y-Mynach Brook, SO 353 156. Mill intact, with equipment, but derelict and without water supply. References to mill here 1614 (probable) and 1724 (certain). On OS c 1830, and Walker 1834; 'Disused' by OS 1901. 100-yard millpond on 400-yard leat (including long tail-race); head about 18 ft for overshot wheel about 18 ft x 2 ft 6 in. Two pairs of French burrs. [G; OS; W]

30



Wonastow Mill (number 52)



31

Reconstruction of gearing arrangements at Olchon Mill (number 42)

Industrial water mills

1. Textile mills

Woollen textiles were made throughout the country from very early times, and by the later medieval period the process of manufacture had become divided into several parts, viz.

- a) cleaning, carding, spinning and winding of the wool,
- b) weaving,
- c) fulling or tucking,
- d) finishing, ie nap-raising and shearing.

Parts (a), (b) and (d) were essentially cottage-based activities, and remained so until the second half of the 18th century, and until much later in many more-remote districts. However, fulling was a process requiring power; its purpose was to felt and thicken the cloth and make it more uniform, and this was achieved by soaking the woven cloth in a fluid detergent of some simple kind (eg urine) mixed with fuller's earth (a finely-divided hydrated aluminium silicate), and then thumping it heavily. In early days this was done by trampling, but water-powered fulling stocks were introduced during the later middle ages. Thus, by the time most of our records start, part (c) of the textile manufacturing process was carried out in special water-mills known in English as fulling-mills, tuck-mills, or walk-mills, and in Welsh as 'pandai' (singular 'pandy'). Note also that 'walk-mill' can mean a horse-gin of some kind, so that care must be taken in interpreting this term.

1.1 Fulling mills

Since a large part of the Monnow and Trothy basins was originally Welsh-speaking (as was all of Monmouthshire), the place-name Pandy is occasionally found, and almost certainly indicates the location of a fulling-mill at some early period. This name exists at the present day near Llanfihangel Crucorney, in the Monnow Basin, and Jenkins¹³ notes two fulling mills near this place and twenty-two altogether in Monmouthshire.

Using all the documentary evidence we have examined, there appear to have been at least eight fulling mills in the Monnow Basin. These

Underground water-wheel pump at Llantilio Court (number 58)

comprised the two which Jenkins claims for Llanfihangel Crucorney (and nothing more is known about them), Pentwyn and Perthir mills at Rockfield, 'The Pandy' Inn at Dorstone, Walk Mill near Ewyas Harold, a 'tuck mill' on the Olchon Brook and Cwm Mill, Crasswall. In the Trothy Basin there were at least three: Troy House, Mitcheltroy, and Cwmcavran.

Pentwyn Mill. Grid ref. SO 478 150 This mill on the Nant-y-Gern, a small brook running into the Monnow at Rockfield, was shown as a tuck mill on the Tithe Map of 1842/3, and as 'Tuck Mill (disused)' on the 1st-edition 6-inch OS map of 1880/6. It had, however, been referred to as "that Water Corn Grist Mill called Pentoyne Mill situate . . . in the Parish of Rockfield" in a lease of 1767¹⁴, so it must have been a fulling mill for less than a century.

A large dam had been provided to form a storage pond for this mill, and it still exists; there is, however, now no sign of the mill itself. **Perthir Mill.** Grid ref. SO 484 154. This must have been a large mill, for it was apparently able to include a corn mill "under the same roof" as a fulling mill. In 1700 it was recorded as containing a paper mill along with several corn mills,¹⁵ but in 1717 it contained a fulling mill¹⁶. Deeds of the 16th and 17th centuries refer only to a corn or grist mill, but there is an intriguing reference in a marriage settlement in 1746 to a tucking mill, thus:—

"those Grist or Water Corn Mills called Perthyres Mills together with the Messuages Lands and Premises thereto belonging now in the possession of William Richards as Tenant thereto together with the Tucking Mill thereto adjoining".

This makes it seem that a fulling mill still formed part of the Perthir mill complex, but four years earlier a lease of Perthir Mill made no reference to anything but a "Corne or Water Grist mill"¹⁸. Although many later deeds exist, none makes any further reference to a fulling mill, nor do the Tithe or OS maps.

It is apparent that Perthir Mill contained a fulling mill for only a very short period, probably only a few decades.

The name of the mill (as of the old house nearby) came from the Welsh Perth-hir (long hedge). Perthire or Perthyre (often with a terminal s) was the common spelling in early deeds.

There are now no remains of the mill. It is reported to have been destroyed by fire in 1890.

'The Pandy' Inn at Dorstone Grid ref. SO 314 416. The name of the inn itself suggests at least the proximity of a tuck-mill, and the inn-sign is a painting of fulling stocks. However, at the rear of the inn is a very clear indication of an old leat and small terminal pond, and it is most likely that the inn building at some time was, or contained, a fulling or tuck-mill. 'Pandy' is shown here on Bryant's map of Herefordshire, 1835.

Walk Mill. Grid ref. SO 379 294. The only evidence we have so far discovered relating to this mill is the name Walk Mill on the 1st edition 1-inch OS map, and on Bryant's map of Herefordshire (1835), and the persistence of the names Walk Mill Farm and Little Walk Mill Farm to the present day. There is no evidence on the ground of any likely building or site. But the name Walk Mill is usually indicative of the existence at one time of a fulling mill, not necessarily water-driven. It is even possible that Walk Mill and Little Walk Mill existed as two separate mills; but it may well be the farm that is 'little'.

Olchon Brook : Tuck Mill. In some old deeds¹⁹ there is a reference to a "decayed tuck mill on the Olchon River" in 1717, and the rebuilding of the mill by 1721. There is also reference to an 'Olchon Mill' in a deed of 1776²⁰. Nothing more is known of this mill. There were also corn mills in the Olchon Valley (one still stands), and the situation is obscure. **Cwm Mill, Crasswall.** Grid ref. SO 302 329. Shown as tuck mill in 1826–7 (see below).

Troy House Tuck Mill. Grid ref. SO 508 116. Indicated clearly on a large-scale map of 1765,²¹ but not on map of 1706,²² nor on later maps. No remains are now identifiable.

Mitcheltroy Tuck Mill. Grid ref. SO 502 112. Indicated clearly on Tithe Map, c 1840; leat (about 400 yards long, including tail race) and building shown on 1st-edition 25-inch OS 1881, but not labelled. No other known documentary evidence. No remains now identifiable except for traces of leat.

Cwmcavran Tuck Mill. Grid ref. approx SO 473 088. Evidence from Tithe Map, 1842, which shows "Tuck mill meadow" and "Tuck mill orchard" and two 'mill meadows' within 100 yards of the grid ref. quoted. Possible site exists, but no other evidence.

