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The Durham Mint: the Control, Organization, Profits and Output
of an Ecclesiastical Mint

Martin Robert Allen

Submitted for the Doctorate of Philosophy at the University of Durham,
in the Department of Archaeology

1999

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17 JAN 2000

This thesis is dedicated to the memory of
VERA ADELAIDE ALLEN (*née* HANN) (1924-1996)
and
GEORGE EDWARD ALLEN (1910-1997)

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Abbreviations

AA	<i>Archaeologia Aeliana</i>
ACamb	<i>Archaeologia Cambrensis</i>
ACant	<i>Archaeologia Cantiana</i>
AJ	<i>The Archaeological Journal</i>
AN	<i>Anglo-Norman Studies</i>
Ant	<i>Antiquity</i>
AntJ	<i>The Antiquaries Journal</i>
Antiq	<i>The Antiquary</i>
Arch	<i>Archaeologia</i>
ARTYPS	<i>Annual Report and Transactions of the Yorkshire Philosophical Society; formerly [1823-1943 and 1955-65] Annual Report of the Yorkshire Philosophical Society</i>
AS	<i>Archaeologia Scotica</i>
BH	<i>Business History</i>
BI	Borthwick Institute, University of York
BIHR	<i>Bulletin of the Institute of Historical Research</i>
BM	British Museum
BMC	British Museum Catalogue
BNJ	<i>British Numismatic Journal</i>
BNS	British Numismatic Society
CH	<i>Coin Hoards</i>
CLAJ	<i>County Louth Archaeological Journal</i>
CCR	<i>Calendar of Close Rolls</i>
CPR	<i>Calendar of Patent Rolls</i>
DAJ	<i>Derbyshire Archaeological Journal; formerly [1879-1960] Journal of the Derbyshire Archaeological and Natural History Society</i>
DNB	<i>Dictionary of National Biography</i>
EAH	<i>Essex Archaeology and History; formerly [1852-1958] Proceedings/Transactions of the Essex Archaeological Society</i>
EcHR	<i>Economic History Review</i>
EJ	<i>Economic Journal</i>
EngHR	<i>English Historical Review</i>
GAJ	<i>Glasgow Archaeological Journal</i>
GM	<i>Gentleman's Magazine</i>
IN	<i>Irish Numismatics</i>
JBAA	<i>Journal of the British Archaeological Association</i>
JCHAS	<i>Journal of the Cork Historical and Archaeological Society</i>
JEEH	<i>Journal of European Economic History</i>
JEH	<i>Journal of Economic History</i>
LAASRP	<i>Lincolnshire Architectural and Archaeological Society Reports and Papers</i>
LP	<i>Letters and Papers, Foreign and Domestic, Henry VIII</i>
N	<i>The Numismatist</i>
NA	<i>Norfolk Archaeology</i>
NC	<i>Numismatic Chronicle; formerly [1836-8] Numismatic Journal</i>
NH	<i>Northern History</i>
NM	<i>The Numismatic Magazine</i>

<i>NMAJ</i>	<i>North Munster Antiquarian Journal</i>
<i>NSAS</i>	<i>The New Statistical Account of Scotland</i> (15 vols, Edinburgh and London, 1845).
<i>PBNC</i>	<i>Proceedings of the Berwickshire Naturalists' Club</i>
<i>PMNS</i>	<i>Proceedings of the Manchester Numismatic Society</i>
<i>PNS</i>	<i>Proceedings of the Numismatic Society</i>
<i>PRIA</i>	<i>Proceedings of the Royal Irish Academy</i>
<i>PRO</i>	Public Record Office
<i>PSA</i>	<i>Proceedings of the Society of Antiquaries</i>
<i>PSAN</i>	<i>Proceedings of the Society of Antiquaries of Newcastle-upon-Tyne</i>
<i>PSAS</i>	<i>Proceedings of the Society of Antiquaries</i>
<i>PSIANH</i>	<i>Proceedings of the Suffolk Institute of Archaeology and Natural History</i>
<i>PYPS</i>	<i>Proceedings of the Yorkshire Philosophical Society</i>
<i>R</i>	<i>The Reliquary</i>
<i>RBN</i>	<i>Revue Belge de Numismatique</i>
<i>RNM</i>	<i>Riocht Na Midhe: Records of Meath Archaeological and Historical Society</i>
<i>RNS</i>	Royal Numismatic Society
<i>RSAI</i>	<i>Journal of the Proceedings of the Society of Antiquaries of Ireland</i> ; formerly <i>Proceedings and Transactions of the Kilkenny Archaeological Society</i> [1849-67]; <i>The Journal of the (Royal) Historical and Archaeological Society of Ireland</i> [1868-89].
<i>SAS(a)</i>	J. Sinclair, <i>The Statistical Account of Scotland, Drawn up from the Communications of the Ministers of the Different Parishes</i> (21 vols, Edinburgh, 1791-9).
<i>SAS(b)</i>	<i>The Statistical Account of Scotland 1791-1799</i> , ed. D.J. Withrington and I.R. Grant (20 vols, Wakefield, 1973-83).
<i>SCBI</i>	Sylloge of Coins of the British Isles
<i>SCMB</i>	<i>Seaby Coin and Medal Bulletin</i>
<i>SM</i>	<i>Scots Magazine</i>
<i>SNC</i>	<i>Spink Numismatic Circular</i>
<i>SurrAC</i>	<i>Surrey Archaeological Collections</i>
<i>SussAC</i>	<i>Sussex Archaeological Collections</i>
<i>TAASDN</i>	<i>Transactions of the Architectural and Archaeological Society of Durham and Northumberland</i>
<i>TBGAS</i>	<i>Transactions of the Bristol and Gloucestershire Archaeological Society</i>
<i>TCWAAS</i>	<i>Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society</i>
<i>TDGNHAS</i>	<i>Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society</i>
<i>TH</i>	<i>Textile History</i>
<i>THAS</i>	<i>Transactions of the Hawick Archaeological Society</i>
<i>TLAS</i>	<i>Transactions of the Leicestershire Architectural Society</i>
<i>TRHS</i>	<i>Transactions of the Royal Historical Society</i>
<i>TRS</i>	<i>Transactions of the Radnor Society</i>
<i>TTRCAR</i>	<i>Treasure Trove Reviewing Committee Annual Report</i>
<i>TYNF</i>	<i>Transactions of the Yorkshire Numismatic Fellowship</i>

UJA *Ulster Journal of Archaeology*
WAM *Wiltshire Archaeological Magazine; formerly [1854-1969] Wiltshire
Archaeology and Natural History Magazine*
YAJ *Yorkshire Archaeological Journal*
YN *Yorkshire Numismatist*

Preface

The university libraries of Durham and Cambridge have been the indispensable foundation of my work. I have spent countless enjoyable and extremely fruitful hours in the Archives and Special Collections department of Durham University Library, and in the Dean and Chapter Library of Durham Cathedral. The archivists and librarians of those two great sources of material and inspiration for Durham historians have always been helpful, often beyond the call of duty. Mr Patrick Musset and Mr Alan Piper helped me with many tricky matters of palaeography, and Ms Linda Drury has been a source of wisdom concerning Weardale mining. Mr Roger Norris has always offered a friendly and tolerant welcome in the Dean and Chapter Library. My greatest debt of gratitude in the Durham fellowship of archivists and librarians is to Mr Martin Snape, who laboriously checked my calendar of documentary evidence, and brought to my attention the mint indenture of 1367. The Public Record Office and the Borthwick Institute, University of York, have also been safe havens of documentary research, and their staffs have been unfailing in their friendly help. Dr Constance Fraser generously provided many transcripts of PRO documents from the reigns of Edward I and Edward II, produced for her own research, which have been invaluable. Miss Ethel Stokes deserves an extremely posthumous mention for her excellent transcripts of thirteenth-century PRO documents, made for H.B.E. Fox shortly before the First World War. Mrs Yvonne Harvey and Dr Barrie Cook have provided unpublished information about the dies in the PRO and the British Museum respectively.

Miss M.M. Archibald, Mr Christopher Bailey, Mr Edward Besly, Ms Kristin Bornholdt, Dr Cook, Mr Robert Heslip, Mr N.M.McQ. Holmes, Mr D. Lockwood, Mr Nicholas Mayhew, and Mr D. Robinson have very generously provided unpublished hoard data. The corpus of hoards would be much poorer without the contributions of Mr Besly, Dr Cook, and Mr Holmes in particular. Mr Holmes and Mr Keith Sugden have patiently answered onerous enquiries about obscure hoard publications. Dr Sean Miller has provided important data from the Early Medieval Corpus of single finds.

The Ashmolean Museum, Oxford, the British Museum, Sunderland Museums, and last but not least my employers the Fitzwilliam Museum, Cambridge, have provided coins for illustration. Four collectors have also allowed their coins to be illustrated: Mr Joe Bispham, Mr Denis Martin, Dr Ian Taylor, and Mr Robert Thomas.

Professor T.V. Buttrey has read the thesis with great care, saving me from a multitude of errors, although he could not save me from the sin of attempting to estimate mint outputs. Dr Mark Blackburn, Dr Robin Eaglen, Mr Mayhew, Mr Jeffrey North, Dr Peter Spufford, and Lord Stewartby have read parts of the thesis and offered many valuable comments and suggestions. They and others have greatly encouraged me in a seemingly interminable project by their interest in its progress, and Mr David Palmer and Mr Christopher Wren also deserve a particularly honourable mention in that regard. The laurel must go to my supervisor, Mr John Casey, who has shown superhuman endurance in the six years since he first succumbed to the obviously mad idea that a Roman archaeologist could supervise a thesis on a medieval mint. John has been a good supervisor, and a good friend. My greatest regret in completing this thesis is that my mother, Vera, and father, George, did not live to see the end of a project that depended so much upon their love and encouragement.

Cambridge, Epiphany 1999

Introduction

The bishop of Durham had a mint at various times from the late eleventh century to 1541. The right to make coinage in Durham was a delegated royal privilege, apparently first granted to Bishop William of St Calais (1080-96) in the late 1080s. Bishop William and his successors had a moneyer or mint-master, supervising the use of the bishop's dies to strike coins, usually pence, from silver brought to the mint. The dies were normally supplied by the king's officials, and the number of dies available was usually strictly controlled, as extra dies might be used to increase output and profits in competition with the king's mints. Bishop Hugh of le Puiset's *Boldon Book* survey of the Bishopric of Durham provides contemporary evidence of a belief that the establishment of a royal mint in Newcastle reduced the profits of the Durham mint in the late 1150s or 1160s (document 2 in appendix 1). One of Bishop Hugh's moneyers, Cristien, leased a Weardale lead mine from the bishop (1), and the processing of Weardale lead supplied silver for coinage at various times from the twelfth century to the fifteenth century or early sixteenth century. The king's removal of Bishop Hugh's dies recorded by *Boldon Book* is the earliest documentary evidence for a closure of the Durham mint, in a long series of closures caused by government action or economic factors. The mint was reopened by the king's keepers of the Bishopric after Bishop Hugh's death in 1195 (3): the first known use of the Durham dies in a *sede vacante* period, and the only occasion on which *sede vacante* administrators opened the mint after a period of closure. The restoration of the dies to Bishop Philip of Poitou in 1195/6 is the first documented grant of minting rights to a bishop of Durham (4). Bishop Philip's allowance of dies was increased from one set to two in 1205, during one of the many recoinages of part or all of the English currency that temporarily boosted mint output. The allowance of dies seems to have been further increased to three sets in the *sede vacante* period after the death of Bishop Philip in 1208, and this number became an essential feature of the bishop's minting rights until the late fifteenth century. In 1253 Bishop Walter Kirkham



(1249-60) received three pairs of dies after he obtained the first confirmation of the bishop's minting rights of which the text survives (11-14).

Edward I's recoinage begun in 1279 was a watershed in the history of the Durham mint. Output increased to unprecedented levels, and the profits of the recoinage were administered by a warden, who was a representative of an Italian 'society' of merchants and financiers, the Riccardi of Lucca. In the recoinage of 1300 output reached even greater heights, and William Servat, a merchant and money-lender, acted as warden. Records of the exchequer provide an exceptionally detailed picture of its supply of dies to William Servat (30, 32-4). His use of some locally-made dies in 1300 may be connected with the disputes between Bishop Antony Bek (1283-1311) and the king, which caused the confiscation of the mint and other privileges in 1302-3 and 1305-7. Bek was the first bishop of Durham to have an identifiable personal mark on his coins, and many of his successors followed this example. A decline in output during the episcopates of Richard Kellaw (1311-16) and Louis de Beaumont (1317-33) culminated in the closure of the mint by the end of Beaumont's tenure of the see. The Durham mint was not allowed to produce either the debased halfpence and farthings that kept the London mint open from 1335 to 1343, or the gold coins introduced in 1344.

After the reform of the coinage in 1351 the Durham mint could not produce the new groat and halfgroat, but output probably reached its highest-ever level. The mint attracted the services of Florentine mint-masters in the late 1350s and the 1360s, but output declined. Only one supply of dies was needed in the reign of Richard II (1377-99), authorized in 1384 (63). The mint was closed from no later than 1394, when its disused buildings, on Palace Green and Owengate next to Durham Castle, were leased (66). It reopened for the production of Henry IV's light coinage, begun in 1412. The accounts of the receivers and receiver-generals of the Bishopric in 1416-60 provide the only surviving directly recorded output figures for the Durham

mint, and they show that an official of the bishop acted as warden, supervising the mint-master contracted to produce the coins. The chancellor of the Bishopric became *ex officio* warden in the late 1450s, during a reform of the Bishopric's financial administration. Durham's last Florentine mint-master had left in 1423, and goldsmiths took a leading role in the mint in the second half of the fifteenth century. In 1460 one goldsmith handed over the office of mint-master to another goldsmith, John Orwell, who was a former engraver of the king's dies in London. Orwell used locally-made dies in the early 1460s, which was the first avoidance of the use of official dies, supplied through the exchequer, since 1300. In 1473 Bishop Laurence Booth (1457-76) received an exceptional privilege to make his own dies, with the unprecedented right to strike halfpence, which eventually lapsed on the death of Bishop William Dudley in 1483 (**91-2, 94, 98**). Indentures of 1489, 1495, and 1510 between the bishop and his mint-master are important for the understanding of the organization of the mint in its last years (**106, 112, 115**). The chancellor supervised the mint, using periodic trials of the coins to ensure the maintenance of standards of weight and fineness. From 1460 to the final closure of the mint the mint-master paid a rent from the mint's profits. He received silver from the mint's customers and charged for the minting: records of transactions between the mint-master and the bursar of Durham Priory in the early 1530s have survived (**163**). The mint's supplies of silver were intermittent and relatively slight in the sixteenth century, and the mint closed for ever in 1541.

In 1780 Mark Noble published a history of the Durham mint, which is still the only book on the subject, combining an account of the coins of the bishops of Durham with documentary evidence. An article of 1912 by Canon J.T. Fowler introduced more documentary evidence, as well as providing a list of the coins that embodied some of the latest numismatic research of the time. More recent developments in medieval numismatics have made possible detailed studies of the Durham mint during parts of its history. I have examined the early history of the

mint from the late eleventh century to the early thirteenth century, combining die-studies with the historical evidence (1979, 1994). The administration of the mint in the Tudor period has been the subject of an unpublished dissertation (Guilding 1971), and it has received a much more definitive treatment in Christopher Challis's important paper on the Tudor ecclesiastical mints (1975a). The rich and complex history of the Durham mint between the mid-thirteenth century and the Tudor period has been quarried from time to time by students of particular series. The importance of Durham coins for the classification and chronology of the coinages of Edward I and II, first articulated by Mark Noble's contemporary Benjamin Bartlet (1779, 1817), was fully realised by the Fox brothers (1909-13). The Durham mint has not been neglected by other numismatists who have advanced the study of Plantagenet coinage: notably, Christopher Blunt, George Brooke, L.A. Lawrence, Jeffrey North, Ian Stewart (Lord Stewartby), and C.A. Whitton. A synthesis of this work will provide the basis of a new survey of the issues of the Durham mint, informed by a corpus of the documentary evidence intended to be as comprehensive as possible.

The Durham mint can be compared with the other ecclesiastical mints of England, to obtain a more comprehensive understanding of the nature of ecclesiastical minting. Blunt's 1961 survey of ecclesiastical mints after the Norman Conquest is an essential starting point. Robin Eaglen's work on the mint of the abbot of Bury St Edmunds (1989, 1998) is an important source of comparative material until the first half of the fourteenth century. Challis's work on the Tudor ecclesiastical mints has shown the potential for detailed comparison between the three ecclesiastical mints that survived after the fourteenth century: Durham, Canterbury and York. There are no comprehensive studies of the mints of the archbishops and Canterbury and York, but much useful material was published by the York historians Robert Davies (1855) and Caesar Caine (1908).

Die-studies of Durham coins provide invaluable evidence for die supply from the inception of the mint in the late eleventh century to the thirteenth century. H. Montagu (1895) and the Fox brothers began the investigation of the administration of die supply in the reigns of Edward I (1272-1307) and Edward II (1307-27), when the documentary evidence first becomes plentiful, and Mavis Mate's important paper on the subject (1969a) included significant new evidence for the Durham mint. The survival of fourteenth- and fifteenth-century dies used in Durham and elsewhere, now in the custody of the Public Record Office and the British Museum, has been the basis of recent work on die supply (Condon, Foster and Harvey 1997; Cook 1996). The full range of evidence for the supply of dies to Durham can be used to reconstruct the administrative process, from the ordering of new dies to the disposal of used dies.

The role of the Durham mint in the privileges, administration and finances of the Bishopric has not received the detailed attention it deserves. The mint has often been one subject amongst many in accounts of the Bishopric of Durham, such as the general survey of the subject by G.T. Lapsley (1900). C.M. Fraser (1959) and Jean Scammell (1966) have examined the development of the bishop's privileges in general. The biographers of Bishops Hugh of le Puiset (Scammell 1956), Antony Bek (Fraser 1957), Thomas Langley (Storey 1961), and Cuthbert Tunstall (Sturge 1938) have examined the privileges and administration of the Bishopric in their particular periods. P.N. Grainger (1975) has analysed the financial administration of the Bishopric in 1457-79. A survey of the profits of the mint, and its contribution to the bishop's revenues, is particularly necessary, as there has never been a comprehensive study of the finances of an English ecclesiastical mint.

The recorded outputs of royal mints have been crucially important in discussions of English money supply and its economic context, but the ecclesiastical mints have been excluded from the debate because their outputs have remained obscure. The Durham mint is the only English ecclesiastical mint with a series of documented outputs, for the period 1416-60. The profits and rents of the mint at various times from the late 1150s to 1541 also provide a body of evidence for outputs unparalleled in any other ecclesiastical mint. Much of the fifteenth-century and sixteenth-century evidence has already been examined by W.H.D. Longstaffe (1867), P.N. Grainger, A.G. Woolley (1991), and Christopher Challis (1975a, 1978), but a comprehensive survey is needed. Hoard statistics can be used to estimate the Durham mint's contribution to English mint output, or the size of its output, when documentary evidence is insufficient or non-existent. This requires a contribution to the listing of hoards, which has been one of the foundations of English medieval numismatics.

There has never been a fully integrated explanation of the output of an English mint throughout its history. John Day, Nicholas Mayhew, John Munro, and Peter Spufford have greatly enhanced our understanding of the economic factors underlying English mint output and money supply. The Durham mint's output can be placed in its economic and monetary context, with particular emphasis on the wool trade, local supplies of silver from Weardale, and mint prices for bullion. The mint can also be placed in the context of local trade, as a business minting silver for its customers and providing some of the coinage needed in an increasingly monetised economy.

1. PRIVILEGES: THE DURHAM MINT AND THE BISHOP'S TEMPORALITIES

1.1 Ecclesiastical mints and grants of minting rights

In June 1253 Bishop Walter Kirkham appeared before King Henry III to claim the bishop's customary right to have dies to make coins in Durham. The bishop exhibited money made in Durham, and some of the dies formerly in use were shown. The money was the king's money, made according to his standards of weight and fineness; the dies were the king's dies, with standardized national designs or 'types', which always included the king's name and stylized portrait. Bishop Kirkham obtained letters patent recognizing his right to have a mint (11), and a writ to the exchequer ordering dies (12; 13); later bishops established their tenure of this delegated privilege by obtaining writs or warrants. Use of the mint normally reverted to the king in the *sede vacante* period after a bishop's death, or during a confiscation of the bishop's 'temporalities', and the dies could be withdrawn.

The earliest known written grant for an English ecclesiastical mint is a writ of 1065-6 giving the right to have a moneyer to Abbot Baldwin of Bury St Edmunds (Eaglen 1989, 52-3; 1998, 112). Coins are the only source of evidence for the existence of an ecclesiastical mint in Durham in the eleventh century. The earliest surviving coins of Durham are silver pence of the *Paxs* type (*BMC* William I type VIII), which may have been introduced soon after William II's accession in September 1087 (Archibald 1984, 324 and 328). These coins, and pence of William II (1087-1100) *BMC* types II and III, may have resulted from an otherwise unknown verbal or written grant of minting rights to Bishop William of St Calais (1080-96), although it is possible that some of them were struck for the king during the bishop's exile in 1088-91 (Allen 1994, 384-6).

At seven of the sixty-five mints known to have struck the *Paxs* type (Metcalf

1988, 19-23) some or all of the moneymen may have used dies granted to an archbishop, bishop or abbot. The archbishops of Canterbury and York, the abbot of St Augustine's Abbey, Canterbury, and (possibly) the bishop of Rochester had minting rights pre-dating the Norman Conquest, like the Abbot of Bury St Edmunds. The possession of moneymen by the bishops of Hereford and Norwich is recorded in *Domesday Book* (compiled in 1085x7), and a royal charter of 1089x91 granted the city of Bath, with a mint, to its bishop (Blunt 1961, ii-v; Eaglen 1989, 65-7).

Various twelfth-century coin types may have been struck at Durham for Bishops Ranulf Flambard (1099-1128), Geoffrey Rufus (1133-41), and William Cumin (usurper of the Bishopric, 1141-4) (Allen 1994, 386-392), but the earliest documentary evidence for the bishop's possession of dies is provided by the 1183/4 *Boldon Book* survey of the revenues of Bishop Hugh of le Puiset (1153-95). *Boldon Book* records the income received from the Durham dies, and asserts that the king took them away (2): this loss of the bishop's dies probably occurred in the 1160s (Allen 1994, 395). The chronicler Roger of Howden reported the restoration of the minting rights (*licentiam fabricandi monetam*) in 1195/6 (4). This may have been a written grant not available for presentation as evidence by Bishop Kirkham in 1253.

The English mints fluctuated in number during the twelfth century, but there was an overall decline, to eleven by the 1170s (Allen 1951, clxxvii and clxxxiii). In 1253, when Bishop Kirkham claimed his dies, there were only three mints in England: the royal mint in London, the Canterbury mint (shared by the king and the archbishop of Canterbury), and the mint of Bury St Edmunds abbey. From the thirteenth century long periods of minting at a few principal mints, or occasionally in London only, were punctuated by the opening of temporary mints for short periods of exceptional mint output (Mayhew 1992, *passim*). Between 1351 and the final closure of ecclesiastical mints in the reign of Henry VIII the production of coinage in England was usually monopolized by London, Durham, and York, with the addition

of Canterbury from 1464 (Blunt 1961, xiv-xviii).

Until 1464 the production of the ecclesiastical mints was usually restricted to the silver penny, although the abbot of Reading's mint struck halfpence and farthings between 1338 and 1351 (North 1989, 37-41; Woodhead 1989, 74). After 1464 archbishops of Canterbury were allowed to strike the halfgroat (twopence), and in the reigns of Henry VII (1485-1509) and Henry VIII (1509-47) the archbishops of Canterbury and York struck the halfgroat and the halfpenny. In the reign of Henry VIII Thomas Cranmer's Canterbury mint struck the farthing, and Thomas Wolsey's York mint produced the groat (fourpence) (Brooke 1931, 79-83; North 1991, 16-18, 88-113 *passim*). The Durham mint made only pence until a grant of 1473 allowed the production of halfpence (91), and this lapsed on the death of Bishop William Dudley (1476-83).

1.2 The Durham dies

1.2.1 Claiming and ordering dies

A bishop could not exercise his minting rights without obtaining dies. He would need at least two dies: a 'pile' or 'standard' for the obverse of the coin, and a 'trussel' for the reverse. In the mint, blank flans of silver were placed between the lower pile and the upper trussel, and the trussel was struck with a hammer to strike the coins. Dies were occasionally made in Durham, but usually they had to be obtained from the king's exchequer or the Tower mint in London.

The earliest known evidence for the exchequer supply of dies to the Durham mint is a record of the sending of three sets of dies on 22 June 1218 (9). The first record of a written instruction to the exchequer to supply dies for Durham is a summary of a writ of 1250, which may not have resulted in the production of any coins (10; Wells 1934-5, 101-2, 107). The supply of 1218 and the writ of 1250 were recorded on the exchequer's memoranda rolls. Writs to the exchequer were enrolled on the chancery Close Rolls before despatch to the exchequer in 1253, 1279, 1317 (twice), 1336, 1344 (twice), 1345, and 1384 (12, 16, 47-8, 56-8, 63). Enrolment of the writs on the Close Rolls seems to have been abandoned after 1384, possibly because they were being issued under the privy seal instead of the great seal used for Close Roll writs. Writs of 1253, 1279, 1317, and 1323 enrolled on the Close Rolls were cited by the exchequer memoranda rolls (13, 17, 43, 50-1, 53). A writ of 1484 and a warrant of 1530, a successor of the earlier writs, are known from petitions not enrolled (102, 147). A warrant of 1523 is preserved in a seventeenth-century partial transcript (132).

The writ of 1250 was enrolled in a very abridged form, and the writs of 1253 and 1311 were paraphrased. The texts of the other writs survive substantially intact. From 1279 to 1345 the format was essentially unaltered, informing the treasurer and barons of the exchequer that the bishop should have his dies for the king's money

with all appurtenances, as was customary for bishops of Durham, reserving the king's rights. Henry Montagu (1895, 290-5) noted the similarity of the writs of 1311, June 1317, 1336, and October 1344. The writs show the development of a standard text, which changed only slightly from 1317 to 1345. The writs of 1384 and 1484 differ substantially from the earlier writs, with new phraseology in each case and a clause requiring the return of dies previously supplied. The text of the 1484 writ was sent to the chancery in a petition ostensibly presented to the king by the bishop, and it was almost certainly adapted from an earlier writ recorded by the exchequer or the bishop's archives. Copying probably occurred at various times before 1484. There is a discontinuity between the Latin writ of 1484 and the English warrants of 1523 and 1530, which have similarities of form and phraseology. The latter warrant has two separate elements: one part concerning the supply of dies, and the other part an authorization of the recruitment of mint workers, not found in any of the writs.

