

ART. XI. – *The Bretherdale Wool Weight*
By J. E. SATCHELL

SOME thirty years ago a lead wool weight was found by the writer on a hill farm a few miles north-east of Kendal. Enquiries at the time suggested that it was an 8 lb. weight in the *libra mercatoria* scale but this has now been shown to be incorrect. Recent study has shown, however, that it is an uniquely important object in the history of English weights. This report presents the information obtained about the weight so far and suggests some alternative datings.

Location and Description

The weight, now in the Science Museum, was found in use as a camstone in a farm wall near the head of Bretherdale, some eight miles north-east of Kendal. It is shield-shaped, 15×10 cm at its maximum length and width, 3 cm thick and pierced with a cylindrical hole, probably for a carrying thong. The obverse is decorated with a crude fleur-de-lys in relief on a shield within a raised border; the reverse is more or less flat and lacks the depression found on many wool weights for correcting the weight. There are no punch marks or maker's marks.

The weight is mainly of lead, somewhat dented, and shows a few traces of a red substance in discrete pits consistent with being a corrosion product. XRF analysis kindly carried out by Mr Paul Wilthew at the Royal Museum of Scotland shows that the weight consists approximately of 94·5% lead, 3·5% tin and 2% other metals. The high tin level suggests that the founder deliberately added tin to increase the hardness of the material to reduce damage from abrasion.¹ When found, the weight had fragments of soil and mortar adhering to it, partly overlaid in the recesses by a black substance subsequently found by the Archaeological Laboratory of Leeds University to contain resin — 4·33 g of resin were recorded. The appearance of this black substance and the presence of resin are consistent with an accidental spillage, over the weight, of sheep salve which within recent times was rubbed into the fleeces of hill sheep and contained Stockholm tar, a resinous wood tar. After cleaning by micro-excavation and an ultra-sonic bath of acetone, the wool weight weighed 3,504 g or approximately 7 lb 9 $\frac{1}{2}$ oz.

The Weight of the Wool Weight

Since at least the late 13th century the traditional units for weighing wool have been the sack, the tod, the stone, the clove and the pound – the tod, stone and clove weighing respectively one quarter, one eighth and one sixteenth of a hundredweight. Thus we find Pegalotti writing of the early decades of the 14th century that “Wool is sold . . . throughout all the island of England by a sack of 52 cloves and each clove weighs 7 English pounds”.² The Bretherdale weight, though apparently a wool weight, weighs not 7 lb but 7 lb 9 $\frac{1}{2}$ oz. The explanation of this seeming anomaly is to be found in the confusion surrounding the evolution of English pounds and ounces.