Cwm Mill, Crasswall, in 1973 (number 47)

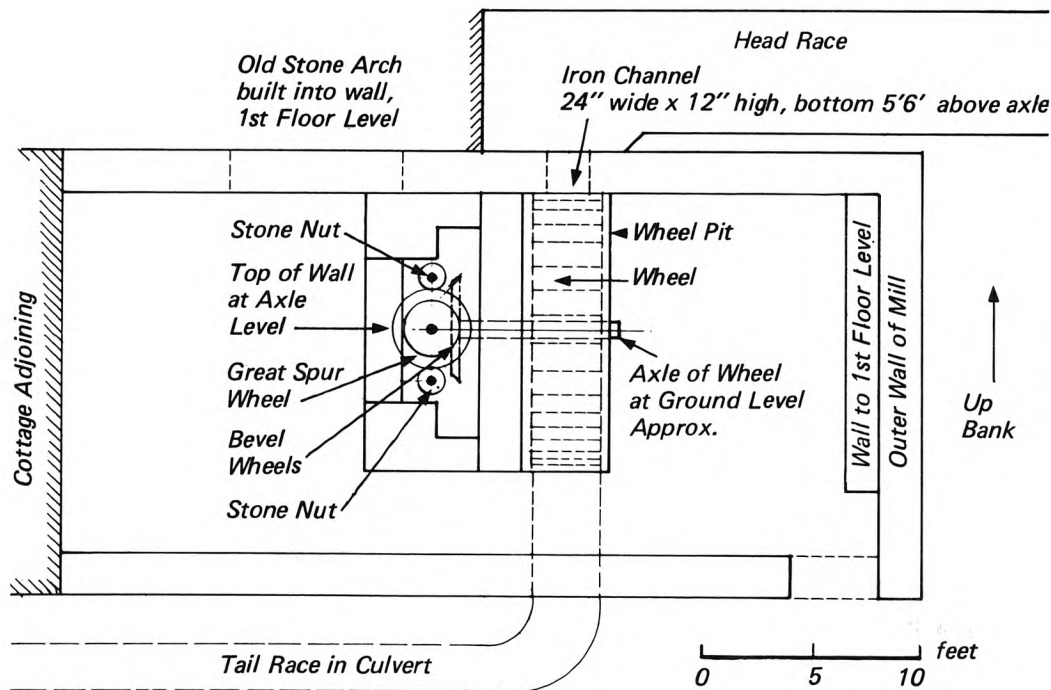


1.2 Other textile mills

Although the various parts of the textile manufacturing process, other than fulling, were normally cottage-based activities, there were some factories or mills in operation from the 16th century onwards in which a whole range of operations took place. These would probably not involve the use of water power unless fulling stocks and, later, gig-mills for nap-raising were included. In the Monnow Basin only one such factory is known. This was one established at Cwm, in the parish of Crasswall, near Longtown, in the early mid-18th century. In an advertisement,²³

“Elizabeth Phillips, Dyer, Cwm, near Longtown, Respectfully begs to acquaint her Friends, and the Public in general, that she has recently established a Manufactory, for the Spinning and Weaving of Woollen Cords, Cloth, Flannel, Blanketting, Linsey, Carpetting, Bed Covers, Horse and Collar Cloths. NB: Yarn of all sorts may be done up on the most reasonable Terms for ready money.”

According to Davies²⁴, flannel manufacture, which had been centred in Abergavenny, migrated to Longtown towards the middle of the 18th century, still retaining the name of Abergavenny flannel although of inferior quality. Perhaps Elizabeth Phillips’ manufactory was the new centre of this activity. It may well have been based on Cwm Mill, SO 302 329, which although later a corn mill (see gazetteer), was shown as a tuck mill in the possession of Elizabeth Phillips in 1826–7²⁵ and again in her possession in 1840.²⁶



Probable arrangement of Cwm Mill, Crasswall, as corn mill (number 47)

2. Leather and tanning

Tanneries were fairly common in earlier centuries, and the name ‘Tanhouse’ occurs frequently in our area. Water power might well have been used at a tannery which included a bark mill for crushing the bark from which the tanning liquor was made. In our area, however, we have evidence of a bark mill only at the Monmouth tannery. The tannery itself was, from some time in the 18th century until 1914, beside the R Monnow at the site which is now the bus station, SO 504 126, and it seems that the bark mill used an oil or steam engine of some sort, at least in later years²⁷. It is believed that water power was never used here, and if a bark mill existed before steam engines became available, it might well have been driven by a horse.

Some other examples of tanhouses are listed below, but it is probable that water power was not involved at any of them. Needless to say, an ample water supply would have been needed in the tanning process.

SO 467 313, ‘Tanhouse’ in parish of Much Dewchurch, shown on 1st edition one-inch OS, c 1830.

SO 343 376, ‘Tanhouse Bn’ near Trenant Farm, Peterchurch, shown by Bryant, 1835.

SO 315 417, ‘Leather Mill’ at Dorstone; now a house. In 1919 was a pair of cottages known as Leather Mill²⁸.

SO 354 337, ‘Tan Ho’ at St Margaret’s, shown by Bryant, 1835, (‘Tanhouse Wood’ still shown on modern one-inch OS).

There are also references to a “Tannehouse now converted into a cider mill” in the parish of Llanddewi Rhydderch in 1665 and 1685²⁹.

3. Paper mills

Paper making started very slowly in England at the end of the 15th century, becoming properly established only a century later. By 1700 there were many paper mills in England, but the only one in Wales was that at Perthir Mill on the river Monnow, which we have referred to in the section on textile mills. Assuming that the description ‘paper mill’ was correct (and in a legal document one would expect it to be), this was the first in Wales³⁰; but it was short-lived, having apparently been converted to a fulling-mill by 1717.

A more important paper mill was the nearby Ruthlin Mill (grid ref. SO 464 193). There is much documentation available for this mill, and a summary of its history is given in the appended chronology. It evidently started as a corn mill in or before the 16th century, and remained in the ownership of the Evans family for 190 years. At some time around 1720 it was converted into a paper mill and continued as such for some 120 years or more, becoming, on the evidence of the Tithe Map, quite a large establishment. It was roughly concurrent with the paper mills in the Mounton Valley near Chepstow,³¹ and some 40 years earlier, both in starting and finishing, than the paper industry in Whitebrook³².

It seems likely, from the evidence in our chronology, that the Vaughan family were the actual paper makers from around 1720 to 1796, being tenants of the Evans family until 1781, when James Vaughan became the owner. Even after 1796, the Vaughan family remained connected with the mill through having given a mortgage to Francis Lewis and then to William Farr. The mortgage arrangements became very complicated³³ and are not worth recording here. Obviously William Farr let the mill to Edward Williams and his partners, and then

to Edward Johnson, as tenants. Edward Johnson was later a paper maker at Whitebrook.

Nothing is known specifically of the equipment used at Ruthlin Mill, but the process used for paper making would certainly have used rags, which had to be pounded with water in a water-powered machine; water power might have been used in other stages of the process too, although it was basically a hand process.

It is evident that there were many variations in the spelling of the name of this mill. It is interesting that in Bryant's map of Herefordshire of 1835, the mill is shown as YRYCHLYN PAPER MILLS. This suggests that the original Welsh name may have been YR UWCH LYN, "the upper pool", and that all the various English versions are corruptions or Anglicisations of this. Ruthlin seems to be the accepted spelling now, being the name of a nearby farm and the house which has been tastefully converted from the only remaining building of the former mill complex.

There are a very few minor remains of old walls by the river, but in general it must be said that there is now little to indicate the site of the mill, apart from the house just referred to.

Chronology of Ruthlin Mill

- 1591 Water grain mill called Rullings Mill transferred from John Jones of Trostrei to Hugh Evans³⁴.
- 1614 "Water corn mill called Rullyns Mill" inherited by John Evans³⁵.
- 1667 "Water grist mill called Rullyn Mill" transferred from Walter Evans to Herbert Evans and Thomas Powell³⁶.
- 1722 William Vaughan, paper maker, of Rockfield, took an apprentice, Jeremy Wyatt³⁷.
- 1729 "Water corn grist mill called Rullins Mill lately converted to a paper mill" formed part of the marriage settlement of Thomas Evans and Sybil Williams³⁸.
- 1754 Shown as paper mill on Taylor's map, 1754.
- 1781 "Water mill or paper mill . . . called . . . Rutlings Mill" sold by Thomas Evans to James Vaughan, paper maker of Rockfield³⁹.
- 1796 Francis Lewis, paper maker of Rockfield, purchased mill from James Vaughan³⁹.
- 1800 Ownership transferred to William Farr³⁹.
- 1806 The partnership was dissolved of Edward Williams, paper maker of Shirenewton, and Joseph and Richard Morris of Chepstow, who carried on business as paper makers and copartners at Pandy Mill, Itton and Rolling mill. Rockfield⁴⁰.
- 1830 Edward Johnson paper-maker at "Rullings Mills near Skenfrith"⁴¹.
- 1834 Shown as 'Rehlan' on Walker's map, 1834.
- 1835 Shown as 'Yrychlyn Paper Mills' on Bryant's map, 1835.
- 1840 Reference to "the Paper Mill late in the occupation of the said William Farr and now of the said John Day or his under-tenants"⁴².
- 1843 Tithe Map for parish of Rockfield shows 'Rulling Paper Mill' with about six separate buildings over a distance of about 200 ft (60 m), and a long weir in the river.