Montagu (1895, 290-3) suggested that the writs of 1311, June 1317, and 1336 authorized the first supply of dies to Bishops Richard Kellaw (1311-16), Louis de Beaumont (1317-33), and Richard de Bury (1333-45), respectively. The writs of 1253, 1345, 1384 and 1484, and the warrants of 1523 and 1530 seem to have performed the same function for Bishops Kirkham, Thomas Hatfield (1345-81), John Fordham (1381-8), John Shirwood (1484-94), Thomas Wolsey (1523-9) and Cuthbert Tunstall (1530-59). Montagu (1895, 293, 295-7) noted that the writ of 16 October 1344 (which was an almost verbatim reissue of the writ of 14 August 1344), could not be the 'first mandate' for Richard de Bury, who had already been the beneficiary of the 1336 writ. He suggested that the 1336 writ might have been defective, as it did not mention the number of dies allowed to the bishop, or that more probably it was a 'dead letter'. The writs of 1344 may have been issued because Durham was to be supplied with dies for a new coinage of reduced weight (the 'Florin' coinage of 1344-51). The writ of 1279, issued during Edward I's reform of the coinage, is distinguished by an assertion that the bishop customarily had dies at other changes of

the coinage (*in mutacione aliarum monetarum*), and it may have renewed minting rights already enjoyed by Bishop Robert of Holy Island (1274-83) for the production of the old Long Cross coinage of 1247-78. The writ of 1253 was issued after Bishop Kirkham received confirmation of his right to have a mint. The 1323 writ may have initiated a return to a normal supply of dies after a period of supply of extra trussels begun by the writ of July 1317 (see p. 28).

A writ of January 1317 (45) and the warrants of 1523 and 1530 were addressed to the warden, without using the exchequer as an intermediary for the chancery's authorization of dies. Alternatively, writs to the warden might order the supply of dies already authorized by a writ to the exchequer, as in 1311 and 1323 (44, 54). Finally, writs to the warden might continue a supply of dies authorized on a previous occasion. In 1486 and 1487 continued supplies for the York mint were authorized by writs to the warden (PRO E 159/262 rec. Trin. 17; E 159/263 rec. Trin. 6).

A writ of 15 June 1309 to the warden (40) instructs him to supply dies as often as old dies were returned, implying that no further writs were required, unless there was a change of bishop or a new coinage. However, this writ is exceptional, being sent directly from the king under the privy seal, unlike the other writs, which were sent from the chancery or the exchequer, under the great seal and the exchequer seal respectively. It followed a privy seal letter of 25 May (39), in which the king informed John de Sandale, at the exchequer, that the bishop was claiming his dies, and should have them without delay. C.M. Fraser (1957, 220) has assumed that this letter restored the dies to Bishop Bek in 1309, after the partial confiscation of his temporalities begun in 1305. However, the surviving fragment of the receiver's account of 1306/7 records the bishop's rent from the mint, backdating the rent and the restoration of the temporalities to 7 July 1307, the day of Edward I's death (37).

The letter and writ of 1309 might be connected with a letter from a bishop of Durham copied into the *Liber epistolaris* of Bishop Richard de Bury (38). The bishop sought help in obtaining the restoration of his dies, which had been detained in London after being sent there to be replaced in the customary manner. This letter may have been sent by Bishop Bek no later than 1309, referring to a problem resulting in the privy seal letter and writ, or by Bishop Beaumont c.1318 (see p. 41). Some of the letters in the Register of Bishop Kellaw (1311-16) also appear in the *Liber epistolaris*, providing support for N. Denholm-Young's tentative dating of the group of letters including 38 to c. 1311-17, but other letters in the *Liber* have dates between 1157 and 1324 (Denholm-Young 1969, 11-12).

The bishop or administrators of his mint may have routinely written letters to obtain replacement dies. There is evidence for this in 1300. The first of two exchequer memoranda analysed by Mavis Mate (1969, 212-16; 30) refers to the receipt of a letter in May 1300 from William Servat, warden of the Durham mint, requesting dies. The second memorandum (32) cites letters received on five occasions in 1300. These letters were endorsed with details of the supply of dies, and kept by the deputy chamberlains of the exchequer. A third memorandum, not analysed by Mate, records the receipt of a letter from Servat on 10 November 1300, claiming dies that had been withheld (33). The originals of two letters from the reign of Richard II (1377-99) asking for the replacement of the archbishop of York's dies have survived in the exchequer 'Bille' files (Condon, Foster, and Harvey 1997, 3).

The replacement of the Durham dies required a journey to the exchequer or the Tower of London. In 1311 a man was sent to London with dies to be replaced (42; Fox and Shirley-Fox 1912, 191), and in 1316-17 four such journeys to the Tower were accounted for (46). Servat's messengers - Thomas Neville, John Maunsel, and a merchant, Peter de Batesesse - usually had to travel only to York, where the exchequer was temporarily based. On three occasions Neville brought supplies of

new dies from the warden of the exchange in London, to be kept in York. Six times in 1300-1 dies were stated to have been brought from Servat under his seal, and once the new dies sent to Durham were said to be under seal. The dies were probably carried in sealed bags, like the archbishop of York's dies in 1487 (Davies 1855, 268-9; PRO E 159/263 rec. Trin. 6).

There is fragmentary evidence for the procedures followed by people responsible for obtaining the Durham dies when they arrived at their destination. On 12 December 1253 a servant of the bishop appeared before the barons of the exchequer to exchange three old pairs of dies for three new pairs (18). On this occasion the old dies presumably had to be exchanged because wear or damage prevented further use, but in 1279 the old dies had to be exchanged because a new coinage with new designs had been introduced. Henry de Dunolm delivered old two pairs of dies to the exchequer on 2 November 1279 (17). He may have obtained the writ from the chancery to the treasurer and barons, dated on the same day (16), and carried it to the exchequer with the old dies. Subsequently Henry delivered the bishop's third pair of old dies, and collected three new pairs for the new coinage. The writ of 1323 to the treasurer and barons (52) was presented at the exchequer by William de Denum, who asked for a writ to the warden ordering dies. William was given his writ (54), after he had stated that the used dies had already been delivered to the Tower mint: the writ retrospectively ordered the warden to receive the dies. This was held to be in accordance with a precedent of 1317, when William de Ayremynn exchanged old dies for new dies at the exchequer (53). It seems to have been customary to make a first exchange of dies at the exchequer, after a writ had been obtained at the chancery. Subsequent exchanges of dies, such as the four exchanges of 1316-17, were made at the Tower: the routine exchanges of 1300-1 at the exchequer were exceptional. A writ from the exchequer to the warden may have been required for each exchange of dies at the Tower, which was the procedure for the exchange of the York dies in 1486 and 1487 (Challis 1978, 56)

Warrants directed to the warden at the Tower may have eliminated appearances at the exchequer, but a visit to the chancery was probably still needed to start the supply of dies. The petition for the warrant of 1530 has a note stating that it has been passed to the chancellor for action, and the petition for the writ of 1484 has a similar note. The petitions were presented to the king in person, by either the bishop's man or the chancery: the petition of 1484 was initialled by Richard III, and the petition of 1530 was signed by Henry VIII.

Summary of procedures for claiming and replacing dies

First supply by writ

Petition to the king
Writ from the chancery to the exchequer

Surrender of old dies at the exchequer
Writ from the exchequer to the warden
Receipt of new dies at the exchequer

Routine supply by writ

Letter to the exchequer
Writ from the exchequer to the warden
Surrender of old dies at the Tower
Receipt of new dies at the Tower

First supply by warrant

Petition to the king
Warrant from the chancery to the warden

Surrender of old dies at the Tower
Receipt of new dies at the Tower

Routine supply by warrant

Letter to the warden?
Surrender of old dies at the Tower
Receipt of new dies at the Tower

1.2.2 Making dies, paying for dies, and the disposal of used dies

From no later than the eleventh century to 1376 an hereditary die-maker (the sergeant of dies or *cuneator*) was responsible for the production of dies, usually by delegation. After 1376 a non-hereditary engraver made the dies, or supervised their production (Mayhew 1992, 155-6; Archibald, Lang and Milne 1995, 195-7). Piles (obverse dies) sent to Durham could be supplied from stocks suitable for other mints, if they did not have marks specific to the Durham mint. Some or all of the piles supplied for Bishops Bek, Beaumont, Langley, Booth, Shirwood, Ruthall, Wolsey and Tunstall had special marks (see appendix 4), and would have to be made to order. Until 1279 the engravers would have to be informed of the Durham moneyer's name, to put onto the trussel (reverse die) with a version of the mint's name. From 1279 the trussels had the mint's name only, often with episcopal marks or the bishop's initials. Dies for the archiepiscopal mints of Canterbury and York were frequently distinguished by such initials or symbols from the 1460s (North 1991, *passim*).

When the Durham mint first opened, in the late 1080s, London seems to have had a monopoly of die-production. *Domesday Book* does not specifically state that the dies supplied to various places in exchange for fixed payments were made in London, but the payment from Worcester was sent to London. Four reverse dies of c. 1030xc. 1145, for the Northampton, Norwich, Southwark, and Wareham mints, have been found at the Thames Exchange site next to Southwark Bridge in London, supporting the suggestion that dies were produced by a workshop in that area (Archibald, Lang and Milne 1995, 195, 197-8).

The centralized supply of dies was temporarily disrupted during the Anarchy of the reign of Stephen (1135-54). In the early 1140s the Durham mint used locally-made dies, apparently produced by a die-cutter serving three north-eastern mints (Allen 1994, 387-391; Blackburn 1994, 191-3). Derek Allen (1951, cxxxii) suggested that a pair of dies used by the Durham moneyer 'Cristien' in the 1160s may

have been locally produced, but similar dies were supplied to nine other mints, probably from London or another centre of supply (Allen 1994, 392-3, 398). In 1280, during Edward I's recoinage, dies were briefly produced in York for supply to the mints of York (royal and archiepiscopal), Durham and Newcastle (Fox and Shirley-Fox 1910, 110-11, 121-2). Subsequent interruptions of the use of London-made dies in Durham involved locally produced dies: in 1300, the 1460s, and 1473x1483.

Jeffrey North (1984) has identified two groups of unofficial dies used and probably made in Durham, apparently in 1300. The first group resembles Fox class 9a, which was in production immediately before the opening of the class 9b recoinage mints in April and May 1300 (Fox and Shirley-Fox 1912, 182-3). These dies may have been produced to supplement inadequate dies received from London. In a letter of 9 May 1300, Edward I complained to John de Sandale, the London warden, that dies recently sent to Durham were used up within a few days, as they were made of soft metal (29; Mate 1969a, 210, 212; Condon, Foster, and Harvey 1997, 3). North (1984, 78-80) has suggested that the local production of dies may have begun in about August or September 1300, if the supply of dies to Bishop Antony Bek (1283-1311) was suspended during a dispute with Edward I at that time. The king is known to have been displeased with Bek on or before 4 August, concerning the besieging of Durham Priory in the bishop's struggle with Prior Richard de Hoton, and on 20 August Bek failed to appear before the king's council at York, when summoned. The exchequer memoranda analysed by Mate (1969, 212-14) show a steady supply of dies from 24 May to 16 July, and from 23 August to 3 October 1300 (30, 32). However, it is possible that the dispute disrupted the supply of dies at some time between 16 July and 23 August, and that North's second group of dies, copied from class 9b, resulted.

The supply of London-made dies seems to have been temporarily

discontinued in the early years of the episcopate of Bishop Laurence Booth (1457-76), although profits and rents are known to have been received from the mint between Michaelmas (29 September) 1458 and Michaelmas 1461 (77, 79-81). Dies of the Leaf-Pellet issue of Henry VI, with the double ring mark of Bishop Neville (1438-57) on the trussels, were altered for Booth by the addition of his initial 'B' beside the king's portrait on the piles (pl. 6, 127). Later, altered dies of Neville were further amended, with a cross beside the portrait, and lines and pellets on the trussels (pl. 6, 128): this may have distinguished the coins of John Orwell, who was put in charge of the mint and its dies in April 1460 (78). Booth had been Queen Margaret's chancellor since 1451, and the king's keeper of the privy seal since September 1456 (Pollard 1990, 267; Pollard 1996, 77; Compton Reeves 1998, 70; Hick 1998, 130), and the failure to obtain dies for the new bishop through the exchequer in the customary manner may have been condoned, if it became known to the government. Booth's support of the Lancastrian government against the junior branch of the Neville family, who dominated much of the north of England in the late 1450s (Storey 1972, 138-9; Pollard 1990, 274), may have made transport of dies between London and Durham potentially hazardous.

The Yorkists proclaimed Edward IV on 4 March 1461, and his authority was recognized in Durham by 5 April. The new king arrived in Durham on 22 April, and immediately appointed Booth as his confessor. In June 1461 Booth showed his loyalty to the new king by raising troops to defeat Sir Thomas Neville (Knecht 1956-7, 115; Storey 1972, 139-40; Pollard 1990, 294; Pollard 1996, 80; Compton Reeves 1998, 75-6; Hick 1998, 238). It might be assumed that the continued activity of Booth's mint until at least September 1461, apparently indicated by the payment of its rent, would have been supported by the supply of London-made dies in the name of Edward IV. However, there are no known Durham coins from official dies of Edward IV's 'heavy' coinage of 1461-4. The need for dies in the name of the new king was met by a group of local dies, often displaying the Yorkist rose, made by or

for John Orwell (**pl. 6, 130-1**). Orwell can be identified with John Orewell, the London engraver in 1431-45 (*CPR 1429-1436*, 194, 288; *CPR 1441-1446*, 420; Symonds 1918, 117-18; Reddaway and Walker 1975, 300), who made seals for Edward IV in 1461-2 (Campbell 1986, 52).

Nicholas Holmes and David Walker (1988, 87-9) have suggested that coins from an unmarked Leaf-Pellet pile of Henry VI, used with local trussels of the rose type (**pl. 6, 129**), were produced after the accession of Edward IV. They have also suggested that the old pile could have been used accidentally, or deliberately used to produce coins in the name of Henry VI, between the arrival of Queen Margaret in Northumberland in October 1462 and Edward IV's confiscation of Booth's temporalities in December. However, R.L. Storey (1972, 141) and A.J. Pollard (1990, 295-7; 1996, 81) have questioned the assumption that Bishop Booth supported Queen Margaret against Edward IV. The most probable explanation of the coins from the old pile is that some local trussels were produced and used before the accession of Edward IV. Holmes and Walker (1988, 86-8) noted the absence of the Yorkist rose on the three local trussels known to have been used with the old pile, none of which was used to produce any of the four recorded rose type pence of Edward IV without a rose on the reverse.

Marion Archibald (1970, 136) has tentatively attributed some of the rose coins to the period of the 'light' coinage, after 13 August 1464. However, a *valor* or summary of revenues of the Bishopric, for the year ending at Michaelmas 1464, states that no revenue was received from the mint, and that nothing was spent on making dies (**82**). It can be inferred that money was spent on rose dies before Michaelmas 1463. The reopening of the mint after Michaelmas 1464, shown by the accounts (**83**), almost certainly coincided with the supply of London-made dies of the first light coinage type, Blunt and Whitton type V (**pl. 6, 132-3**).

The last period of use of locally-made dies in Durham, from 1473 to no later than 1483, is well documented. By 1473 Edward IV was firmly established, and the political instability that may have encouraged the possibly unlicensed production of local dies in the 1460s had ended. Letters patent of 21 July 1473 gave Bishop Booth a temporary grant of rights to make his own dies, and to strike halfpence as well as the customary pence (91). F.A. Walters (1914, 349) noted that the licence was issued when Booth was high in the king's favour. Booth was appointed chancellor of England on 27 July 1473.

Bishop Booth quickly implemented his licence, by issuing his own licence of 26 August 1473 to William Omoryghe of York, to make dies for pence and halfpence in Durham Castle (92): the castle included the mint. Omoryghe was licensed to make 12 piles and 24 trussels for pence, with 4 piles and 8 trussels for halfpence. The 1:2 ratio of piles to trussels allowed for the tendency of trussels to wear out faster than piles. The 3:1 ratio of penny dies to halfpenny dies, and the 4:1 ratio of the respective rents in 1473/4 and 1474/5 (95, 97), provide evidence of the expected relative outputs of the two denominations. Output of halfpence seems to have been less than expected: Omoryghe's second licence of 4 August 1474 stipulated 24 piles and 36 trussels for pence only (94). The new ratio of piles to trussels in 1474 (1:1.5) probably reflected experience of the actual consumption of dies made under the first licence.

The king's licence was renewed for Bishop William Dudley (1476-83). Bishop Dudley licensed William Omoryghe to make his dies on 21 March 1477: 24 piles and 36 trussels for pence, as in 1474, and 12 piles and 24 trussels for halfpence (98). The 1476/7 receiver-general's account records the payment of Omoryghe for engraving 6 piles and 12 trussels for pence (restoring the old 1:2 ratio of piles to trussels), and for the same number of dies for halfpence; 48 dies of unspecified types had been prepared for engraving by a smith, William Yong (99; Grainger 1975, 197).

The cost of dies in London was constant, at 7s. per dozen (7d. each), from the thirteenth century to the time of the Durham mint's closure in the 1540s (Brooke 1932, 127; Beardwood 1950, 45; Craig 1953, 18; Mate 1969a, 208). The London warden's account of 30 September 1281-21 October 1283 records the payment of 7s. per dozen for 3½ dozen dies supplied to Durham (**25**; Fox and Fox 1909, 210). The two supplies of no more than a dozen dies each for the Sovereign pence of Bishop Shirwood struck between 1489 and 1494 (Allen 1996b, 128 n.7), would have cost 14s. at most. Consequently, it is unlikely that the 4 marks (£2 13s. 4d.) per year that had to be paid to the warden, under the terms of the 1489 indenture (**106**), was a payment for dies as Mark Noble (1780, 56 n.(a)) and Christopher Challis (1975a, 96) have suggested. The warrants of 1523 and 1530 stipulate the warden's payment for the dies by the dozen, and a warrant of 1532 for the York mint has a similar clause (*LP V*, 978/20).

The cost of obtaining dies might be the responsibility of either the administrators of the Bishopric or the moneyers and mint-masters. The keepers of the Bishopric in 1311 and 1316-17 both paid 13s. 4d. to a messenger sent to London to obtain dies (**42**, **46**), but the indenture of 1367 implies that the mint-masters are to pay the costs of obtaining dies (**62**). The cost of making dies was a potential charge on the revenues of the Bishopric in 1463/4, and the bishop paid Omoryghe and Yong to make dies in the 1470s. The indenture of 1510 states that the bishop shall provide the dies, at the mint-master's cost (**115**), and there is a similar stipulation in a York indenture of 1523 (Challis 1975a, 95).

London-made dies had to be returned to the London mint, either directly or through the exchequer, to obtain new dies. Some of Bishop Dudley's locally-made dies may also have been surrendered to the exchequer, as the old dies whose return was required by the writ of 1484. In 1218 and 1265 the engraver was entitled to receive old dies from the exchequer, defaced to prevent further use without refurbishment, but a writ of 1358 reserved the penny dies for retention at the exchequer (Condon, Foster, and Harvey 1997, p. 3). At least 362 dies apparently obtained by the exchequer, the earliest of which were groat, halfgroat and penny dies of 1353-5, were preserved in the Pyx Chapel and Gatehouse of Westminster Abbey. 192 dies were transferred to the Public Record Office in the nineteenth century, and c. 170 dies were sent to the British Museum in 1914 (Condon, Foster, and Harvey 1997, 4-8). Another seven dies in the Royal Mint Museum may be from the same source (Cook 1996, 4).

The PRO dies have been catalogued by Derek Allen (1938, 35-50) and Yvonne Harvey. The piles are 3-12 cm. high, with spikes to fix them into an anvil or a block of wood. The earliest piles, of Edward III, are square at the bottom, passing through an octagonal section to round at the top (the end with the design of the obverse of the coin); later piles are more evenly round. The trussels are 3-6 cm. long, and round in section, with a splayed end caused by hammering to strike the coins (Allen 1938, 32-3; Condon, Foster, and Harvey 1997, 4). The Durham trussels in the PRO belong to the Treaty coinage of 1361-9, the Post-Treaty coinage of 1369-77, and Henry IV's light coinage of 1412-13. The attribution of the PRO piles to mints is not as easy as the attribution of the trussels, which have the mint's name. However, Derek Allen (1938, 47) found a Durham penny from a Henry IV pile (die no. 135). The other piles in table 1 could have been used in either Durham or York. There are later penny dies, of Henry V (1413-1422) and the Rosette-Masle issue of Henry VI (1422-61), but all of the trussels were for the ecclesiastical mint of York, and it can be assumed the piles were also used in York.

Table 1. *Dies in the Public Record Office*

<i>Period</i>	<i>Piles</i>	<i>Trussels</i>
Treaty	1 (no. 74)	3 (nos. 122-4)
Post-Treaty	5 (nos. 81-5)	7 (nos. 125-31)
Post-Treaty?	5 (nos. 109-13)	
Post-Treaty or Richard II	1 (no. 86)	
Richard II	2 (nos. 132-3)	
Henry IV Light Coinage	1 (no. 135)	1 (no. 136)

Derek Allen prepared a manuscript list of the c. 170 dies at the British Museum. The thirty identifiable dies were probably all from the reign of Edward III, including ten Durham trussels. The thirty-four dies that survived a Second World War air raid include three Durham trussels, and two trussels of Durham or London. Table 2 is derived from a recent unpublished list of the surviving dies (Harry 1996).

Table 2. *Trussel dies in the British Museum*

<i>BM list no.</i>	<i>Period</i>	<i>Mint</i>
11	Edward III?	Durham or London
12	Edward III?	Durham or London
13	Edward III(?) Pre-Treaty G	Durham
16	Edward III(?) Pre-Treaty F-G or Treaty B?	Durham
17	Edward III(?) Pre-Treaty F-G or Treaty B?	Durham

Janet Lang has analysed seven dies, including two of BM dies: the Durham trussel of series G, and a trussel for London farthings of Edward III or Richard II (Archibald, Lang, and Milne 1995, 171-9, 190-1, pl. 37). The dies have steel caps welded to iron or mild-steel shanks. Lang found that the BM dies have relatively low hardness and spheroidized crystalline structures, caused by heating, and concluded that they had probably been prepared for refurbishment. Barrie Cook (1996, 5-13) has suggested that most of the BM dies have had their steel die-caps removed for re-use, and he has also detected signs of work on the bases of some of the dies to remove the splaying caused by striking coins. The Durham trussel of series G is identifiable because its die-cap has not been removed, and its base is splayed from use. One of the series F or G trussels (no. 16) has a crack in its shank

caused by use (Cook 1996, 9-10).

1.2.3 Controlling the number of dies

At various times before Edward I's reform of the coinage in 1279 the archbishop of Canterbury had three moneyers, the archbishop of York had two, and other ecclesiastics with minting rights (such as the bishop of Durham) had one moneyer (Blunt 1961, i-ix). These moneyers were in competition with the royal mints, and it was in the king's interest to restrict the production of the ecclesiastical mints by limiting the number of dies allowed (Fox and Fox 1909, 205-6). Before the reform of 1279 only one set of dies was allowed per moneyer, except in the Durham mint, and the resulting allowances of dies persisted after the removal of moneyers' names from the coins in 1279. The archbishop of Canterbury's first supply of dies for the reformed coinage in 1279 consisted of three sets (PRO E 368/53, rot. 2d.), and he was still entitled to three sets in 1329 (Fox and Fox 1909, 206-7). The archbishop of York was allowed only two sets of dies (Caine 1908, 31-3; Fox and Fox 1909, 208). The abbot of Bury St Edmunds had one set (Fox and Fox 1909, 209-10, 212; Eaglen 1989, 303-8). The bishop of Durham's sole moneyer was allowed only one set of dies until the early thirteenth century, but in 1279 the bishop was entitled to three sets of dies by a long-established, exceptional, custom. From 1279 writs often specify the number of dies allowed in Durham, but before 1279 surviving coins are the principal source of evidence for the changing allocations.

Medieval English dies were hand-made using various engraving tools and punches, and consequently the coins struck from a die can be identified and distinguished from the products of other dies. The first five, chronologically distinct coin types known to have been produced in Durham, between the late 1080s and *c.* 1125, were each struck from one pair of dies. Three of the five types are known from just one coin (Allen 1994, 384-7, 396), which can represent only one pile and one trussel, but an allowance of a single pair of dies may be suspected.

The bishop seems to have received one pair of official dies of the first, Cross Moline or Watford type of King Stephen (1135-54). Control of the number of dies was disrupted by the use of local dies of this type, probably made during William Cumin's usurpation of the Bishopric (1141-4) (Allen 1994, 387-91, 396-7). The four, separately used, pairs of dies of the Cross-and-Crosslets type (1158-80) known to have been supplied to Durham are well represented by surviving coins (Allen 1994, 392-4 and 398), clearly indicating a return to the allowance of one pair.

The reopening of the Durham mint by the king's keepers of the Bishopric in the 1195-6 *sede vacante* period (see pp. 33-4) seems to have been the occasion of an increase in the number of dies, from one pair to a pile and two trussels. The earliest pile known to have been used by the reopened mint was combined with two trussels in the name of the moneyer 'Adam', and one trussel of 'Alein', but these moneyers probably used their dies successively (Allen 1979, 46-7). Alein used at least six further piles, and his successor 'Pi(e)res' used one pile before the partial recoinage of 1205-7: four of these seven piles have been found in combination with two trussels, and the other three piles with one trussel each (Allen 1979, 46-8; one pile and two trussels have been identified since publication in 1979, and other dies may have existed). The supply of an extra trussel may have been a deliberate innovation in 1195-6, to increase the king's profit from the Durham dies, if it was not made in ignorance of the earlier allowance. The extra trussel might postpone the unprofitable interruption of production when the dies were sent away to be replaced. The trussel in a pair of dies would tend to wear out faster than the pile, as it received the hammer blows when coins were struck.

A further increase in the number of dies, to two pairs, occurred with the first supply of dies for the reformed coinage, in 1205 (Allen 1979, 48-50). During the recoinage of 1205-7 the dies allowed per moneyer were increased in at least seven of the sixteen mints, including Durham, and the increase was reversed in only two of

them (Lincoln and Norwich) before the end of the recoinage (Allen 1989, 49-55, 58-9, 69-74). Extra dies were being allowed at a time of exceptional mint output, probably as a temporary expedient. The Durham mint, one of the three mints remaining open after the recoinage, with London and Canterbury, never returned to its former allowance of dies.