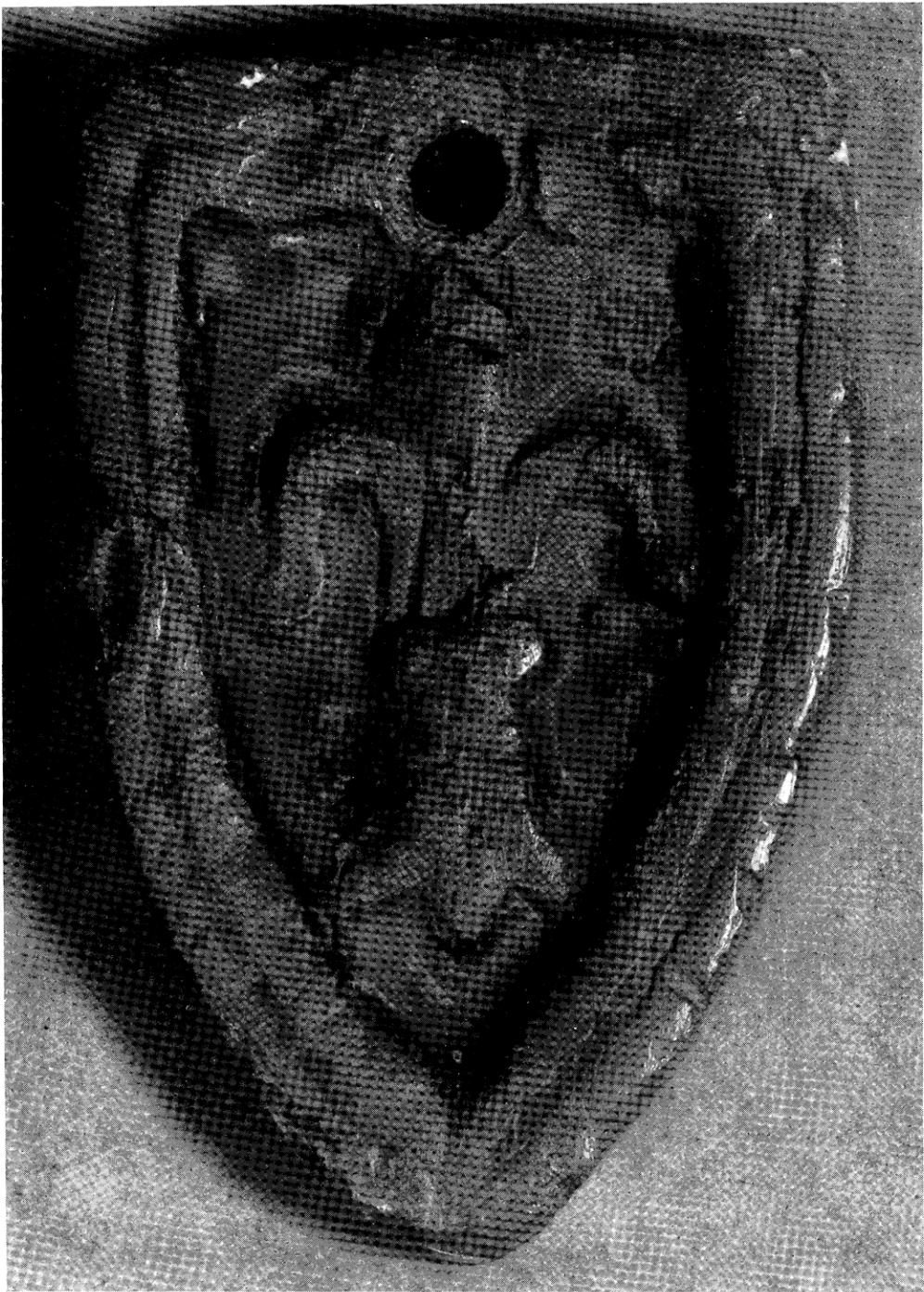


PLATE 1 – The Bretherdale wool weight.

The avoirdupois system was well known in Edward III's time and his unique set of weights, preserved in Winchester City Museum, agree closely with modern avoirdupois standards. The avoirdupois pound was of 16 ounces of 437·5 grains (28·35 g) but the only well known ounce, particularly in the 13th century, was the troy ounce of 480 grains (31·10 g), twelve of which made the troy pound. This led to considerable confusion both in the making and use of weights. In a Harleian manuscript of the period, for example, we find the statement, ". . . twelve uncs maketh a pound of Troye weight for silver, gold, breade and measure. . . . The same tyme ordained that XVI uncs of Troie maketh the Haberty poie a pound for to buy spice by . . .". This "Haberty poie" pound of 16 troy ounces would have weighed 7,680 grains, considerably more than the true avoirdupois pound of 7,000 grains. The confusion surrounding the belief that the troy ounce and the avoirdupois ounce were the same was not dispelled until 1588 when, using one of Edward III's 56 lb weights as a standard, Elizabeth succeeded at the third attempt in producing a set of true avoirdupois weights.³

The Bretherdale weight is a product of this confusion, combining the avoirdupois pound of 16 oz with the troy ounce of 31·107 g. Its measured weight of 3,504 g exceeds the expected weight of 3,484 g ($7 \times 16 \times 31\cdot107$) by only 20 g or 0·6% and it can therefore be positively identified as a 7lb clove. Although there are a number of manuscript references to pounds of 16 troy ounces, the weights themselves have been effectively collected and destroyed. So far as is known, the Bretherdale weight is the only surviving example combining avoirdupois and troy measures.

Origin and Date

The hypothesis suggested is that the weight originated in the manor of Wakefield in the 14th century. The evidence to be considered concerns the fleur-de-lys, two other weights also bearing fleur-de-lys, and some records of weights and measures in the manor of Wakefield.