4. Saw mills

Only two water-powered sawmills have been identified in our area; these were at Ridby Mill near Much Dewchurch, grid ref. SO 469 313, and at Llanthony on the river Honddu, grid ref SO 286 277.

Ridby saw-mill. This mill was originally a corn mill, being shown as such on the Tithe Map⁴³ (1841) and by Bryant (1835). However, it is shown as a 'Saw Mill' on the 2nd edition 25-inch OS map (revised 1903). The mill building has been demolished, and now only the rear wall (which was in effect part of the embankment of the mill pond) remains, together with a header pipe and box which fed the overshot wheel, which must have been an internal one of diameter around 12 ft. The pond remains as an embanked hollow, but is dry and overgrown.

Llanthony saw-mill. The 1st edition 1-inch OS map (c 1830) and the Tithe Map⁴⁴ (1852) show respectively only 'Melin' (Welsh for 'mill') and 'Mill&c' at this site. However, the 1st edition 6-inch OS map (surveyed 1880, published 1886) shows a saw mill adjacent to a corn mill, while the 2nd edition (revised 1899, published 1905) shows a saw mill only. Directory entries⁴⁵ show Llanthony Abbey Mill (without functional designation) in the hands of John Cullum between 1891 and 1910, and of J J Powell between 1914 and 1937.

A local informant said, in 1975, that the saw mill and corn mill had both been functioning up to about 1930, although the one water wheel was not able to drive both mills together.

It is clear that the saw mill was in use for at least half a century, but it may well have been very much older.

The saw mill wing of the mill has now been converted into a house, and in that sense still exists; the corn mill wing has been demolished. The mill pond and leat have been destroyed, but the tail-race still exists.

Wormbridge Mill (number 22)



5. Snuff mill

Snuff mills were uncommon in comparison with corn, textile, and even paper mills, but there appears to have been one, probably on the river Monnow itself, at Garway. The only reference⁴⁶ to it so far found was in 1773:

“To be let, Mill Farm with a Snuff Mill, at Garway in Herefordshire”
Subsequent references to a mill at Garway (eg 1st edition 1-inch OS map, later maps, directory entries) are merely to ‘mill’, location SO 453 214. This building still exists, and was a corn mill. Whether the snuff mill was here and, if so, whether it co-existed with the corn mill has not yet been determined.

6. Iron works

Iron was made and forged in numerous places in Britain during the Roman occupation and in medieval times, and there is good evidence of such early ironworks in and near Monmouth. By the 17th century there were undoubtedly iron forges at Osbaston (Monmouth Forge), Pontrilas and Llancillo, on the river Monnow, and at Peterchurch on its tributary the river Dore, making a total of four in the Monnow Basin. There were also others at New Weir and Tintern on the river Wye itself, and at Tintern on the Angidy river, together with yet others in the Forest of Dean.⁴⁷ The term ‘forge’ by this time meant a works where pig-iron (ie brittle high-carbon iron made in a blast furnace) was converted by suitable heating in a current of air, and by hammering, using water-powered hammers, into bars of wrought iron (ie tough low-carbon iron with great tensile strength). There were usually two stages: in the finery the pigs were converted into blocks called ‘anconies’, and in the chafery these were further reduced or ‘drawn’ into bars (or other shapes if required). The forges thus required a supply of pig-iron. The sources of this would no doubt vary from time to time according to changes in ownership and perhaps quality of the iron available. It is known that by the early 18th century, the forges in the Monnow basin were taking pig-iron from St Weonards furnace, and Monmouth Forge, at least, took some iron from much further afield – from Cunsey in the Lake District. But by this time it is possible that the forges at Pontrilas and Peterchurch had closed down. Llancillo forge may have continued in operation until the beginning of the 19th century, and Monmouth Forge continued until 1885, although for the last 20 years of its operation it had been making tinplate, using water-powered rolls.

There are many puzzles about the history of the forges in the Monnow basin. It is not known when those at Llancillo, Pontrilas and Peterchurch commenced and finished their working period. Nothing is known of the layout and plant at Llancillo and Peterchurch, although a plan and some production cost figures are available for Pontrilas (see discussion and chronologies which follow). Some figures for output are available for certain periods when the forges were part of the industrial empire of the Foley Partnerships⁴⁷, viz.

Monmouth Forge, 1704–1723, information available for ten years of this period, annual output 200 tons \pm 33%.

Llancillo Forge, year 1677/8, output 150 tons; for four years in the period 1725–1731 output was respectively 62, 120, 76 and 33 tons.

Pontrilas Forge, year 1677/8, output 89 tons.

Peterchurch Forge, year 1677/8, output 54 tons.

It is also not known how ironworks came to be established on these four sites in the first place. The bar iron produced was largely exported from the area via Monmouth Storehouse, and one would have thought that it would have been far more economic to have refined the iron near the furnaces which produced it.

It is worth emphasising that, however the forges may have started, while held by the Foleys they were under the partially-centralised control of a very large, although not entirely coherent, organisation, operating some 50 ironworks scattered over the West Midlands and East Wales. The survival of account books for certain years is doubtless due to this fact. Monmouth Forge, at a later stage, was operated by the Harford, Partridge company which was a group of ironmasters who developed in a very large way of business at Ebbw Vale – which they virtually created – as well as at Redbrook, near Monmouth, and elsewhere.

An outline of what is known of the history of the forges at Osbaston, Pontrilas and Llancillo is given below in the form of chronologies. Practically nothing is known of the history of the forge at Peterchurch except the output figure quoted above, and the fact that at that time it was held by the Foley Partnerships.