During the supply of dies of Short Cross class 5c, which were probably in production by May 1207, and may have been produced until c. 1209/10 (Stewart 1989, 42-5), the allowance of dies was increased from two pairs to three pairs (Allen 1979, 51-2). This increase probably occurred in the *sede vacante* period after the death of Bishop Philip of Poitiers on 22 April 1208. Durham and four other bishoprics that fell vacant in 1206-8 were not filled until 1213, due to King John's dispute with Pope Innocent III (Painter 1949, 184). Keepers accounted for the bishopric's temporalities from 24 June 1208, and they may have been allowed an extra pair of dies, to increase the king's profit during his indefinite possession of the mint (**6** and **7** record this profit). An extra pair of dies could prolong the intervals between journeys to London to replace dies used one pair at a time, or be used at the same time as other pairs, to increase production: Mate (1969a, 213-14) assumed that Durham's three sets of dies were used simultaneously in 1300.

The supply of dies for Bishop Richard Marsh (1217-26) consisted of three sets of dies (*iii cunei*), despatched from the exchequer on 22 June 1218 (**9**). Surviving coins of Short Cross class 7a, which are from two piles and three trussels, seem to indicate that the three sets of dies were pairs, as they had been in the *sede vacante* period (Allen 1979, 52-3). This was the first supply of three sets of dies for a bishop's use. Three pairs of dies were supplied on 27 June and 12 December 1253 (**14**, **15**). In 1279 the bishop's attorney had to surrender two piles and two trussels, and later a third pair of dies, to obtain three pairs of dies for the new coinage (**17**). In 1300-1 the three sets each consisted of a pile and two trussels (**30**, **32-3**), but the concession

of extra trussels seems to have lapsed at or before the death of Bishop Bek in 1311. The four dies sent to London for replacement by the keeper of the Bishopric in 1311 (42) were probably two of the three pairs of dies in use.

Bishop Beaumont was allowed three piles and three trussels in 1317, but he was temporarily granted an extra three trussels on 30 July 1317 (48), and the grant was renewed annually from Easter 1318 (50; Fox and Fox 1909, 210). A writ of 1 December 1320 extended the concession to Easter 1321 (51), but it lapsed eventually. The supply of three pairs of dies may have been reinstated in July 1323, although the documentary evidence is contradictory. An exchequer memorandum mentions the ordering of six dies, but the writ of 12 July to the warden specifies three piles and six trussels (53-4). Peter Woodhead (1989, 62, 66) has found that the Durham coins of Fox class 15d, tentatively dated to 1328x30, were struck from three piles and three trussels. The writs to the exchequer of August and October 1344 (56-7) stipulate the supply of three dies, which could refer to either three pairs or three sets of a pile and two trussels. Extra trussels had been conceded for a third time by 1384: the writ of that year required the supply of three piles and six trussels, stating a belief that this was customary for Bishop Hatfield (1345-81) and his predecessors (63). At some time between 1384 and 1484 three more trussels were conceded, as the writ of 1484 specifies three piles and nine trussels (102). The 1473 grant of the right to make dies (91) implicitly delegated control of the number of dies to the bishop. In 1473 and 1474 Bishop Booth was able to license William Omoryghe to produce a total of 108 dies (92, 94), and Bishop Dudley's licence of 1477 authorized 96 dies (98).

The supply of three sets of dies, begun c. 1208 and only temporarily interrupted by the local production of dies, probably ended in 1489. D.M. Metcalf (1976, xxix) has used evidence of the Sovereign pence in the Ashmolean Museum to suggest that Bishop Shirwood's indenture of 1489 (106) was followed by the supply of at least eight piles and sixteen trussels of the new Sovereign type. However, the

Sovereign pence of Bishop Shirwood in the Ashmolean and British Museums are from only two piles of type 1ii and four piles of type 2, used with a total of eight trussels. The Durham mint probably received a dozen dies of type 2, equally divided between piles and trussels, and Bishop Fox's indenture of 1495 (112) was almost certainly followed by the supply of four further batches of six piles and six trussels (Allen 1996b, 127-8). The total number of dies in each batch was the same as in the petition of 1484, but the number of piles had been doubled at the expense of the trussels. The size of the batch was evidently doubled no later than 1523, as William Frankeleyn's letter of 11 April 1523 (133) referred to the receipt of twenty-four dies.

Dies could be kept within the prescribed allowances, when they were replaced, by requiring the return of used dies equal in number to the new dies. None of the dies in the pairs of London-made dies used in Durham from the late eleventh century to the 1160s is known to have been used with dies from other pairs (Allen 1994, 384-8, 392-7), probably indicating that each pair had to be surrendered to obtain a new pair. There is a similar lack of 'die-links' between the sets of dies with one pile supplied between 1195-6 and 1205. One of the piles from the first batch of two pairs of dies supplied in 1205 was evidently not returned when the dies were replaced, as it was used with the trussels from the next batch. However, no further die-links have been found between the batches supplied from 1205 to 1218, showing a continued requirement to return all used dies when new dies were supplied (Allen 1979, 46-53).

On 12 December 1253 there was a complete exchange of six old dies for six new dies (15). In 1279 the bishop was not allowed to receive his three pairs of dies until all three of the old pairs had been returned (17). The old Long Cross type of 1247-78 was being replaced by the new type of Edward I, requiring a complete exchange of dies. However, complete exchanges were not always required after

1279. North (1989, coins 86, 461-2, 475, 502) has published five Durham coins, dated between 1280 and 1301, from dies of two different sub-classes probably supplied at different times. The memoranda of 1300-1 record five complete exchanges of dies, twelve incomplete exchanges of equal numbers of dies, which would have allowed some mint output to continue during the transaction (Mate 1969a, 212-13), and four unequal exchanges.

Table 3. *Exchanges of dies in 1300-1*

<i>Source</i>	<i>Date</i>	<i>Received in York</i>	<i>Sent to Durham</i>
30	9 x 24 May 1300	1 [pile] + 2 [trussels]	1 + 2
	24 May	2 + 4	2 + 4
	31 May	1 + 2	1 + 2
	11 June	2 + 4	2 + 4
	17 June	3 + 6	2 + 4
	17 x 25 June	0 + 0	1 + 2
	25 June	2 + 4	2 + 4
	2 July	3 + 6	3 + 6
	16 July	2 + 4	2 + 4
	32	23 August	3 + 6
3 September		3 + 6	3 + 6
8 September		2 + 4	2 + 4
18 September		4 + 6	7 + 6
3 October		2 + 6	3 + 6
33	31 October	2 + 4	2 + 4
	5 November	3 + 6	1 + 2
	10 November	0 + 0	2 + 4
	26 November	1 + 2	1 + 2
	4 February 1301	3 + 6	3 + 6
	27 May	2 + 4	2 + 4
	4 June	2 + 3	2 + 3
	20 July	2 + 4	2 + 4

After 17 June 1300 the bishop had to claim a third set of dies, as only two sets of dies were received in exchange for three (Mate 1969a, 213-14). William Servat, the warden of the Durham mint, seems to have been sent three extra piles on 18 September and another extra pile on 3 October (Mate 1969a, 213 n. 2), and two sets of dies were withheld on 5 November in consequence. On 10 November Philip de Willoughby, chancellor of the exchequer, wrote to Servat explaining that the records of the exchequer showed that he had too many dies, but conceding the two

sets of dies not supplied on 5 November at Servat's request (34). The memoranda do not provide a complete record of the supply of dies after 26 November 1300. Thomas Neville brought nine sets of dies from London on 4 February 1301, and another twelve sets on 5 May, but the only recorded supply to Durham between 26 November 1300 and 27 May 1301 was three sets on 4 February. The fresh supply of dies to York on 5 May would have been unnecessary if only three of the nine sets brought on 4 February had been used.

Philip de Willoughby's records may have been an exceptional expedient during his administration of the dies temporarily kept at York. No records of this kind are known to have survived from the exchequer's residence at Westminster. The supply of dies from York must have ended no later than 1304, when the exchequer returned to Westminster (Broome 1925, 291). The mixture of complete and incomplete exchanges seen in the memoranda of 1300-1 may have continued. Four dies, probably two of the three sets of dies, were replaced in 1311 (42). During the supply of dies for Bishop Beaumont (1317-33), a Fox class 14 pile seems to have been omitted from an exchange of dies, surviving to be used with a class 15c trussel (North 1992). There was no full exchange of dies in 1351, when the weight of the coinage was reduced: Durham coins were struck from piles and a trussel of the old coinage used with dies of the new coinage (North 1989, 40; **pl. 5, 98-9**). However, a complete exchange was intended by the petition of 1484, which anticipated the return of twelve old dies in return for the twelve new ones (102).

Dies did not have to be returned to London immediately after a bishop's death. Dies of Bishop Bek were available for use with dies of Bishop Kellaw (North 1989 pl. 30, no. 793, n. 84; **pl. 3, 71-2**). A Durham trussel of Fox class 15c, produced in the time of Bishop Beaumont (1317-33), was used with a pile of the Florin coinage of 1344-51 (North 1989, 40, 59, 61, coin no. 1092). The writ of 1384, for the supply of dies to Bishop Fordham (63), required the return of the old dies of Bishop Hatfield,

which had apparently not been returned since Hatfield's death in 1381. Dies of Bishop Neville were used by his successor Laurence Booth in 1457x61 (see p. 18), and a trussel of Bishop Fox (1494-1501) was used by Bishop Ruthall (1509-23) (Allen 1996b, 128, pl. 11, no. 16; **pl. 7, 158**).

1.3 The king's use of the bishop's dies in *sede vacante* periods

In the *sede vacante* period after the death of a medieval English bishop the temporal assets and revenues of his bishopric usually reverted to the crown. The temporalities were separated from the spiritualities or diocesan revenues of the bishop, which the king, as a layman, could not enjoy (Howell 1962, 111-15): the spiritualities of Durham reverted to the archbishop of York or the Durham prior and chapter (Till 1993, 5). Temporalities might include profits of justice, agriculture and mining, 'feudal' payments (regular rents and irregular 'incidents' such as wardships), the revenue of boroughs, market dues and tolls, and the profits of a mint. One or two keepers would be appointed by the king to administer the Bishopric and its revenues, until the temporalities were granted to a new bishop. Keepers often paid some or all of the revenues into the exchequer (Howell 1962, 98-101).

The first surviving exchequer (pipe roll) account of a Durham *sede vacante* period, for two years after the death of Bishop Ranulf Flambard on 5 September 1128, does not indicate whether the keepers were operating a mint. Profits of the mint, if any, would probably have been included in the combined payments for the 'farm' of the Bishopric, without comment (Allen 1994, 387). The next *sede vacante* period documented in exchequer accounts is the vacancy of 1195-6, after the death of Bishop Hugh of le Puiset on 3 March 1195. The brief account of the first keeper, Hugh Bardolf, does not mention the mint. The account of Bardolf's successors, Gilbert Fitz Renfrew and Richard Brewer, for 2 April 1195 to c. February 1196 (Howell 1962, 217 n. 1), includes £174 0s. 4d. profits of a mine and 'exchange' (*cambii*, i.e. of the exchanging of silver for new coins, or of the place where exchanging was done) (3). The mint had been closed by Henry II, and John Brand (1994, 51) has argued that the keepers of the Bishopric would not have had time to reopen it, but this is not consistent with the evidence of the account. The keepers were evidently exploiting the bishop's argentiferous lead mine in Weardale, and reviving his mint, to maximize receipts from the temporalities. The relatively large

expenditure of £130 13s. 8d. on the exchanging operation (*ad cambium faciendum*) probably included the costs of re-establishing minting and exchanging in Durham (Allen 1979, 46). Some of the exchanging expenditure may have been money exchanged for silver, before the silver could be converted into new coins in the Durham mint. The provision of money for exchanging is first documented in English mints in 1180, and in 1194x6 such provision was made for Canterbury, Norwich (Brand 1994, 26-8 and 33) and, arguably, Durham.

Sede vacante keepers are known to have used the Durham dies in 1208-12 (6, 7), 1283 (26), 1311 (42) and 1316-17 (45-6; Fox and Shirley-Fox 1912, 189-191). The king appointed a master of the Durham mint in 1494 (111). The mint had been open before the death of the bishop in each case. In 1529 the last *sede vacante* use of the Durham mint was administered by the former bishop, Thomas Wolsey, who had been translated to the see of Winchester on 8 February. On 25 April 1529 Richard Bellysis, the chancellor of the Bishopric, wrote to Wolsey recommending John Richardson to succeed his deceased father, Roger, as master of the mint (143). This letter does not state the year, and it has been dated to 25 April 1528 (*LP IV(ii)*, 4201), but the receiver-general's account of 1528/9 indicates that Roger Richardson died in 1529. Roger's executors and John Richardson were responsible for equal shares of the mint's rent from 11 November 1528 to, probably, 24 June 1529 (144; Challis 1975a, 91). Before the end of July 1529 the king asked Wolsey for the revenues from the temporalities, which had been granted to Viscount Rochford. On 31 July Stephen Gardiner gave the king Wolsey's answer: Wolsey had always intended to surrender the *sede vacante* revenues, and had not yet received them. The king accepted this reply, although he evidently believed that Wolsey had intended to keep the money (*LP IV(iii)*, 5816; Pollard 1953, 236, 311; Ives 1991, 300).

A *sede vacante* administration of the Bishopric ended when the temporalities were formally restored to the bishop, before or after his consecration or translation

from another see. In the fourteenth century bishops Kellaw, Beaumont, de Bury, Hatfield, and Fordham received writs for dies after the restoration of the temporalities (43-4, 47, 55, 58, 63; Fryde, Greenway, Porter and Roy 1986, 241-2 lists dates of restoration). However, the petition of 1484 claiming dies for Bishop Shirwood (102) antedated the restoration of temporalities: Shirwood was out of the country from his appointment in 1484 to 1490, and the restoration was delayed until 6 August 1485 (Pollard 1986, 120-1). Either the bishop asked for his dies before he obtained his temporalities, or the petition was a fiction used to supply dies to the king's administrators of the Bishopric.

1.4 Confiscations of temporalities and the mint

In March 1088 Bishop William of St Calais was suspected of involvement in the rebellion led by Robert of Normandy and Odo of Bayeux, and William II confiscated his temporalities. This confiscation became effective with the bishop's surrender of Durham Castle in September 1088, and his trial and sentence to exile in November (Barlow 1983, 294 n. 136), and ended in September 1091. The first three coin types known from the Durham mint (*BMC* William I type VIII and William II types II and III) were probably struck while the bishop was in possession of his temporalities, but it is also possible that coins of type VIII were struck for the king during the exile (Allen 1994, 384-5).

There were no confiscations of the bishop's temporalities in the twelfth- and thirteenth- centuries, but the disputes of Bishop Bek with Prior Richard de Hoton and Edward I resulted in two confiscations during the first decade of the fourteenth century. The temporalities were confiscated in parliament on 1 July 1302, and a royal keeper and chancellor of the Bishopric were appointed on 17 July (Richardson 1913, 188; Fraser 1956, 337). In the royal assizes opened at Durham in September Henry Pysane and Gregory the moneyer had to answer the charge that they had continued to make coins after the parliamentary judgement; Alice, wife of William Servat, was accused of exchanging coins after the judgement (35). It could not be doubted that Henry, Gregory, and Alice had no authority to strike or exchange coins after the bishop lost his temporalities, but there was uncertainty about the authority needed for the mint to continue to operate in future. The keeper, Robert de Clifford, asked for instructions after he took into the king's hands the mint, customs and tolls of the Bishopric. The king's reply, in late September 1302, deferred an answer until the matter could be discussed by Parliament (36; Fraser 1957, 182 n. 1, 185). The king's final answer is unknown.

The temporalities were restored to Bishop Bek in July 1303 (Richardson

1913, 178, 188-90; Fraser 1956, 337), but the jurisdictional uncertainty of 1302 returned in the second, partial confiscation, which began in December 1305. On this occasion Robert de Clifford was only responsible for the revenues of boroughs, with tolls and market dues, and the mint. Other revenues should have remained with the bishop, and on 6 May 1307 Clifford was ordered to restore to Bek everything he had levied from the episcopal lands, with all related profits of mills, fairs and markets (Fraser 1957, 198-9 and 200-12 *passim*). A distinction was being made between the bishop's 'liberty' and his unconfiscated feudal 'barony'. The mint belonged to the liberty: the bishop's receiver's account of 1306/7 states that the mint's rent was paid to the bishop after the return of the liberty (37). North (1984, 80) has suggested that the mint may have been considered to be separate from the rest of the liberty, assuming that the mint remained in the king's hands until 25 May 1309 (Fraser 1957, 220), but this assumption is contradicted by the receiver's roll. There does seem to have been a piecemeal restoration of the liberty after the death of Edward I on 7 July 1307: the receiver's roll dates the restoration of the mint to the day of the king's death, letters patent of 4 September 1307 restored the liberty with minor reservations, and all temporalities were fully restored by 1309 (Richardson 1913, 209-11; Fraser 1956, 342).

The bishop's accumulated temporal revenues and rights changed before and after Bek's time (Scammell 1966, 449-73 describes this development), but Bek's difficulties provide evidence of its nature throughout its existence. The parliamentary judgement of 1 July 1302 explicitly endorsed the doctrine that the delegation of royal rights to an individual did not negate the king's superior authority (Richardson 1913, 188; Fraser 1957, 182): the bishop's minting rights conformed to this doctrine. In 1293 the king had called Bishop Bek a 'count palatine' (*comes palatii*), when he supported Bek in a dispute with the archbishop of York (Fraser 1956, 332-3; Emsley and Fraser 1984, 1), but this new title did not imply the creation of an autonomous or indivisible authority.

Between Bishop Bek's episcopate and the final closure of the Durham mint in the 1540s the only confiscation of the bishop's 'palatine' temporalities was that suffered by Bishop Booth in 1462-4. In the absence of accounts for the period from Michaelmas 1461 to Michaelmas 1463 it is impossible to determine whether the mint was open in December 1462, when the confiscation began. The *valor* of 1463/4 (82) shows that the mint was not open by the end of the confiscation, on 17 April 1464.

1.5 The bishop and the king sharing the mint: unproven examples

Letters patent of 21 February 1218 assigned the profits of the king's mints to William Marshall the younger (Brand 1994, 38). One version of the letters was sent to the bishop of Durham, with particular reference to the benefits of the mint belonging to the king (*specialiter ad dominum regem pertinente*) (8). This should be interpreted as an attempt to make the grant as comprehensive as possible, and it does not necessarily indicate that the king actually had a share of the mint's profits. The Bury St Edmunds mint was the subject of another of the letters, but a writ of 13 March 1218 confirmed the abbot's exclusive right to his mint and exchange (Brand 1994, 38).

The London wardens' account of 18 October 1280-13 April 1281 reported the receipt of £366 13s. 4d. from the warden of the Durham mint (21). It has been suggested that the king may have been receiving a share of the profits of the bishop's mint, during the recoinage begun in 1279 (Stewart 1984, 83-4). It is much more probable that the £366 13s. 4d. was a partial repayment of £900 given to the Durham warden in 1279, presumably to finance the mint's exchange (18).

The suggestion that the appearance of Bishop Bek's mark on only about a quarter of the Durham coins of Fox class 9b indicates that the king received three quarters of the profits from these coins, in the recoinage of 1300 (Stewart 1984, 82-3), is not supported by documentary evidence. F. Elmore Jones's proposition that the annulet and crozier marks on some Durham coins of Edward III's 'Florin' coinage of 1344-51 indicate concurrent royal and episcopal issues respectively (Elmore Jones 1965, 6) is similarly unsupported by documentary evidence, and is contradicted by the existence of coins combining the two marks (pl. 5, 97, 99). The £2 13s. 4d. per year that the master of the Durham mint agreed to pay to the London warden in the 1489 indenture (106) might have been a share of the profits, but the purpose of the payment is not stated.

1.6 Government supervision of the mint

A privy seal letter of 29 June 1353, received by the archbishop of York, issued detailed instructions to the holders of minting rights. They were to produce only pence. The melting of old coins to make new ones, and the employment of anyone who had done so, was strictly forbidden, presumably in an attempt to ensure a royal monopoly of the profitable reminting of coins made before the weight reduction of 1351. Furthermore, the holders of minting rights should not pay better wages than the king, offer lower minting charges to mint customers, or lease their mints without the king's permission (BI reg. 18 f. 309). This letter is apparently without parallel: government supervision of ecclesiastical mints was predominantly concerned with the enforcement of a national standard of weight and fineness for the coinage, and with the control of the supply of dies.

In 1218 the archbishop of York was instructed to receive the oaths of the bishop of Durham's moneyer and die-keepers, notifying their names to the exchequer (9). The oaths may have included a promise to maintain the king's standard. The Bury St Edmunds officials were presented at the exchequer and sworn-in from no later than the mid-thirteenth century (Ruding 1840, II, 219-20; Eaglen 1989, 302), but there is no evidence for the application of a similar procedure to Durham officials.

The London wardens' account of 18 October 1280-13 April 1281 allowed 10d. for sending a letter to Durham, to raise the weight of the coinage (*pro pondere ibidem erigend'*; 21). The letter was probably sent in February or March 1281, when the number of pence made from a Tower pound of silver was reduced from 245 to 243, increasing the weight of each coin (Mate 1972, 53). Information about the standard may have been communicated to Durham on other occasions; particularly when the standard was changed.

From the thirteenth century the standard communicated to the ecclesiastical mints could be enforced by requiring pyx trials, which tested the weight and fineness of sample coins kept in a chest or 'pyx'. The earliest known pyx trial was an 'assay' of the coins of Bury St Edmunds in 1236 (Eaglen 1993, 22). A writ of 12 January 1310 instructed Bishop Bek to send his mint-master to the exchequer, with the pyx containing the coins to be tried (41). There was apparently no pyx trial in 1310, as another writ of 30 November 1318 ordered a trial at the exchequer, asserting that the money made in Durham and Bury St Edmunds in the reigns of Edward I and Edward II had not been tested (49). Two pyxes, containing samples of the money produced at Bury St Edmunds from 1287 to 1319, were presented for trial on 12 February 1319 (Ruding 1840, II, 219-20; Hervey 1925, II, 14-15). There is no known record of a pyx trial of Durham coins in response to the writ of 1318. The letter from an unnamed bishop in Bishop Richard de Bury's *Liber epistolaris* (38) states that the bishop believed that his dies had been detained in London because a pyx trial may be required, and he asks whether a trial is customary. The anticipated trial may have been ordered by the writ of 1310, if the letter was connected with the king's letter of 25 May 1309 (39; see p. 13). Alternatively, the *Liber epistolaris* letter may have preceded the 1318 writ, or an undocumented trial.

At some time between 1318 and 1466 exchequer pyx trials of Durham coins ended, and were either delegated to the bishop, or independently used as a check on the mint-master's efficiency and honesty. On 28 March 1466 3d. was spent on charcoal for a 'say' in Durham Castle (84). The fuel would be needed to melt the sample coins for assay. The trial was probably held in the mint, which could be said to be in Durham Castle, using the mint's equipment. By the 1460s it may have been customary to hold a pyx trial when a mint contract was terminated, so that the mint-master could be held to account for deficiencies: John Orwell was losing his tenure of the mint in 1466 (see p. 76).

Mint indentures and recognizances could require the mint-masters' compliance with the king's standard, and preparations for pyx trials. The indenture of 1367 stipulates the fineness and weight of the London mint, and states that the bishop's officers shall take and keep the pyx coins (*lassay del monoi*; **62**). The recognizance of 1470 (**87**), the indentures of 1489, 1495 and 1510, and the indentures of 1527 and 1530 summarized in books of transumpt all stipulated the king's Tower standard (**140, 148**, etc.). The indentures of 1495 and 1510 further specified Tower remedies, which were allowances of weight and fineness for unavoidable inaccuracies in minting. These two indentures also require the comptroller and the mint-master to place a penny from every pound weight in a bag, deposited in a pyx with two locks, evidently in preparation for eventual trial. At the Tower there was a bag for each month of production, and the warden, comptroller and master each had a key to one of three locks (Challis 1978, 24). Coins produced in a particular period might be distinguished by 'privy marks' (small modifications of the design, or symbols), but the privy marks required by the indentures of 1495 and 1510 were said to be needed to distinguish the bishop's coins from counterfeits. All of the coins of Bishop Richard Fox (1494-1501), produced under the indenture of 1495, are marked with a mitre on the reverse (**pl. 7, 151-7**). The coins of Thomas Ruthall (1509-23), resulting from the indenture of 1510, have two 'initial marks' on their obverses: a lis and a radiant star (**pl. 7, 158-62**). The lis, first used on the Richard III pence of Bishop Shirwood (**pl. 7, 147**), seems to have been the first mark for Bishop Ruthall, superseded by the radiant star. On the coins of Thomas Wolsey (1523-9) the spur rowel initial mark of 1523x6 was followed by three marks, apparently successive, in 1527-9 (**pl. 7, 163-5**). Wolsey's last mark was probably the star, recalling Ruthall's mark, and the star or radiant star remained the mark of the Durham mint until its closure in 1541 (**pl. 7, 166-8**).

There is no certain evidence for failures in enforcing the standard in Durham before the fifteenth century. The Durham moneyer 'Ordwi' may have been

prosecuted in 1124/5, when moneyers were punished for the alleged production of 'false' money, but there is no documentary evidence for this (Allen 1994, 388-92). In 1469 old coins produced in Durham, York, and other places were tested, to determine their intrinsic values when they were brought to the Tower mint, and the Durham coins were among those found to be deficient in fineness (86). On 14 March 1475 Bishop Booth received a pardon for the making of money not of true alloy and weight, it being accepted that this was done without his knowledge (96). The infringement of the standard may have been discovered at an undocumented trial of the coins of Robert Dixson, who paid the rent of the mint until Michaelmas 1474 (95, 97).

1.7 Closures of the mint, government policy, and politics

Mark Blackburn (1990, 64-71, 74) has argued that the reduction of the number of English mints between *BMC* types XIV and XV of Henry I - twenty eight mints active in type XIV are not known to have produced type XV - was a direct consequence of the 1124/5 Assize of Moneyers. The king may have decided to reduce the number of mints, either in the Assize or later: the Durham mint was one of those apparently closed (Allen 1994, 387). The statement of *Boldon Book*, that Henry II had taken away the bishop's dies (2), supports Derek Allen's suggestion that Henry progressively eliminated minting rights granted to ecclesiastics and laymen during the production of the Cross-and-Crosslets coinage (1158-80) (Allen 1951, lxxvi-lxxvii, c-ci, cxxiii). The bishop's minting rights were restored in 1195/6 (4) but, after a supply of dies to Bishop Richard Marsh in 1218 (9), they lapsed until 1253 (11-15). Letters patent of 10 February 1223 announced that minting was to be restricted to London and Canterbury only (Lawrence 1915, 73-4). The Bury St Edmunds mint was leased by the wardens of the London mint from 1223 to 1230, the abbot being allowed a restricted right to strike his own silver (Eaglen 1989, 230-1; Brand 1994, 49; Eaglen 1998, 116-117). The Durham mint must have been closed by the prohibition of 1223, if it had not already closed.