The Fleur-de-lys

The fleur-de-lys as a symbol of the purity of the Virgin Mary appears quite frequently in England on 13th and 14th century tokens and seals but generally as a naturalistic representation of a lily bearing both flowers and leaves. The stylized heraldic fleur-de-lys derived from the iris and used by Louis VII of France as his blazon in the Crusades was first introduced to England by Edward III after he claimed the throne of France in 1339. At that date the lord of the manor of Wakefield was John, Earl Warenne, whose device was a pattern of chequers in gold and blue. On his death, without heirs, the estate reverted to the Crown and all his manors, lands and castles north of the Trent were granted by Edward to his fifth son, Edmund of Langley, now King's Langley in Hertfordshire. Edmund was then six years old. The manor of Wakefield, however, was settled on the Earl's widow until 1359 when the King gave her £120 annually in lieu of the estate which then came into Edmund's possession. Edmund married in 1372, had a son, Edward, in 1373 became Duke of York in 1385, remarried on the death of his first wife in 1393 and died in 1402. The manor of Wakefield then came to her step-grandson, Richard Plantagenet, who lost his life at the Battle of Wakefield in 1460. After the Battle

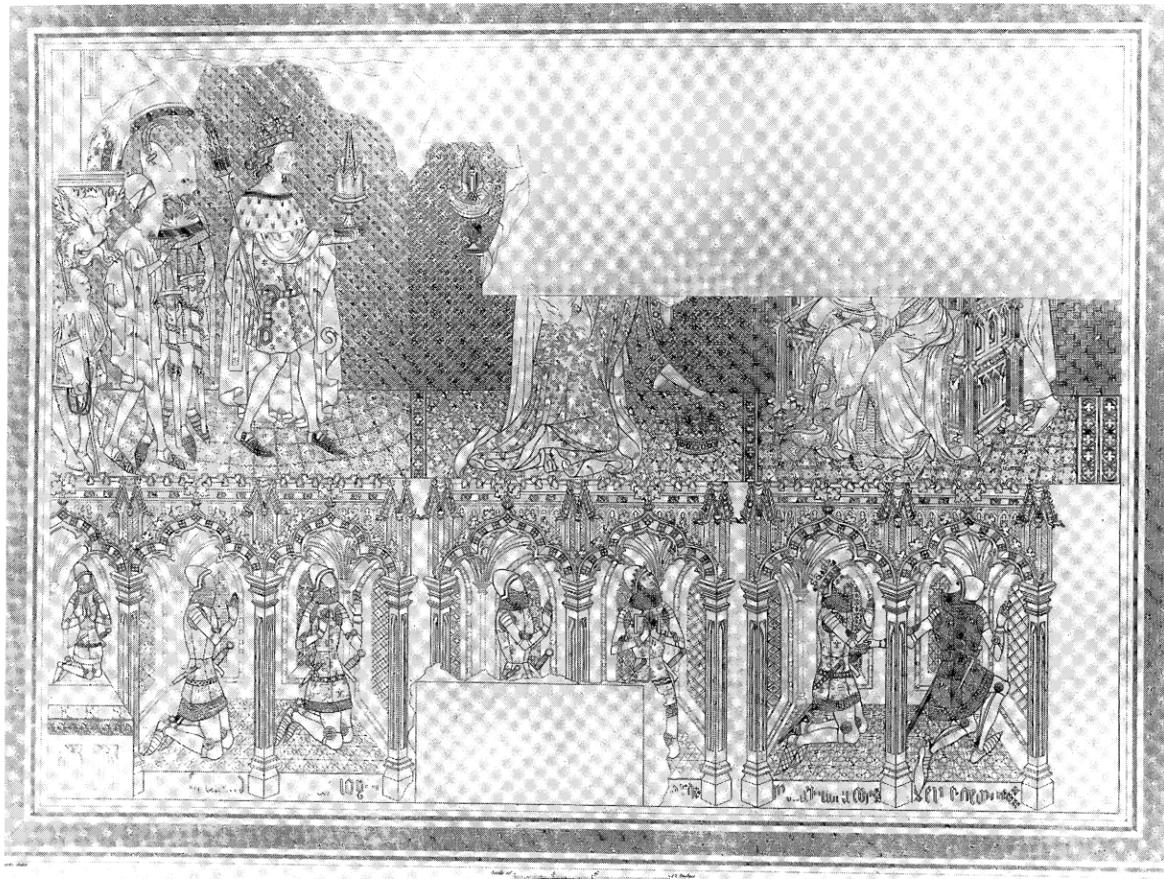


PLATE 2 – King Edward III and his sons. Tracing of part of a fresco painted about 1356 on the east wall of St. Stephens Chapel, Westminster and destroyed by fire in 1834. The surcoats of Edward and his older sons are all decorated with the fleur-de-lys of France and the lion of England. (Photo National Portrait Gallery)

of Towton in which the Yorkist forces prevailed, his son Edward succeeded to the Crown as Edward IV in 1461.