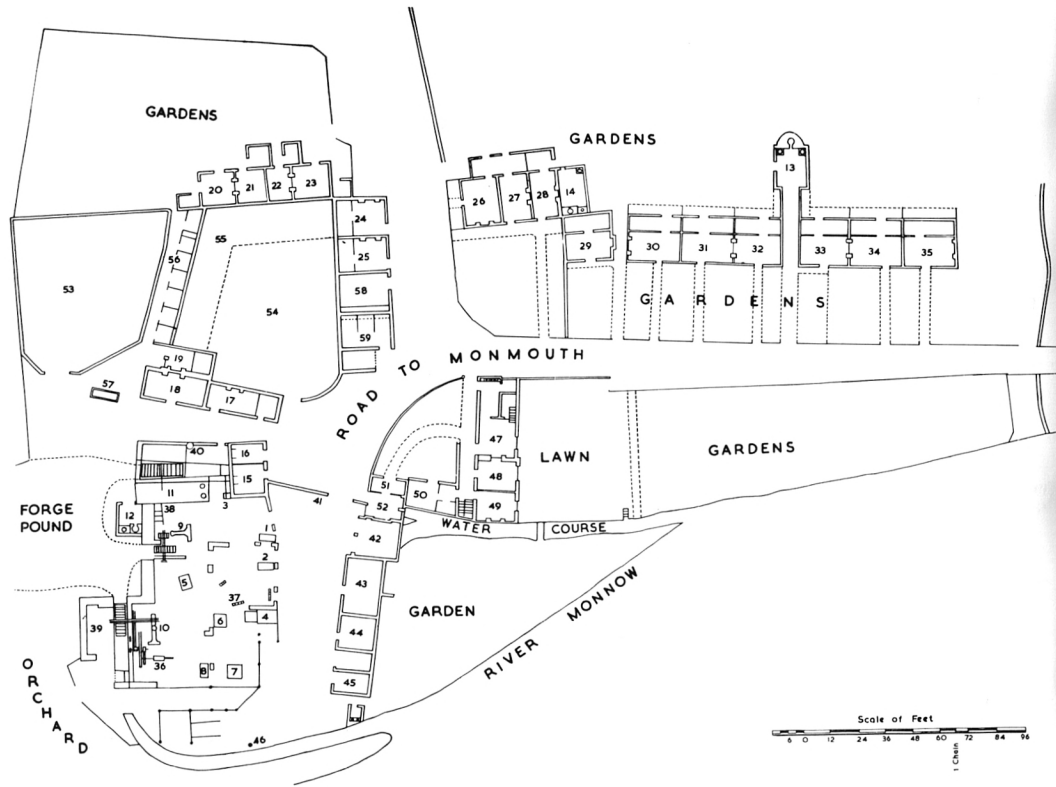
Only for the mid-19th century have we any detail of the works at Monmouth Forge. The plan⁴⁸ of 1849, reproduced here in a somewhat revised form, shows three water-wheels; one was for the blowing machine, one for the shingling forge-hammer, and one for the stamping forge “with the newly purchased Flywheel and Rolls”. There were three ‘lumping fires’, four ‘hollow fires’ and one ‘ball furnace’. A great deal of storage for charcoal was provided, and there were a smith’s shop, a carpenter’s shop, and a sawpit. 21 cottages were provided for workers and a ‘mansion house’ presumably for a manager. Three bakehouses were provided.

A plan also exists⁴⁹ for Pontrilas Forge at an earlier but unknown date, probably in the later 17th century; this is reproduced in its original form here. It shows a ‘Forge Pond’ taking water from the ‘Worme Brooke’ (which is really here the River Dore into which the smaller Worm Brook flows a mile to the north), with overflow and tail races flowing directly into the River Monnow. There are evidently separate water-wheels for the finery and chafery (‘Hammer’), each with its own tail race (‘Finery Ditch’ and ‘Hammer Ditch’). There is a ‘Clarke’s House’ for the manager or overseer, and some workmens’ cottages, also storehouse, coal house and stable. It is clear that while Monmouth Forge in 1849 was much larger than Pontrilas Forge was over a century-and-a-half earlier, yet the concept and general arrangement had changed hardly at all.

Physical remains of the four ironworks are now very scanty. At the site of Monmouth Forge, grid ref. SO 503 137, most of the forge buildings were demolished in the 1890’s to make way for the hydro-electric generating station, discussed later. The old charcoal yard remains with the stone stable block on the eastern side, but with no sign of the cottages and other buildings on its northern and western sides. The seven cottages (a single and a terrace of six) which formed a row along the road fortunately still stand, having been renovated, and in their present good decorative condition form a very attractive group. The archway at the middle of the terrace which formerly led to the bakehouse at the back is still there, but not the bakehouse itself. The

Monmouth Forge 1849

Key to numbered references on plan:



- 1, 2, 3 Lumping fire
- 4 Ball furnace
- 5,6,7,8 Hollow fires
- 9 Shingling forge
- 10 Stamping forge with the newly purchased fly wheel and rolls
- 11 Blowing machine, &c
- 12 Bakehouse and boiler
- 13, 14 Bakehouses, &c for the use of the tenants occupying the cottages
- 15 - 35 Cottages
- 36 New purchase rolls
- 37 Rack
- 38 Troughs
- 39 Shed
- 40 Well
- 41 Two scales
- 42 Charcoal shed
- 43 Smith's shop
- 44 Carpenter's shop
- 45 Clay house
- 46 Scales
- 47 Mansion house kitchen
- 48 Mansion house parlor
- 49 Mansion house parlor
- 50 Mansion house cellar
- 51, 52 Offices
- 53, 54 Charcoal yards
- 55 Charcoal sheds
- 56 Cellars
- 57 Sawpit
- 58, 59 Stables

'mansion house' and its garden is also still in use, apparently little changed externally. As to the water-power arrangements, the present weir is of 20th century construction, and the leat and tail-race have been filled in, although their course can still be followed.

At the probable site of Pontrilas Forge, SO 402 261, all that can now be found is a spread of clinker and slag over perhaps 100 yards in the field. No pieces of building stone have been found here.

At the site of Llancillo Forge, SO 377 252, the remains are much more distinct. There is a large almost-rectangular mound of slag and clinker some 50 ft by 30 ft and about 4 ft high, on which stands a stone building which may have been a pair of cottages. The stone (sandstone) blocks are so weathered that the building may be old enough to have been originally a part of the Forge. A modern barn nearby has one wall of stone, apparently quite old, and this may be another remnant of the Forge, or may merely have utilized old stone blocks from the Forge. There is no indication of the leat which took the water to the water wheels which were presumably provided to drive the hammers, nor of a wheel site. However, the river Monnow itself has been diverted here in recent years to a new course over a length of a few hundred yards, in order to permit improvements to the main road; the large machinery used for this purpose may well have entirely destroyed any old channels near the river bank.

At Peterchurch, SO 342 389, there is now little evidence of the former existence of the forge. A fragment of a dam at one side of a level area that may once have been a mill-pond (and is indicated as 'Old Mill Pond' on the 2nd-edition 6-inch OS map of 1903-5) is about all that remains. The map just referred to also shows 'The Forge' adjacent to this pond, but there are now no identifiable remains of it. No slag or clinker is now apparent, but there was a good deal to be found in 1888⁵⁰. There can evidently be little doubt about the site. 'Forge' was shown here on Bryant's map of Herefordshire in 1835.

It seems that little more can be deduced about the physical arrangements of the four forges from superficial inspection of the sites. Possibly the application of traditional archaeological techniques of excavation would yield more information, but it is doubtful if the likely results would justify the effort and cost.

One little mystery is worth mentioning. Bryant's map of Herefordshire of 1835 shows 'Forge' near what is now Vro Farm at SO 382 260 – only about two-thirds of a mile from 'Old Forge' at Llancillo, which is indicated in its correct position. No other reference to a forge at Vro has been found in spite of extensive enquiries. No conclusive ground evidence has been found.

