

ART. VII – *Some mill building work at Kendal, 1581-1600*

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IN HIS recent book Dr Malcolm Airs¹ studied original building contracts, accounts and other documents to present inspiring insights into many aspects of the construction of fine Elizabethan and Jacobean country houses. Rarely, however, do opportunities arise to study documents referring to ordinary sixteenth century buildings, even when they were as important as town halls, such as at Keswick, which was especially well-documented in 1571.² Therefore, this article will study the chamberlains' accounts of Kendal, which survive mainly as annual volumes from 1582, seven years after the borough was incorporated. They note the building of the town's horse-mill in 1582, and later work on watermills. Much of the information is poorly detailed, commonly omitting dates of work and payment, the nature and amount of work and the sources and quantities of materials. Despite the drawbacks there is enough detail to outline a few projects and consider aspects of their historical background.

The Kendal Borough Horse-mill, 1582

Although it has not been possible to discover the motivation for building the horse-mill, it would have been advantageous to have a mill closer to the centre of population since the Castle water-mill was inconveniently located by the eastern edge of Miller's Close and had inadequate access from the town except over Miller Bridge. This is made clear on the earliest plan of Kendal, inset on John Speed's 1611 Map of Westmorland (Fig. 1).³ It is also possible that the borough wished to increase revenue by charging inhabitants to grind their corn. However this would infringe the lord of the manor's monopoly of corn milling at Castle mill and could be challenged in law. Defeat would require closure of the horse-mill, but such a setback would not spoil its value for the study of ordinary Elizabethan building work.

The oldest Kendal chamberlains' account book is endorsed "Horse Mylne howse" on the cover and, on the first page, "A Boke of the buyinge and buydinge of the horse mylne and the howse, Anno 1582".⁴ The writing is often difficult to read, spelling is variable and the detail leaves a lot to be desired. There are only four dated entries but not in sequence, so that the timing of activities is unclear. There are many vague entries such as:

pd to tho bethm & Ambrose Sp for ii T	iiii s
pd to Kater Poulton for leading i T & a d	vi s
pd to Kytchen for ii T leading	viii s
pd to Jonto Crackell for his pains	xii d
pd to Thomas hodgson & holed	vi s
pd to peter hartley & hewghe denneson	viii s
pd to thomas levens	xxviii s iiiii d

[Levens received £5 5s. in six such payments]

Note: Roman numerals have been made arabic except in quotations.

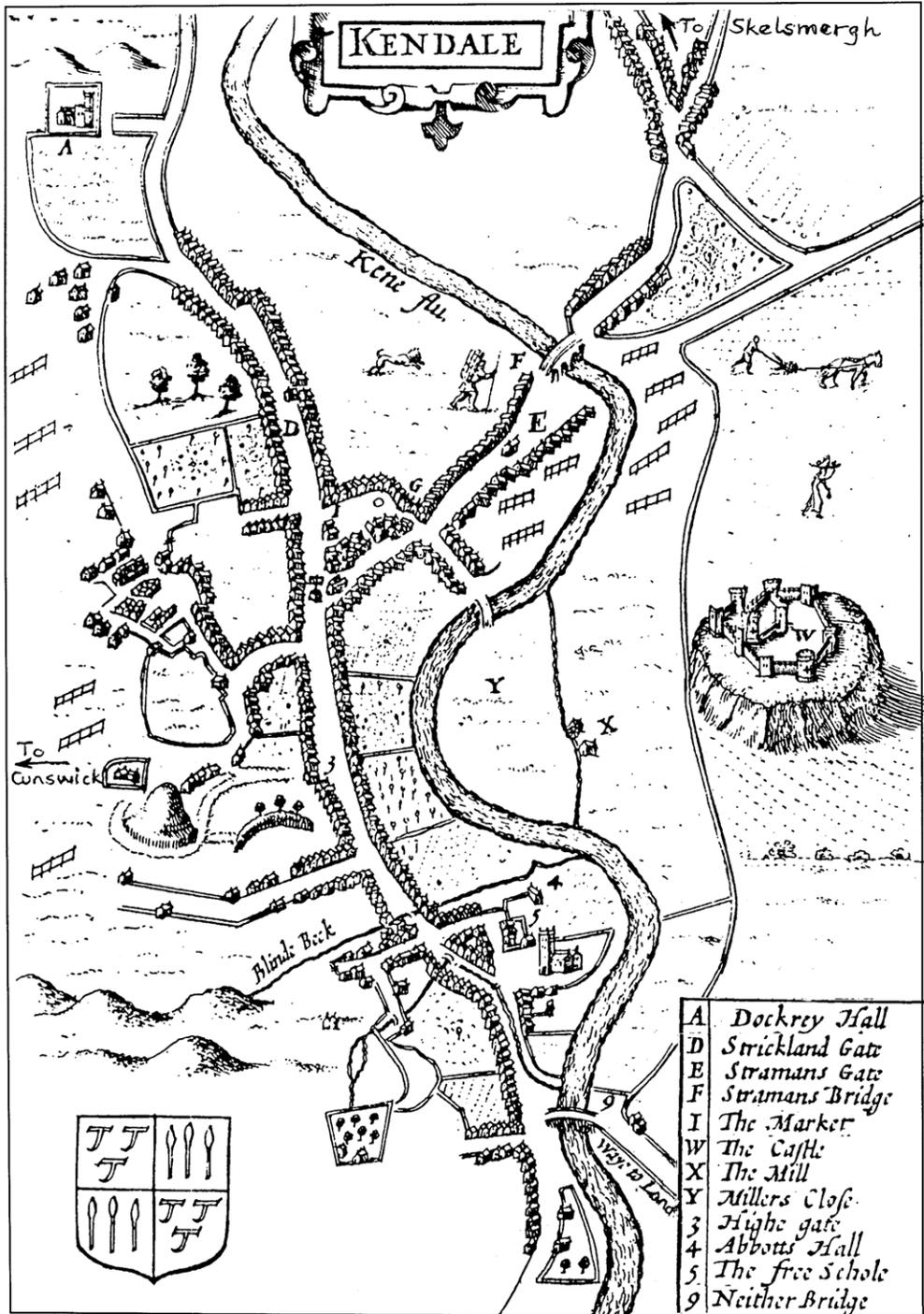


FIG. 1. Plan of Kendal, enlarged and adapted from John Speed's Map of Westmorland, 1611.

However other clues suggest some sources and types of materials, the role of named workers, and how the project was financed. The second account book kept by the next pair of chamberlains, who were elected annually at Michaelmas, gives clear payment dates, starting on 19 October 1582. However the other details are just as vague and fade into other matters without clear indication.

First it is necessary to identify some leading personalities and examine how the funds were raised. Page two of the first account begins “[This is to] Say that this £10 whiche did by [buy] the house / was lentt unto the tonne [town] by my mother in law / & pd by me unto Tho[m]as Wilkinson for / the usse of the toun being chamberlayne E Wilkinson / this year Ano Dni 1581 & in Anno 1582 / this house is given to the toun by my mother in law who did pay for it”. There are no clues to show why she changed her loan to a generous gift. The *Boke of Recorde*⁵ shows that, in 1581-2, Edward Wilkinson, mercer, was the junior chamberlain and, as an unmarried young person, in 1576 donated 20s. towards the cost of Kendal’s charter. Before 1581, the Kendal parish registers note two marriages of Edward Wilkinson, both to Margaret Jopson, on 5 May 1577 and 22 August 1579.⁶ Later Edward Wilkinson, mercer, was elected as Alderman (= Mayor) in 1589, 1598, for the rest of 1608/9 after Michael Rowlandson (tanner) was buried on 22 August 1609, and in 1613.⁷ The burials of “Mr Edward Wilkinson of Stramongate” on 10 June 1620 and of Margaret his “late wife”, on 14 February 1628/9, suggest his address and status. The first of eight children was baptised on 13 September 1577, which suggests that the first marriage was undertaken with some urgency.⁸ If either party was under-age without parental permission, their second marriage in 1579 would legalise their union.⁹