The lord of the manor of Wakefield thus became King of England and the royal arms became, on all public documents, the arms of Wakefield. It would seem that a kind of abridgement of these arms ensued and that, instead of representing the whole four quarters and all the contents of each, one golden fleur-de-lys only on an azure shield was adopted. The instances are numerous in which a lion of England or a fleur-de-lys of France was assumed and incorporated in the arms of ancient cities or towns, as in the lions in the arms of Lancaster, the fleur-de-lys of Great Torrington, the fleur-de-lys diapered all over with small flowers of Tamworth, the three fleur-de-lys reversed of Wareham and the fleur-de-lys in the arms of Liskeard. Wakefield's single fleur-de-lys appears on a carved wooden boss on the cathedral roof, built at the latest in 1470; on the frieze of the choir screen erected in 1635; and on the badge, dated 1688, of the Wakefield Waits, nightwatchmen who also served as town musicians. A waits' arm badge made in silver with a fleur-de-lys in deep relief is preserved in Wakefield Museum.⁴

The Eastmoor and Wetwang Weights

The suggestion that the Bretherdale weight originated in Wakefield is supported by the existence of two other medieval weights, one dug up in Eastmoor, a Wakefield housing estate, and now in Wakefield Museum, the other seemingly now lost, from Wetwang, 45 miles north-east of Wakefield, near Great Driffield.⁵ Both weigh one pound avoirdupois and, like the Bretherdale weight, are of lead. They are similarly shield-shaped and decorated on one side only with a shield-shaped field inside a raised border. In relief on the shield both have a crude fleur-de-lys surmounted by a crown, a badge of the Dukes of York.⁶

Most of the wool weights which have survived in museums and private collections were not used directly for weighing wool but as standards with which the King's tax collectors or "tronagers" checked the accuracy of the weigh beams or "trones" used in each district for assessing wool tax. In 1494 Henry VII provided for the issue of a series of standard wool weights in units related to the 28 lb tod under a statute which required them to be made of "brasse" and to be marked with a crowned letter H. Thereafter wool weights, which continued in use until the reign of George III, were made of bronze and bore the royal arms and assay marks. The Bretherdale weight, the Eastmoor weight and the Wetwang weight must therefore all date from a period between 1339 when Edward III introduced the fleur-de-lys to England and 1494 when this statute ended the casting of official weights in lead.

Weights and Measures of the Manor of Wakefield

Because weights and measures were such a local matter, the earliest inspections of their accuracy were carried out by juries under the auspices of the leet courts, the manorial courts presided over by the lord of the manor or his steward.⁷ The Wakefield Manor Book, a record of a survey made in 1709 for the then lord of the manor, the Duke of Leeds, provides direct evidence that the manor of Wakefield functioned as a weights and measures office.⁸ Following a list of burgess rents this has an entry:



PLATE 3.—Edmund of Langley, 1st Duke of York, 1341-1402. Effigy on tomb chest of Edward III, Westminster Abbey.

Fees for Weights and Measures

For measuring a Load of Corne	o o 4
For sealling every drye measure	o o 4
For cutting a yارد wond	o o 4
For stamping a Pinte or other small measure	o o 4 ¹
Weights and Measures in his custody (belonging His Grace The Duke of Leeds The present Ld of the Manor.	

Weights vizt

A Stone weight of Brass
a pair of Brass Scales
a Brass pound
a Sett of Brass Weights of £4

Measure

a Brass Winchester Bushell
a Brass drye Measure Pinte
a Pewther Wine quart
a Brass yead
a Pewther Wine Jack'

It is clear from these details that the manor of Wakefield weighed and measured goods and charged fees for doing so; provided yard wands and stamped measures for use as standards. It seems likely that these would have borne some official mark to avoid confusion with the weights and measures of clients.

Conclusion

The evidence so far suggests that the Bretherdale weight originated in the manor of Wakefield. Its single fleur-de-lys suggests a date between 1359 when the manor came into Edmund of Langley's possession and 1389 when he became Duke of York. After this date the manor weights are likely to have borne the fleur-de-lys and crown of the Dukes of York, like those on the Eastmoor and Wetwang weights. It remains to consider how the Bretherdale weight reached the vicinity of Kendal.

The Kendal/Wakefield Cloth Trade

Wakefield's cloth trade, like Kendal's, is first recorded at the end of the 14th century. By the 15th century the town had become a stronghold of the Yorkshire textile trade, Leland observing, when he visited it in the reign of Henry VIII, that "It standeth now al by clothynge".