Chronology of Monmouth Forge

AD	
1108	Forge at Osbaston; also three at Monmouth town ⁵¹
1257	Ditto ⁵²
1628	Benedict Hall leased forges at Osbaston ⁵³
1647	Walter Williams in occupation.
1670	(approx) Osbaston forge shown on John Ogilby's map.
1676/1736	at least. Forge in possession of Scudamore family of Blackbrook ⁵³

1704/1733	at least. Forge leased to Foley partnership ⁵⁴ . Pig iron supplied by St Weonards Furnace, but some also came from Cunsey in Lancashire. Power hammers and anvils obtained from Hales' Furnace in Stour Valley. Old 'cynders', ie partially-smelted slag from medieval furnaces, widely exploited for re-smelting at this time, and obtained in quantity in Monmouth.
1746	Thomas Daniel in occupation; Duke of Beaufort owner.
1754	Forge visited by the Swedish expert Angerstein ⁵⁵ . The finery had three hearths and one hammer, while the chafery had two hearths and one hammer. Only charcoal used – 15 horseloads in the finery and seven in the chafery per ton of iron; cost 4s 6d per load. Nine men worked in the finery, producing 8½ to 9 tons of anconies a week and being paid 10s 9d per ton. Four men worked in the chafery, drawing the anconies down to bars at 9s 0d per ton. Around 3 tons of bar iron were obtained from 4 tons of pig. The bar iron was sent to Bristol by ship and thence sold in Devon and Cornwall. The pig iron used was partly American iron, said to be of poor quality, and partly iron from local furnaces; price about £7 per ton.
1762	Forge leased to Richard Reynolds, John Partridge, and his son John – who in this year also leased tinplate works at Redbrook. Reynolds was a Quaker, born 1735, died 1816, married Hannah Darby, daughter of Abraham Darby III of Coalbrookdale; was Manager at Coalbrookdale 1756-68. The Partridges lived in Monmouth ⁵³ .
1770	James Harford became a partner; he was a Quaker. Grandfather Charles Harford bought Worthybrook, Wonastow, in 1709. Family later associated with ironworks at Ebbw Vale and Nantyglo (1795).
1810	Forge taken over by Richard Blakemore & Co.
1821/1825	Benjamin Whitehouse in occupation ^{56, 57}
1830's	Alfred Whitehouse in occupation.
1849	New lease to Messrs Whitehouse – plan of works made and still in existence ⁵⁸
1868	Lease of Forge granted to David Griffiths of Redbrook ironworks, trading with his son Horatio as Griffiths & Son. Tinplate made.
1871	Lease re-assigned to Horatio T Griffiths.
1872	David Griffiths took half-interest.
1885	H T Griffiths sued for unpaid rent by agents of Duke of Beaufort. Lease surrendered.
1886	Works sold for scrap ⁵⁹

Chronology of Pontrilas Forge

AD	
1623	James and Walter Baskerville leased to Benedict Hall "one iron mill or ironwork called Pontrilas Fordge", with other rights, for 12 years at £60 per annum. ⁶⁰

c 1630

Viscount Scudamore, cousin of James Baskerville, collected cost figures for Pontrilas Forge⁶¹, as follows:—

“A perfect note of the trewe charge of the making of one tunn of barr iron at Pantrilas forge even from Mr.Kyr(l)e’s furnes doore, untill it come to Bristol” —

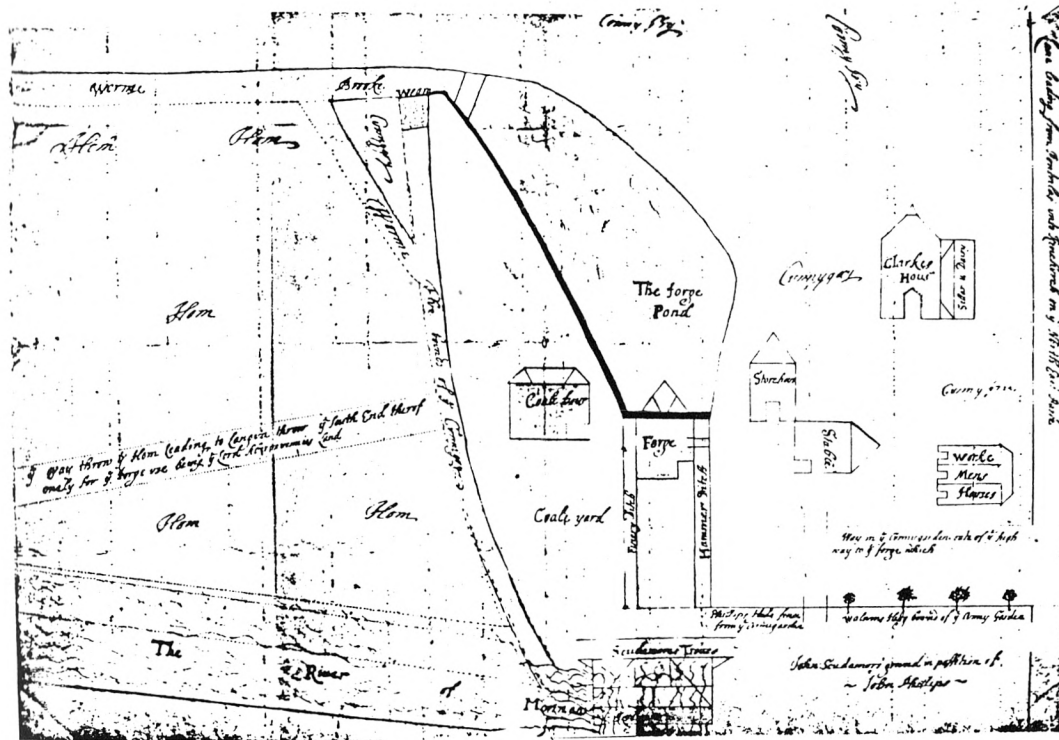
27 cwt of sow iron at £4.10s per ton	
at the furnace	£ 6. 1.6d
Carriage from furnace to forge at 12s per ton	16.2
3 loads of charcoal at 14s.3d per load	2. 2.9
To the Forgerman	18.0
Carriage of one ton of bar iron to Monmouth and thence to Bristol	13.0
Rent of forge at £80 p.a., assuming 160 tons made in the year	10.0
Clerk’s wages at £20 p.a.	2.6
All other charges to the forge	7.6
Other charges at £40 p.a.	5.0
Total charge	£11.16.5d

The profit made was £1.13.6d per ton.

- 1664 Humphrey Baskerville leased Pontrilas Forge to Benedict Hall for 21 years.
- 1672 William Hall, son of Benedict, assigned forge to Paul Foley for residue of term.⁶²
- 1677/8 Forge produced 89 tons of bar iron in year⁶³, under Foley management
- 1695 Last mention of forge as still existing at Pontrilas.⁶⁴
- c 1830 ‘Forge Barn’ shown on 1st edition OS.
- 1835 ‘Old Forge Barn’ shown on Bryant’s map of Herefordshire.

Chronology of Llancillo Forge

- AD**
- c 1645 Anecdotal evidence of existence of Llancillo Forge⁶⁵
 - 1670 John Scudamore leased ‘Lansyllo Forge’ to William Hall for 21 years.⁶⁶
 - 1672 Hall assigned residue of lease to Paul Foley.⁶⁶
 - 1677/8 Llancillo Forge produced 150 tons of bar iron in year,⁶⁷ under Foley management.
 - 1698–9 Forge operated under Nathaniel Morgan.⁶⁸
 - 1701/50/78 Forge still in onwership of Scudamore family.⁶⁹
 - 1725–31 at least. Forge operated by Foley partnership.⁶⁷
 - c 1725 Llancillo Forge obtained pig iron from the furnace at Llanelly (west of Abergavenny) as well as from Forest of Dean and St Weonards.⁶⁸ Bulk of bar iron from Llancillo marketed through Monmouth storehouse.



Old plan of Pontrilas Forge

- 1731 Last available accounts for Llancillo⁶⁷.
- 1754 Taylor’s map of Herefordshire shows ‘Lansilic Forge’.
- 1810/12 Lists of iron manufactories include Llancillo Charcoal Forge.⁷⁰
- 1814/15 Ordnance Survey plan on 2-inch scale shows forge.⁷¹
- 1831 Ordnance Survey 1-inch map as published does **not** show forge.
- 1835 Bryant’s map of Herefordshire indicates ‘Old Forge’ at Llancillo.
- 1839 Tithe Map (1839) shows ‘Forge’.