This argument suggests that the miller’s house was bought by Mrs Jopson whose identity, but not forename, can be deduced from two sources. The first is a will, made on 1 October 1597 by Robert Jopson, gentleman of Old Hutton, who had been Kendal’s Alderman in 1578.¹⁰ To his eldest son, Robert, he left his property at Cudworth (near Barnsley, Yorks.) and at Skelsmergh, including his lease on Skelsmergh Hall, its park and demesne land. In default they were to pass in turn to Thomas (3rd son), Christopher (4th), Francis (5th) and Matthew (2nd). Thomas was to have properties in Kendal, including Sparrowmire and Stricklandgate, and two in Old Hutton.¹¹ Properties in Wensleydale were for Christopher, while Francis was to go to the Inns of Court. The three younger sons and Agnes, the only daughter, were to receive portions when they were twenty-one. Matthew, clearly out of favour, was to have £30 a year from the Lordship of Hauxwell (near Leyburn) but, if he led a “good life” for four years, he could have £200.¹² Rents of 40s. from two houses and two paddocks on Kendal Fell were to be distributed by Thomas to poor householders of Kendal on Good Fridays for ever.¹³ Vitally, Robert Jopson’s executors were his “brethren-in-law” Robert and Christopher Bindloss, Thomas Braithwaite and *Edward Wilkinson* (mercier), plus “cosen” Henry Fisher. This shows that Margaret Wilkinson was Robert Jopson’s sister and that his mother donated the miller’s house.

An inquisition post mortem at Kendal, on 7 April 1596, after the death of Robert Bindloss of Staveley,¹⁴ recorded his 68 properties, including two in Old Hutton “held of Robert Jopson”. He left them all to his eldest son Robert Bindloss and, in default, in turn to the second son Christopher, then to daughters, Agnes Fleming (of

Rydal),¹⁵ Dorothy Braithwaite (of Burneside)¹⁶ and Robert Jopson (younger), the son of Anne Jopson, late wife of Robert Jopson senior. Thus by marriage to Anne, Robert Jopson senior became brother-in-law to Robert and Christopher Bindloss and to Thomas Braithwaite; so died in 1597 as noted above.

The Kendal parish registers record that Anne, wife of Mr Robert Jopson of Stricklandgate was buried on 16 August 1582, probably as a result of childbirth complications, as their youngest child Francis was baptised on 13th. Tracing backwards, Robert's older children were Christopher (bp. 28 Aug. 1580), Agnes (bp. 22 Dec. 1577) and Matthew (bp. 9 Nov. 1576). Robert and Thomas have not been found but would have been born about 1574-5 and 1578-9 respectively; not at Kendal, but perhaps at Cudworth. Their father is recorded as having married *Agnes* Bindlesse on 18 April 1573 at Kendal but as that register is an old copy of a lost original it seems likely that Annas (for Anne) was wrongly transcribed as Agnes. Did old Mrs Jopson give the miller's house in memory of her daughter-in-law Anne? The chamberlains then paid 16s. per year "for milne house rent" to Thomas Preston's rent collector and bailiff, Robert Wilson, butcher.

As if spurred on by Mrs Jopson's example, thirteen men gave £50 more, starting on 2 August [1581] with £3 from "Mr Oldrman" (the Alderman).¹⁷ The other gifts were £6 each from Roger Dawson, Henry Fleming and Henry Wilson; £3 each from John Armer, Henry Dickson, Mr ---- Jopson, Anthony Pearson, James Wilson, William Wilson and his brother Thomas Wilson, £2 from Peter Allason and £6 "laid forthe of my owne purse", clearly by Edward Wilkinson. Mr Jopson was probably Robert Jopson discussed above. Except for Allason who was sworn "Clarke off Courtts" (Town Clerk) in 1575,¹⁸ all of these men became alderman at least once between 1575 and 1609.¹⁹ Thus, as was common in other towns, the work was financed by prominent citizens.²⁰ Thomas Wilkinson, who was paid to buy the miller's house, may have been Edward Wilkinson's younger brother, baptised 13 September 1559. He succeeded Peter Allason as "Clerk of the Peace" in 1612 and, until his burial on 16 November 1616, lived in Stricklandgate.²¹ In 1582, Roger Dawson and John Thwaite were chamberlains for the second account book.²²

Mill Building Expenses and Activities

The first recorded payment was £10 10s. (*sic.*) to "Thomas Wilkinson for the [miller's] howse the Second of June . . . 1582". It was followed immediately by undated payments for timber which would have been felled in May, when oak bark was most valuable for tanning.²³ Thus the main effort from August 1581 to mid-1582 was gathering enough finance. Some sources of timber were noted when 11s. 3d. was "pd to Robart Eskrigg for *working* tymber in Skelsmyre parke" two miles north of Kendal and 4s. 4d. was "pd for *leading* tymber from Cunswick" two miles west of the town. Both estates had been owned by the Leyburne family since the 13th and 14th centuries respectively.²⁴ After these entries, William Hodgson was paid 11s. 4d. "for leading forth of park", presumably from Skelsmergh, and he had 16s. more "for leading tymber". The weak details may have arisen from the accountants being more concerned with how money was spent rather than how work actually progressed.²⁵

The timbers processed at Skelsmergh would have been hauled over Stramongate bridge into town. As 3s. 6d. was paid “for drynk & outhr things abot ye tymber draw[ing]”, it seems likely that it was done with some difficulty and even risk. This may have been noted by the burgesses who, on 21 December 1582, passed an order prohibiting the haulage of timber over Stramongate and Nether bridges using more than “one beast draught at any one time”, in effect imposing a weight restriction on the bridges, probably to prevent costly damage.²⁶

There is no mention of felling or working the Cunswick timber, only of leading it to Kendal. Perhaps therefore, it was being re-used. Kendal’s *Boke of Record* (p. 254) states that, in 1582, James Leyburne gave the town a clock with a “sounding bell” from “his Manor House at Cunswick” and enough timber to make a frame on which to set it opposite the market place.²⁷ In 1913 J. F. Curwen quoted this passage and added, without giving a reference “About this time the old [Cunswick] Pele Tower was pulled down and the whole building remodelled”. Later authors, such as W. G. Collingwood and J. H. Palmer used this comment as if it were fact.²⁸ The evidence of only leading the timber from Cunswick might support Curwen’s assertion, and makes it at least arguable that some horse-mill timber could have come from the pele tower.²⁹

The accounts record that Henry Fleming and Anthony Pearson (both contributors to the capital fund) were paid 43s. and 40s. respectively “for tymber” unspecified, as if they provided additional material from their own resources. Later Pearson had another 5s. and there were unhelpful payments of 19s. “for tymber” and 11s. “for one tre” to unknown persons at unknown places and dates. In addition, 10d. was given “for drynck at the dra[w]ing tymbr that was Mr Jopson”. Thus the former alderman may have supplied wood from Skelsmergh Park. On 29 October, he had 36s. “for tymber that Antho pearson and hewe denison prisyd” (valued) and 15s. “mor fr A great tre [that] lieth yet in the pke”, apparently surplus to requirements for, by then, the building was complete. A further 5s. 4d. was paid “to nycolas hodgson for drawing of tymber from the tarn of banck”. This may have referred to Tarnbank, 650 yds north of Skelsmergh Hall, or to Tarney Bank near the northern end of Stricklandgate, between “Toppin Well and Dockwray Hall Yeat”.³⁰ On 2 December 1582, £2 10s. was “pd to thomas Robinson for Timber [that] went towards building of mylne” but its nature and source were not indicated. Though payments after 19 October are dated, the detail does not permit dating of actual events.