From the fourteenth century monetary policies contributing to closures of the Durham mint were concerned with the centralization of minting in predominantly royal mints, as in earlier centuries, with the clipping of silver from the edges of coins for private profit, or with shortages of bullion. In the early 1330s English mint output was negligible, and in 1335 debased (10 oz. or 83.33% silver) halfpence and farthings were introduced, to encourage the bringing of silver to the mints by offering an increased 'mint price' of coins for each pound of silver (Hughes, Crump, and Johnson 1897, 186-9; Beardwood 1950, 49-50). It was evidently hoped that debased coins would not be exported, unlike sterling silver pence, and that the international reputation of the English penny would be protected (Mayhew 1992, 143-5).

Production of pence, the only denomination allowed in the Durham mint, was not forbidden - penny dies were ordered for Durham in 1336 (55) and Reading in 1338 (Fox and Fox 1909, 209; Fox and Shirley-Fox 1913, 108, 120-1) - but no pence were produced because their mint price was not high enough.

Production of the penny in Durham and elsewhere resumed from 1344, with the weight of the penny reduced to make its mint price sufficiently attractive (Hughes, Crump, and Johnson 1897, 194-5; Reddaway 1967, 1-4). The weights of English coins were reduced again in 1351, but the Statute of Purveyors of 1352 forbade a further reduction by royal prerogative, without parliamentary approval (Craig 1953, 72). In the parliament of 1385 a proposed reduction of the silver content of the coinage to counteract a bullion shortage was defeated by Richard II's opponents (Craig 1953, 83). Weight reductions in a London and Calais mint indenture of 1409, possibly intended to be kept secret, may not have been put into effect (Blunt 1967). In November 1411 Henry IV obtained a parliamentary statute, reducing the weights of the coins (Mayhew 1992, 172). Shortage of silver seems to have forced the closure of the Durham mint, from no later than 1394 (66) to the introduction of the 'light coinage' of 1412 resulting from the statute of 1411.

The closure of the Durham mint during the Annulet issue begun in 1422, at a time of relatively large supplies of bullion at other mints (Challis 1992, 682), may have been caused by a policy intended to maximize the profits of the king and Bartholomew Goldbeter, master of the king's mints. On 13 February 1422 Goldbeter obtained an indenture placing him in charge of the Tower and Calais mints on favourable terms, and another indenture of 16 February 1423 gave him the option to open mints in York and Bristol (Challis 1992, 708-9). A royal mint was opened in York in August 1423, but the archbishop's mint was closed no later than the death of Archbishop Bowet in October 1423, and from Michaelmas 1423 the Durham mint-house was no longer used for minting (Allen 1995b, 121, 125; 71). On 18 March

1424 Bishop Langley issued a writ requiring the publication of the substance of Goldbeter's second indenture in the Bishopric (Allen 1995b, 129), arguably recognising Goldbeter's monopoly.

The closure of the Durham mint in the brief second reign or 'Readeption' of Henry VI (3 October 1470-11 April 1471) may have been a consequence of Court politics, and not of monetary policy. In August 1470 John Orwell agreed to pay the mint's rent until 15 August 1471 (87). This agreement was not fulfilled, as Orwell paid for only half a year between Michaelmas 1470 and Michaelmas 1471 (90), and no Durham coins of Henry VI's second reign are known. The royal mints open in 1470 - London, Bristol, and York - remained open during the Readeption. The closure of the Durham mint may have been instigated by the earl of Warwick, who had a leading role in the Readeption government (Hicks 1992, 80-3 and 87). On 2 June 1470 Booth had obtained Edward IV's permission to confiscate Barnard Castle from the earl; the earl's other possessions in England remained untouched, despite his treasonable activities in 1469-70 (Pollard 1992, 295-7; Hicks 1998, 297). Booth seems to have been the only bishop appointed by Henry VI abstaining from active politics during the Readeption, and he was suspended from the commission of the peace by the new government (Knecht 1956-7, 115-17; Storey 1972, 144 n. 57; Pollard 1986, 110).

Concern about the clipping of the smaller silver coins, and increasing reluctance in the 1490s to accept clipped pence in payment, culminated in a privy council decision of 11 February 1499 restricting the production of pence. The Durham mint, which could strike only pence, was closed, and the ecclesiastical mints of York and Canterbury were also 'restrained' (114; Metcalf 1976, xix-xx; Challis 1978, 57-9). Production of halfgroats was allowed in York from 1502-3, and in Canterbury from 1504 (Metcalf 1976, xxxiv, xxxviii; Challis 1978, 58). The prohibition of pence in the ecclesiastical mints seems to have ended after the death of

Henry VII in April 1509, and the Durham mint reopened in 1510 (115-18).

The final closure of the ecclesiastical mints has often been associated with the extension of royal authority over the Church, and the abolition of delegated criminal jurisdictions, in the Reformation parliament of 1529-36 (Challis 1975a, 96-7). However, T.F. Reddaway (1965, 121-4) has shown that the Canterbury mint remained open until December 1537 or later. Challis (1975a, 96-8) has noted the continued payment of the Durham mint's rent until Michaelmas 1541, and the buying of monastic silver by the master of the York mint in 1541-2. He has argued that the ecclesiastical mints may have closed as intermittent supplies of bullion failed, and that they could not have reopened after the introduction of an openly debased coinage in 1544, which was associated with a new system of direct crown management of all mints by salaried officials (Challis 1975a, 98; 1992, 227-8). It may have been impossible to reopen the Durham mint under the new system, but the bishop was not deprived of his minting rights in 1544. The mint continued to appear in the Bishopric's accounts (Guinding 1971, 23-4), although it was acknowledged at the 1547/8 accounting that the mint was unoccupied and derelict (199). However, in the 1550/1 receiver-general's account, compiled after Michaelmas 1551, it was reported that the mint had been discharged (*exoneratur*) by the king (203). Bishop Cuthbert Tunstall had been confined to his London house from September 1550, accused of misprision of treason; on 20 December 1551 he was committed to the Tower, and on 14 October 1552 he was deposed (Sturge 1938, 285-92; Loades 1973, 12-15; Loades 1987, 101-3). The withdrawal of the bishop's minting rights was never reversed. In the 1577/8 receiver-general's account the mint was said to be in the queen's hands (224), although there was not a *sede vacante*, and after 1580/1 the mint disappeared from the accounts forever.

1.8 Privileges: summary and conclusions

The bishop derived his income from temporalities and spiritualities. The temporalities consisted of rights and assets acquired at various times, which reverted to the king in a *sede vacante* period after the death of a bishop, and might be confiscated entirely or partially. In 1305-7 a distinction could be made between the 'feudal' temporalities of the bishop's barony, and the liberty: the liberty included minting rights delegated by the king. The bishop's minting rights could be exercised on the king's behalf in periods of *sede vacante* or confiscation, but there is no conclusive evidence for the sharing of the mint's profits by the bishop and the king.

The right to derive profits from a mint, using the king's dies, and observing a national standard of weight and fineness, was granted to various ecclesiastics. Bishop William of St. Calais may have been the first bishop of Durham to be given minting rights, in 1087/8. Bishop Walter Kirkham received the king's written recognition of the bishop's customary right to a mint in 1253. Later bishops maintained the minting rights by obtaining writs or warrants, with relatively standardized texts authorizing the supply of dies. Writs to the exchequer, warrants, and some writs to the warden of the London mint provided general authorizations of supply. Writs to the warden might alternatively order a supply of dies on one occasion only, following the exchequer's receipt of a letter from Durham requesting new dies. Edward I and Edward II wrote to the warden to correct die-supply problems.

Dies were supplied by the king's engraver, through the warden and, usually, the exchequer. Used dies were returned to the exchequer or the warden, if replacements were required. Some of the returned dies were preserved in Westminster Abbey, possibly after preparation for refurbishment. The exchange of equal numbers of used dies and new dies generally ensured that the bishop had a prescribed number of dies only.

From the 1080s to the 1160s the bishop seems to have had only one pile and one trussel when dies were centrally supplied. An extra trussel was provided after the reopening of the mint in 1195-6. In 1205 the number of dies was increased to two piles and two trussels, and a third pair of dies was added *c.* 1208, establishing a custom of supplying three sets of dies last documented in 1484. Three extra trussels were supplied in 1300, and under a temporary grant of 1317. The grant of 1317 lapsed in the 1320s, but three extra trussels were customary in 1384, and six extra trussels were ordered as part of a batch of a dozen dies in 1484. Batches of six piles and six trussels were probably usual from 1489, and two dozen dies were supplied in 1523.

The royal monopoly of the supply of dies, and the control of the number of dies in Durham, was broken by the use of locally made dies on five occasions: in the early 1140s, twice in 1300, in 1461x3, and in 1473x83. The last use of local dies in Durham was authorized by temporary licences of the 1470s, which also allowed the production of halfpence. Normally the bishop's mint made silver pence alone, which caused its closure when only the production of halfpence and farthings was viable, or when its production of pence was prohibited. The mint also closed because monetary policy effectively prevented the production of coins of any denomination, as part of a policy of centralization, or for political reasons

2. PEOPLE: COINAGE PRODUCERS, ADMINISTRATORS, AND CUSTOMERS

2.1 Moneyers, mint officials, and mines: 1080s-1279

All coins of the Durham mint made between the first opening of the mint in the late eleventh century and Edward I's reform of the coinage in 1279 were struck from dies with the moneyer's name, and a usually abbreviated version of the city's name.

English moneyers were legally responsible for the weight and fineness of the coins carrying their names. Moneyers were commonly merchants or prominent citizens.

From the tenth century some royal moneyers may have been paid officials, and all royal moneyers were salaried from 1262. Other moneyers, such as the Durham moneyer, were contractors, paying a fixed rent or 'farm', or a share of the mint's profits (Stewart 1992, 68-73; Brand 1994, 18-23; Nightingale 1995, 24-33).

Surviving coins show that the Durham mint usually had one moneyer, from its inception. 'Cutthbrht' produced the earliest known Durham coins in the late 1080s, and 'Ordwi' intermittently operated the mint from the 1090s to, probably, the mid-1120s (Allen 1994, 386-7 and 396). The first coinage type of King Stephen (1135-54) was produced by two Durham moneyers: 'H[en]ri' and 'Fobund'. 'Fobund' seems to have succeeded 'H[en]ri', probably being appointed by William Cumin (1141-4) (Allen 1994, 388-90). If 'Fobund' is the 'Folbold' monetarius' who owed debts in Berwick or Newcastle upon Tyne, and in Northumberland, in the 1160s, he is the first Durham moneyer known from documentary evidence. 'Fobund' may have become a Scottish moneyer, in Roxburgh, Perth, Berwick and, probably, Newcastle, after his time in Durham (Stewart 1993, 128; Allen 1994, 390).

The *Dialogues* of Laurence of Durham, written in the 1140s after Laurence's temporary expulsion from Durham Priory by William Cumin, assert that the bishop received three great talents (360 pounds weight) of mined silver each year (Raine

1880, xxxi-xxxii, 20; Allen 1994, 393-5). Some or all of the bishop's silver could have been minted by his moneyers. 'Cristien', one of the Durham moneyers named on coins of the Cross-and-Crosslets type introduced in 1158, was the *Christianus monetarius in Dunelmo* who leased a mine from the bishop, according to a chapter of Reginald of Durham's *Libellus* composed no later than January 1167 (1).

'Christianus' apprehended the finder of some 'treasure': presumably, mineral wealth claimed on behalf of the bishop (Raine 1835a, 210; Allen 1994, 393-4). The bishop had received a grant of a Weardale mine from King Stephen in 1153-4, which was probably a confirmation of his possession of argentiferous lead workings (Page 1905-28, II, 348). The three moneyers responsible for the production of the Cross-and-Crosslets type in Durham - 'Waltier', 'Iohan', and 'Cristien' - may have leased the mine in turn, minting some or all of the mined silver. From 1157/8 to 1179/80 William FitzErembald similarly combined the leasing of the 'Carlisle' mines, near Alston, with the office of moneyer at Carlisle and Newcastle (Allen 1951, xcvi, cxxiii-cxxvi; Allen 1994, 394). The Carlisle moneyer Alan, who was a lessee of the 'Carlisle' mines from 1185/6 to 1197/8, was almost certainly also the Durham moneyer 'Alein': the issues of Alan or 'Alein' end with Short Cross class 4b at both mints (Allen 1979, 44, 46-7). This moneyer may have minted mined silver at Carlisle and at Durham: the keepers of the Bishopric in the 1195-6 *sede vacante* period accounted for £124 0s. 4d. in bullion as the combined profit of the bishop's mine and the exchange (3).

Twelfth century moneyers could have commercial interests beyond minting and mining. Alan incurred a fine of one mark (13s. 4d.) in 1180/1, for selling wine contrary to an assize regulating its sale (Allen, 1979, 44). Folbold owed a load of wool in the 1160s (Jenkinson and Stead 1913, 224-5).

W.C. Wells (1932, 229) assumed that 'Pieres', the successor of 'Alein' as Durham moneyer, was Peter Sagarnium, one of three men who took the bishop's dies from the exchequer to Durham in 1218 (9). If Sagarnium was the Durham moneyer, it is strange that the archbishop of York had to be instructed to receive the moneyer's

oath on behalf of the exchequer, as Sagarnium could have been sworn in at the exchequer. The archbishop had to receive the oaths of the bishop's moneyer and die-keepers, and notify their names to the exchequer. However, the Durham mint officials are not included in exchequer lists of 1217/18 and 1221/2, which name two die-keepers for each moneyer (Brand 1964, 65-6). The earliest known reference to die-keepers is in the writ of 7 October 1207, summoning people associated with the mints of sixteen places, including Durham, to Westminster (5). The *Officia ministrorum cambii* - an exchequer document of c. 1248 describing the duties of mint officials - says that the die-keepers supervised the striking of blanks into coins, ensuring that the blanks are lawful. Assayers, who had been included in the writ of 1207, assessed the fineness of silver before and after striking (Johnson 1956, 51-2). Assayers were named in the lists of 1217/18 and 1221/2, but there was no mention of a Durham assayer in the record of the instructions to the archbishop in 1218. The *Officia* mentions a clerk of the mint, and each of the mints opened for the recoinage of 1248-1250 had one (Johnson 1956, 52 100-5). The Durham moneyers might have needed the services of a clerk at various times, although there is no known documentary evidence for this. The Durham moneyers would certainly need workmen, referred to as *operatoribus monete* in the writ of 1207.

2.2 Financiers and Italian mint-masters: 1279-1423

Italians established a lasting dominance in international trade, finance, and mint administration in many parts of medieval Europe in the twelfth- and thirteenth-centuries (Spufford 1988a, 17, 22-3; 1988b, 187, 194, 251-3, 388). Joint-stock 'societies' of Italian merchant-bankers, principally from Florence, Lucca and elsewhere in Tuscany, had a leading role in English export trade and finance by the end of the thirteenth century (Lloyd 1977a, 39-45, 72-4, 82-4; 1982, 168-171). Edward I (1272-1307) received large loans from the Riccardi of Lucca until 1294, repaying them by the assignment of revenues. The Riccardi may have procured loans used to initiate the recoinage begun in 1279, and they participated in the administration of royal mints and exchanges until July 1281, receiving a share of the profits (Kaeuper 1973, 104-15). The mints produced the new coins and the exchanges paid them to mint customers selling their old coins and bullion, yielding profits. Bishop Robert de Insula delegated the management of the Durham mint and its exchanging profits to the Riccardi, probably in return for a loan, according to the terms of an indenture between the bishop and Baroncino Gualteri and Enrico da Poggio (24; Kaeuper 1973, 112). The Riccardi provided a warden for the mint: James (*Jacobus*) Orlandi of Lucca, also called James Roulandi, Chancoccus Orlandini, and Jacaccus in chancery and exchequer records. Orlandino da Poggio, the Riccardi joint warden in London, reported his payment of £900 to Orlandi in the London wardens' account of 20 November 1279-1 January 1280 (18). This was almost certainly Riccardi money needed to sustain exchanging in Durham until old money received could be recoined by the Durham mint, which received its first dies for the new money after the issue of the writ of 2 November 1279 (16-17). The £366 13s. 4d. received from Orlandi in the wardens' account of 18 October 1280-13 April 1281 (21) was probably a repayment of part of the £900. The Riccardi could use new money from Durham to sustain other exchanges or provide loans, with payments recorded in chancery writs. A writ of 20 August 1280 instructed Orlandi to pay £500 of his new money to Peter de Turnmire and John Monet of Florence, for use in the Newcastle

exchange (19). An order to pay a further £500 to Peter de Turnmire followed on 24 August (20), but the writs of 20 and 24 August were superseded by a writ of 10 September 1280 sent to the wardens of the York mint, ordering the provision of £700 (CCR 1279-1288, 33). A writ of 10 August 1281 instructed Orlandi to pay £466 13s. 4d. of the Durham exchange's money to William of Louth, keeper of the king's wardrobe, presumably as a loan (23). The Riccardi evidently retained an interest in the Durham exchange for a short time at least after the end of their association with the royal exchanges in July 1281.

The Riccardi received profits from royal exchanges, but the making of the money for these exchanges was entrusted to William de Turnmire and subordinate mint-masters, at rates specified by a contract of 8 December 1279 (Johnson 1956, 59-61). The Riccardi may have paid the bishop of Durham's moneyer or mint-master to produce the coins exchanged. There is no known documentary evidence for the moneyer in the 1280s, and the coins no longer carried his name, but in 1293 a *quo warranto* jury asserted that the bishop had a moneyer (27).

An order in council of 29 March 1300 required the establishment of mints and exchanges to remove from circulation imported foreign sterlings. The Frescobaldi of Florence took responsibility for the royal exchanges of Exeter, Hull, Newcastle, and York (Fox and Fox 1909, 181-3; Johnson 1956, xxxix, 62-5), and for the archbishop of York's exchange (Brown and Hamilton Thompson 1928, 72). The Frescobaldi and other Italian societies also obtained the right to buy coins for eventual exchange (Mate 1972, 69). The Durham exchange had been entrusted to an Italian society in 1279, but in 1300 a prominent London merchant and moneyer-lender, William Servat of Cahors (Lloyd 1977a, 296-8; Nightingale 1995, 91-2, 104-5, 118, 122, 126-7, 130, 145-6), was the recoinage financier and warden in Durham (30, 32-3). Servat had accompanied Bishop Bek on an embassy to Norway in 1290 (Mate 1969a, 212-13). He had mercantile interests in Durham, selling sugar and wine to Durham Priory,

probably in 1299 (Fowler 1900, 494). Servat may possibly have acquired some expertise in mint administration from William de Turnmire, who was one of his partners in 1280/1 (Whitwell 1903, 204).

The Frescobaldi administration of exchanges finished by the end of 1300, as the recoinage of foreign coins was complete (Fox and Fox 1909, 183). William Servat's administration of the Durham mint and exchange continued. The record of dies supplied to him ends on 20 July 1301 (33). At the assizes opened in Durham in September 1302 it was alleged that William's wife, Alice, had exchanged all of the bishop's money made after the confiscation of the temporalities on 1 July 1302 (35). Alice was probably acting as her husband's agent in Durham, although a jury swore that she had received the money for exchange without her husband's consent. Servat subsequently failed to answer two summonses to appear in court, in 1303 and 1304, and it is probable that he was not allowed to continue as warden during the confiscation of July 1302-July 1303.

The assize jury of 1302 said that Henry Pysane and Gregory the moneyer had minted thirty pounds after the confiscation, which they paid to Alice. Henry and Gregory admitted making the money, but pleaded ignorance of the confiscation. Henry and Gregory could have been joint masters of the bishop's mint, without responsibility for exchanging the coins they made: the mint was held by two men in 1367/8 (62), and in the 1480s (103-5, 108-10). Alternatively, Gregory could have been the bishop's sole moneyer, as he was called 'monetarius', or Gregory may have worked for Henry, striking coins. Mate has noted the use of 'monetarius' to distinguish hammer-men striking coins from other mint workers or 'operarii', so that Durham's three sets of dies would have required three working 'moneyers' (Mate 1969a, 213-14). However, the archbishop of York had two sets of dies and two mint-masters (*magistri monete*) in 1280, and in 1300 these officials were described as moneyers (Brown 1907, 268; Caine 1908, 31-3, 35-7; Brown and Hamilton

Thompson 1928, 6). Gamell 'monetarius', named as the owner of a tenement in Clayport (now Claypath) in Durham by a charter of c. 1300 (28), was not a landless hammer-man. In 1310 Bishop Bek was ordered to send his 'magister monete' to the exchequer (41), but the master of the bishop's mint was called a 'monetarius' as late as 1433 (72). The master was termed a 'cunator', 'firmarius', coiner or master and workman at various times in the fifteenth and sixteenth centuries (appendix 1, passim). 'Mint-master' can be used as a convenient term for the bishop's moneyer or his equivalent from 1279 to the closure of the mint.

The Durham mint is known to have had a palatine official acting as warden from no later than 1416 (68), and this may also have been customary in the fourteenth century, if there was no financier administering exceptional profits. In Bury St Edmunds the sacrist of the abbey was the warden of the mint from no later than the thirteenth century, accounting for profits and presenting mint officials at the exchequer (Ruding 1840, II, 220; Lobel 1934, 53, 59 n.1; Eaglen 1989, 302; Eaglen 1998, 112-13). Richard de Snoweshill, the archbishop of York's receiver, was the warden of his mint in 1331-4 (Woodhead 1989, 64, 78). William de Denum might have been acting as warden in 1323, when he claimed the bishop of Durham's dies (53). William was the bishop's chancellor in 1312 (Hodgson 1832, 15), and later he was one of Bishop Beaumont's justices (Scammell 1958, 399 n.4),

In 1358 an Italian named as 'Bonageus Moneour' leased from the prior of Durham a messuage and twenty eight acres of land in Pittington (59). John Booth (1889, 28-9) was almost certainly right to suggest that Bonageus was Bishop Hatfield's moneyer. In 1364 the land, described as a messuage and twenty acres, was forfeited, as Bonageus had absented himself, subletting the land and neglecting the buildings on it (60-1). Between 2 June 1361 and 2 December 1364, and most probably during the absence noted in 1364, the master of the Scottish mints paid Bonageus for images (*ymaginibus*) and other artefacts (*rebus sculptis et depictis*).

Edward Burns (1887, I, 239) assumed that Bonageus had made designs and dies for the Scottish coinage, but the work cost £40 13s. 4d., and it is possible that Bonageus was providing decorative objects (Dakers 1931-3, 67-8). Bonageus subsequently remained in Scotland, and as late as 1393 a Scottish act of parliament stipulated that the king's money should be made by 'Bonachium de Florencia' (Cochran-Patrick 1876, cxv; Burns 1887, I, 239-40, 285). He may have been related to Franciscus Bonagius, who held office in the mint of Florence in 1324 (Cochran-Patrick 1876, cxii).

Bonageus was one of many Florentine mint-masters in English or Scottish mints in the second half of the fourteenth century. The Mulkins of Florence, working in Scotland, and from the 1390s in English mints, are discussed below (pp. 58-60). Laurence of Florence was placed in charge of the archbishop of York's mint in 1357 (Raine 1863, 459), and was admitted to the freedom of York in 1360/1 (Collins 1896, 54). 'Bonache' of Florence was admitted to the freedom in 1363/4, probably during his absence from Durham (Collins 1896, 11-12, 57; Collins transcribed 'Bonache' as 'Bonathe'). Andrew of Florence 'moneour' became a freeman in 1362/3 (Collins 1896, 56), leased the archbishop's mint for two years from 1365 (Raine 1863, 462), and became joint lessee of the Durham mint in 1367 (62).

From the 1340s to the end of the century contracts for the king's mints were often awarded to Italians from Florence, Genoa, and Lucca (Craig 1953, 78-9; Mayhew 1992, 167-71; Challis 1992, 179, 703-7). The pre-eminence of Italian societies in English finance temporarily ended in the early 1340s, but in the third quarter of the fourteenth century Florentine involvement in English finance revived. Genoese and Venetians took the initiative after a Florentine commercial collapse in 1375-6 (Holmes 1960, 200-3).

Italians did not have a monopoly of English mint contracts in the second half

of the fourteenth century, either in the royal mints or in Durham. The Durham indenture of 1367 (62) leased the mint to John of Bishopdale 'burgess and citizen of Durham' and Andrew of Florence, not to Andrew alone. It was usual to have only one mint-master in Durham in the fifteenth- and sixteenth-centuries, although William Richardson and Robert Bagot shared the mint in the 1480s (103-5, 108-10). John of Bishopdale may possibly have been appointed to increase the confidence of his fellow citizens or the bishop in the administration of the mint by a Florentine, a few years after the departure of Bonageus from Durham. John of 'Byshopdale' was bailiff of the city of Durham in 1370 (Surtees 1816-40, IV(2), 17). He became a prominent citizen of Newcastle upon Tyne, entrusted with the collection of its customs from 1377, and he later served as mayor and member of parliament for that city (Steel 1957, 395-7, 401). The 'Ricardus moniour' who rented a mill in Elvet from 1382/3x1388/9 to 1396/7 or later (64-5, 67) was probably English, as an Italian may not have retained an interest in Durham after the leasing of the buildings of the closed mint in 1394.

In November 1394 William Warde leased the 'moneyour hous' on Palace Green, and a chamber or one-room building (*camera*) beyond the gate known as Owengate, until a moneyer should want to use them (66; Page 1905-28, II, 24). The mint buildings were at the corner of Palace Green and the street also called Owengate, with Durham Castle on the other side of the street. This is the earliest known documentary evidence for the location of the mint. The mint reopened for the production of Henry IV's light coinage of 1412-13. A survey compiled in or soon after 1421 (Britnell 1988, 215-17) noted that the mint, on the east side of Palace Green, was occupied by Mulkin of Florence, the bishop's mint-master (70). Mulkin accounted for mint's profits in the receivers' accounts of 1416/17 (68) and 1418/19 (69), but the 1424/5 account reported that the mint building (*domus*) lately occupied by Mulkin had been leased for the past two years (i.e. since Michaelmas 1423) (71; Longstaffe 1867, 25, 28-30).