Evidence of Kendalians in Wakefield in the earliest days of its evolution into a textile town comes from three entries in the court rolls of the manor of Wakefield:⁹

October 1312 Gilbert de Kendale, 2s for a licence to marry Matilda, d. of Philip de Horbiry and to live with his goods on the land Matilda holds in custody for John, her son, until the said John is of age.

October 1314 John de Kendale's dunhill is obstructing the highway.

Easter 1315 John de Kendale is fined for obstructing the common way in Wrenigate.

The evidence from these entries that Kendal men were living with their goods in Wakefield and marrying the local girls suggests that trade between the two towns was firmly established well before the mid 14th century. No records have come to light for the next two centuries but trade between Kendal and Wakefield in the late 16th and 17th centuries, when cloth was the main commodity, is now well authenticated by

sources located by Dr C. Phillips (pers. comm.). The earliest are the will of Anthony Pearson of Kendal which refers to "my shop in Stramongate", and the probate inventory of his goods made at his death in 1590.¹⁰ He appears in Kendal's "Boke off Recorde"¹¹ as both a chapman and a shearman who was one of the borough's "24 Assistants" in 1578 and the alderman in 1586. His probate inventory includes "a part cloth on the stodills" (his loom), a quantity of white, green and black wool, three grey and two green cloths, two qualities of Rhineland cloth, a broadcloth and some carsey, tenters and tenter timbers and a shearboard covering. Concluding the inventory is "cloth at Wakefield" valued at £8. 8s., a sum indicating perhaps one or two dozen pieces.

Another prominent Kendalian, William Warriner, had at his death in 1592 a house in Soutergate (now Highgate) and a shop in Wakefield with a stock of 65 cloths. The Kendal rolls for 1602 provide further examples. John Gaskell of Crosthwaite, Shearman, brought an action against Edward Walker of Wakefield for recovery of a debt of £10. "Henry Airey, Attorney, said that on 24 December last John Gaskell sold and Edmond Walker bought in the Borough of Kendal woollen cloth commonly called white cottons and that Edmund Walker has often been requested to pay but he has not yet rendered the £10 he owes". A number of similar cases have been identified from court rolls by Phillips.

Walker¹² records another case heard in 1633/34 concerning the tolls paid in Wakefield market which were for every pack of Yorkshire broadcloth 8d., of narrow cloth 4d. or thereabouts, of Lancashire cloth 1d. or 2d. and of Kendal cloth 1d. There is thus ample evidence of a lively cloth trade between Wakefield and Kendal in the late 16th and 17th centuries and evidence of some precursor of this trade by Kendalians living in Wakefield in the 14th century.

The basis of this trade seems to have been that Wakefield produced quality cloths, broadcloth and kersey, the latter made from the longer fibres hand-picked from the fleece, and worsted, a fine cloth made from long-stapled combed wool. Kendal's speciality by contrast was a coarse, cheap, hard-wearing cloth made for the labouring classes out of what a statute of 1390 described as 'the worst Wool within the Realme'. It seems likely that the cloth trade would be accompanied by a wool trade through which Westmorland's better wool was sold into Yorkshire for worsted manufacture, an industry not recorded in Kendal until the 18th century. Early documentary evidence records that the monks of Byland Abbey held land in both Yorkshire and Westmorland and perhaps had a hand in this wool trade.

Byland Abbey Lands in Bretherdale

A series of deeds from Levens Hall shows that lands in Bretherdale, Bannisdale, Borrowdale and other land in Fawcett Forest was held by the monks of Byland Abbey at dates from the mid-12th century until the dissolution.¹³ The first of the series, 1154-89, states that William de Lancaster II gave to the monks of Byland his part of "Borgheredale" (Borrowdale). In 1198-1200 they received a further grant of lands between "Bannendesdalebec (Bannisdale Beck), the water of Douthe and the water of Burgra", a grant confirmed by Henry de Redeman in 1200. In 1368 William de Thelkeld released to the abbot and convent of Byland his rights within the bounds of Bretherdale and, in 1379, a later William de Thirlekeld restored to the abbot "the land which his

grandfather William de Thirlekeld, to the no small peril of his soul had seized to his own use within the bounds of Bretherdale".