While the early timber felling, processing and hauling was being undertaken, stone was being quarried and carried from an unnamed source, probably Kendal Fell where good limestone was plentiful. For about a week’s work, a man had 2s. 4d. for “the making of the way and . . . breaking the gap for the leading of stones” probably through a walled enclosure. On at least eleven occasions Thomas Bethum and Ambrose Spede were paid 2s. a ton for “gitting” over twenty tons of stone while others had twice as much for “leading stone”. They included Kater[in]e Poulton (7 tons), – Kytchen (9 tons), Myles Ginnings (Jenyng) (3½ tons), Robert Jopson (1 ton) and “Johnson wife” (4 tons); while she, Edward Locky, James Locky and his wife had 3s. a ton for “gitting and leading” about four tons more, perhaps from a nearer source. Presumably to feed the many packhorses, 3s. was paid “for the grase of the croft”.

Later entries record paying Raysbeck, Bethum, Winburn and Lockey for 54 tons of unspecified material at only 2d. a ton and also to 10s. "pd to Jackson in p[ar]t of leading the stones". At such a low price, the four were probably getting stones for re-use from a demolished building very near the horse-mill, but there is no direct evidence to confirm this. Among the early entries Thomas Hodgson and "holed" (alias "henry hawlud"; probably Holehird or Hallhead) were paid for "quarters of sand" at 1s. a quarter.³¹ In all, they had 28s. 3d., enough for over four tons of sand. As lime was not mentioned until the roof was complete, perhaps the stones were bedded with fine sand rather than mortar. This might link with Rachel Newman's discovery in her Stricklandgate excavations that walling stones were bedded in clay/earth, not mortar.³²

Very few entries refer to walling the mill and all are sketchy. For example, 12d. was paid "to Kytchen for wolling" and 9d. "to Hodgson for sarving the same", probably for two days work each, while just 4d. was paid "to James Warton for bearing stones" for a day. Also, 1s. was "pd to hodgson & woller for bearing stones" and 5s. "to Spede & hodgson for gitting stones & bearing". Such small sums for casual work could not pay for the bulk of walling work. The answer seems to lie in six payments "to thomas levens" that lack further detail, but total £5 5s. 0d., and in two others worth 11s. 8d. to George Levens. This suggestion gains support in a 10d. payment "to Thomas levins for walling of James aray howse by Jo twhett", chamberlain, on 30 August 1583. It was a part of repairs which included 2s. "for Sklating & stopping [leaks in] James Aray howse" which stood in the "m[a]rkytstead" when 6s. 8d. rent was paid in December 1582. "Levens the waller" is mentioned briefly in the 1593-4 accounts.

Once most of the timber and stone had been led, regular payments were made to Peter Hartley and Hugh Dennison, one of which calls them "wryghts". They were probably responsible for general carpentry including the roof. By Saturday 20 October, when the next chamberlains paid them, they had already had £4 16s. in fourteen instalments, eight of them for 8s., while the remainder were in multiples of 1s. 4d.³³ This suggests wages of 8d. per man per day and that they usually worked six-day weeks for 4s. each. In October Robert Jackson joined them at the same rate.³⁴ On 20 October, they had 5s. 4d. "for viii days work among them"; on 10 November "A weik wagis" 12s.; and on 15 November "for everyma[n] 4 days", 8s.³⁵ After only their third payment, fourpence was given "to lancaster [as] earnist mony for sklating", to seal the roofing contract and 12s. was paid for "the earnist of the myln stones". Also the first 10s. was paid "to the myln wryght". The three aspects of work will be considered in turn.

Lancaster, the slater, had four payments of 20s., 20s., 10s. and 10s. before the end of the first account. He supplied 600 slate laths at 2s. a hundred and also moss to stuff between the slates, before an entry dated "the last of Septembre". He had 30s. more on 20 October, then 21s. 8d. on 10 November, for the "rest of his Dewe for Sklating *in full*" making £5 12s. in all. A "Wm Overend Sklater"³⁶ was also paid £2 on 27 October, but whether he was actually working with Lancaster on the mill is not stated.

As Lancaster's fourth payment precedes all those which refer to raising the roof timbers, it is clear that the order of entries does not reflect progress of work. No date for the "raising" is given, but the payments include 3s. 8d. "for bread, drynk & sope

[soap or soup?] at Rysing”; 1s. 4d. “for cheise the sam[e] tyme” and 1s. 3d. “to John dykson for gloves”, a customary payment for those who raised the main timbers. There is no sign of gloves for the several other workmen who must also have been involved. Later entries record 4s. 8d. “pd for Venneson that my l[ord] skrop did give us to the Keper & for the raising”³⁷ and 5s. 6d. “pd for xi wives at that feast”, suggesting that eleven married men and an unknown number of bachelors were involved.

Meanwhile, boards were paid for, including 7s. 4d. to Christopher Eskrigg’s wife (Jennet, see note 19) for an unknown number. She later had 1s. for “iii bords”, but only 3d. each for twenty-two more. By contrast, Henry Myers had 12s. “for 1 doz bords”. For “stangs [poles] for the skafold” 1s. 10d. was paid. The cheapest boards may have been used on the scaffold and then, for economy, for flooring. Sixpence was paid “to Wllm Judson for bords” and, on 20 November his wife had 4s. for unspecified “latte & bords”. On 27 October he had 1s. 9d. “for A caskit and ii skutles for the milne”. In 1584, 9d. was “pd to Brigge wif for ii plank that was Lost at the Building of the milne”, as though great care was taken with keeping accounts, but not to recording clear information.

Iron goods were noted in several payments. The largest were 20s. and 10s. “pd to Cock the Smith for Ironwork” unspecified. Henry Myers had 6d. “for one grindstone crock”³⁸ while 13s. was “pd to John Armar that he pd to beck for Iron”. John Dawson had 3s. “for ii ho[o]pes, iiiii wagis [wedges] & iii Iron pyns” and, in January 1582-3, received 6s. 8d. “for making Bands for the milne trindles & other things”.³⁹ Also, on 29 November, 1s. 9d. was paid “to colling for making bands & hesps and other things for myllne Arkes”. Robert Lickbarrow supplied “nayles to milne” but, even with other petty payments for nails and “bands & staples”, many more nails were needed than are recorded.

The millstones seem to have cost £4 2s.; earnest [i.e. payment to confirm contract] 12s.; 40s. paid directly by the chamberlains and 30s. “pd for the sam[e] stones before by Mr Alderman & to him alowid”. After a long delay, on 2 December 1582, 2s. was “pd to thomas Jackson for drynck [that] was promised at leading of mylnstones upon Mr Potter note to C[e]rtiffy”. For “drynck at the bring[ing] of the first stone” 4d. was paid and 1s. 6d. more “for drynck at lying of the Sels”.⁴⁰

Regarding the millwrights’ affairs, the accounts record 40s. “pd to Wllm Judson wife for wryghts bord”, but without dates. Later she had 44s. “for one month endid the 20 of Awgust for wryghts”; and another 44s. for “wryghts bord 15th of September” just four weeks later. At a weekly rate of 11s., the first 40s. would pay for about 25 days, so that the millwrights probably worked from about 26 June. The next chamberlains paid her 11s. for “the rest of the mylnewright Table *in full*” on 27 October. That might have been a late payment for their board to the end of September, for the largest single payment was £7 12s. “to georg grein the myln wryght for his wagis to this day being the last of Septembre”. Earlier, “the myln wryght” had 10s. earnest plus 20s. more “pd to georg wryght by hen fleming & so to him aloid [allowed]”. Dated items in the second account book show that, on 20 October, £3 9s. was “pd to george the mylnewryght in full for all waigis 39s., mor Coming & goinge to Kendall . . . 20s. Drinking money for him 5s. & for his man 5s”. Then on 29 October, 5s. was “pd for Caredg the wright toyls to wak feld”, suggesting that the two either lived at Wakefield or found their next job there.