Mulkin of Florence was probably related to several English and Scottish mint-masters. In 1358 James 'Mulekyn' or 'Milliken' was named by letters patent granting privileges to Scottish moneyers. Payments to James were recorded in Scottish mint accounts of 1358-9 and 1361-4, and in 1377 he received a gift of money, possibly on leaving the mint. Donatus 'Mulekyn' received a payment in the account of 1361-4, and it has been assumed that a goldsmith named Nicholas paid in this account was a member of the same family (Cochran-Patrick 1876, I, xvi, xxxiii, xl, cxi-cxii, cxiv, 3-6, 9). In December 1393 Nanfre 'Molakyn' was described as the deputy of the master of the Calais mint (*CCR 1392-1396*, 187). On 9 July 1395 Nanfre was appointed master at the Tower and Calais mints, and he probably held this post until 1402 (Mayhew 1992, 170-1; Challis 1992, 707-8).

Mulkin of Florence is the last known Italian mint-master in Durham, and England. Richard Garner, a naturalized Englishman from Piedmont who served as master and warden from 1409 to 1413, was the last Italian master in the royal mints, although Italians continued to serve as wardens of the exchange in London until 1507 (Bradley 1992, 202-3). John Craig (1953, 79) suggested that the disappearance of Italians from the royal mints was related to a sudden decline in their importance in the commercial life of London c. 1400. However, Florentine trade with England had revived in the 1390s, and Florentines dominated international exchanges of money from London until the 1430s. Italians had a large share of English foreign trade and finance in the early fifteenth century, although their role in royal finance was negligible (Bolton 1980, 311-14; Holmes 1960, 196-9, 204, 206-8; Nightingale 1990, 573). They may have abandoned the English mints because they were not sufficiently profitable: the Durham survey of the early 1420s estimated that Mulkin's mint paid the bishop only £2 per annum (70), and Mulkin's net profit was probably of the same order of magnitude.

2.3 Goldsmiths, palatine officials, and customers: 1416-1541

Mulkin of Florence's accounts of 1416/17 and 1418/19, and the account of 1424/5 reporting the leasing of Mulkin's mint-building, name Richard Buckley as the warden (*custos* or *gardianus*) of the mint (66-7, 71). Buckley was associated with the administration of the Bishopric from no later than 1407, becoming an auditor in 1419 and receiver-general of the Bishopric in 1422. He was appointed to the rectory of St Nicholas's, Durham, the prebends of Auckland and Chester-le-Street, and the office of master of Kepier Hospital (Storey 1961, 72-85 passim). William Raket, the warden in 1438/9 (74), was made clerk of the bishop's chancery and keeper of its rolls for life in 1437 (Storey 1961, 59). Richard Raket, the warden in 1453/4 (76) and presumably a kinsman of William, was described as a clerk of the bishop's exchequer in a document of 13 October 1452 (PRO DURH 3/48, m. 6). The office of warden was being given to palatine clerks, who supervised the mint as one of their duties. The receivers' accounts show that the mint-masters' accounts were checked with the counter-roll of the warden, which may have provided duplicate records of bullion purchased for minting, costs and profits, like the counter-roll of the late thirteenth century 'comptroller' of the Tower mint (Mate 1969b, 207-8).

The financial administration of the Bishopric, and the mint, was reformed in the early years of the episcopate of Laurence Booth (1457-76). The receiver of the Bishopric, who was usually also the chancellor, was responsible for the principal annual account roll until 1458/9 (CCBpric 189814, m. 3). In the account of 1459/60 the chancellor was named as both receiver and receiver-general (CCBpric 189815, mm. 1 and 3). Bishop Langley had created the office of receiver-general, separate from the office of receiver, no later than 1416/17 (Storey 1961, 74-80), but Booth merged these offices (Grainger 1975, 142). From 1460/1 the accounts were rendered by the chancellor as receiver-general only (CCBpric 189816, mm. 1 and 3). The chancellor seems to have become *ex officio* warden of the mint at about the time that the office of receiver disappeared. In the account of 1458/9 a space for the name of

the warden was unfilled, and in 1459/60 there was no space (77, 79). The warden or comptroller was not mentioned in accounts after 1460, when the mint-master stopped paying a seignorage that had to be checked with a warden's counter-roll, but the indentures of 1495 and 1510 name the chancellor as the comptroller (112, 115). Indentures for the archiepiscopal mints of York, in 1523, and Canterbury, in 1534, name the archbishop's chancellor as comptroller or comptroller and surveyor of the mint (Challis 1975a, 91; Challis 1978, 27-8). Some of the Durham chancellor's possible responsibilities as warden or comptroller are shown by William Frankeleyn's letter of 11 April 1523 to Thomas Wolsey (133). Frankeleyn was intending to obtain mint-workers, silver and dies from London. On 25 April 1529 another chancellor, Richard Bellyssis, wrote to Wolsey, recommending the appointment of John Richardson as mint-master (143).

The chancellor's responsibility for the supply of dies seen in Frankeleyn's letter of 1523 is also shown by the licences of 1473, 1474, and 1477 for William Omoryghe's manufacture of dies (92, 94, 98). The dies were to be made with the 'advice and oversight' of the chancellor. In 1474 the chancellor and Richard Chadkyrk were named as the bishop's representatives for the supply of dies, and in 1477 Chadkyrk's place was taken by John Raket. Richard Chadkyrk, rector of Wolsingham in 1475/6 (PRO DURH 3/49, m. 15), was responsible for delivering the revenues of the Bishopric to the bishop, jointly or alone, from 1468/9 (CCBpric 189822, m. 4) to 1474/5 (CCBpric 189829, m. 4). John Raket, a kinsman of William Raket, the former warden of the mint, held various offices in the bishop's administration in the 1470s (Grainger 1975, 186-7; Woolley 1991, 171-2). The appointment of palatine clerks as wardens had almost certainly ended in the late 1450s, but they might still be employed on mint business.

William Omoryghe was described as a goldsmith of York in the licences of 1473 and 1474, but he was said to be 'of Durham' in 1477, probably indicating

intermittent residence in the city at least. William 'Omere', goldsmith, was made a freeman of York in 1472/3 (Collins 1896, 193). In 1476 William 'Omereg' or 'Omerey', goldsmith, owed 4s. 4d. to the chamberlains of York, increased to 4s. 8d. later in the year, and paid in 1477 (Attreed 1991, 12, 18, 91-2; the final letter of the goldsmith's name is a *yogh*, which can represent g or y). William Omoryghe was probably not the only York goldsmith connected with the Durham mint in the fifteenth century. John Van Arscot, goldsmith, admitted to the freedom of York in 1439/40 (Collins 1896, 154), can be identified with John Arscot, Durham mint-master in the accounts of 1453/4, 1458/9, and 1459/60 (76-7, 79), who was called John 'Goldsmyth' in 1460 (78). Arscot's name probably refers to Aarschot, which is now in Belgium. 'Dutchmen', principally from the Low Countries, Germany, and the Baltic, entered England in relatively large numbers in the early fifteenth century, and in 1434 an Ordinance of Dutchmen regulated 'Dutch' goldsmiths (Reddaway and Walker 1975, 120-6).

In April 1460 John Arscot surrendered his tenure of the Durham mint, with the dies and other equipment, to John 'Norwell' (78). This new mint-master was called 'Norwell' and 'Orwell' in the same account in 1464/5 (83), and in 1460/1 'Orwell' was corrected to 'Norwell' (81). In 1469/70 John 'Orwell' received £10 as part payment for a silver dish for the bishop, in arrears from 1465x9 (88; Grainger 1975, 169-70). 'Orwell' or 'Norwell' can be identified with a prominent London goldsmith, John 'Orwell', 'Orewell', or 'Horwell': 'John (H)or(e)well' could have been misheard as 'John Norwell'. (H)or(e)well entered the goldsmiths' trade as an apprentice in 1402, and during his long career he was warden of the Goldsmith's Company on three occasions (Reddaway and Walker 1975, 300). He made a silver-gilt crozier costing £40 for the abbot of Bury St Edmunds in 1430, and in 1447/8 he was paid £14 to make a font for Canterbury Cathedral (Campbell 1986, 52; 1998, 70). John 'Orewell' was engraver of the king's dies in 1431-45, he engraved seals for Edward IV in 1461-2, and he may have made the local dies used in Durham in

1461x3 (see pp. 18-19). He had connections with York, like John Van Arcscot and William Omoryghe, leaving a house in York to St Mary's Abbey by a will of 8 July 1470. He left his London house in Cheapside to the Goldsmiths' Company in a will of 20 August 1472 (Reddaway and Walker 1975, 300). The goldsmith, engraver, and mint-master who can conveniently be called John Orwell disappears from the Durham accounts between 1470/1 (90) and 1472/3 (93), and he probably died in 1472.

After John Orwell the only Durham mint-master known to have been a goldsmith was George Strayll, described as such in his indenture of 1489 (106). William Richardson was called a merchant in 1494 (111), and a yeoman in 1495 (112). In 1510 Roger Richardson was a merchant, and his son John was a dyer (115-16). However, in 1529 John Richardson's expertise in refining, assaying and minting, learnt as his father's deputy, was cited when he was recommended for his father's office (143). A goldsmith's expertise in refining and assaying would make him particularly suitable for mint office, although managerial skill, discretion, and honesty might also be considered to be qualifications for office (Challis 1975a, 89-90). A goldsmith might have useful business connections with other goldsmiths who could become customers of the mint, such as the Thomas Goldsmyth of Durham who was one of John Orwell's sureties in 1470 (87). There were goldsmiths in Durham's Sadlergate in the late thirteenth- and early fourteenth-centuries, and later in the medieval period goldsmiths had properties in the market place area (Bonney 1990, 158, 163). Merchants left silver at the mint to be coined, according to the indentures of 1495 and 1510 (112, 115), and many of these may have been goldsmiths.

The only known documentary evidence for transactions between the Durham mint-master and a customer is provided by the Bursar's Book of 1530-4. Robert Bennet, the bursar of Durham priory, recorded the sale of a silver cross and some silver-gilt to John Richardson, and the cost of minting parcels of silver (163; Raine

1845, 46-7). The mint-master had to agree to mint an annual quota of silver for the bishop without charge in the late 1460s and early 1470s (see pp. 76-7). In 1523 William Frankeleyn intended to buy silver in London to be minted on the bishop's behalf (133), but the mint may often have been dependent upon the merchants leaving silver to be minted. In 1520/1 the mint was said to be unoccupied due to a pestilence (129), which may have killed some customers and discouraged others from coming into the city, or disrupted their trade. More usually, customers would stay away from the mint if it was unable to offer a competitive price for silver: the operation of the mint price is discussed below (p. 68).

2.4 People: summary and conclusions

The Durham mint usually, but not invariably, had one moneyer or mint-master from its inception in the 1080s. Several twelfth-century Durham moneyers may have leased an argentiferous lead mine in Weardale from the bishop: Christian certainly leased it in the 1160s. The Carlisle moneyer Alan, who seems to have been the Durham moneyer 'Alein', leased the 'Carlisle' mines from the king in the 1180s and 1190s. Twelfth century Durham moneyers might have mercantile interests: Alan sold wine and 'Fobund' was probably the Scottish moneyer Folbold, who seems to have been connected with the wool trade. In 1207 and 1218 the Durham mint was expected to have die-keepers, who supervised the use of the dies. In 1207 all of the English mints were assumed to have assayers, who assessed silver before and after striking. The Durham mint may have had a clerk at various times.

From 1279 to 1423 the Durham mint was intermittently administered by predominantly Italian financiers and itinerant mint-masters, broadly conforming to national and international trends in mint-administration and finance. During the recoinage begun in 1279 the bishop leased the mint to the Riccardi of Lucca, and a representative of the Riccardi became warden of the mint. In 1280-1 new money from the Durham mint was available for use in the Riccardi exchange in Newcastle, and to finance a Riccardi loan to the king's wardrobe. In the recoinage of 1300 the financier and merchant William Servat of Cahors became warden, and his wife Alice exchanged the bishop's coins in 1302. Gregory the moneyer and Henry Pysane, held responsible for making the coins exchanged in 1302, and their contemporary Gamell the moneyer may have been masters of the mint. The bishop's mint-master made coins for the financier-warden or administered the mint under the supervision of a palatine official acting as warden.

The first itinerant Italian mint-master known to have been connected with the Durham mint was Bonageus of Florence, who leased land from the prior of Durham in 1358 and moved to Scotland no later than 1364. In 1367 Andrew of Florence leased the mint, with a local man, John of Bishopdale, after a two-year lease of the archbishop of York's mint. Other Italian mint-masters operated in England and Scotland in the 1350s and 1360s. Florentine commercial interests in England were temporarily curtailed in the 1370s, but Mulkin of Florence was the Durham mint-master in 1412x23, during a revival of Florentine activity begun in the 1390s. Mulkin's mint was located at the Owengate entrance to Palace Green in a survey of the early 1420s, confirming the evidence of a lease of the temporarily disused mint buildings in 1394.

In the receivers' accounts of 1416/17 and later years the warden of the mint was a palatine official, keeping a counter-roll to check the mint-master's accounts. The financial administration of the Bishopric was reformed in 1458x61: the office of receiver was abolished, and the chancellor became *ex officio* warden or comptroller of the mint. Letters from the chancellor in 1523 and 1529 show that his responsibilities then included obtaining dies, silver and workers for the mint, and recommending a new mint-master. In the 1470s palatine officials assisted the chancellor in the supervision of the production of dies.

In 1473-7 the Durham dies were produced by a York goldsmith, William Omoryghe. The mint-master John (Van) Arscot was also a York goldsmith, and his successor John Orwell was a goldsmith with a house in York. Orwell was a prominent London goldsmith, who had been engraver of the king's dies in 1431-45, and he may have made dies for Durham in 1461x3. Another goldsmith, George Strayll, was appointed master in 1489. A goldsmith's skills in refining and assaying would be useful in the mint, and his connections with other goldsmiths might also assist the mint's business. Goldsmiths were probably important customers of the

mint, although Robert Bennet, bursar of Durham Priory, is the only certainly identified customer. The bishop might provide his mint with silver, but it was probably dependent upon its customers.

3. PROFITS: THE DURHAM MINT AND THE BISHOP'S INCOME

3.1 Seignorage and mintage: how to make money by making money

Bullion taken to a medieval English mint was converted into coins with a specified total face value per pound weight of metal of standard fineness. The coins were divided between the 'mint price', paid to owner of the bullion, and the minting charges. The minting charges consisted of the 'mintage', kept by the mint to cover costs of production, and the 'seignorage', which was profit. C.E. Challis (1978, 165-6, 168, 171; 1989, 5-6) has investigated the operation of minting charges, which allowed a profit for mint customers if the mint price paid to them exceeded the market value of their bullion:

$$\begin{aligned} \text{Total face value} &= \text{mint price} + \text{minting charges} \\ &= (\text{market value} + \text{customer's profit}) + (\text{seignorage} + \text{mintage}). \end{aligned}$$

A seignorage of 6d. per Tower pound was customary in royal mints no later than 1189/90, when minting money for the king's use cost 6d. per pound (Stenton 1925, xxiii, 9). 6d. seignorage was charged in the recoinage begun in 1205 (Mayhew 1992, 98), and in the earliest surviving accounts of the London and Canterbury mints, from the 1220s (Blunt and Brand 1970, 61-2). In the *Officia ministrorum cambii*, of c. 1248, the king had 6d. seignorage, with another 10d. for the recoinage of 1247-50, and the moneyers had a customary 6d. in mintage for their costs and remuneration (Johnson 1956, 51-2; Challis 1988, 82-3). Until 1279 the mintage was derived from the substitution of six pennyweights of copper for an equal weight of silver in each pound of silver of standard fineness, and the seignorage was deducted from each pound of silver minted. In the 1260s or 1270s the Bury St Edmunds mint charged 6d. seignorage by deducting 6d. from one pound and 6d. (Allen 1999). The Durham mint probably charged 6d. seignorage until 1279, but it cannot be assumed with certainty that it deducted the 6d. from one pound. From 1279 the mintage and seignorage were both deducted from the coins minted from each pound of silver of standard

fineness. Between 1279 and 1290 there were nine different sets of minting charges in the royal mints (Mate 1972, 77). The rates were stabilized from 1290 to 1344, but there were four sets of charges in 1344-51, and further revisions of the charges in 1351, 1355, 1361, and 1412 (Mayhew 1992, 134-5). Finally, the charges were changed nine times between 1459 and 1526 (Challis 1992, 196). The Durham mint probably did not conform to the fluctuating royal mint charges after 1279: its seignorages recorded in the fifteenth century and the total minting charge of the 1530s differed from royal mint rates.

The seignorage component of the Durham mint's charges is documented in 1416-60. This seignorage was probably negotiated between the bishop's exchequer and the mint-master, changing from time to time. In the 1416/17 account 6d. seems to have been amended to 5d. (68); 5d. may have been changed to 4d. in 1418/19 (69); the 5d. seignorage was restored by 1438/39 (74); and 6d. may have been written in error for 8d. in 1458/9 (77) because the seignorage had just been changed again. When the mint-master paid an annual rent for the mint, as he did from 1460, he would keep all of the minting charges, and a seignorage did not have to be established.

There is no known documentary evidence for the total minting charges of the Durham mint before the sixteenth century. Challis (1975a, 93) has suggested that the minting of an extra 12d. per troy pound of silver, allowed by the Durham indenture of 1510 (115), may imply minting charges of 12d. However, the bursar of Durham Priory had silver minted four times in 1530x4, and on each occasion the minting cost 1½d. per ounce, equivalent to 18d. per troy pound of 12 ounces (163). A Tower indenture of 1485 allowed the deduction of 18d. from each Tower pound, equivalent to 19.2d. per troy pound, but subsequent indentures of the Tower, Canterbury, and York mints until 1540 required the deduction of only 12d. from each pound (using a troy pound from 1526) (Challis 1978, 309-12).

Minting charges, and the mint price for silver, would be varied if a mint customer offered silver that did not conform to the sterling standard of fineness (11 oz. 2 dwt. or 92.5 per cent of the purest possible silver). The silver minted for the bursar in the 1530s always incurred the same charge, implying that it was sterling silver, which was used by all English mints and by makers of silverware.

Goldsmiths were required to use sterling silver by statutes of 1300 and later, reinforced by ordinances of the Goldsmiths' Company, although sale of substandard silver was a persistent problem (Reddaway and Walker 1975, xxv, 4-5, 31, 35-7, 40, 141, 165-6, 169). The Durham seignorages of 1416-60, and the numbers of coins per pound in the Durham indentures of 1495 and 1510, were related to the troy pound of 5,760 troy grains, and in the 1530s the bursar recorded minting charges per troy ounce. The use of troy weights was customary in the goldsmiths' trade, and it was permitted at the London exchange in the 1460s (Reddaway 1967, 17), but the English royal mints used the Tower pound of 5,400 troy grains until 1526.

3.2 The profits of the mint

The earliest known evidence for the profits of the bishop's mint is provided by *Boldon Book*, the survey of Bishop Hugh of le Puiset's annual revenues commissioned in 1183 or 1184. *Boldon Book* records an annual rent of 10m. (10 marks worth 13s. 4d. each), reduced to 3m. before the mint was closed (2; Allen 1994, 381). The exchanging profits of the *sede vacante* period of 1195-6 were included with mining profits in the exchequer accounts (3), and it is not known whether they were rent or seignorage. The profits in the next *sede vacante* period - £18 11s. 0d. in 1208-11 (6) and £4 1s. ½d. in 1211/12 (7) - seem to have been seignorage, as rents of the mint were usually multiples of marks or pounds. Payments of seignorage alternated with payments of rent, both kinds of payment being predominantly annual, until the closure of the mint in the 1540s. The mint yielded seignorage in 1283 (26); rent in 1307 (37), 1311 (42), 1316-17 (46) and 1367/8 (62); seignorage in 1416x60; and rent from 1460 to 1541. The final change from seignorage to rent was associated with an increase in revenue: the last full year of seignorage (1458/9) provided only £2 (77), but a rent of £6 13s. 4d. was paid in 1460/1 (81). Other changes between seignorage and rent may also have been intended to increase revenue, or to guarantee a reliable income from the mint, in the case of changes to rent.

Table 4 lists the known seignorages and rents. W.H.D. Longstaffe (1867, 25, 28-30, 33, 37, 39) used most of the fifteenth-century documentary evidence to 1458/9 in a pioneering study of the coinage of Henry IV, Henry V, and Henry VI. P.N. Grainger (1975, 168), has tabulated the receipts from 1458/9 to 1478/9, omitting the 14s 10½d. seignorage of 1459/60. A.G. Woolley (1991, 117-20) added 1453/4, but his suggestion that the all of the receipts he listed were 'round number' rents is incorrect. Woolley's listing of annual receipts from 1487/8 to 1491/2 is a misinterpretation of an unpaid rent, probably incurred in 1485, which was recorded in the books of transumpt of those years (see pp. 74-5). Challis (1975a, 100-1; 1978, 74) has tabulated the rents from 1510 to 1559.

Table 4. *Revenue from the mint*

<i>Accounting year or period</i>	<i>Seignorage per troy lb.</i>	<i>Annual rent</i>	<i>Amount due</i>	<i>Remarks</i>
1158xc. 1169		10m., then 3m.		Valuation
1195/6-1196 (¾ of a year)	?		?	£170 0s. 4d. from mint and mine
24.6.1208-11.11.1211	?		£18 11s. 10d.	
1211/12	?		£4 1s. ½d.	
13.6.1283-4.9.1283	?		£13 3s. 6d.	
7.7.1307-11.11.1307		£75?	£26 10s. 0d.	Payment for 129 days?
3.3.1311-20.5.1311		£50?	£12 10s. 0d.	Payment for one term?
10.10.1316-4.5.1317		40m.?	£13 6s. 8d.	Payment for two terms?
1367/8		4m.		Indenture
1412xc. 1421	5d., then 4d.?		20m., then 3m.	Valuation
1416/17	5d.		£3 16s. 3d.	
1418/19	4d.		£1 4s. 3d.	
1424/5	4d.		Nil	
1427/8			Nil	No account
1434/5	4d. or 5d.?		10s. 10d.	
1438/9	5d.		£3 1s. 3d.	
1453/4	5d.		£1 10s. 0d.	
1458/9	8d.		£2 0s. 0d.	
29.9.1459-7.4.1460	8d.		14s. 10½d.	
7.4.1460-29.9.1460		10m.	£3 6s. 8d.	Half year
1460/1		10m.	£6 13s. 4d.	
1463/4		10m.		Valuation
29.9.1464-10.8.1465		20m.	£11 10s. 1¾d.	Payment for 315 days
10.8.1465-29.9.1465		30m.	£2 14s. 9½d.	Payment for 50 days
29.9.1465-6.4.1466		30m.	£10 0s. 0d.	Half year
6.4.1466-29.9.1469				All receipts to the bishop
1469/70		30m.	£20 0s. 0d.	
1470/1		30m.	£10 0s. 0d.	Half year
1472/3		40m.	£26 13s. 4d.	
1473/4		40m.	£26 13s. 4d.	Pence
1473/4		10m.	£6 13s. 4d.	Halfpence
1474/5		40m.	£26 13s. 4d.	Pence; not paid
1474/5		10m.	£6 13s. 4d.	Halfpence; not paid
1476/7		20m.	£13 6s. 8d.	
1478/9		20m.	£13 6s. 8d.	
1484/5?		20m.?	£6 13s. 4d.	Half year?
1486/7?		20m.	£13 6s. 8d.	

Table 4 (cont.). *Revenue from the mint*

<i>Accounting year or period</i>	<i>Seignorage per troy lb.</i>	<i>Annual rent</i>	<i>Amount due</i>	<i>Remarks</i>
1510/11		15m.	£10 0s. 0d.	
1511/12		15m.	£10 0s. 0d.	
1512/13		15m.	£10 0s. 0d.	
1513/14		15m.	£10 0s. 0d.	
1514/15		15m.?	£10 0s. 0d.?	Half paid
1515/16		15m.?	£10 0s. 0d.?	Nothing paid
1517/18		15m.	£10 0s. 0d.	Nothing paid
1518/19		15m.	£10 0s. 0d.	Nothing paid
1519/20		5m.?	£3 6s. 8d.?	£1 13s. 4d. owed: half year?
1520/1		5m.	£3 6s. 8d.	Nothing paid
1523/4		5m.	£3 6s. 8d.	Nothing paid
1524/5		5m.	£3 6s. 8d.	Nothing paid
1526/7		5m.	£3 6s. 8d.	Nothing paid
1527/8		2m.	£1 6s. 8d.	
1528/9		3m.	£2 0s. 0d.	£1 5s. 0d. paid for half year and 40 days
1529/30		5m.	£3 6s. 8d.	£1 13s. 4d. paid for half year
1530/1		5m.	£3 6s. 8d.	
1531/2		5m.	£3 6s. 8d.	
1532/3		5m.	£3 6s. 8d.	
1533/4		5m.	£3 6s. 8d.	
1534/5		5m.	£3 6s. 8d.	Nothing paid
1535/6		5m.	£3 6s. 8d.	Nothing paid?
1536/7		5m.	£3 6s. 8d.	Nothing paid
1537/8		5m.	£3 6s. 8d.	
1538/9		5m.	£3 6s. 8d.	
1539/40		5m.	£3 6s. 8d.	
1540/1		5m.	£3 6s. 8d.	
1541/2-1542/3		5m.	£3 6s. 8d.	Nothing paid

The terminal dates of accounting periods in table 4 are as stated in the accounts, although this may cause a day to be included in two successive periods. Accounting years usually ended at or about Michaelmas (29 September) or Martinmas (11 November). The *sede vacante* accounts of 1208-11 and 1211/12 both ended at Martinmas, which was the customary end of the Bishopric's accounting year from no later than the twelfth century (Lapsley 1900, 264). The receiver's account of 1306/7 ends at Martinmas (Greenwell 1852, xxv-xxxix), not at Michaelmas as assumed by G.T. Lapsley (1900, 265-6). The receiver's account of 1339/40 is for the period from the eve of Martinmas 1339 to Martinmas 1340 (DCD, Loc.V:32). The indenture of 1367, which leased the mint for one year from Martinmas, specified

payment of the rent at the four major terms of the Bishopric, beginning with St. Cuthbert in March (20 March): presumably, the first payment fell due at the term-day and was to be paid during the term (62). The major terms were Martinmas, St. Cuthbert in March, St. John the Baptist's day (24 June), and the translation of St. Cuthbert (4 September) (Lapsley 1900, 264-5). The £12 10s. profit from the mint in the *sede vacante* period of 3 March - 20 May 1311 (42) may have been a quarter of an annual rent of £50 due for the term of St Cuthbert in March 1311. Similarly, the £13 6s. 8d. (20 m.) of 10 October 1316 - 4 May 1317 (46) may have been two quarters of a 40m. rent due at Martinmas 1316 and St Cuthbert in March 1317. The four major terms of the Martinmas year were still used for some payments recorded in Bishop Hatfield's survey of 1377xc. 1382 (Greenwell 1857, vii, 1-193 passim), but the receiver's account 1385/6 has an undivided Michaelmas year (Greenwell 1857, 260). Michaelmas years were used throughout the fifteenth century in accounting for the mint's profits. However, Roger Richardson rented the mint from Martinmas 1510 (115), and from 1527 (137) the mint's rent year ended at Martinmas, although the bishop's exchequer was still using a Michaelmas year. In this period of Martinmas accounting half of the rent was payable after Pentecost, but Easter was used to halve Michaelmas accounting years. In April 1460 John Orwell agreed to pay halves of his annual rent at the next Michaelmas and Easter (78), and his tenure of the mint temporarily ended at Easter 1466 (84).