After the dissolution, the lands of Byland Abbey in the parishes of Kendal and Shap were leased in 1539 to William Parr, lord of the manor of Fawcett, and on his being convicted of high treason, Queen Mary in 1554 granted the lands, "possessions of the late dissolved monastery of Byland in Fawcett, alias Fawcett Forest", to Sir Edward Hastings, master of the Horse, who promptly sold them to Alan Bellingham of Hel-sington.

Byland Abbey, near Thirsk, was a Cistercian house, an order outstanding as sheep farmers. The Cistercians sold their fleeces in three grades; best, medium and worst, while the other religious houses sold theirs in bulk. Their wool therefore was likely to have included some of a quality high enough to attract Yorkshire buyers. Moreover, Byland Abbey held land in the vicinity of Wakefield, for example within the manor at Emley and Bretton West¹⁴ and at Woolley, where in 1554 Francis Woodrave sold "certain grounds . . . and a close of land and meadow . . . in Woolley and Woolley Moorhouse having been parcel of the possessions of the late dissolved house or monastery of Byland".¹⁵ It seems likely therefore that the abbots of Byland would have had dealings with wool merchants from Wakefield and would dispose of the wool from their grange in Bretherdale through the same channels.

In a grazing rights dispute recorded in the Levens Hall series, a witness testified that "during the time of his remembrance the abbot of the late dissolved house of Byland were owners of the said land . . . two kyne were slain by woundes besides shepe and lambs slayne . . . ". The cattle were from a herd, part of which belonged to Alan Bellingham and part 'to persons who had put them to geest' (agistment, grazing).¹⁶ This Alan Bellingham is known to have been the biggest sheep farmer in the area, owning at his death in 1577, 4,224 sheep and lambs. In the same year, Thomasine Bellingham sold the wool from Selside Hall for 10s. a stone, a phenomenal price for the area and certainly an indicator of quality. Bretherdale lies less than 5 miles from Selside and could no doubt produce wool of similar quality. It is entirely credible that an agent of the manor of Wakefield on a wool buying trip in this area should lose one of his wool weights in Bretherdale.

Acknowledgements

It is a pleasure to record my indebtedness and thanks to Professor R. D. Connor who resolved the problem of the anomalous weight of the wool weight and confirmed its identity as a clove; to Dr C. B. Phillips who most generously allowed me to use his unpublished records of trade between Kendal and Wakefield; to Mrs S. Thomas of the West Yorkshire Archive Service who located the 14th century records of Kendalians in Wakefield; to Mr R. C. Jaanaway, now of the University of Bradford, who examined the weight for traces of pigment and identified the presence of resin; and to Dr A. D. Simpson and Mr Paul Wilthew of the Royal Museum of Scotland for analysing the metal composition of the weight.

Notes and References

- ¹ Pers. comm. from Dr A. D. C. Simpson.
- ² R. D. Connor, *The Weights and Measures of England* (H.M.S.O., 1987).
- ³ *Ibid.* It should not be supposed that the weighing of wool was thereby standardized. Tuke's "General view of the agriculture of the North Riding of Yorkshire", published in 1800, notes, "A stone of wool in York market is sixteen pounds, and four ounces in each stone are allowed for draught . . . At Ripon market, a stone of wool is sixteen pounds twelve ounces. A stone of wool in the Western Moorlands, is seventeen pounds and a half . . . At Darlington, where the wool grown in Richmondshire is chiefly sold, the stone is eighteen pounds. In the Eastern Moorlands, the weights used by individuals vary up to nineteen pounds to the stone. A stone of all other commodities throughout the riding is fourteen pounds".
- ⁴ Joseph Edmondson, Mowbray Herald Extraordinary, *Complete Body of Heraldry* (1780).
- ⁵ *Yorkshire Archaeological Journal*, Vol. 28, 448.
- ⁶ J. W. Walker, *Wakefield, its history and people* (1939).
- ⁷ R. D. Conner, *op. cit.*
- ⁸ Yorkshire Archaeological Society, *Record Series*, 101 (1939), 47.
- ⁹ *Ibid.*, 57 (1917).
- ¹⁰ Cumbria Record Office, Kendal.
- ¹¹ R. S. Ferguson, *A Boke off Record* (Kendal, 1892).
- ¹² J. W. Walker, *op. cit.*
- ¹³ W. Farrer, Records of Kendal, I (1923).
- ¹⁴ J. Burton, *Monasticon Eboracense* (York, 1758).
- ¹⁵ Yorkshire Archaeological Society, *Record Series*, 39 (1907), 182.
- ¹⁶ W. Farrer, *op. cit.*