The mill was probably working by 20 October when 20s. was “delyveryd to Rich Patchett to buy malt withall to s[e]rve costemers” and 4s. was “pd to Rich Patchet wagis a weik”. On 10 November his pay was cut by agreement to 3s., but he gained an assistant. Patchet also had 3s. 4d. to buy “oitis [oats] for horses” and was reimbursed for paying 1s. 6d. “to Alann Stevenson pokeleader” who probably carried customers’ grain and flour sacks using the mill horses when they were not driving the mill. On 12 November 30s. was “pd for A horse to Willm Betha[m]” and, on 2 December, 40s. was “pd to Roger Dawson for A horse”. The mill probably used two horses as, on 14 March 1582/3, 2s. 8d. was “pd to Mr Pendleburrow for ii barrams of lether for horses at mylne”. A barriham (or braffam) was a horse’s collar⁴¹ but whether the horses worked together or separately is not recorded.

Although the mill was probably complete before the new chamberlains took office at Michaelmas they continued to receive bills from builders. The total cost was over £75, exclusive of buying the miller’s house, but many vague items make an accurate figure impossible. On 8 December, Christopher Stevenson was awarded 3s. 4d. “for the hinderance of his croft at building of mylne by Judgmt of thomas Benson and Georg Archer”, who probably assessed damage caused by using his land for access and to store building materials.⁴² Although this might be the best clue to identify the mill site, searches have failed to locate Stevenson’s land.

There is no clear evidence on the form of the mill and its machinery. It had two millstones, probably placed one on top of the other, rather than being set up on edge to roll round a circular trough in a large bed-stone⁴³ which would probably have been separately recorded. Horse-driven mills were of two basic forms. The more modern was the sweep, which had rotating arms close to floor level. The horses had to step over a horizontal rotating shaft which drove machinery in an adjoining building. The older, more likely, form was like a whim or horse-gin such as were used for hauling coal up colliery shafts. Above the horse’s head, a large, horizontal frame had long fixed, radiating poles (similar to capstan bars) to which horses were harnessed. In cornmills a central upright shaft could be set in the upper stone to turn it directly, or an overhead wheel could have cogs to drive a small lantern gearing below two millstones placed on the upper floor.⁴⁴ The latter arrangement had the great advantage of keeping the horses and manure away from the flour.

The horse-mill certainly had a slate roof with moss windproofing but the slate source was not stated. If the 54 tons of building material brought to the site for 2d. a ton was actually salvaged stone,⁴⁵ the total weight of stone was about 104 tons. This was enough for a circular building, about 20 ft internal diameter with walls 2.5 ft thick and about 8.5 ft high. Thus, the walls could be entirely of stone and any extra diameter, wall thickness or height could be accommodated by leaving openings in the walls to improve ventilation. This calculation might help to explain why so few boards were bought and suggests that most of the timber was for the roof and the mill machinery.

Consequences

Some legal expenses incurred by infringeing the manorial milling rights are noted in the accounts. As early as 13 April 1583, £7 4s. 1d. was “pd to Thomas Potter

[Alderman, 1584] by his brother Edward for his chargis to london about our milne sute & sute to my L[ord Archbishop] of Canterbury for [Kendal] scole". On 15 September, 30s. 8d. was "pd to Wm Wilson [Alderman, 1583] that he layd owt at east[e]r terme for our Sut wth my Lord of Warwek for milne counselles ffees". Other reimbursements, specifically for legal costs "about the milne" were 9s. 8d. on 5 April 1584, to Mr Fell for Hilary term; 28s. 8d. to Mr Jopson for Michaelmas term 1584; and 42s. 10d. to "Mr Alderman" for Easter term 1585. More may have been subsumed into other less helpful entries. The earl became involved through Queen Elizabeth's grant to Ambrose, earl of Warwick, of "the Park of Kendal . . . as of the manor of East Greenwich" in 1581.⁴⁶ Kendal Castle mill was a part of that manor. If the earl had increased the milling charges, that could have precipitated the town's desire to build a horse-mill.

Despite the dispute, the affair seems to have been conducted in a very civilised manner. In July 1584, for example, 1s. 8d. was spent "for a gallon of wine to my Lord Warwicke his gentilmen"; 3s. 4d. "for fruite and the cariage of it when the gentilmen shuld [a]gain come to Mr Ald[er]mans"; and 5s. 7d. "for ii gallons and iii quarts of sacke and claried wine when they dined" with him. They also bought: beef (2s.), a pig (14d.), a quarter of mutton (16d.), a quarter of lamb (8d.), a shoulder of mutton (7d.), a breast of veal (4d.) and much more including 4s. "for A barrell of bear to my L[ord] president his Bankett".⁴⁷

As the earl paid mill rent to the queen, the horse-mill damaged her income, so that he was able to stop its use by suing in the Exchequer. The earl's ban was relaxed a little for townspeople only and he got out of the lawsuit very neatly by leasing Castle Mill to the town. This harmed the town's income but not his, yet the town remained liable at law for damaging the queen's income.⁴⁸ The first clear payment of watermill rent was in the 1587-88 accounts when £15 was "pd by Edward Garnet to Mr Will Wilson to pay at London for the rent of the Castle mill". The same annual rent was paid in 1595 "to Mr Willm Wilkinson for . . . the Castle Millnes dewe to the Right Honorable the Countesse of Warwicke at the feast of St Michaell the archangell" (29 September).⁴⁹ The horse-mill was still standing in 1590, probably in good condition, for William Colling was given 6d. "for making a new Keye to the horsemyllne dore" to deter intruders. Its fate has not been discovered, but Speed's Map of Westmorland shows no sign of a building resembling a horse-mill.

The town also maintained Mrs Jopson's mill house. Brief entries show that it was thatched. In 1584, for example, Thomas Hodgson had 18d. "for S[er]ving the thecker". They used 900 spelks at 2d. a hundred and at least 36 threaves of straw at 1d. a threave.⁵⁰ From December 1586 to March 1587, more thatching was done. Other entries refer to "gitting" stones and to leading stones and clay "to the milne house". A payment for 8d., probably for two men for a day, was "for clay & dabing" but this is insufficient evidence to infer that it was a clay-walled house. Perhaps some walls had clay rendering, but the entries are not clear enough.

One consequence of leasing the watermill was to keep it and its dam in repair. From 1584 to 1586 it is difficult to distinguish watermill from horse-mill payments. For example, references to horse shoeing could be for beasts driving the latter or carrying corn and flour for either. The first *dated* payments referring to activity typical of watermills was on 20 June 1587, when 3s. 6d. was paid "for working the

milne dyke” and on 21 July “for mending the dam” 18d. Only two payments for dam repairs slightly predate these and are compatible with the earliest rent paid for Castle Mill, noted above. Another undated sign of a new lease was the purchase of several new locks all at the same time. They were for the kiln door, the mill barn and two for “the mulct arke” in which the miller’s share was stored.

Watermill Repairs

Watermill repairs became common items in the accounts. In 1593 a few specific references to the “Kastell myllne” are interspersed with some for “Spittle milln” north of the town, but the majority do not indicate to which mill they applied. Some brief entries refer to thatching “the Kylne beyond watter”, repairing “the dam at Kastell” and to sawing boards in the park to repair the mill wheel. Likewise in 1594-5, thatching a kiln and repairing a dam are noted in wholly undated entries, too fragmentary to develop.

In 1596, timber was carried from “the park” for mill repairs and James Ayray’s wife was feeding millwrights at her house in the market place. The Ayrays commonly supplied drink to workmen, so would be publicans. If the work was convenient to both locations the entries surely refer to Castle mill, but this is not stated. “A notte of all the Charges Abowte the milln Senis Michellmas laste 1596”, lists the mill employees. They were John Stainton (miller) and Jenken, “dryster”, who probably dried grain at the kiln, each paid 2s. 6d. a week (or 5d. a day); George Gibson and Brysome Murton “poke leaders”, who carried customers’ flour and corn sacks, and Robert Borwick whose job was not stated, each at 2s. a week (4d. a day).