Challis (1975a, 95 n. 17) has suggested that William Richardson and Robert Bagot may have been responsible for the mint's rent for a half-year from Lady Day (25 March) 1487, and for the two following years from Michaelmas 1487. The books of transumpt, which recorded expected revenue and revenue as it was received, charged Richardson and Bagot with £6 13s. 4d. for the second year of Bishop Shirwood, and with twice as much for the fourth year, subsequently changed to the third year (103-5, 108-10). Shirwood was consecrated on 26 May 1484, and obtained his temporalities on 6 August 1485, and it might be assumed that the years

used to date Shirwood's accounts were reckoned from the restitution of the temporalities. However, the master forester's account of 1484-6 places the Michaelmas of Shirwood's first accounting year in 1484 (CCBpric 190031, mm. 1-2). The rent of the mint in the second year, if it was for a half-year, probably referred to a period from a date after the supply of the dies authorized in December 1484 (102), to about the time of the battle of Bosworth (22 August 1485). The rent of the fourth year, possibly changed to the third year in a mistaken belief that the second year should be followed by the third, may refer to 1486/7. The earliest known Durham coins of Henry VII (1485-1509) belong to his facing bust type II, which was introduced between May 1486 and July 1487 (Metcalf 1976, x), and they may have been struck in the 1486/7 accounting year.

Rents were not always related to full, half or quarter years. In 1464/5 John Orwell paid rent for 315 days at one rate, and for the remaining fifty days at an increased rate (83). In 1528/9 rent was paid for a half-year and forty five days (144), probably from 11 November 1528 to 24 June 1529 (Challis 1975a, 91). The £26 10s. rent in the 1306/7 receiver's account (37) may have been derived from an annual rent of £75 by including the terminal dates of the account (7 July and 11 November), and the non-existent 31 September, in a calculation of 129 days' rent at a daily rate:
 $129/365 \times £75 = £26 \text{ 10s. } 1.64\text{d.}$

John Orwell's recognizance of 1460 seems to stipulate that the two payments of £3 6s. 8d. for the year's rent should be made within forty days of Michaelmas 1460 and Easter 1461 (78). However, he paid £1 6s. 8d. fifteen days before Easter 1461, and the £2 residue of the Easter 1461 rent seems to have been paid on 11 December (80). The rent due at Easter 1466 was paid much more promptly, only eight days late, but this was an exceptional final payment when Orwell's tenure of the mint temporarily ended (84). More usually, payments due at Michaelmas or Martinmas were made in December, before the final auditing of the receiver-generals' accounts:

on 18 December 1461 (80), 3 December 1513 (121), 15 December 1531 (152), 19 December 1533 (158), and 17 December 1541 (179).

Mint-masters attended the bishop's exchequer, to render their accounts, and to be discharged from responsibility for the seignorage or rent paid. The receivers' and receiver-generals' accounts of 1416-60 cite details (*parcelles*) produced by the mint-master at the accounting (68-79 passim). The receiver-generals' accounts of 1531/2, 1532/3, and 1538/9 refer to the examination of the mint-master's account (155, 159-90, 175), and the book of transumpt of 1531/2 describes this account as a bill remaining in his hands (154).

In 1465/6 John Hertipole, one of the Bishopric's two auditors (CCBpric 189819, mm. 3, 4), spent three weeks with John Orwell unsuccessfully reviewing the mint's 'rental' (Grainger 1975, 169). Orwell's tenure of the mint ended on 6 April 1466, with a final payment of rent to the bishop in person on 14 April. John Rode spent two weeks visiting the mint-master on the bishop's business, and Hertipole was occupied for another four weeks in July for the same reason: this business may have included Orwell's remaining liabilities. Orwell had to pay for part of a water pipe from the Cathedral to the Castle, which presumably passed under the mint. The construction of a fence around the mint in July and August 1466, at the bishop's expense, probably followed a decision to manage the mint without a mint-master (84). In the receiver-general's account of 1466/7 it was stated that the profits of the mint for the year had been paid to the bishop himself (85). The mint disappeared from the accounts until 1469/70, and it may have been administered by palatine clerks not accountable to the receiver-general.

John Orwell regained control of the mint from Michaelmas 1469, paying his old rent of 30m., with an additional annual obligation to mint up to 20 troy pounds of silver for the bishop, free of charge (89-90). This obligation was recorded in all mint

accounts until 1478/9, but a space left for the weight to be struck was not filled in 1476/7 and 1478/9 (99-100), possibly indicating that the bishop did not have silver minted in those years. The silver probably came from the bishop's mines in Weardale: the minting of mined silver would give it an extra value as coinage. In 1523 the chancellor William Frankeleyn considered that it would be 'profitable' to buy silver in London for striking in Durham (133), although the bishop no longer had a right of free coinage.

Ian Blanchard (1973b, 97, 100-5, 107-8, 110-11) has argued that a new system of accounting for the bishop's lead mines, instituted under William Frankeleyn in 1523, was intended to determine net profits. Earlier accounts had not connected gross profits with associated costs. Lead was mined regardless of cost, because the bishop was entitled to mine it, as a symptom of a 'patrimonial endowment syndrome'. The operation of the bishop's mint provides some evidence of such a 'syndrome'. The receivers' and receiver-generals' accounts never determined the net profit of the mint, after expenditure on buildings and equipment. Bishop Langley defended his 'patrimonial endowment' of a mint, *inter alia*, in the parliament of 1433 (72; Storey 1961, 128), but in 1434/5 his mint provided a gross profit of only 10s. 10d., which may not have covered costs. In 1418/19 the mint-master had been allowed to deduct 3s. 7d. from the seignorage of £1 4s. 3d., for repairs to the mint (69), and in 1511 repairs cost £5, equivalent to half of the mint's rent (117). Further repairs cost £2 15s. 9½d. in 1522/3 (134). The mint-master was responsible for the cost of repairs from 1527, according to the books of transumpt (140-81 *passim*), but the bishop paid 2s. 1d. for repairs to the fence in front of the mint in 1535/6 (167). The fence had cost the bishop 16s. 8d. in 1466 (84). There was also the hidden cost of the rent of mint buildings possibly foregone when the mint was open: in 1394 William Warde agreed to pay 5s. per annum and the maintenance costs (66), and in 1423-5 the mint-house was leased for 9s. (71). The bishop paid £2 6s. 4d. for the local manufacture of dies in 1476/7 (99). Bishop Booth owned the dies and other equipment of the

mint in 1460, according to the recognizance of that year (78), presumably incurring some costs for the equipment. However, in 1367 the mint's lessees agreed to pay all of costs of the mint (62), and the cost of dies was the responsibility of the mint-master in 1510 (115). The evidence for the size of the bishop's costs is fragmentary, but the available evidence suggests that costs may often have been equivalent to a large percentage of gross profits, particularly if the profits were relatively low.

3.3 The mint's contribution to the bishop's revenue

The evidence for the total revenue of the Bishopric is heterogeneous, principally consisting of receivers' and receiver-generals' accounts, *sede vacante* accounts, and valuations. Annual totals of revenue provided by receivers' and receiver-generals' accounts exclude substantial receipts from some estates, worth about £1,000 in the episcopate of Bishop Langley (1406-37), and allowances for expenses (Storey 1961, 68-9, 73, 75-6). *Sede vacante* accounts include allowances for expenses, but revenue might be abnormally high with money from the late bishop's reserves, large sales of crops and stock, or special taxation (Howell 1962, 51-2). Valuations intended for use in the administration of the Bishopric might include revenues that were not currently received, such as the mint's rent in the *valor* of 1463/4 (82). The valuation of the Bishopric in the king's *Valor Ecclesiasticus* of 1535 was deliberately set as low as possible (Lapsley 1900, 294), with the mint's rent used as the valuation of the entire castle area (164). None of these diverse sources of evidence include the bishop's diocesan spiritualities. Nevertheless, it may be possible to make speculative comparisons between estimates of the total revenue from the temporalities and the gross revenue from the mint.

Table 5 provides approximate estimates of the annual revenue of the Bishopric, in multiples of £500. The estimate for 1158xc. 1169 is derived from the work of G.V. Scammell (1956, 194, 202-3), who estimated that Bishop Hugh of le Puiset had an income rarely less than £3,000, having allegedly doubled the revenue of the Bishopric during his episcopate (1153-95). The £6,000 estimate for 1306/7 is based upon the total (£5,695) on the receiver's roll of that year (Greenwell 1852, xxxiv), which excludes income from confiscated temporalities, and includes unpaid arrears. R.L. Storey (1961, 68) has estimated that the average annual income of Bishop Langley was nearly £4,000, and this figure has been adopted for 1412xc. 1421. £4,000 has also been used for 1367/8, as the four wards of the Bishopric and Sadberge yielded similar revenues in the receivers' accounts of 1385/6 and 1416/17:

£2,572 and £2,445 respectively (Storey 1961, 69). P.N. Grainger has analysed *valors* of the Bishopric for 1463/4, 1476/7 and 1478/9, and calculated their net totals as £2,893, £3,151, and £3,207 respectively. Combining *valors* and accounts, Grainger (1975, 223-30) has estimated that the actual net revenue of the Bishopric in 1457-79 was normally £2,000-£2,500, or possibly more than £2,500. £2,500 has been used as the estimated income in 1458/9-1478/9. The receiver-generals' totals rose from about £2,200 in 1476/7 and 1478/9 to £2,700 in the first decade of the sixteenth century (Pollard 1990, 53-4), and the estimates for 1510/11-1530/1 have been increased to £3,000, exceeding the probably conservative £2,398 valuation in the *Valor Ecclesiasticus* of 1535. D.M. Loades (1987, 106) has estimated that the normal revenue of the Bishopric in the 1550s was slightly more than £2,800.

The *sede vacante* totals of 1208-12 and 1283 in table 5 are taken from the calculations of Margaret Howell (1962, 217-18), which exclude *sede vacante* taxation. The total for 1311 is an incomplete figure, excluding some manors (Fraser 1957, 107 n. 4). The table includes all of the *sede vacante* periods with a recorded mint revenue. It also includes each different annual rent known from *Boldon Book*, accounts, the 1367 indenture, and the survey of c.1421. 1458/9 has been used as a year representative of the seignorage payments of the 1450s, but the seignorage payments of the 1430s are too diverse (10s. 10d. and £3 1s. 3d.) to allow the selection of a representative year.

Table 5. *The mint's contribution to the revenue of the bishop*

<i>Period</i>	<i>Bishopric annual estimate</i>	<i>Sede vacante</i>	<i>Mint</i>	<i>Mint % of total</i>
1158xc. 1169	£1,500-£3,000		10m. 3m.	0.22-0.44 0.07-0.13
24.6.1208-11.11.1212		£14,283	£22 12s. ½d.	0.16
13.6.1283-4.9.1283		£1,926	£13 3s. 6d.	0.68
1306/7	£6,000		£75?	1.25?
3.3.1311-20.5.1311		>£1,525	£12 10s	<0.82
1367/8	£4,000		4m.	0.07
1412xc. 1421	£4,000		20m. 3m.	0.33 0.05
1458/9	£2,500		£2	0.08
1460/1	£2,500		10m.	0.27
1464/5	£2,500		20m. 30m.	0.53 0.80
1472/3	£2,500		40m.	1.07
1473/4	£2,500		50m.	1.33
1478/9	£2,500		20m.	0.53
1510/11	£3,000		£10	0.33
1519/20	£3,000		2½m.	0.06
1527/9	£3,000		2m.	0.04
1528/9	£3,000		£2	0.07
1530/1	£3,000		5m.	0.11

It would be unwise to make detailed comparisons between the estimated percentages of the Bishopric's revenue provided by the mint, as they are based upon speculative estimates of total revenues and gross mint revenues containing unknown percentages of costs. Nevertheless, it is possible to offer some tentative conclusions. The mint may have normally provided only 0.1 or 0.2 per cent of the bishop's temporal income in the late twelfth- and early thirteenth-centuries, when it was open, but this increased to about 1 per cent with the exceptional mint outputs of the 1280s and the first two decades of the fourteenth century (see pp. 105-6 for estimates of these outputs). The mint's share of total revenue fell back to 0.1 per cent or less in the late fourteenth- and early fifteenth-centuries, with a temporary improvement due to an increase in output after the reduction of the coinage's weight in 1412 (see p. 137). The share improved again in the 1460s, after a change from seignorage to rent, reaching about 1 per cent in the early 1470s. The percentages of the early 1470s were not sustained, and the share was usually 0.1 per cent or less in the last two decades of the mint's existence. The mint never made a major contribution to the bishop's income.

3.4 Profits: summary and conclusions

The Durham mint deducted minting charges from the silver minted, leaving a mint price to be paid to the customer bringing silver. The deductions would have to be adjusted if the customer's silver was not of sterling standard. The charges consisted of seignorage, paid to the bishop if he received a share of the profits, and mintage, kept by the moneyer or mint-master. Before 1279 the Durham mint may have conformed to the royal mint rates, 6d. per Tower pound for seignorage and 6d. for mintage, but such conformity was unlikely during the rapid changes in the charges of royal mints from 1279. The rates of seignorage of the Durham mint are known only in 1416x60, when they differed from the royal mint seignorages, and they changed frequently, probably by negotiation between the mint-master and the bishop's exchequer. The Durham seignorages of 1416x60 were related to troy weights, which were not used in royal mints before 1526. In the 1530s Robert Bennet paid total minting charges of 1½d. per troy ounce, equivalent to 18d. per pound, 6d. more than the charges elsewhere. Undocumented Durham charges cannot be inferred from the charges of other mints with certainty.

Payment of seignorage might be replaced by a rent. Seignorage provided a share of increased profits, but rents provided a reliable income and could exceed the yield of seignorage. Rents were always multiples of pounds or marks. In 1466-9 the bishop directly managed the mint, receiving all of the profits, and presumably paying all of the costs of minting. The mint-master recovered control of the mint in 1469, but with an additional obligation to mint up to twenty troy pounds of the bishop's silver free of charge.

The mint's seignorage and rent payments were predominantly annual, with accounting years ending at or about Martinmas until the late fourteenth century. Michaelmas replaced Martinmas in the accounts of the bishop's exchequer from the 1380s. Martinmas was restored as the end of the mint's accounting year in the

sixteenth century, contrary to the practice of the exchequer. In 1367/8 payments were to be made at the four major terms of the Bishopric's Martinmas year, but in 1527-43 the Martinmas year was halved, using Pentecost as a term-day. Michaelmas years were halved at Easter, if necessary. Rents for part of a year were calculated using a daily rate in 1464/5 and 1528/9, and probably in 1306/7. The rent may have been payable within forty days of the term-days in 1460/1, but it was usual to pay rents due at Michaelmas and Martinmas in December, sometimes more than forty days late. Mint-masters presented their accounts after the final payment of the year, for audit.

The accounts of the bishop's exchequer never showed the net profits of the mint, after costs. The mint-masters agreed to pay all of the costs of minting in 1367/8, but the bishop paid for repairs to the mint from no later than 1418/19 to 1527, and retained responsibility for the mint's fence after 1527. The mint buildings could not be rented when the mint was open, with a consequent possible loss of income. The cost of obtaining dies was the bishop's responsibility in the 1460s and 1470s, and probably at other times, although it was the mint-master's expense in 1510. The bishop might also have to pay for the other equipment of the mint, which belonged to him in 1460. Total costs may often have been equivalent to a large proportion of gross profits. The operation of the bishop's lead mines with low or non-existent gross profits, and no determination of net profits, has been called an example of 'patrimonial endowment syndrome': this term might be applied to the Durham mint at times of low output and profits.

The mint may have provided about one per cent of the bishop's income from his temporalities at times of exceptionally large output, in the early 1280s and the first two decades of the fourteenth century, and its contribution may have briefly increased to a similar level in the early 1470s. More usually the mint might yield only 0.1-0.3 per cent of the bishop's temporal income, or less.

4. THE OUTPUT OF THE DURHAM MINT

4.1 Beginnings and growth: 1080s-1279

The earliest known coins of the Durham mint are pence of the *Paxs* type (*BMC* William I type VIII), probably struck in 1087-8 or slightly later (Allen 1994, 384-5, 396). Four of these coins were found in the Beauworth (or 'Beaworth') hoard, providing only 0.06 per cent of the hoard's 6,486 *Paxs* coins listed by Edward Hawkins (1836, 10; Metcalf 1988, 19-20). The Beauworth hoard's evidence for Durham's contribution to English mint output in the *Paxs* type stands alone. The next largest list of *Paxs* coins from a hoard consists of only thirty pence, from the Tamworth hoard (Thompson 1956, 132-3; Stewart 1992a, 129). The York Jubbergate (or Peterlane) hoard probably had less than thirty *Paxs* pence, eight of which have been listed (Pirie 1975, xxxvii), and only one *Paxs* penny is known from the Shillington hoard (Thompson 1956, 124).

After the *Paxs* type the only known survivors from the Durham mint's relatively insignificant output in the eleventh century are apparently unique coins of William II *BMC* types II and III (Allen 1994, 385-6, 396). Ian Stewart has reviewed the two relatively substantial published hoards with coins of William II (1087-1100) later than the *Paxs* type: Shillington and Tamworth. The Durham mint is not represented in Stewart's list of fifty-two William II *BMC* type II coins probably or certainly from Shillington, and it is also missing in the list of 164 type II coins from Tamworth (Stewart 1992a, 124-32; Thompson 1956, 132-3). The type III penny of Durham published by P.W.P. Carlyon-Britton (1921) could have been a previously unrecorded stray from the Shillington hoard, but the sixty-two type III pence in Stewart's reconstruction of this hoard do not include a Durham coin. The evidence of the Shillington and Tamworth finds would not contradict an estimate of Durham's contribution to late eleventh-century national mint output, based upon the Beauworth hoard, of less than 0.1 per cent.

Durham's contribution to the English coinage remained relatively insignificant in the reign of Henry I (1100-35). Only three Durham pence of Henry I are known: a coin of *BMC* type X and two specimens of type XIV (Allen 1994, 386-7, 396). The Lincoln (Malandry) hoard included the type X penny in 159 coins of the type attributable to a mint (*CH* 1, 90), and the fifty-eight type XIV pence in the Watford 'No. 1' find included the two known Durham coins of the type (Thompson 1956, 143-5). Durham's percentage of national output was probably much less than these two hoards might suggest. The thirty-seven finds in Mark Blackburn's corpus of hoards with coins of Henry I contained at least 223 coins of type X and 822 of type XIV (1990, 78-81). Durham provided only 0.4 per cent and 0.2 per cent of the hoard coins of the two types, respectively. The Durham mint may have supplied *c.* 0.1-0.5 per cent of national output in the reign of Henry I, when it was open.

Blackburn's corpus of hoards containing coins of Stephen (1135-54) lists thirty-seven hoards, with a minimum of 2,275 coins of *BMC* type I, excluding ninety-one coins of this type from the 'erased' dies not used at Durham (1994, 202-4). Only eleven type I pence known to be from the hoards listed by Blackburn can be attributed to the Durham mint, with a twelfth coin attributable to Durham or Dunwich (Allen 1994, 387-91, 396-7). These eleven or twelve coins constitute *c.* 0.5 per cent of Blackburn's 2,275, and this may be a useful estimate of Durham's contribution to output.

Derek Allen's review of seventeen hoards containing coins of Henry II's Cross-and-Crosslets or 'Tealby' coinage (1158-80) includes only four adequately recorded hoards with more than twelve coins of this type: Lark Hill, Leicester, Awbridge and Ampthill (1951, xlv-lx). As the Durham mint produced Cross-and-Crosslets classes A-C only, coins of the remaining classes (D-F) in the four hoards should be excluded from any estimate of the Durham mint's share of output. Durham provided two of the 130 coins of classes A-C in Allen's summary of the Lark

Hill hoard. His analysis of 160 of the 238 coins in the Leicester hoard includes one Durham penny in seventy-two coins of the three classes. The Durham mint was not represented in the sixty-five coins of classes A-C from the Awbridge hoard identified by Allen, or in the Amphill hoard, which had at least thirty-eight coins of the three classes. The three Durham pence in the four hoards are 1.0 per cent of the minimum aggregate of 305 coins of classes A-C.

The Cross-and-Crosslets hoard evidence is consistent with D.M. Metcalf's summary of the dies represented in Allen's *BMC*, which credits the Durham mint with five obverse dies (piles) in a total of 470 dies of classes A-C, or 1.1 per cent (1977b, 26-31). Metcalf suspected a general overestimation in his *BMC* totals, but he increased his count of obverse dies for classes A-C from 470 dies to 697 equivalent dies - 697 dies with the same mean output as the 470 known dies - by estimating the output of dies not represented in the *BMC*. Durham's five obverse dies are 0.7 per cent of this revised total. The combined evidence of dies and hoards indicates that Durham's share of output in Cross-and-Crosslets classes A-C was probably between c. 0.5 and c. 1 per cent.

Metcalf (1977b, 26-7) used his total of equivalent reverse dies for the Cross-and-Crosslets coinage (1,344) to estimate that the total output of all mints during the coinage may have been between ten and thirty million pence (c. £42,000-£125,000). He multiplied the 1,344 equivalent dies by 14,000 and 20,000 coins, with about nineteen million and twenty-seven million pence as the necessarily tentative result. Brand (1970, 139) found that reverse dies (trussels) produced about 20,000 pence (c. £83) at Shrewsbury in 1249-50, and Mate (1969a, 211) calculated outputs per reverse die for eight mints in 1299/1300 between 10,875 pence (c. £45) and 17,303 (c. £72). The five Durham reverse dies could have produced c. £200-£400 at c. £40-£80 each. This is an extremely speculative calculation, but c. £20-£40 may be a useful estimate for the Durham mint's mean annual output in approximately a decade from the late

1150s to the late 1160s.

The Durham mint's reopening in 1195-6 was contemporary with the earliest documentary evidence that might provide output statistics for some English mints. Exchequer accounts record profits due from the Canterbury mint for 1194-6, the London mint for 1194-6 or 1195-7, and from all of the royal mints combined in 1201-5 (Brand 1994, 33-5). Outputs could be calculated from these profits, if they were derived from the king's 6d. per pound seignorage. John Brand (1994, 37-8) noted that if a similar payment of £73 for the London mint in 1217-18 came from the 6d seignorage, the calculated output of £2,920 would be consistent with the recorded payment of 15s. to the die-keepers being at the 6d. per £100 rate paid on later occasions. Unfortunately, outputs calculated from the profits of 1194-1205 could not be used to estimate the Durham mint's output, by comparison of the representation of mints in hoards. The Gisors hoard had one Durham penny in its thirty-eight coins of Short Cross class 4 (c. 1194-1204/5) (Dumas and Brand 1971, 25, 32-41), but no other published hoard has provided any class 4 coins of Durham. The Naxos hoard had twenty-nine class 4 coins, without a Durham penny (Stewartby 1994, 150, 157-60). The Bainton hoard had more class 4 pence (eighty), but it was not fully representative of class 4, as it was deposited during the production of the class. It can only be very tentatively suggested that Durham's percentage of national output in class 4 may have been of the same order of magnitude as its contribution to Cross-and-Crosslets output (c. 0.5-1.0 per cent).

Three adequately published hoards have contained more than one hundred coins of Short Cross class 5 (1204/5-c. 1209/10), far exceeding the thirty-two or fewer coins in the Rotenfels hoard (Gittoes and Mayhew 1983, 21-1, 24-7), the next largest representation of class 5. The 1911 Ribe hoard had 192 class 5 pence, with three coins of Durham (Stewart and Brand 1971, 55-9); Naxos provided two Durham coins in 178; and Gisors had no Durham coins in its 114-16 class 5 pence (two London

pence in the Gisors hoard could be attributed to class 5 or class 6). The five Durham pence in these three hoards were *c.* 1.0 per cent of the 5 aggregate (484-6), and Durham's contribution to class 5 output may have been *c.* 1.0-1.5 per cent. The seventeen class 5 obverse dies known from Durham coins are *c.* 1.2-1.6 per cent of my estimate of 1,082-1,471 obverse dies used to produce class 5 (1989, 49-52, 54, 56-7, 70).

A speculative estimate of the absolute size of the Durham mint's annual output during the recoinage of 1205-7 can be derived from a comparison with the London mint. The three hoards used for the estimation of class 5 output contained seventy-seven London pence of classes 5a and 5b made in 1204/5-7, no class 5a Durham pence, and four Durham pence of class 5b equivalent to 5.2 per cent of the seventy-seven London coins. In classes 5a and 5b, the ten obverse dies known from Durham pence are equivalent to 2.9-4.4 per cent of 229-340, the estimated number of London obverse dies. £710 16s. 9d. profit was due from the London mint for one year from 13 January 1205 (Stewart 1989b, 39-40; Brand 1994, 35), which may have been 6d. per pound seignorage on an output of £28,433 10s.. If it can be assumed that in 1205-6 the Durham output was *c.* 3-5 per cent of the postulated London output, the Durham mint may have produced about £850-£1,400 in the year.

There are no recorded profits that might be used to calculate outputs of royal mints between 13 January 1206 and 30 November 1210 (Stewart 1989b, 40-1; Brand 1994, 35-6). However, George North used the Durham mint's first recorded profit of £18 11s., for the period from 24 June 1208 to 11 November 1211 (6), to calculate an output of £1,484 (Ruding 1840, II, 165 n.4). The result of North's calculation implies a 3d. seignorage. If the £18 11s. came from the customary 6d. seignorage, the output would have been £742, equivalent to an annual output of £311 6s.. The £4 1s. ½d. profit for the year to 11 November 1212 (7) would indicate an output of £162 1s. 8d., if it came from 6d. seignorage.