7. **Electricity Generation at the Monmouth Forge site :
Half-a-Century of hydro-electric power in Monmouth⁷²**

After the closure of the tinsplate works at Monmouth Forge in 1885 the site remained unused for over a decade. At some time in 1896 or 97 work started on the construction of a water-powered electricity-generating station to give a public-electricity supply in Monmouth, using the weir and water-channels of the Forge, but with a new building. The station finally opened on 10 June 1899. It remained in use for about 50 years.

Public electricity supply started in Britain at the end of 1881, but its development was impeded by a short-sighted Act of 1882. It was not until the amended Electricity Act of 1888 that it became attractive to investors, and it was only then that the rapid growth of electricity supply began. A common stimulus to the consideration of electricity-supply schemes was the raising of the price of gas for street lighting. This applied in Monmouth in 1890, and the Corporation drew up plans for electric lighting. This threat was sufficient to get the demanded price of gas lighting reduced from £4 to £3 per lamp per annum, and so nothing was then done about electric lighting.

In 1892–3 plans were being drawn up for the disposal of sewage in Monmouth, using water power for pumping it. The Mayor, Mr W Honeyfield, with considerable shrewdness, suggested that it would be an economy to use the water power for generating electricity as well. At this time there were only two water-powered public supply systems in Britain – at Keswick and Lynmouth – and they were both operated by private companies. The Brush Electrical Engineering Company was consulted and recommended a scheme to the Corporation based on a site on the east bank of the river Wye near the northern railway viaduct. The sewage-disposal part of the scheme was also worked out, and it was concluded that without the electricity scheme this would necessitate a rate of 8½d in the pound, but that with it the rate would be only 5d. So the joint scheme went ahead, with an estimated cost of £19,000.

In February 1894 new consultants – Messrs Bramwell and Harris – were appointed and they changed the scheme. The generating station was now to be at the site of Monmouth Forge, and they proposed three turbines, each of 35 horse-power, and a high voltage alternating-current system at 2500 volts, with transformers to provide a 100-volt supply for lighting, and electric pumping of the sewage. This was the scheme which actually came to fruition, but there were many delays, some due to local opposition (said to be stimulated by the directors and share-holders of the gas company!), some due to the sloth of the consultants, who did not invite tenders on behalf of the Corporation until October 1896, and some due to financial mismanagement by the Corporation. The Brush Company was dropped in favour of Siemens Bros., whose tender for electrical generating plant and mains was £6,980.

It was not until 10 June 1899 that the station opened for public supply – and then it had only two of the three turbines planned. Orders for electric light were coming in so fast that it was decided in July to fit the third turbine after all. Within six months the demand had become so great that a steam-driven generator of 60 kW had to be added, practically doubling the capacity of the station. Thus at this time the main plant comprised:

3 turbines of 35 hp, each driving a generator of 21 kW, with stand-by steam engines in case of drought or floods.

1 steam engine of 100 hp, driving a generator of 60 kW.

The turbines were made by Gilbert Gilkes & Co., of Kendal, the engines by Ransome, Sims & Jeffreys of Ipswich, and the generators by Siemens Schuckert.

The use of water power appears to have been effective in keeping the cost of generating electricity at a lower figure than was usual in other places, and the Corporation was proud of this.

To meet ever-increasing demands, the Corporation in 1922 tried to arrange to purchase additional electricity from Hereford and transmit it by a special transmission line. The Electricity Commissioners would, however, not approve this scheme (this was before the days of the electricity grid; and the Corporation was evidently more advanced in its ideas than the Commissioners!), and instead authorised the Corporation to extend its works. It is believed that this extension consisted in the replacement of two of the old 21 kW generators by one of 30 kW using one of the old turbines, and one of 40 kW with a new, larger turbine. The steam-driven set was replaced by a new diesel-driven set.

In 1930 the Monmouth Corporation sold the concern to a subsidiary of the General Electric Company, which continued to operate the station until nationalisation in 1948. It finally closed down in 1953.

An interesting feature of the station, which had been added before 1930, was that a storage battery had been provided. This was normal in direct-current stations, but not in ac stations, since ac could not charge batteries. What was done here was to provide an ac machine which could be used as motor or generator, coupled to a dc machine. When surplus power was available, the ac machine ran as a motor, the dc machine generating electricity to charge the batteries. When extra power was needed at times of peak load, the battery drove the dc machine as a motor, and the ac machine generated electricity to augment the supply.

The water-supply arrangements were at first substantially those used by Monmouth Forge. But in February 1917 the weir on the Monnow was broken by accumulating ice, and had to be rebuilt. It is believed that the present weir is the one that was built then.

The generating-station building still stands, as did its chimney until 1976, but none of the plant remains, and the leat, head-race, and tail-race have been filled in. The building is still in use, however, as a small engineering works.

Unresolved sites

Llantillio Mill (number 59)



Of the 64 sites listed in the gazetteer, all are quite positive locations and have been discovered from searches among documents and/or searches on the ground. However, during our searches we have come across numerous references in documents and maps which suggest the locations of other mills which must once have existed in the area, although no definite trace of them can now be found on the ground. These are listed below. Of course, the mill in each reference is not necessarily a water-mill; it might well be a horse-powered mill such as a cider mill, or even a windmill. In the list we have added (as site P2) a location where there are remains on the ground which suggest a strong possibility of a former water-mill although we have found no documentary support. As these are only 'possible' sites, very far from certain, we have used a separate numbering system with the prefix P. All these sites are marked on the map.

There is another category of unresolved site. This is where it is known quite certainly that a mill existed, but the location cannot be determined. We have three in this category, and they are also listed below.

The fact that the sites in the main gazetteer are certain must not obscure the fact that the attribution of historical evidence to a particular site is not always certain. Several examples of difficulty are mentioned in the gazetteer. It is possible that old names of mills found in documents have been wrongly attributed by us, and may actually represent additional mills. A good example of this is Pentanne(s)ts Mill 'at Longtown'. This was to be sold in 1850⁷³, and occurred again in directory entries 1895–1913.⁷⁴ The most obvious equation is Pentanne(s)ts = Pontynys (No.44 in gazetteer), which is in Longtown and pronounced in Welsh as 'Pontunnis'. But for the years mentioned, the millers' names were different and this equation cannot be accepted. In the directory entries, Clodock Mill occurs only over the years 1856–1891 with the last miller William Davies. As the miller at 'Pentannets' Mill in 1895 was William Davies, the case for equating Pentanne(s)ts with Lower Mill, Clodock (No.39) seems fairly strong. The doubt remains,

however, because even in 1850 Longtown was not the same as Clodock, even although the two villages are only a mile apart. Moreover, the name Lower Mill is that given on the large-scale OS maps of c 1904; where was Upper Mill? Pentannets may possibly have been another mill (which we cannot now locate) to which William Davies moved between 1891 and 1895.

It will thus be seen that there is a great deal of scope for further research.