On 9 November five millwrights were paid. They were John Barwick (14 days at 6d.), John Thornton (17 days at 6d.), William Labray (19 days at 5d.), Thomas Dickson and John Potter (each 6 days at 4d.). The various pay rates reflected relative skill and experience. The chamberlains paid 28s. for board “to James Araye wyffe for the Table of theis milln wrights Abov sayd theis dayes they wrought and for iii men ii Sundayes after 2s. 10d. a wk”. Thus, the first three probably stayed three full weeks, and were with Mrs Ayray on the intervening Sundays as if their homes were too far from Kendal. The rate of 34d. indicates an allowance of 5d. per working day each, but only 4d. on Sundays.⁵¹ This came to 24s. 6d., leaving 3s. 6d. for both assistants for six days each at 3½d. a day; enough for two meatless meals a day. Another 4d. was paid to Mrs Ayray “for 2 mealles meatt old Lyndaye had when he came to putt one of the workmens armes in to Joynte”, but there is no sign of what had happened. Perhaps this explains why John Barwick worked fewer days than his two main colleagues.

The accounts note 3s. 4d. paid “to Bryhame Schowe” and 6s. 8d. “to Bryame Dyckson for drawinge timber forthe of the pke for mending of the milln”, presumably from Kendal castle park. The value of these payments suggests that a large amount of timber was used. The work included 2s. 4d. “to Borreke the millnwright for a gange of Coges”; 5s. “for Coges and Runners” and 8d. “to a workeman for setting them in”. However these must represent a small fraction of all the work. The chamberlains also paid 20d. “to Wm tompson the waller and Mitchell for mending the water race” probably for two days each. In addition,

Brysome Murton had 8d. "his charges when he wentt for labra the millnwryght", who then had 4d. for unspecified "work" perhaps for a day righting faulty work. More informative accounts were kept in 1598-9 when Edward Wilkinson was again Alderman.

Repairing the Mill Dam, 1598-9

After several years of constant running repairs to the mill dam, in 1598 "payments abowte the myln gene[r]ally" started on 2 November. The first entry reads "payd Forthe For Workemen Workinge att the millne dame And For makinge all the dame Anew Frome the Lowest end to the head of the dame". It then notes 14s. paid to five named men "for Three Dayes Worke standinge in the watter in winter and for Some Drinke", and 20d. to two others "att the same for iii dayes woorke".⁵² While the first five had nearly 1s. a day each for working in the cold water, the other two would be young helpers. Materials included 4s. 8d. "for xvi Longe Raylles for making of stackes for dryving in to the earthe" and 3s. 4d. "for viii stoupes for dryving in to the earthe And for A greatt Long planck & for nayles for nayling them to the stackes". A man was paid 9d. "for gyttinge of soddes on[e] daye". "A horsse thre dayes for leaddyng of wattling & whynes [gorse], Rayles & Soddes . . ." cost 3s. The only other work before the end of 1598 was one day each by Richard Cornthwaite, Richard Jackson, Percy Jackson and Edward Lockey. Materials cost 4s. 6d. "for viii Long Rayles & xiii Long Stoupes . . . for driving into the ground", and 3s. 6d. "for iii Long borrdes 3 yards & more Longe & two mid bordes & for brygges for nayling of them". The form of words varied little through the winter. The 1599 payments for labour are dated and are summarised in Table 1.

Table 1. Kendal Mill Dam Workmen, Spring 1599

Name	pence per day	days paid for on date shown					
		27 Jan	29 Jan	4 Feb	11 Mar	23 Mar	25 May
Total payment		7s. 8d.	6s. 6d.	5s. 0d.	5s. 8d.	5s. 0d.	3s. 0d.
Edw Lockey	12	1	1	1			
Adam Dennison	12	1		1			
Richd Cornthwaite	12	1	1	1	2*	2*	1
George Gibson	12				2*		1
John Dennison	12						1
Arthur Chambers	8	1	1	3	1	2*	
Chris Hodgson	8	1	1		1		
Percy Jackson	8	1					
George Lucas	6		1				
John Mouthatt	6		1				
Robert Hegganie	6		1				
R'd Cornthwaite wife	8		1				
John Valentine	8				1		
Rowland Wallas	4				1		
--- ditto ---	12				1		
Arthur Dickson	5					2	
Anthony Lucas	5					2	
Richard Park	5					2	

* Note: Lower day rates paid (see below); 10d. (Cornthwaite & Gibson) and 5d. (Chambers).

Only Cornthwaite and Chambers show consistency of employment and then only for occasional days, presumably as need arose and conditions allowed. Perhaps casual work suited the workmen for the discomfort of working in cold water in winter, when water levels were higher, would have been unpleasant. To offset ill-effects, the men were plied with strong drink, such as "Ackervitte"⁵³ on "the 29 of Jenuwrye", and had much higher pay. Thus, Rowland Wallas had 4d. a day when just "helping" but 1s. for a day "when he stood in the coulld watter". So when Cornthwaite, Gibson and Chambers had lower pay, they were probably not working in water.

Other payments fill out the detail. In January, 6d. was paid to "George Birkett For leading with the millne horse 1 daye and For iii woode mells⁵⁴ to Drive the stackes into the earthe". For "gitting and Leadinge A car[t] full of Watteling", William Pott was paid 4d. More posts, boards and nails were paid for on "the 4th day of feberywery", and "xxvi Long Railles chossonn out of others to finish the Dame" cost 3d. each. Despite this comment, more materials were paid for on 11 March; a "Longe Sparre" (6d), a "midell Sparre" (4d) and "viii Longe Railles aboutt vi yeardes Longe" at 3½d. each. A "Brode coveringe of i tabell ii yeards Longe and more" cost 4s. It was probably a large flat stone laid to protect the bottom of the mill leet entrance from erosion.

The details suggest that men stood in the water to hammer stout posts and intervening stakes into the substructure, about three yards apart, and nailed rails to them. The gaps were filled with wattling and gorse to hold earth shovelled in behind. The bank was faced with turf. Thus by 23 March, Richard Cornthwaite (10d. a day) and four helpers (5d. a day) had spent two days "hackinge and shoullinge sand in the dame", probably from the surrounding ground rather than from in the water. By comparison, on 25 May, Cornthwaite and two others had 1s. each for one day "shovllinge in the Watter Rasse". For similar work Edward Lockey and Adam Dennison had 14d. on 9 February "for takinge up of the Cundetthe [conduit th]att comes ffrorme the steepe ffatt and for drissinge of itt for makinge the watter to Rune from them", probably for one day cleaning a dry, choked channel at the mill.

On 10 August, John Smith had 20s. "for leadinge Timber fourth of the park". Next day, Robert Birkett and three men had 12s. "for vi dayes workinge at planckinge under the wheeles and makeinge 1 wheel Anew". "Mr Alderman" (Wilkinson) gave 1s. for drink "when they sheested [shifted ?] the millstones of the one unto the other". Also on 10 August, 7s. 8d. was paid to "William Swainsonn wif for 1 Barre of Ironn . . . 46 lbs weight for 1 Brandrethe to the new millne" but, two days later, Reginald Walker was given 6s. 8d. "for makinge the new Brandrethe when . . . Robert Swainsonn couldd nott make itt". John Stainton, the miller, was allowed 2s. "his charges beinge Awaye ii dayes & 1 night . . . [with] the Baye horse when the Brandrethe was made", probably to give guidance on its size and design. Simon Swainson was paid 1s. 4d. "for drawinge of od[d] pecces of Timber from the birkhag to the millnedame" and 1s. was paid "for leading 1 cloge of Bordes the 17th of August . . . for lofting the stabell att the millne".