There is no documentary evidence for the output of the Short Cross class 7a dies supplied to Durham in 1218 (9; Allen 1979, 52-3). The Eccles and 1903 Colchester hoards contained class 7a coins of Durham, attributed to Evans class V (Greuber 1903, 123; Stewartby 1993a, 140). The Evans class V statistics for coins of other mints in these hoards do not exclusively refer to Lawrence class 7a, preventing calculations of Durham's contribution to class 7a. No other published hoards contained class 7a coins of Durham.

The exchange of three old pairs of dies for three new pairs on 12 December 1253 (15) was probably recorded because it was the first exchange since the initial supply of Long Cross dies on 27 June 1253 (14), creating a precedent. If the Durham mint had used three trussels in about half of a year, producing perhaps *c.* £40-£80 each, output may have been at the rate of *c.* £250-£500 per annum. This estimate can be tested with hoard evidence. Marion Archibald (1977, 168-74) has used data from six hoards to compare the contributions of the London, Canterbury, and 'provincial' mints to the Long Cross coinage, estimating aggregate outputs of the provincial mints from the documented outputs of Canterbury and London. Only two of Archibald's hoards contain more than a few hundred coins and more than one Durham penny: the 1969 Colchester hoard (information from Dr B.J. Cook) and the Slype hoard (Brooke 1914). Coins of classes Va and Vc have been excluded from table 6 because the Durham mint opened after the inception of class Va, and it may have closed during the production of class Vc (see p. 302), preventing valid comparisons with the Canterbury and London mints, which were open throughout the period of classes Va-Vc (1250-*c.* 1256).

Table 6. *Class Vb Long Cross pence in hoards*

<i>Hoard</i>	<i>Durham</i>	<i>Canterbury</i>	<i>Durham/Canterbury ratio</i>	<i>London</i>	<i>Durham/London ratio</i>
Colchester	13	1141	1:87.8	1213	1:93.3
Slype	3	91	1:30.3	106	1:35.3

The numbers of Canterbury and London coins in the two hoards are consistent, with London marginally in the lead, but the small number of Durham coins in the Slype hoard undermines confidence in its ratios. The Colchester data can be used to estimate the Durham output from the Canterbury and London outputs, which are known for two periods in 1252-6 (Blunt and Brand 1970, table I; Challis 1992, 674). In tables 7 and 8 the Canterbury and London outputs have been combined with the Colchester hoard ratios to estimate the Durham output.

Table 7. *Durham mint output estimated from the Canterbury output*

<i>Period</i>	<i>Canterbury output</i>	<i>Durham estimate</i>	<i>Annual equivalent</i>
May 1252-Nov. 1254	£90,159	£1,027	c. £410
Nov. 1254-July 1256	£66,408	£757	c. £450

Table 8. *Durham mint output estimated from the London output*

<i>Period</i>	<i>London output</i>	<i>Durham estimate</i>	<i>Annual equivalent</i>
May 1252-Nov. 1254	£84,526	£906	c. £360
Nov. 1254-July 1256	£51,689	£554	c. £330

The periods in tables 7 and 8 almost certainly do not coincide with the period of production of class Vb in Durham, but the similarity of the annual estimates encourages confidence in them. The tables do not contradict the c. £250-£500 estimate of annual output inferred from the documentary evidence of 1253, and this estimate can be allowed to stand for the period between the first supply of dies in June 1253 and the temporary closure of the mint no later than c. 1256 (see p. 302). Output estimates for the production of Long Cross classes Vg, VI, and VII in Durham will not be attempted, as there is no known documentary evidence, and no adequately recorded large hoard.

4.2 Booms and slumps: 1279-1351

4.2.1 Hoard-mint output estimates, 1280-1351

Hoards have been used to estimate some undocumented pre-1279 outputs from documented outputs, by comparing the representation of mints in the hoards, and this method may also be applied after 1279. Ian Stewart (1964, 300-2) found that the ratios of documented outputs in 1300 to representation in the Montrave hoard (**224/S**) for six mints were similar, at £225-£290 per hoard coin, and produced a minimum estimate of the undocumented output of the Bury St Edmunds moneyer Robert de Hadeleie in the 1280s. Michael Dolley (1968, 294-5) aggregated hoards containing Irish pence of Edward I, and compared the total number of Irish coins with the totals for the Bristol and Newcastle upon Tyne mints. Separate estimates of the undocumented Irish output from the documented outputs of the two English mints were similar (*c.* £48,500 and *c.* £52,000 respectively), apparently vindicating Dolley's method. Michael Metcalf (1977b, 5, 17 n.22) used the Broughton hoard (**58/E**), and the aggregated documented output of the London and Canterbury mints, to estimate the undocumented output of the other English mints from 1280 to *c.* 1290. Nicholas Mayhew (1976, 92-6) also aggregated the London and Canterbury outputs, in his 'hoard-mint output method' calculations for two types of sterling imitations found in the 1886 Aberdeen hoard (**6/S**).

There are almost continuous records of London and Canterbury outputs from the 1220s, summarised by Challis (1992, appendix 1), which provide good material for comparisons with Durham. Canterbury's output ceased for over a century from 1346, but London's output continued. Use of the London penny output figures is complicated by their inclusion of unspecified numbers of groats, principally or wholly contemporary with the pence of 1279-81 (North 1989, 4-8). A more serious problem is the failure of the London records to separate the outputs of any of the silver denominations from 1351, including large quantities of groats and halfgroats.

Estimation of the Durham output of 'Edwardian' pence of 1279-1351 from the London and Canterbury outputs, and hoard data, would be straightforward if hoards with similar dates of deposition always had similar compositions. Mayhew (1976, 93) noted the similarity of English and Scottish hoards from the second quarter of the fourteenth century, assuming that they represented the composition of a common stock of coinage. Metcalf (1977a, 12-14) has suggested that long-distance payments maintained the uniformity of the coinage available to English and Scottish hoarders of Edwardian coinage. Furthermore, Mayhew (1977b, 90-1) has argued for the homogeneity of English, Scottish and Irish coinage stocks, in a thirteenth- and fourteenth-century 'sterling area'. However, Mayhew acknowledged national biases in hoards of the three countries, and some hoards have undeniable biases towards local mints. Marion Archibald (1971, 46-7) found a bias towards the Lincoln mint in the Skegby hoard (**285/E**), and George Boon (1986, 86) confirmed this view of the Skegby find in a comparison with the Cae Castell hoard (**64/W**). Michael Dolley and George Tatler found a Durham bias in the Whittonstall hoard (**320/E**), particularly noticeable in the most recent coins (Dolley and Tatler 1963, 69-70; Tatler and Stewart 1962, 84). Nicholas Holmes (1996, 34-6, 38, 40) has also found a bias towards the Durham mint in the Ednam hoard (**130/S**), again most evident in the latest coins. Stewart (1989c, 84-5) has detected a strong bias towards early coins in the Middridge hoard (**219/E**), suspecting that this hoard of c. 1311 included a large element assembled in the early 1290s. The Renfrew hoard of c. 1321 (**268/S**) has a similar early bias, caused by coins apparently originally hoarded in 1299 or 1300 (Woodhead and Stewart 1966, 133-4). It is not desirable to use only one hoard in mint output calculations, without investigation of possible local or chronological bias. Hoards can be aggregated to provide a standard against which an individual hoard can be compared to detect bias. If it can be shown that most hoards do not significantly differ from the aggregate, a possible working hypothesis is that the aggregate approximates to the currency available for hoarding.

Appendix 2 lists 328 hoards from the British Isles that are known to have contained at least one English penny minted between 1279 and 1544. Ninety-eight of these hoards are listed as 'suitable for analysis', with adequate identifications available for at least ninety-five per cent of the identifiable coins discovered. One 'suitable for analysis' hoard, the Mayfield find (**215/E**), must be excluded from aggregates intended to be representative, as all of its 348 pence belong to class 10cf3 of the Edwardian series. The remaining ninety-seven hoards are listed in table 9, in approximate chronological order. The order is based upon the last class or issue represented, if it is English. The latest coins in some hoards are Scottish or Irish, and dates of deposition from appendix 2 have been used to place these hoards in the sequence indicated by the dates of the English issues summarised in North 1991.

Table 9. *Hoards suitable for analysis*

<i>Hoard</i>	<i>Latest coin(s)</i>	<i>English pence</i>
Skipton Castle	Class 4b	3
Cae Castell	Class 4e	54
Skegby	Class 5a	406
Broughton	Class 5b	255
Kings Lynn	Class 5	29
Ickfield	Class 7a	434
Horsleyhill	Class 7b (+ class 10cf, intrusive?)	46
Beverley	John Balliol (period of classes 6-8)	1
Dover	Class 8	55
Avebury	Class 10cf	2
Bunduvowen	Class 10cf	3
Newminster	Class 10cf	426
Rothersthorpe	Class 10cf	30
Sherrifflatts	Class 10cf	35
Ballayelse	Class 10	5
Wallington	Class 10	31
Annagassen	Class 11a	11
Middridge	Class 11a	2612
Muckamore	Class 11a	14
Whittonstall	Class 11a	1069
Holme Cultram	Class 11b	70
Tynagh	Class 11b	22
West Whelpington	Class 11	5
Belfast	Class 13	48
Blacksod	Class 13	18
Boston	Class 13	13
Leadburn	Class 13	16
Caernarvon	Class 14	31
Whitburn	Class 14	206
Gatehouse of Fleet	Class 15a	69
Renfrew	Class 15a	451
Carns	Class 15b	154
Doveridge	Class 15b	61
Dunblane	Class 15b	81
Ednam	Class 15b	1246
Gainsborough	Class 15b	6
Maidens	Class 15b	42
Montrose 1973	Class 15b	69
Neath 1957	Class 15b	59
Wandel, Crawford	Class 15b	34
Amble	Class 15c	1040
Ballaslig	Class 15c	166
Bootham 1953	Class 15c	829
Boyton	Class 15c	3858
Cefn Coed	Class 15c	26
Coppergate	Class 15c	4
Dumfries II 1878	Class 15c	197
Grittleton	Class 15c	46
Neath 1956	Class 15c	94
Scotton	Class 15(c?)	304
West Rudham	Class 15c	366
Aberdeen 1983	Class 15d	4064
Loch Doon	Class 15d	1722

Table 9. *Hoards suitable for analysis (cont.)*

<i>Hoard</i>	<i>Latest coin(s)</i>	<i>English pence</i>
Aberdeen 1984	Edward III Florin coinage	2242
Derby	Edward III Florin coinage	567
Llysdinam	Edward III Florin coinage	94
Paisley 1987	Edward III Pre-Treaty series C	192
York Minster	Edward III Pre-Treaty series E/F	14
Durham 1930	Edward III Pre-Treaty series G	411
Farndon	Edward III Pre-Treaty series G	14
Aston Church	Edward III Treaty B	2
Athea	Edward III Treaty B	6
Beulah Hill	Edward III Treaty B	6
Coventry 1967	Edward III Treaty B	123
Eynesford	Edward III Post-Treaty	4
Grantham	Edward III Post-Treaty	362
Sutton-on-Sea	Edward III Post-Treaty	19
Newtonards	c. 1370 (period of Post-Treaty)	1
Aberdour	1371+ (period of Post-Treaty/Richard II)	222
Tranent	c. 1375-80 (period of Post-Treaty/Richard II)	79
Bristol	Richard II	134
Hill Deverill	Richard II	5
Skipton Bridge	Henry IV heavy coinage	288
Attenborough	Henry V	931
Brentwood	Henry V	125
Huntington	Henry VI Rosette-Mascle	17
Blencogo	Henry VI Pinecone-Mascle	3
Hurstbourne Tarrant	Henry VI Leaf-Trefoil	8
Reigate 1972	Henry VI Leaf-Pellet	2
Reigate 1992	Henry VI Cross-Pellet	654
Wyre Piddle	Edward IV first reign light coinage	43
Leith	c. 1470-5 (period of Edward IV first/second reign)	2
Streatley	Edward IV second reign	41
Innerwick	1484+ (period of Richard III/Henry VII facing bust)	1
Deeping St James	Henry VII facing bust	2
Mendlesham Green	Henry VII facing bust	1
Pennyrock Falls	Henry VII Sovereign pence (period of facing bust)	53
Perth 1920	1496+ (period of Henry VII facing bust)	3
Rhoneston	c. 1490 (period of Henry VII facing bust)	2
Ryther	Henry VII facing bust	537
Downham Market	Henry VII profile issue	6
Fonthill Gifford	Henry VII profile issue	4
Askeaton	1535+ (period of Henry VIII second coinage)	1
Maidstone	Henry VIII second coinage	234
Peckleton	Henry VIII second coinage	1
Houghton	Elizabeth I	42

The hoards in table 9 can be aggregated for each of the classes or types issued by the Durham mint, as a first step towards estimating the mint's contribution to output in each type. Only five mint categories need to be used: Durham, London, Canterbury, other mints, and mint uncertain. It is not possible to calculate aggregates for sub-classes of the fifteen Fox classes, as some older hoard publications use the fifteen classes without some or all of the sub-classes currently used. The aggregates in table 10 exclude hoards apparently deposited during the currency of the type being aggregated. For example, the Fox class 4 aggregate does not include the Skipton Castle (287/E) and Cae Castell (64/W) hoards, as they end with coins of class 4, and cannot be assumed to represent the class fully. The table also excludes 172 Edwardian pence not definitely attributed to one Fox class, which are equivalent to only 0.69 per cent of the 25,043 coins in the table.

Table 10. *Hoard aggregates, 1279-1351*

<i>Type</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Uncertain</i>	<i>Total</i>
Class 2	63	715	56	260	2	1096
Class 3	177	2024	517	1604	2	4324
Class 4	87	1960	1082	61	1	3191
Class 5	9	114	54	2	0	179
Class 6	5	49	0	1	0	55
Class 9	313	1297	312	522	2	2446
Class 10	911	4615	2528	383	10	8447
Class 11	319	829	633	129	1	1911
Class 12	12	18	33	6	0	69
Class 13	75	109	186	45	0	415
Class 14	81	212	345	144	1	783
Class 15	35	41	68	30	1	175
Florin coinage	11	127	5	28	0	171

The largest available hoards should be preferred for comparison with the aggregates, as the proportions of the mints in them will be relatively unaffected by small variations in the numbers of coins. An arbitrary figure of at least 100 coins of one type in a hoard, which is low enough to provide hoards for comparison with the aggregates of seven of the Fox classes, ensures that individual coins are no more than one per cent of the hoard's data. The minimal numbers of coins not attributed to a

mint can be disregarded in the comparisons. In the tables the hoards are listed in the order of table 9, with the hoard's last type stated.

Table 11. *Comparisons with the class 2 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Middridge (11a)	16 (6%)	161 (64%)	12 (5%)	64 (25%)	253
Aberdeen 1983 (15d)	5 (4%)	64 (55%)	10 (9%)	37 (32%)	116
<i>Aggregate</i>	63 (6%)	715 (65%)	56 (5%)	260 (24%)	1094

Table 12. *Comparisons with the class 3 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Skegby (5a)	2 (1%)	106 (43%)	21 (9%)	118 (48%)	247
Broughton (5b)	5 (4%)	53 (46%)	12 (10%)	46 (40%)	116
Ickfield (7a)	1 (0.5%)	108 (51%)	18 (8%)	86 (40%)	213
Newminster (10cf)	7 (5%)	95 (63%)	10 (7%)	38 (25%)	150
Middridge (11a)	63 (6%)	486 (46%)	128 (12%)	387 (36%)	1064
Whittonstall (11a)	8 (6%)	55 (43%)	15 (12%)	50 (39%)	128
Renfrew (15a)	9 (5%)	87 (48%)	16 (9%)	69 (38%)	181
Ednam (15b)	5 (4%)	71 (52%)	14 (10%)	47 (34%)	137
Amble (15c)	8 (6%)	57 (46%)	12 (10%)	47 (38%)	124
Bootham (15c)	12 (7%)	90 (49%)	22 (12%)	58 (32%)	182
Boyton (15c)	8 (3%)	147 (47%)	44 (14%)	117 (37%)	316
Aberdeen 1983 (15d)	17 (4%)	198 (46%)	54 (13%)	158 (37%)	427
Loch Doon (15d)	5 (3%)	71 (48%)	20 (14%)	52 (35%)	148
Aberdeen 1984 (Florin)	4 (2%)	118 (48%)	35 (14%)	90 (36%)	247
<i>Aggregate</i>	177 (4%)	2024 (47%)	517 (12%)	1604 (37%)	4322

Table 13. *Comparisons with the class 4 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Ickfield (7a)	4 (3%)	70 (50%)	64 (46%)	2 (1%)	140
Middridge (11a)	18 (3%)	424 (60%)	247 (35%)	12 (2%)	701
Renfrew (15a)	5 (4%)	75 (63%)	37 (31%)	2 (2%)	119
Ednam (15b)	4 (3%)	78 (64%)	40 (33%)	0	122
Amble (15c)	2 (2%)	65 (64%)	31 (31%)	3 (3%)	101
Bootham (15c)	4 (3%)	77 (58%)	46 (35%)	6 (5%)	133
Boyton (15c)	7 (2%)	195 (62%)	111 (35%)	2 (1%)	315
Aberdeen 1983 (15d)	12 (3%)	266 (64%)	134 (32%)	6 (1%)	418
Loch Doon (15d)	4 (3%)	91 (62%)	47 (32%)	4 (3%)	146
Aberdeen 1984 (Florin)	3 (1%)	138 (63%)	78 (36%)	0	219
<i>Aggregate</i>	87 (3%)	1960 (61%)	1082 (34%)	61 (2%)	3190

Table 14. *Comparisons with the class 9 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Middridge (11a)	16 (16%)	60 (59%)	10 (10%)	15 (15%)	101
Whittonstall (11a)	10 (10%)	53 (53%)	21 (21%)	16 (16%)	100
Ednam (15b)	16 (11%)	71 (49%)	19 (13%)	38 (26%)	144
Amble (15c)	109 (51%)	69 (32%)	14 (7%)	21 (10%)	213
Boyton (15c)	33 (8%)	238 (57%)	55 (13%)	94 (22%)	420
Aberdeen 1983 (15d)	38 (9%)	244 (56%)	59 (14%)	95 (22%)	436
Loch Doon (15d)	19 (10%)	106 (54%)	23 (12%)	48 (24%)	196
Aberdeen 1984 (Florin)	15 (6%)	147 (57%)	31 (12%)	64 (25%)	257
<i>Aggregate</i>	313 (13%)	1297 (53%)	312 (13%)	522 (21%)	2444

Table 15. *Comparisons with the class 10 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Middridge (11a)	41 (16%)	135 (53%)	66 (26%)	11 (4%)	253
Whittonstall (11a)	104 (18%)	267 (47%)	169 (30%)	30 (5%)	570
Ednam (15b)	59 (11%)	288 (55%)	164 (31%)	16 (3%)	527
Amble (15c)	42 (12%)	192 (54%)	110 (31%)	13 (4%)	357
Bootham (15c)	14 (7%)	114 (61%)	50 (27%)	9 (5%)	187
Boyton (15c)	142 (9%)	903 (56%)	478 (30%)	81 (5%)	1606
Scotton (15c?)	11 (9%)	75 (61%)	27 (22%)	9 (7%)	122
West Rudham (15c)	8 (6%)	86 (61%)	42 (30%)	6 (4%)	142
Aberdeen 1983 (15d)	177 (11%)	911 (54%)	519 (31%)	77 (5%)	1684
Loch Doon (15d)	79 (10%)	398 (54%)	224 (31%)	30 (4%)	731
Aberdeen 1984 (Florin)	91 (10%)	500 (55%)	279 (31%)	33 (4%)	903
Derby (Florin)	19 (9%)	110 (52%)	70 (33%)	14 (7%)	213
Attenborough (Henry V)	18 (17%)	59 (57%)	24 (23%)	3 (3%)	105
<i>Aggregate</i>	911 (11%)	4615 (55%)	2528 (30%)	383 (5%)	8437

Table 16. *Comparisons with the class 11 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Ednam (15b)	28 (20%)	50 (35%)	52 (37%)	11 (8%)	141
Boyton (15c)	80 (17%)	185 (40%)	161 (35%)	33 (7%)	459
Aberdeen 1983 (15d)	59 (15%)	175 (45%)	129 (33%)	24 (6%)	387
Loch Doon (15d)	35 (18%)	80 (42%)	68 (36%)	7 (4%)	190
Aberdeen 1984 (Florin)	42 (20%)	89 (42%)	60 (28%)	23 (11%)	214
<i>Aggregate</i>	319 (17%)	829 (43%)	633 (33%)	129 (7%)	1910

Table 17. *Comparisons with the class 14 aggregate*

<i>Hoard</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
Boyton (15c)	14 (6%)	54 (24%)	117 (52%)	39 (17%)	224
Aberdeen 1983 (15d)	15 (10%)	41 (28%)	55 (38%)	34 (23%)	145
<i>Aggregate</i>	81 (10%)	212 (27%)	345 (44%)	144 (18%)	782

The tables show English and Scottish hoards generally approximating to the aggregates, supporting the hypothesis that they represent the composition of the coinage in use, individually and collectively. The exceptions to this approximation

to the aggregates may be attributable to two factors: the relatively great influence of individual coins on percentages in the smallest hoards, and bias in the representation of relatively local mints.

Table 12 provides evidence of a bias in class 3 coins, produced from 1280 to 1281 or 1282, in a hoard deposited *c.* 1290 and, less certainly, in a hoard of the mid-1290s. Skegby, the hoard of *c.* 1290, is 8 per cent higher than any other comparison hoard in 'other mints', confirming Archibald's observation of a bias towards the local mint of Lincoln. Skegby and Ickfield (**164/E**), the hoard of the mid-1290s, seem to be low in the representation of Durham, although the small percentages involved require caution. Ickfield is high in class 4 coins (1281/2-*c.* 1289) of Canterbury, the local mint, and correspondingly low in London coins. Newminster, Northumberland (**241/E**), is exceptionally high in class 3 coins of London and low in 'other mints'. This might be due to the relatively small number of class 3 coins from Newminster (150).

The biases in the class 3 table support the observation of Archibald, that classes 1-3 were apparently not yet fully integrated in circulation in 1290. Archibald (1977, 176-81) has compared combined percentages of London and Canterbury coins of classes 1-3 and 1-5 in four hoards deposited before the end of class 5, and nine later hoards. The later hoards had greater mean percentages of London and Canterbury coins, apparently indicating that the percentages increased as the currency became more thoroughly mixed, eliminating local bias.

The clearest example of local bias in the tables is provided by the class 9 Durham pence in the Amble, Northumberland, hoard (**10/E**), which are 38 per cent higher than the aggregate. This may have been caused by the inclusion of an old parcel of class 9 coins, minted in 1300, not representative of the coins in circulation when the hoard was deposited, no earlier than *c.* 1321. The percentage of class 10



coins of Durham in the Amble hoard does not show a local bias. After the Amble hoard, the next highest percentage of class 9 coins of Durham is 16 per cent, in the Middridge, County Durham hoard (219/E), which might be interpreted as local bias in a hoard probably deposited c. 1310. This interpretation should be treated with caution, as the Middridge hoard had only 101 class 9 pence. The 100 class 9 pence in the Whittonstall, Northumberland hoard (320/E) include 7 per cent more, non-local, Canterbury pence than any other hoard in table 14, which may be evidence of the relative unreliability of percentages derived from the smallest numbers of coins in the tables.

There is evidence of local bias in the high percentages of class 10 pence of Durham in the Whittonstall hoard, confirming the observations of Dolley and Tatler, and in the Middridge hoard. Both hoards probably provide enough coins of class 10 (570 and 253 respectively) to minimise the risk of unrepresentative percentages. The high percentage of Durham coins of class 10 and low percentage of Canterbury coins in the Attenborough hoard (17/E) may indicate the unrepresentativeness of the relatively low number of class 10 pence in this hoard (105).

Variations in percentages in the smallest hoards in the tables, and in smaller hoards not in the tables, may tend to cancel each other out, and the numbers of coins involved are relatively small. No Welsh, Irish or Manx hoards have provided enough coins to be tested for bias by inclusion in the tables, but again the numbers of coins are relatively small. The effect of the local bias found in some English hoards deposited up to about 10-15 years after the end of the class being aggregated can be tested, by comparing aggregates for hoards deposited at least fifteen years later than the aggregated class with the aggregates for earlier hoards. The relatively large numbers of class 9 coins in the Amble hoard must be excluded from the comparison, as a special case.

Table 18. *Comparison of aggregates from early and late hoards*

<i>Class</i>	<i>Last type in hoards</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Other mints</i>	<i>Total</i>
2	class 4b-class 8	7 (4%)	126 (69%)	10 (5%)	39 (21%)	182
	class 10+	56 (6%)	589 (65%)	46 (5%)	221 (24%)	912
3	class 4b-class 8	11 (2%)	303 (46%)	59 (9%)	281 (43%)	654
	class 10+	166 (5%)	1721 (47%)	458 (12%)	1323 (36%)	3668
4	class 5a-class 10	12 (3%)	239 (56%)	167 (39%)	10 (2%)	428
	class 11+	75 (3%)	1721 (62%)	915 (33%)	51 (2%)	2762
9	class 10-class 13	40 (12%)	181 (55%)	49 (15%)	61 (18%)	331
	class 14+	164 (9%)	1047 (55%)	249 (13%)	440 (23%)	1900
10	class 11a-class 15c	491 (11%)	2402 (55%)	1295 (29%)	204 (5%)	4392
	class 15d+	420 (10%)	2213 (55%)	1233 (30%)	179 (4%)	4045
11	class 13-class 15d	250 (16%)	668 (43%)	523 (34%)	96 (6%)	1537
	Florin+	69 (18%)	161 (43%)	110 (29%)	33 (9%)	373
14	class 15a-Florin	67 (11%)	167 (27%)	276 (44%)	116 (19%)	626
	Pre-Treaty+	14 (9%)	45 (29%)	69 (44%)	28 (18%)	156

Differences between the early and late hoard percentages seem to show evidence of the class 3 bias towards 'other mints' in the Skegby hoard, the Ickfield hoard class 4 Canterbury bias, and the Middridge class 9 Durham bias. However, the numbers of coins involved in these biases are relatively small, with relatively little effect on aggregate percentages. Early hoards provide only 15.1 per cent of the class 3 coins in table 15, 13.4 per cent of the class 4 coins, and 14.8 per cent in class 9. The late hoard percentages for classes 3 and 4 are either the same as the aggregate percentages, or they differ by no more than 1 per cent. The class 9 aggregate without the Amble hoard has the same percentages as the class 9 late hoards, with the minor exception of 1 per cent less in 'other hoards'. The percentages for the exceptionally large numbers of coins in early and late class 10 hoards correspond closely, showing no evidence of bias. The greater variation in the class 11 and class 14 percentages might be due to the smaller number of coins involved. It may be concluded that although the hoard representation of mints may be biased up to about fifteen years after the end of a type, the effects of such bias can be almost entirely disregarded in the calculation of the 1279-1351 aggregates. The 348 pence in the Mayfield hoard, all belonging to class 10cf3, provide an exceptional example of extreme bias in a

large number of coins that must be excluded from aggregates. The class 9 coins in the Amble hoard are also excluded from the revised aggregates in table 19.