Possible Water-Mill Sites

Monnow Basin

- P1 SO 466 179, near Trivor Farm, St Maughans. 'Mill Field' is accepted field name, but no identifiable remains of a mill.
- P2 SO 432 208, near Blackbrook House. Remains of dam and sluice, heaps of stone. No documentation.
- P3 SO 379 294, Walk Mill, Dulas; possibly once a tuck mill. See Ch.3.
- P4 SO 353 317, Dulas Brook; 'Mill Wood' on 2nd edn. 6-inch OS.
- P5 SO 406 276, near Pontrilas; 'Mill Wood' on OS maps.
- P6 SO 398 345, near Blackmoor Farm, Abbey Dore parish; 'Mill Plock' on Tithe Map, 1840.
- P7 SO 448 277, near Morlas Brook, Much Dewchurch parish; 'Mill Meadow' on Tithe Map, 1841.
- P8 SO 382 372, near Monnington Court Farm, Vowchurch parish; 'Upper Milling', 'Mill Meadow', etc on Tithe Map, 1845, and on leases of 1794 and 1868 (Herefords C.R.O.). Topography suitable for mill site.
- P9 c SO 34 37, near Trenant Farm and Tenant Mill (see gazetteer). Taylor, 1754, shows three mills here called 'Urishhay Mills'. (Urishhay is a mile or more to the west). No other indications of more than one mill in this area.
- P10 SO 314 416, 'The Pandy', now an inn, at Dorstone. Possibly once a tuck mill. See Ch.3.
- P11 SO 290 416, Cwm Farm, Dorstone. Bryant, 1835, shows two mills here as 'Cwm Mills'. One mill definite (see gazetteer). Another old building beside stream could just possibly have been a mill, but very unlikely; no other evidence found.
- P12 SO 356 277, Cwm Brook, near Rowlestone. Taylor, 1754, shows mill here, possibly in error for Rowlestone Upper Mill.
- P13 SO 379 250, near Pentwyn, unnamed brook, Langua parish; 'Werlodd Felin' (ie Mill Meadow) shown on Tithe Map.
- P14 SO 350 240, near Vineyard Farm, Walterstone; by river Monnow. 'Cae-y-felin' (ie Mill Field) shown in sale brochure for Vineyard Farm, quoting Tithe Map, Hereford Ref.Lib., Hopton Collection, Part 2, item 37.
- P15 SO 313 298, Llanveynoe township in Clodock parish, near Olchon Brook; 'Old Mill Homestead' on Tithe Map, 1840. Mill shown near here by Taylor, 1754, and Bryant, 1835. Old cider mill at top of slope above brook; no sign of any mill on brook.
- P16 SO 288 316, Glandwr Farm, Olchon Brook. Mill shown here by Taylor, 1754, and Bryant, 1835. No sign of any mill now detectable.
- P17 SO 289 372, near Cefn Farm, near Escley Brook, Michaelchurch Escley parish; 'Old Mill Homestead' on Tithe Map, 1844. No other evidence of mill here.

- P18 SO 310 318, Cwm Farm (Lower), river Monnow. Bryant, 1835, shows 'Cwm Mill' here, and there is an 'Old Mill Barn' here. No other evidence.

Trothy Basin

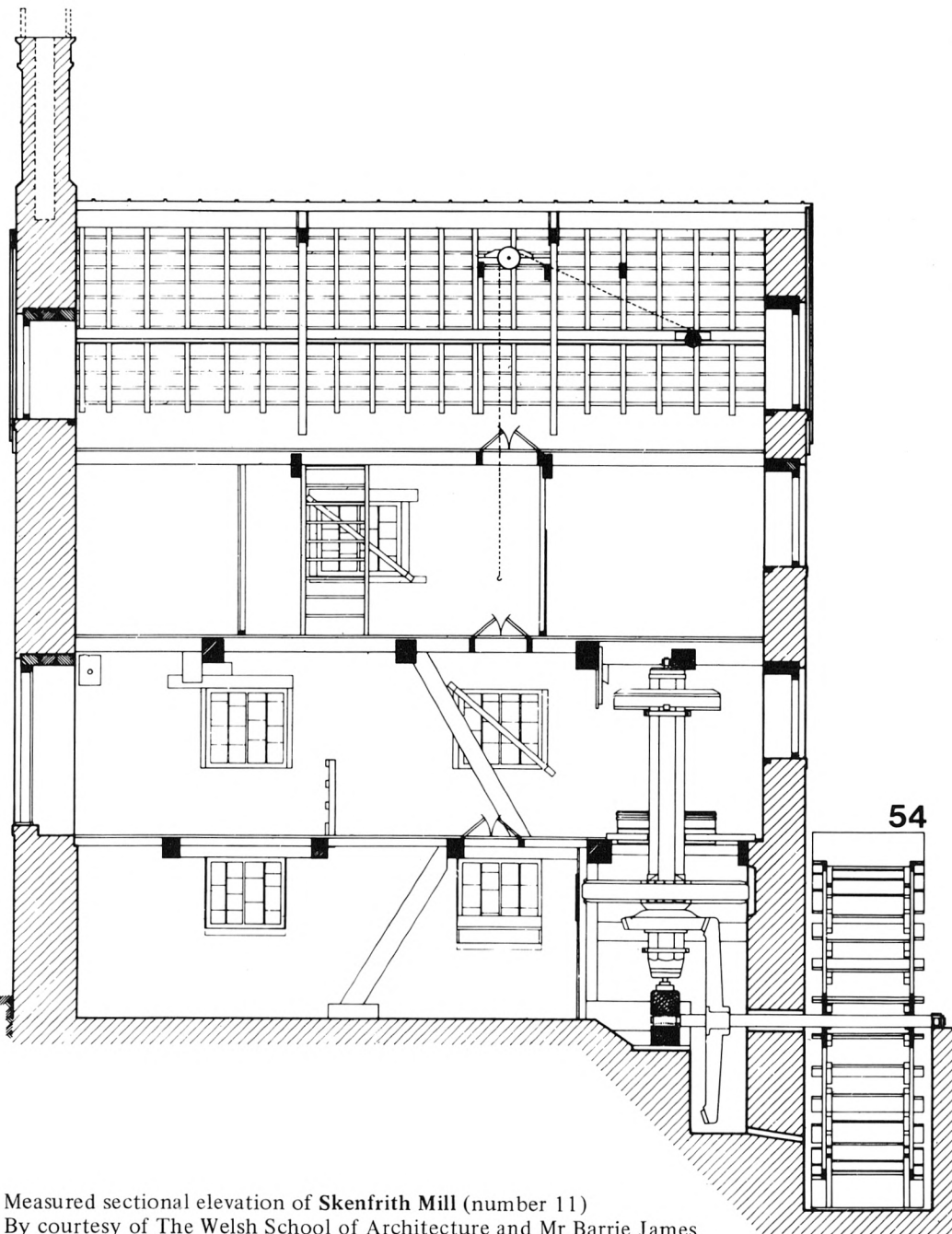
- P19 SO 473 088, Cwmcavvan, probable tuck-mill. See Ch.3.
- P20 SO 453 138, The Hendre. Mill shown by Walker, 1834, at this place. May be the same mill site as referred to in 1706 as 'a water grist mill in the parish of Llangattock vibon Avel . . . [near] the way leading from Groesvane to y Pentre'. (Gwent C.R.O. D361.9-1). No physical evidence can be found.
- P21 SO 430 142, Llanvihangel-Ystern-Llewern; 'Mill House' shown on Tithe Map and on modern OS maps; house still exists, but no sign of any mill. Site quite close to river Trothy.
- P22 SO 405 186, Plas Ifor, parish of Skenfrith. 'Mill Mead' on Tithe Map. No other evidence.
- P23 SO 357 213, near Llangattock Lingoed, on Full Brook. 'Old Mill' on first edn. one-inch OS, c 1830, and on Walker's map, 1834. Suitable site, but no remains except for an old embanked pond. Numerous references to mill in parish of Llangattock Lingoed in deeds from 1534 to 1781, but from this evidence site cannot be identified. (Gwent C.R.O. - see office index).

Definite Water-Mills, Sites not Located

Cornfield Mill, Rockfield parish. Deed of 1767 refers to Cornfield Mill on the Nantygern Brook with pond and dam. Definitely not the same as Pentwyn Mill on the same brook (see gazetteer) as this is separately referred to in another deed of the same year with a different owner. (Gwent C.R.O. D361.38-7 and 8).