Meanwhile two new millstones were bought. The accounts note 1s. 8d. in charges "for goeinge to overcellatt [Over Kellet]", on the edge of the Millstone Grit near Carnforth, and 21s. paid to "Jhon Dyckenson for carrege of A myln stone frome Kearr brygg the 2 July". Also 1s. 6d. was paid "for drynck to them that brought the

stone" and 8d. more to those "helping throw[gh] the watter up to the myln with the same myln stone". Buying the "other milln stonn xxiiiith daye of June" cost 21s. 8d. Its carriage was 23s. and 1s. 3d. was spent on "helping of it up the grauell to Lay itt on the dragger [sledge and] for drawing A pott of Alle wch is as thay say coustome". A further customary payment was made about 10 July "for stopping & dammyng watter in the myln dame at the sleu[ce] head", probably to ensure that the mill was immobilised when the millstones were put in position. On 4 August, Robert Birkett was paid 11s. "for dyghtinge⁵⁵ the miln stones & other work about the millne for himselfe & three workmen". Two days later "James Ayray wyf" had 7s. 6d. "for borddyng of Robart Byrckatt & two of his men . . . for ther meate [and] drynk for vi dayes" at 5d. a day each, and 20d. "for two workmen for meatt & drynk for fouer dayes". Margaret Swainson had 1s. 3d. "for 1 pott of drink, and bread & cheese to men when the millstonn was brought unto the lowder".⁵⁶ On 11 August, "Anthony couke and Robert herysonn" had 4s. "ffor iii dayes wirkinge to sett the watter of the millne and settinge itt on Againe and shoulling sand outt of the watter Rasse beneathe the millne".

Another part of the account deals with obtaining dam materials. It begins "payd by Mr Alldermans Apoyntment and henrie Ingersonn for worke in the parke beinge for the Dame payd the 30th daye of March 1599". Using Henry Ingerson to pay the men suggests that the work was in Kendal Castle park.⁵⁷ John Clarke and Adam Warrener had 3s. 4d. "for Felling trees ii dayes in the parke" or 10d. a day each. With Christopher Clarke they had 5s. more (only 4d. a day each) for five days of unspecified work there; and 6s. 4d. was paid for their table. "Clarke & his two fellowes" had 4s. on 5 May for three more days, while James Ayray's wife had 5s. for boarding three men for four days. At least one of the trees caused difficulty, for 1s. was "payd for ix men for horsinge of A tree and for helpinge with it off[f] the corne", which was probably newly sown. Richard and Robert Jackson then had 3s. for "hewinge of wood" for three days at 8d. and two days at 6d. respectively. On 12 May £1 was paid to Simon Swainson "for Drawinge Timber iii dayes with vi Cattell in the draught", while Edward Garnett's wife had 21s. for "vii cattell in [her] draught drawing iii days Timber". Clearly a large amount of wood was extracted, probably more than was needed just for the dam.

On 7 July Ingerson had 22s. to pay the workmen and another £1 on 9th to pay their board. Likewise he had 42s. on 14 July; 10s. on 4 August; and 27s. in mid-August "by Mr Wilkinsonn Appointment". Ingerson gave John Wilkinson 23s. on 9 July, "for leading stones and wood to the millne dame"; and also paid 4d. "for fouer great clewes [balls] packethread for lininge over the watter Above the Bridge", perhaps for setting out the work.

Despite all of the work already paid for, the 1599-1600 accounts have another series of "payments abowte the damme", starting in November and then a lull until May and June. This suggests that little work was done during that winter, probably a sign of less emergency than in the previous year. An initial payment of 10d. each was made to William Boucher and Richard Jackson, on 13 November "for fellinge one tre and riving it in to stakes" but most of the work was unspecified and is summarised in Table 2.

Table 2. Mill Dam Workmen November 1599 to June 1600

Name	pence per day	date paid and days worked						
		17 Nov	30 Nov	17 May	22 May	31 May	3 Jun	6 Jun
Richard Cornthwaite	12	2	5				5*	3*
John Dennison	12		5				5	5
George Gibson	10	2	2	3*	2*			
Edw. Atkinson	10	2	2	3*			6*	5*
Geo. leackay [Lockey]	10	2		2*	2*			
Anthony Coke	10	2	5	2*				
John Hay	10		5	2*	2*		6*	
John Warriner	10		2	2*				
Edward Lockey	8			2	2	5		5
Bryam Ward	8			2				
Robert Harrison	8			2			5	5
James Jackson	8			2				
Richard Beatmond	8			2				
George Beatemond	8			2				
Ant. Bounes [Bowness]	8						6	5
Robt Birkett [wright]	6					6	6	
Birkett's men (number)	6				(2) 6	(3) 6		
----- ditto -----	6				(1) 5			

Notes: * Rate reduced to 8d. per day.

() Number of unnamed workmen with Robt Birkett.

A few payments have some useful detail, such as 3s. paid to John Wilkinson and John Birket "for iiii horses one daie for leading of watlinge to the dame"; 6d. "to Thomas Denison for cropping of watlinge" after it was set in place and 2s. 4d. "for drink to the workemen at the dame" all paid on 30 November. The next payments were 8s. on 17 May for Robert Birkett (millwright) and three men for four days "breakinge of timber"⁵⁸ and 6s. 8d. to James Ayray's wife for their table, again at 5d. a day each.⁵⁹ On the same day Robert Harrison had 4d. for a day "cropping of watlinge". On 31 May Edward Lockey had 15d. for getting stones for the dam and on 3 June, John Dennison was given 5s. for five days paving it. On 6 June, William Bousher, Richard Jackson and James Bourgus (Burgess?) received 1s. 6d. for felling three trees, probably in one day, and Hugh Birkett was paid 6d. for leading wattle and stakes, clearly in preparation for the last spell of work paid for on that day.

The details show that work went beyond reconstructing the dam. The stable loft was re-floored, a new mill wheel was made and fitted, a new brandreth was made by a smith some distance from the mill and two new mill stones were bought and fitted. The old stones were "sheested . . . unto the other [-----]", perhaps another grinding position at Castle mill, Spittle mill or even the horse-mill if it was still in partial use. It would certainly have been very useful when the Castle mill was being repaired.

Conclusions must be brief. Apart from showing how some sixteenth century building works were financed and undertaken and by whom, several aspects of background history have been explored. It is interesting to discover, for example, that Edward Wilkinson was involved in both projects for which the best records survive and that repairs to Ayray's house in the market place identified the horse-mill waller. Perhaps it is not surprising that details of the more important local people, such as Edward Wilkinson, Henry Ingerson or Robert Jopson have been

uncovered. However, as this article has revealed a microcosm of Kendal life, focussed on one particular topic, more research in the same sources should shed even more light on how a broader range of ordinary Kendal people earned their living and interacted in a close-knit community.

If a building as humble as the horse-mill had stout stone walls and a slate roof in the sixteenth century, it is likely that the absence of ordinary Cumbrian buildings, dating from before about 1680, was a result of a widespread re-use of any sound materials which were available in disused buildings. The mill itself seems to have contained a good proportion of re-used stone and timber. This observation must modify a widely held belief that ordinary medieval buildings failed to survive because they were built of impermanent materials such as thatch, clay and small-sized wood. Probably both factors operated together.⁶⁰ While the article leaves many questions unanswered, it proves the former existence of an early horse-mill in an area where they have been described as rare even in the nineteenth century.⁶¹ Perhaps documents might reveal more in south Cumbria.

Acknowledgements

I am indebted to Richard Hall for drawing my attention to the horse-mill accounts and for help in reading the chamberlains' writing. His encouragement, advice and friendship is greatly valued. Dr J. B. Phillips of Manchester University gave very sound advice on the mill dispute and on a draft of the article. The archivists at Kendal Record Office, as always, have been most helpful.

Notes and References

- ¹ M. Airs, *Tudor and Jacobean Country Houses* (A. Sutton, 1995).
- ² B. Tyson in *CW2*, xcv, 119-135. For ordinary buildings after 1660 see B. Tyson, *Aspects of the Management of Traditional Building Work in Cumbria, 1660-1840*, unpublished PhD thesis, Oxford Brookes University, November 1995. Copies at Cumbria Record Offices (CRO).
- ³ Copy at CRO Kendal. Speed's 1610 coloured map was reprinted in black on white in 1611.
- ⁴ CRO Kendal, WSMB/K, box 26/1.
- ⁵ R. S. Ferguson (ed.), *The Boke of Recorde of the Burgh of Kirkbie Kendall* (1892), *CW Extra Series viii*, 32 and 15.
- ⁶ H. Brierley, *Registers of Kendal*, part ii (1922), 117, 121.
- ⁷ *Boke of Recorde*, 21, 23. The chief officer was "Alderman" until Charles I's 1637 charter created the title of "Mayor".
- ⁸ Edward Wilkinson's family included; Agnes (1577-), Robert (1580/1-), Mary (1583-86), Edward (1585-86), John (June to Dec. 1586), Elizabeth (1587-), John (*-1592/3), Margaret (1594-). "A powre crippell . . . from Mr Edward Wilkinson howse" was buried in 1597. (* gap in registers Mar '88 to Mar '91).
- ⁹ A similar pair of marriages took place at Windermere on 27 January and 7 August 1757 between Henry Williamson and Mary Birkett, the second "with the consent of . . . Mary's father she being under age".
- ¹⁰ Proved in Archdeaconry of Richmond, Lancs. R.O., Preston. Microfilm at CRO Kendal, GL 115.
- ¹¹ Called Town House and Owbancke (or Ewebank), both noted in English Place Name Society, *xlii*, *Westmorland* (1964), 128.
- ¹² The un-named "wife of Mr Mathew Jopson of Haukswell" Yorks. was buried at Kendal on 13 March 1629/30. Thus, perhaps he had made good.

- ¹³ The copy at CRO Kendal of the *Reports of the Commissioners on . . . Charities and Education: Westmorland* (1815-35), 497, records only that a "Mr Jopson gave an exhibition of 40s. a year" for a Kendal boy to go to Queen's College, Oxford. This was either a different Mr Jopson or a misappropriation of the gift.
- ¹⁴ Wm. Farrer, *Records of Kendale* (1923), i, 334-6. Bindloss died on 18 April 1595 when his son Robert was aged 34.
- ¹⁵ As his second wife, William Fleming of Rydal married Agnes Bindlosse "widow of . . . Benson" before 11 Jan. 1574/5. He was buried on 24 June 1600 at Grasmere. She bought Skirwith Hall estate in 1605/6 and died in 1634. W. G. Collingwood (ed.), *Memoirs of Sir Daniel Fleming*; CW Tract Series. xi (1928), 52-8.
- ¹⁶ Thomas Braithwaite esq. of Burnside Hall was buried 6 May 1610. (Kendal regs.) He married Dorothy Bindloss of Borwick before 1583, when their eldest son Thomas (d. 1622) was born. R. S. Boumphrey, C. R. Hudleston and J. Hughes, *An Armorial for Westmorland and Lonsdale* (1975), CW Extra Series xxi, 48. (hereafter *AWL*)
- ¹⁷ Presumably Edward Potter (mercier) who took over after Edward Swainson (tanner) died.
- ¹⁸ Peter Allonson married Aliche Beethome on 18 January 1573/4. She was buried on 11 November 1587 and he "of Marketstead" was buried on 24 May 1612.
- ¹⁹ The identity of these contributors may be deduced from the *Boke of Recorde* as follows:
- | Name | Trade | Chamb'n | Alderman | Comments |
|-------------------|----------|---------|---------------------------|----------------------------|
| Henry Wilson | chapman | 1576 | 1575 | displaced 1579* |
| Henry Dickson | mercier | | 1582, 1596 | died 1597 |
| William Wilson | chapman | | 1583, 1593 | |
| John Armer | shearman | 1576 | 1585, 1597 | "mort del plag" that year. |
| Anthony Pearson | chapman | 1578 | 1586 | died 1590 |
| James Wilson | butcher | 1583 | 1587, 1597 | after Armer died |
| Hen. Fleming senr | mercier | 1580 | 1588 | died 1596 |
| Ed. Wilkinson | mercier | 1581 | 1589, 1598, pt 1609, 1613 | |
| Roger Dawson | draper | 1582 | 1590, 1599 | |
| Thomas Wilson | chapman | | 1609 | |
- *Removed from office because, "to the sclander and offence of the Magistrates", he was living with Jennet, the wife of Christopher Eskrigg. Despite their public humiliation, by 8 November 1583 she had had her second illegitimate child by Wilson (*Boke of Recorde*, 119-29 & 123-4).
- ²⁰ Robert Tittler, *Architecture and Power: the Town Hall and the English Urban Community, 1500-1640* (Clarendon Press, Oxford, 1993), chapter 3.
- ²¹ No will survives but, as his wife was dead, John Wilkinson was granted administration. The inventory was nearly £30, with over £128 owing to him and debts of over £44. In his study were 43 latin books and 15 law books. In 1599 the will of Henry Wilkinson of Highgate, clerk, has relatives' names, including Thomas and Edward Wilkinson, his brother's sons, but full proof of relationship is missing. Archdeaconry of Richmond Wills. Lancs. R.O. CRO, Kendal, microfilm HK673.
- ²² In 1584 John Thwaite was one of the 24 Assistants but was removed from office "for living incontinently with his house servant" not named (*Boke of Recorde*, 132-3). He was later re-instated. (Information from Dr C. B. Phillips).
- ²³ For example see B. Tyson, *CW2*, lxxix, 85 and lxxx, 117.
- ²⁴ *AWL*, 189; and N & B, i, 144.
- ²⁵ This is in marked contrast to the obvious interest displayed by, for example, Sir Daniel Fleming of Rydal in 1659-88 (*CW2*, lxxix, 85-97; lxxx, 113-129).
- ²⁶ *Boke of Recorde*, 121.
- ²⁷ In 1584, 8d. was "pd to Wm Collin for mending the clock" and 2d. was "pd for Lead to the plumb [weight] of the clocke". In 1585 repairs included 11d. "pd for A rope to the Clock".
- ²⁸ J. F. Curwen, *Castles and Towers of Cumberland and Westmorland* (1913), CW Extra Series xiii, 365; W. G. Collingwood, 'Inventory of Ancient Monuments of Westmorland and Lancashire North of the Sands', *CW2*, xxvi (1926), 29; J. H. Palmer, *Historic Farnhouses in and around Westmorland* (1952), 36. The RCHM, *Westmorland* (1936) did not include this idea.
- ²⁹ During the "Pilgrimage of Grace" troubles, men from Kendal, incited by a greater number from Dent, went to "Mr Laborne's house" at Cunswick on 1 November 1537, to intimidate him and "spoiled the house indeed". Next day they intended to attack Skelsmergh Hall, but were bought off by "Parson

Layborne". The extent of damage is not known but, as Leyburne agreed to go with the rebels to Lancaster on 4 November, it is likely that they had not destroyed his house. Less severe damage could have been repaired long before 1582 (*Records of Kendale* i, 77-8).