Tuck Mill, on Olchon Brook. See Ch.3.

Mill on Llymon Brook, parish of Llanvihangel-Ystern-Llewern. Deeds of 1628, 1646 and 1670 (among others) refer to this mill; in 1670 the 'Leman' brook was diverted by a new weir to this mill, apparently to give a better head of water. (Gwent C.R.O. D361.118-84, 93 and 98). Later deeds of 1718 and 1822 refer to Llanvihangel(l)s Mill in this parish. (Gwent C.R.O. D209.26 and Npt 2858). Tithe maps and other maps show no mill in this parish. 'Mill House' (see list of possible sites above - P21) is not near the Llymon Brook.



Measured sectional elevation of Skenfrith Mill (number 11)
By courtesy of The Welsh School of Architecture and Mr Barrie James

References

- 1 Domesday Survey of Herefordshire, *Victoria History of Herefordshire*, Vol.1, 1908, p.318.
- 2 *Ibid*, p.342
- 3 William Rees, Map of South Wales and the Border in the 14th Century; copy in Monmouth Museum. The reason we have to say 'about 27' is that the parish of Penrhos drains partly into the Trothy and partly into the Usk, and it is not clear to which basin its three mills should be attributed; we have assumed only one belonged to the Trothy system.
- 4 For example, K J Allison, *East Riding Water-Mills*, York, 1970, says (p.14) 'with the appearance of the First Edition Six-Inch OS a complete list of mills could be produced.'
- 5 Simmons Papers in the Science Museum Library, London.
- 6 Gwent County Record Office, Misc. MSS 737 et seq.
- 7 Taylor's Map of Herefordshire, 1754.
- 8 Allison, loc.cit.
- 9 C E Bennett, 'The watermills of Kent, east of the Medway', *Industrial Archaeology Review*, 1, 1977, pp 205-235.
- 10 For a discussion of millstones see D G Tucker, 'Millstones, quarries, and millstone makers', *Post-Medieval Archaeology*, 11, 1977, p.1-21
- 11 Hereford County Record Office, Moccas Estate Papers, F10/160.
- 12 There are many published descriptions of typical arrangements; eg D H Jones, 'The water-powered cornmills of England, Wales and the Isle of Man', *Trans 2nd Int. Symp. on Molinology*, 1969, pp 303-354 (available through the Society for the Protection of Ancient Buildings, London).
- 13 J G Jenkins, *The Welsh Woollen Industry*, Cardiff, 1969, p 310.
- 14 Gwent C.R.O., ref.D361.38-7, dated 20 March 1767.
- 15 Gwent C.R.O., ref.D361.35-4 and 5, dated 19 May 1700.
- 16 Gwent C.R.O., ref.D384.0018, dated 8 April 1717.
- 17 Gwent C.R.O., ref.D361.35-10, dated 13 December 1746.
- 18 Gwent C.R.O., ref.D384.0028, dated 29 April 1742.
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- 21 'His Grace the Duke of Beaufort's Estates in the Manor and County of Monmouth: Surveyed by Robt. Whiteley and copyd by Jno. Aram, 1765' – photocopy in Monmouth Museum.
- 22 Map of Troy House Estate, 1706, Monmouth Museum.
- 23 Reproduced by Jenkins, *op.cit.*, p.319.
- 24 D J Davies, **The Economic History of South Wales prior to 1800**, Cardiff, 1933.
- 25 Land tax returns, information kindly supplied by Mr John van Laun.
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- 28 Sale particulars, Moccas Estates, Hereford Ref.Lib., Hopton Collection, Part 2.
- 29 Gwent C.R.O., ref.D361.118–223 and 224.
- 30 D G Tucker, 'The first paper mill in Wales? Perthir Mill on the River Monnow, 1700', **Mon.Antiquary**, 3, 1972–3, pp.155–8.
- 31 I Waters, **Chepstow Miscellany**, Chepstow Soc., 1958, pp.27–41.
- 32 D G Tucker, 'The paper mills of Whitebrook, Monmouthshire', **Archaeologia Cambrensis**, 121, 1972, pp.80–96.
- 33 See document in Gwent C.R.O., ref. E & E 0306, dated 27 Nov. 1845.
- 34 Gwent C.R.O., ref.D583.26, dated 6 June 1591 (in Latin).
- 35 Gwent C.R.O., ref.D361.E/1.103–1 and 2, dated 11 Jan.1614.
- 36 Gwent C.R.O., ref. Npt 4112 (M443.8), dated 16 Jan. 1667.
- 37 A H Shorter, **Paper Mills and Paper Makers in England, 1495–1800**, Paper Publications Soc., Hilversum, Holland, 1957, p.216; also Shorter, 'Paper mills in Monmouthshire', **Arch. Camb.**, 102, 1953, pp.83–88.
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Where the number is in italics, an illustration is indicated.

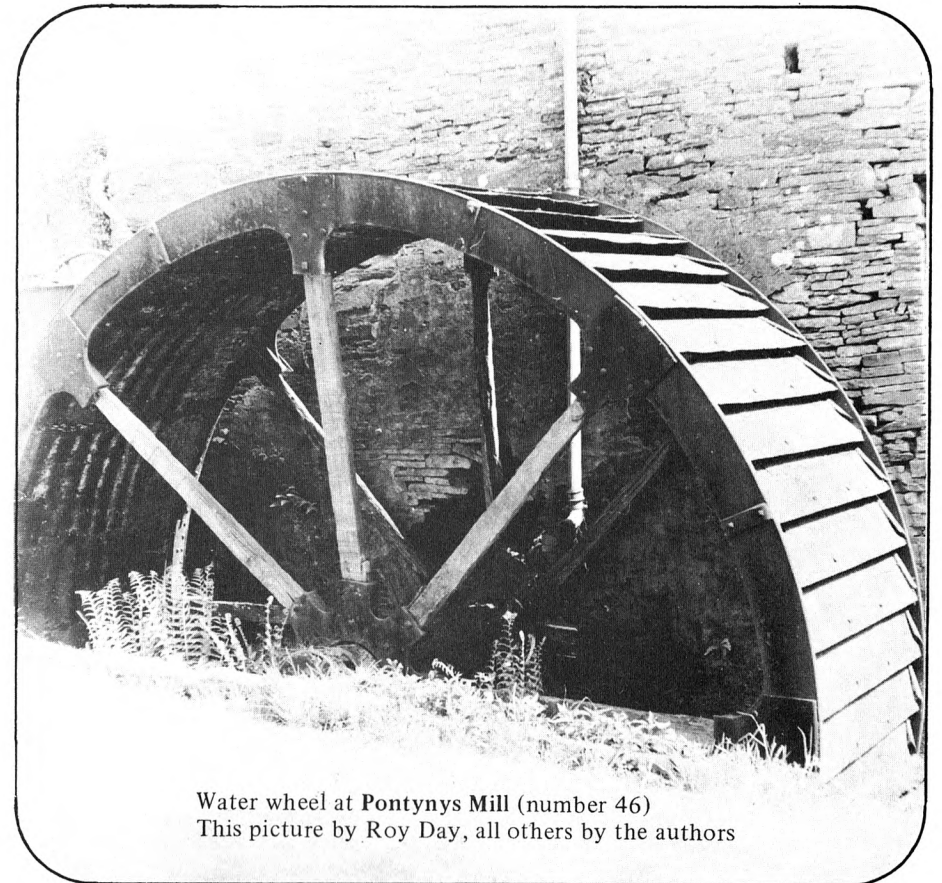
Where the number is in bold type this is the mill reference as shown on the map on page 6.

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Water wheel at Pontynys Mill (number 46)
This picture by Roy Day, all others by the authors