- ³⁰ Tarney Banks is mentioned in a deed of 12 August 1699 (CRO Kendal, WSMB/K, box 20). In October 1537, the Kendal rebels met there (note 29). The site of Toppin Well remains obscure.
- ³¹ A quarter was 8 bushels each of which might comprise 8 to 24 gallons (B. C. Jones, "Variations in the Length of the Perch in Cumbria", *CW2*, lxxxiii, 178). At Kendal 20 gallon bushels were normal. Sand weighs about 100 lbs per cub. ft, each of 6.25 gallons (British Standard 648). Thus a Kendal bushel of sand would weigh about 320 lbs, a very full packhorse load.
- ³² Reported in her lecture to the CWAAS A.G.M., 30 March 1996.
- ³³ Their 14 payments would account for 6, 6, 5, 6, 2, 5, 4, 6, 6, 6, 5, 3, 6, and 6 days respectively, leaving six weeks of slack time in the 20 weeks between 2 June and 19 October. It is clear that there were delays in paying what was due.
- ³⁴ As a thrower (turner) in 1590 Robert Jackson was admitted as a freeman of Kendal's twelfth guild, which included joiners, carpenters, masons, wallers, slaters, thatchers, glasiars, painters, plasterers, dawbers, pavers, millers and coopers.
- ³⁵ The most recent work on wage rates is Donald Woodward's, *Men at Work* (1995), developed from his articles "Wage Rates and Living Standards in Pre-Industrial England", *Past & Present*, 91, (1981) 28-46; and "The Determination of Wage Rates in the Early Modern North of England", *Econ. Hist. Rev.*, xlvii (1994), no. 1, 22-43. The last studies Chamberlain's accounts in five northern towns, including Kendal and Carlisle, where wages were lower than further south. He published higher wage rates than E. H. P. Brown and S. V. Hopkins, *Economica* (1955), 198-9, even though their work was on supra-vernacular buildings in southern England. Woodward concluded that they presented "too harsh a picture" of the hardships caused by low wages. The present writer's research over many years, discussed in his PhD thesis pp. 303-310 (see note 2), suggests that those authors, especially Woodward, deduced figures well in excess of the usual wages paid to ordinary Cumbrian builders, such as those discussed in this article.
- ³⁶ On 27 March 1583, William Overend was paid 1s. "for work on James Aray howse" in the market place. He was a freeman of the twelfth guild before 1590.
- ³⁷ Presumably the money rewarded the gamekeeper for trouble in delivering the meat. Prior to 1593 Henry, Lord Scrope was the Warden of the West Marches of England. Godfrey Watson, *The Border Reivers* (1975), 71.
- ³⁸ A curved handle for the grindstone which itself had cost 8d.
- ³⁹ Henry Beck, Henry Myers and John Dawson were the first three names in a list of smiths in the *Boke of Recorde*. For John Armer see note 19.
- ⁴⁰ Perhaps sills laid under the millstones.
- ⁴¹ P. B. Peacock (J. C. Atkinson, ed.), *Glossary of the Dialect of the Hundred of Lonsdale* (Asher & Co., London, 1869); copy at CRO Kendal.
- ⁴² Certainly the incorrect storage of building materials, such as lying timber in the streets, was frowned upon and made a finable offence before 1584. *Boke of Recorde*, 131.
- ⁴³ As in cider presses like that outside the Museum of English Rural Life at Reading University.
- ⁴⁴ A good illustrated source on vernacular horse-mills is James Walton, *Water-mills, Windmills & Horse-mills of South Africa* (C. Struik, Capetown, 1974), 171-186. An example from Dalton-in-Furness is in J. D. Marshall and M. Davies-Shiel, *The Lake District at Work* (David & Charles, 1971), 95. British books on vernacular architecture seem to ignore horse-driven corn mills, but cover wheel houses in which similar devices drove barn machinery, especially for thrashing. R. W. Brunskill, *Vernacular Architecture of the Lake Counties* (Faber, 1974), 87-9; N. Harvey, *History of Farm Buildings in England & Wales* (David & Charles, 1984), 94.
- ⁴⁵ Dr C. B. Phillips suggests that the availability of re-usable stone may have been influenced by a 1576 lease of mills to Robert Bindloss (PRO, *Cal. Patent Rolls, 1575-78*, 76). He was to do rebuilding work on a mill which was near-derelict. It is not certain that he actually did the work, so that it is possible that the stone could have come from the old mill itself or from the left-overs of its rebuilding or, indeed, from an entirely different source.
- ⁴⁶ N & B, i, 50. Also referred to in PRO, E112 and E123/10 (see note 48).
- ⁴⁷ The Lord President of the Council (1550-53) was John Dudley, Earl of Warwick. The *Handbook of British Chronology* (1961), 136, indicates a gap in the evidence from official sources from 1553 to 1621.

(Copy at CRO, Kendal). The Kendal detail suggests that the post continued in that family after 1553. The post is now occupied by the head of the Privy Council Office and Leader of the House of Commons. It should not be confused with the 16th century Lord President of the Council of the North.

- ⁴⁸ I am grateful to Dr C. B. Phillips for advice on the dispute, based on his study of papers in the Public Record Office (PRO, Exchequer, Equity proceedings: bills and answers, E112/47/8, May and Michaelmas 26 Eliz I (1584): Decrees and orders, E123/9, ff. 142, 247; /10 ff. 91, 123, 203).
- ⁴⁹ Anne, 3rd dau. of 2nd Earl of Bedford, married Ambrose, Earl of Warwick in 1565. He died 1590. (Info. from Richard Hall).
- ⁵⁰ Spelks were thatching rods, sometimes supplied in loads of 500 or 600. A threave of straw was 12 sheaves.
- ⁵¹ Similarly, in 1649 when George Langmire and his man worked on Arrowthwaite windmill at Whitehaven, 44s. 8d. was paid for their combined diet for 21 working days at 2s. plus two Sundays at 16d. B. Tyson, "Two Post-mills at Whitehaven in the 17th century", *CW2*, lxxxviii, 184 quoting CRO Carlisle, D/Lons/W/1/18, 129-130.
- ⁵² Probably three days between them rather than each. As Percy Jackson later earned 8d. a day, he might have worked one day and Thomas Dennison two days at 6d. each.
- ⁵³ Aqua vitae: ardent spirits such as brandy or whisky.
- ⁵⁴ Heavy mallets made from over a foot length of tree trunk up to ten inches in diameter. Freshly cut holly is ideal.
- ⁵⁵ Dight: to prepare, dress, decorate, set in order (OED). Probably dressing the millstone grooves.
- ⁵⁶ Lowder: Foundation supporting the nether millstone. W. Dickinson, *Glossary of Dialect of Cumberland* (1899). Lowder or lowther boards might enclose the stones to reduce dust. M. Davies-Shiel states that lowder mills had the stones on the upper floor, driven by gearing from below, as a precaution on sites liable to flooding (personal comm.).
- ⁵⁷ Ingerson was not a chamberlain but was used by the Alderman to pay the workers, perhaps because he may by then have been tenant of part of the park. Certainly, after he died on 23 September 1629, an inq. p.m. found that Henry Ingerson, gent., of Hutton in the Hay, possessed 42 acres of land in Kendal Park "held of the King" (manor of East Greenwich) at 57s. 9d. rent a year (*Records of Kendale*, i, 108). He married Mabel Warriner in 1577 and, after her death in 1596, married again to Elizabeth [-----], and had: Agnes (1599), John (1608/9), Randall (1613-1627) and Richard the heir who was 25 when his father died. Elizabeth died in 1630 (Kendal par. regs).
- ⁵⁸ Splitting and sawing trees into posts and rails etc.
- ⁵⁹ Likewise, for their work included in Table 2, she had 9s. 8d. on 22 May and 10s. on 31 May.
- ⁶⁰ This is examined in B. Tyson, PhD thesis, chapter 9 (see note 2).
- ⁶¹ The great majority of these however, were in wheelhouses to drive threshing machinery in adjoining barns. K. Hutton, "The Distribution of Wheelhouses in the British Isles", *Agric. Hist. Rev.* 24 (1976), 30-35; and his circular, enclosed in *Vernacular Architecture* 3 (1972). He indicates that they were most commonly built between 1780 and 1850 on farms in the Southwest peninsula, Durham, Yorkshire, Northumberland, east Scotland, Dumfriesshire, the Solway Plain and the Eden valley, but were rare elsewhere.