Table 19. *Durham aggregates as percentages of London and Canterbury aggregates, 1279-1351*

<i>Type</i>	<i>Durham</i>	<i>London</i>	<i>Canterbury</i>	<i>Durham/London%</i>	<i>Durham/Canterbury%</i>
Class 2	63	715	56	8.8	112.5
Class 3	177	2024	517	8.7	34.2
Classes 4+5	96	2074	1136	4.6	8.5
Class 6	5	49	0	10.2	-
Class 9	204	1226	298	16.6	68.5
Class 10	911	4615	2528	19.7	36.0
Class 11	319	829	633	38.5	50.4
Classes 12+13	87	127	219	68.5	39.7
Class 14	81	212	345	38.2	23.5
Class 15	35	41	68	85.4	60.3
Florin coinage	11	127	5	8.7	220.0

The data in table 19 can be used in hoard-mint output calculations of the Durham output from the London and Canterbury outputs. In table 20 the accounting periods of the London and Canterbury outputs have been chosen to be as close as possible to the probable issue dates of the coin types used in the calculations, but the only type exclusively issued in one accounting period is the Florin coinage of 1344-51. An estimate for the production of class 2 in 1279-80 has not been attempted, as the Durham and Canterbury mints were not open when production of the class started. 1291-9 has also been omitted, as the only Durham coins in the aggregates definitely attributable to this period are five class 6b pence. The output records for 1310-11 are missing, and there was no recorded penny output at London and Canterbury in 1331-44. The recorded outputs have been multiplied by the Durham/London and Durham/Canterbury hoard percentages for the contemporary types, to estimate the Durham output. Annual estimates of output have usually been calculated by converting the accounting period estimates to daily rates, when the period is not one or more whole years. The Florin coinage annual estimates have been calculated by assuming a period of production of six years and eight months, from the issue of the writ of 16 October 1344 ordering dies (57), to the introduction of the Pre-Treaty

coinage in the accounting period beginning on 24 June 1351.

Table 20. *Estimation of the Durham annual output, 1280-1351*

<i>Accounting period</i>	<i>Mint</i>	<i>Output</i>	<i>Aggregate</i>	<i>Durham estimate</i>	<i>Annual estimate</i>
18.10.1280-29.9.1281	London Canterbury	£84,555 £22,924	class 3	£7,394 £7,848	c. £7,800 c. £8,300
30.9.1281-14.7.1291	London	£319,169	classes 4+5	£14,773	c. £1,500
30.9.1281-15.7.1291	Canterbury	£162,574		£13,739	c. £1,400
30.9.1299-29.9.1300	London	£108,165	class 9	£17,998	c. £18,000
1.11.1299-29.9.1300	Canterbury	£22,619		£15,484	c. £17,000
30.9.1300-29.9.1310	London Canterbury	£480,028 £273,242	class 10	£94,757 £98,467	c. £9,500 c. £9,800
9.10.1311-29.9.1314	London	£51,542	class 11	£19,833	c. £5,000
23.10.1311-29.9.1314	Canterbury	£48,090		£24,235	c. £6,200
30.9.1314-30.9.1317	London Canterbury	£18,860 £38,669	classes 12+13	£12,920 £15,362	c. £4,300 c. £5,100
1.10.1317-30.9.1319	London Canterbury	£21,914 £39,634	class 14	£8,373 £9,305	c. £4,200 c. £4,600
1.10.1319-29.9.1331	London Canterbury	£22,044 £27,362	class 15	£18,818 £14,083	c. £1,500 c. £1,200
20.1.1344-24.6.1351	London	£69,885	Florin	£5,966	c. £900
30.9.1344-19.12.1346	Canterbury	£2,141	"	£4,710	c. £700

The London outputs of 1280-91 include unknown quantities of groats, which were probably contemporary with classes 1-3 (May 1279-1281/2), although one surviving coin might possibly be contemporary with class 9 (1299-1300) (North 1989, 4-8). Consequently, the assumed London penny outputs of 1280-91 and the Durham estimates derived from them must be too high. There are probably other distortions in the estimates, caused by the imperfect correspondence between accounting periods and periods of Fox classes. The estimates will also have been affected by any unrepresentativeness of the hoard aggregates. Aggregates might approximately represent the proportions of two mints in currency when production of a type ended, but losses from currency during the period of production would cause under-representation of the mint that had relatively more of its output towards the

beginning of the type. Nevertheless, the similarity of the two sets of estimates encourages confidence in them, and they can be combined in one series of approximate means. Table 21 provides combined estimates for years in 1280-1331 ending at Michaelmas, and for the Florin coinage.

Table 21. *Summary of output estimates, 1280-1351*

<i>Period</i>	<i>Annual estimate</i>
1280-1	c. £8,100
1281-91	c. £1,500
1299-1300	c. £17,500
1300-10	c. £9,700
1311-14	c. £5,600
1314-17	c. £4,700
1317-19	c. £4,400
1319-31	c. £1,400
1344-51	c. £800

4.2.2 Documentary evidence, 1283-1317

The estimation of output from the Durham mint's £13 3s. 6d. profit in the *sede vacante* period of 1283 (26) is inhibited by the absence of documentary evidence for the minting charges in Durham. Ten different sets of rates were used in succession in the royal mints from 1279 to 1344, with seignorages between 6d. and 12½d., on a Tower pound of silver usually minted into 243d. (Mate 1972, 77; Mayhew 1992, 134-5). The royal mint seignorages may not have applied in Durham, and they can only provide a speculative estimates for the Durham output. Applying the seignorages used in 1283 until October, the £13 3s. 6d. profit of 1283 would have required the production of £337 0s. ½d. at the 9½d per lb. rate for reminting English coins, or £355 14s. 6d., at the 9d. rate for other, 'foreign' silver. If the 6d. seignorage customary in royal mints until 1279 was charged, £533 11s. 9d. would have been required. The *sede vacante* output might have been c. £300-£550. The rate of output in the whole of 1283 may have significantly differed from the rate in the *sede vacante* period: there may have been a suspension of minting before the *sede vacante* administration of the mint was established, and it is also possible that there was substantial seasonal variation in output. In 1220-2 the Canterbury mint's output was concentrated in the spring and summer, as it was heavily dependent upon seasonal cross-channel trade (Blunt and Brand 1970, 63, 66). Nevertheless, the annual equivalent of the *sede vacante* estimate of 1283, c. £1,300-£2,400, is consistent with the c. £1,500 estimated annual output of the Durham mint in 1281-91.

The £12 10s. 0d. mint profit of 1311 (42) and £13 6s 8d. in 1316-17 (46) were most probably instalments of rents of £50 and 40m. (£26 13s. 4d.) per annum. The 1307 rent seems to have been based upon an annual rent of £75 (see p. 75). The production of £1,735 14s. 3½d. or £3,037 10s. 0d. would have been needed to collect £75 in seignorage, if the Durham mint used the contemporary royal mint seignorages of 10½d. or 6d. The £50 rent of 1311 would have been equivalent to the royal mint seignorage on the production of £1,157 2s. 10d or £2,025, and the 40m. rent of 1316-

17 was equivalent to the seignorage on £617 2s. 4d. or £1,080. These hypothetical outputs are all substantially less than the annual estimates of output: *c.* £9,700 in 1300-10, *c.* £5,600 in 1311-14, and *c.* £4,700 in 1314-17, although the two sets of figures have the same downward trend. In the early fourteenth century the Durham mint-master may have had an abnormally large margin between his rent and minting charges to provide for his expenses and profits.

4.3 Zenith and nadir: 1351-1394

From 24 June 1351 the royal mint output records do not specify the quantities of pence minted, and include groats, halfgroats, pence, and smaller denominations in one total for silver. However, the 'hoard-mint output' method could still be used to estimate the Durham mint's output, if it can be demonstrated that the royal mints converted a known proportion of their silver into pence.

The royal mint indentures (listed by Challis 1992, appendix 2) required thirty per cent of the silver to be struck into pence from 1355, changed to one third in the indentures of 1361-1402. Proportions of halfpence and farthings were specified when those denominations were produced, but parliamentary questions to mint officials in 1381-2 elicited an admission that there was a shortage of halfpence and farthings, and that the master's performance of his indenture needed supervision (Bland, Brown and Tawney 1914, 220-3). A statute of 1403 recognised the shortage and stipulated the allocation of one third of the silver to halfpence and farthings, divided equally (Ruding 1840, I, 260). The indentures of 1409 and 1413 do not specify proportions of pence or other denominations, and the appearance of a new set of allocations in 1422 might indicate that the old proportions had lapsed. Twenty-five per cent of silver minted was allocated to pence from 1422 to the indenture of 1434, which was current until 1445. However, a parliamentary petition of 1423 complained that only a few coins smaller than the groat and the gold noble were being produced, contrary to the indenture of that year (Ruding 1840, 272 n.1; Allen 1995b, 124). In 1435 the Calais mint received 350 pairs of dies for groats, 600 pairs for halfgroats, sixty each for halfpence and farthings, and only thirty pairs of dies (2.7 per cent of the total) for pence (Walker 1921-2, 92). The indentures in force from 1422 to 1445 allocated a total of twenty-five per cent of the silver to halfpence and farthings, obeying a statute of 1402, but a petition of 1445 complained about a shortage of these smaller coins (Ruding 1840, I, 250-1, 275-6). The mint-price of halfpence had to temporarily improved in 1445 to ensure production (Mayhew 1992,

176). The smaller coins were relatively expensive to produce, as cost was related to the number of coins produced from each pound of silver, and the king's master-workers were not paid extra for making them. The indentures of 1445, 1451, 1459, and 1464 did not attempt to specify each denomination's share of the mint's silver. The 1465 indenture recognised the master-worker's discretion in allocating bullion to the denominations. There was no further attempt to specify allocations until a statute of 1523, which required twenty per cent of silver to be minted into pence (Challis 1992, 222-3). Indentures of 1583 and 1601 allocated only 1½ per cent of silver to pence (Challis 1978, 201-2), which Ian McAlpine (1982) has assumed in calculations of penny output in 1583-92. The higher proportions in earlier indentures may have been achieved at least part of the time, but they cannot be used without qualification in hoard-mint output calculations. The indenture proportions can be used to calculate maximum possible outputs of pence, assuming that the master-workers would not incur the extra cost of producing more than the required amounts of pence.

Table 22. *Maximum estimates of Durham mint output, 1355-77*

	<i>1355-61</i>	<i>1361-9</i>	<i>1369-77</i>
<i>London silver output:</i>			
<i>total</i>	£81,369	£25,366	£11,147
<i>allocated to pence (a)</i>	£24,411	£8,455	£3,716
<i>Hoards:</i>			
<i>Durham pence</i>	96	19	58
<i>London pence</i>	24	22	10
<i>Durham/London % (b)</i>	400%	86%	580%
<i>Durham output:</i>			
<i>maximum estimate for period (a x b)</i>	£97,643	£7,302	£21,551
<i>annual maximum</i>	£16,934	£913	£2,702
<i>approximate annual maximum</i>	£15,000	£1,000	£3,000

In table 22 the hoard aggregates have been derived from the 'suitable for analysis' hoards in the same manner as the 1279-1351 aggregates. The 1355-61 hoard data are for Pre-Treaty series F and G. L.A. Lawrence (1929, 56-7) suggested that series E ended about December 1355, consistent with the attribution to series E of the first Pre-Treaty halfpence, ordered by the indenture of 31 May 1355. The

proposal of W.J.W. Potter (1960, 170-2, 175-6), that the introduction of the crown initial mark of series F followed the appointment of William Potter as the king's master-worker by the indenture of 1355, is difficult to reconcile with the existence of series E halfpence. It is possible that series F followed the appointment of Hugh de Wychyngham as master-worker on 27 January 1356, if the crown was a master's mark. The London output of 1355-61 is the aggregate for the accounting periods between 24 December 1355 and 29 September 1361. The penny's allocation of silver was increased to one third on 5 March 1361, but the possible effect of this on the relatively small output of the year ending 29 September 1361 (£6,020) has had to be disregarded. The hoard data of 1361-9 is for the Treaty coinage, which probably began in March 1361 (Potter 1960, 173; 1962, 216-7), about half a year before the end of the 1356-61 accounting periods. The introduction of the Post-Treaty coinage, after the abrogation of the Treaty of Bretigni on 3 June 1369 (Lawrence 1933, 201), has been equated with the end of an accounting year on 29 September 1369. The imperfect match of hoard periods and accounting periods, and possible bias in the hoard aggregates, limit confidence in the estimates of the Durham mint's maximum annual output. However, approximate maximums of *c.* £15,000, *c.* £1,000, and *c.* £3,000 for the three periods of estimation may have some usefulness.

The aggregated hoards have 135 Durham pence attributed to Pre-Treaty series A-E, equivalent to 141 per cent of the series F and G total (96). The maximum Durham output from the introduction of the Pre-Treaty coinage on 24 June 1351 to 24 December 1355 would be estimated to be £137,310, if it is assumed that it was 141 per cent of the 1355-61 output. The estimated annual maximum for 1351-5 is £30,506 or *c.* £30,000. These maximum estimates may be underestimates, if the longer period of circulation of Pre-Treaty series A-E, compared with series F and G, caused greater losses from circulation and under-representation in the aggregated hoards.

The maximum output estimate of 1361-9 (*c.* £1,000) can be reconciled with the evidence of the rent specified in the indenture of 1367 (62). The £4 rent would have been equivalent to either the contemporary royal mint seignorage of 3d. on an output of £400, or a greater seignorage, such as Durham's 5d. per Troy pound in 1416/17 (68), on a smaller output. The output may have been substantially higher than figures suggested by such calculations, as seems to have the case in the early fourteenth century. It is also possible that when the 1367 indenture was negotiated the output was substantially less than the *c.* £1,000 maximum of 1361-9, if the output declined significantly during the 1360s. Over half (55.8 per cent) of the London output of 1361-9 was in 1361/2 alone, and there was no London silver output in 1365/6 or 1366/7.

The method used to estimate maximum outputs for 1351-77 provides an improbably high estimate for the reign of Richard II (1377-99). The London mint's total recorded silver output between 20 September 1377 and 15 October 1399 (the accounts for 30 September 1387 to 19 January 1388 are missing) was £21,567, of which one third or £7,189 was customarily allocated to pence by indenture. The aggregated hoards have twice as many Durham pence as London pence (six and three respectively), providing a tentative maximum estimate of *c.* £15,000 for the total Durham output. This is about twice the total estimate for the Treaty coinage of 1361-9, but Treaty pence of Durham outnumber Richard II pence by seventeen to six in aggregated hoards deposited after the reign of Richard II. The Richard II output estimate may be too high because less than one third of the London silver was being converted into pence, contrary to the indenture requirements. In table 23 the number of London pence in hoards per £1,000 of output increases steadily from 1351 to 1377, as might be expected if representation of earlier coins was reduced by losses from circulation, but the number of pence per £1,000 declines sharply in the reign of Richard II.

Table 23. *London pence in post-1399 hoards and output, 1355-99*

<i>Period</i>	<i>Pence</i>	<i>Output</i>	<i>Pence per £1,000</i>
1355-61	24	£81,369	0.29
1361-9	12	£25,366	0.47
1369-77	8	£11,147	0.72
1377-99	3	£21,567	0.14

In 1376 an investigation into 'falsities and deceptions' at the London mint was prevented by the parliamentary impeachment of the warden and the changer and assayer, who had been commissioned to receive sworn evidence about the matter (*CPR 1374-1377*, 319; Cook 1996, 18). The intended subjects of investigation may have included the beginning of the failure to comply with the indenture proportions of denominations evident in the fifteenth century. If this supposition is correct, the assumed output of London pence in the Post-Treaty period of 1369-77, and the maximum estimate of Durham output based upon it, are too high. The Durham output in the reign of Richard II certainly cannot be estimated from the total London output, in the absence of a reliable intermediate estimate of London penny output, and there is no known documentary evidence. Three piles and six trussels were ordered in 1384 (63), and the two trussels known from surviving coins (Purvey 1962, 103-4, 106-7, pl. 9, nos 30-1) could have produced c. £40-£80 each (see p. 88), or c. £80-£160 in all. Annual output may not have exceeded about £200, even if the dies were used within one year only. Output could have been much lower, if the dies ordered in 1384 were used for a substantial part of the decade until the lease of the mint buildings in 1394 (66).

4.4 Limited revival: 1412-1460

The Durham mint's output after it reopened for the production of Henry IV's light coinage of 1412-13 can be estimated from the statement of Bishop Langley's survey of c. 1421, that the mint-master paid twenty marks (£13 6s. 8d.) when the money of England was changed (70). In table 24 it is assumed that about twenty marks was derived from a 6d. per troy pound seignorage, which seems to have been the rate erased and superseded by 5d. in the 1416/17 receiver's account (68). An output has also been calculated from the survey's £2 estimate of current profit, in c. 1421, assuming the 4d. seignorage of the 1418/19 (69) and 1424/5 (71) receiver's accounts. Exact outputs can be calculated from the profit and rate of seignorage in the accounts of 1416/17 and 1418/19. The 1434/5 account (73) records the profit without stating the seignorage, but two possible outputs can be calculated, assuming the 4d. rate last recorded in 1424/5 and the 5d. seignorage of 1438/9. The surviving accounts from 1438/9 to 1459/60 (74, 76-7, 79) record the troy weight of silver minted. In the table troy weights of silver minted have been converted to their face value at 32s. per troy pound, equivalent to the 30s. per Tower pound of the royal mint indentures.

Table 24. *Mint output, 1412/13-60*

<i>Year</i>	<i>Profit</i>	<i>Seignorage</i>	<i>Troy weight minted</i>	<i>Face value</i>
c. 1412	c. £13 6s. 8d.	6d.?	c. 500 lb.?	c. £900?
1416/17	£3 16s. 3d.	5d.	183 lb.	£292 16s. 0d.
1418/19	£1 4s. 3d.	4d.	72 lb. 9 oz.	£116 8s. 0d.
c. 1421	c. £2 0s. 0d.	4d.?	c. 120 lb.?	c. £200?
1424/5	nil	4d.	nil	nil
1434/5	10s. 10d.	4d.?	32 lb. 6 oz.?	£52 0s. 0d.?
		5d.?	26 lb.?	£41 12s. 0d.?
1438/9	£3 1s. 3d.	5d.	147 lb.	£235 4s. 0d.
1453/4	£1 10s. 0d.	5d.	72 lb.	£115 4s. 0d.
1458/9	£2 0s. 0d.	'6d.' [8d.]	80 lb.	£96 0s. 0d.
1459/60	14s. 10½d.	8d.	22 lb. 4 oz.	£35 14s. 8d.
[to 7 April 1460]				[£68 9s. 6d. annual equivalent]

4.5 The final decline: 1460-1541

There are no records of the Durham mint's output after 7 April 1460. London outputs cannot be used to estimate Durham outputs from 1460, as the penny's intended or actual share of London silver output is unknown after 1445. It can only be suggested that the London production of pence was substantially less than the twenty-five per cent of silver output stipulated by indentures until 1445. Twenty-five per cent of London's mean annual silver output in 1458-60 is c. £1,902, approximately twenty-three times Durham's mean annual output in those years (c. £82), but Durham pence of the Cross-Pellet issue minted between 1457 and 1461 outnumber London coins of that issue by eleven coins to nil in aggregated hoards deposited after 1461.

The transition in 1460 from profits directly related to output to a fixed rent provides a test of a fifteenth-century rent as indirect evidence for output. The £6 13s. 4d. rent of 1460-4 is equivalent to the 8d. seignorage of 1458-60 on £320 weighing 200 lb. troy, which is about four times the mean annual output of 1458-60. The hoard evidence seems to indicate that there was indeed a substantial increase in output at about the time of the change to renting in 1460. Nine of the eleven Cross-Pellet Durham pence in the aggregated hoards are from dies with the alterations that may have occurred when John Orwell began his renting of the mint, and a tenth coin is an 'Henry VI/Edward IV mule' also attributable to Orwell's tenure of the mint (see p. 19). The hoards providing these ten coins also include thirty-seven Durham pence of the 'rose' type of April 1461xSeptember 1463, probably indicating a sustained higher level of output, or a further increase. About £300-£400 may be a credible minimum estimate of annual output, from 7 April 1460 to the suspension of minting recorded by the *valor* of 1463/4 (82).

Hoards deposited after the end of Edward IV's first reign (1461-70) have thirty-five pence of the rose type of 1461x3, and thirty-eight Durham coins of the

1464-70 light coinage. The six years of the light coinage was at least twice as long as the duration of the rose type, and its failure to significantly exceed the rose type in the hoards might imply a decline in output. This conclusion may seem to conflict with the doubling of the rent to £13 6s. 8d. from 29 September 1464, and the further increase to £20 from 10 August 1465. However, the rent increases may have been supported by a substantial rise in minting charges, without an output larger than that of 1461x3. In the royal mints the seignorage was increased from 3d. to 3s. 4d. on 1 September 1464, and the master's charges for minting were increased from 9d. to 1s. 2d. The seignorage was eventually reduced in 1466 and 1467, but it was still 1s. 6d. at the end of the first reign in 1470 (Challis 1992, 196). A seignorage of 3s. 4d. would have repaid the Durham rent of £13 6s. 8d. from an output of only 80 lb. or £160. The increased rent would have been repaid by £240. at 3s. 4d., or £533 6s. 8d. at 1s. 6d. About £200-£500 may be a useful estimate of the Durham mint's annual output in 1464-70.

Hoards deposited after the second reign of Edward IV (1471-83) may indicate that output in the second reign was at about the same level as in the first reign's light coinage. The hoards have thirty-seven Durham pence from the six years of the light coinage, and forty-eight coins from the second reign activity of the mint, which lasted at least eight and a half years, from Easter 1471 to Michaelmas 1479 or later. The numbers of hoard coins per year are about six, and six or less, respectively. The increase of the rent to £26 13s. 4d. in the 1472/3 account (**93**), and the extra £6 13s. 4d. for halfpence in 1473-5, might suggest an increase in output. However, the increased rents were unpaid in 1474/5, and by 1479 the £13 6s. 8d. rent of 1464-5 was restored. The c. £200-£500 output estimate of the light coinage may be tentatively applied to the second reign.

It might be hoped that the numbers of dies licensed or paid for in 1473, 1474, and 1477 would provide evidence for the size of the Edward IV second reign output.

However, Challis (1992, 224 n.83) has noted that we do not know whether all of the dies authorized by the licences were actually produced. Only thirty-six of the ninety-six dies in William Omoryghe's licence of 1477 (98) were paid for in 1477 (99). The licensing of a supply of penny dies on 4 August 1474 (94) may indicate that most or all of the dozen piles and two dozen trussels for pence authorized on 26 August 1473 (92) had been supplied, but some of the dies supplied since August 1473 may have been unused or only partly used in August 1474. The output of the dies that were fully used could have been less than that of contemporary London-made dies, as Challis suggests.

The £6 13s. 4d. rent for halfpence paid in 1473/4 (95) was equivalent to one quarter of the rent for pence, and the four sets of halfpenny dies authorized in 1473 were one third of the number of sets for pence. In 1473 it may have been assumed that halfpenny production would be about one quarter of penny output, perhaps worth *c.* £50-£100 if the estimate of second reign penny output is correct. This expectation of output may not have been fulfilled: halfpenny dies were not ordered in 1474, and there was no extra rent for halfpence by 1476/7 (98). Six sets of halfpenny dies were paid for in 1477, but they were probably produced because Bishop Booth's dies were to be replaced by Bishop Dudley's. It is unlikely that halfpenny production made a significant contribution to the Durham mint's second reign output. It would not have caused an increase in total output, if the silver minted into halfpence was taken from supplies usually minted into pence.

The *c.* £200-£500 estimate of annual output in 1464x83 may be extended to Durham's production of Richard III pence in 1485, and with greater caution to the Henry VII facing bust type II pence, probably produced in 1486/7. The hoard aggregate with about six Edward IV light coinage Durham pence per year, and no more than about six second reign coins per year, has five Richard III pence from about half a year of production. Hoards deposited later than the facing bust issue of

Henry VII have three Richard III pence and two facing bust coins. The £13 6s. 8d. rent of the second reign seems to have been retained in 1485, and in 1486/7 (**103-5**), although there is no surviving record of its payment.

There are no recorded rents to aid the estimation of Durham's output of Henry VII Sovereign type pence, produced between 1489 and 1499, with a probable interruption of several years *c.* 1492-5 (Allen 1996b, 127-9). Only two hoards deposited after 1499 - Pennyrock Falls (**256/E**) and Maidstone (**214/E**) - have Henry VII Sovereign pence of Durham with coins of Edward IV for comparison. Together, these two hoards have three Henry VII Sovereign pence, or about 0.5 per year of output, and twenty-five Edward IV second reign coins of Durham, at about two coins per year. The relative scarcity of the Sovereign pence, despite the second reign coins' longer time for possible loss from circulation, may indicate a much lower annual output than the second reign's estimated *c.* £200-£500. An estimated annual output of *c.* £100-£200, equivalent to *c.* £700-£1,400 in approximately seven years of production, would require a plausible mean output of *c.* £25-£50 from the twenty-eight trussels known (Allen 1996b, 128): mean outputs of *c.* £40-£80 were achieved at other mints in the thirteenth- and fourteenth-centuries (see p. 88).

The rent of the Durham mint was paid for a total of, probably, five years during the first coinage of Henry VIII (1509-26), and for nine years and forty days during the second coinage of 1526-44 (see pp. 72, 75). The rent of the first four and a half years of first coinage output, until 1514/15, was £10. From 1519/20 the rent was usually £3 6s. 8d., falling to £1 6s. 8d. in 1527/8 and £2 in 1528/9. If the 18d. per troy pound minting charges paid by Robert Bennet in 1530x4 (**163**) were entirely profit, £3 6s. 8d. would have been the profit on £100 struck at the 45s. per troy pound standard of 1526-44. The 18d. minting charges were not entirely profit: the master-worker of the Tower mint received 10d. per troy pound for his costs in 1526-44. Consequently, *c.* £50 might be a useful tentative estimate of annual output from

1519/20 to 1541, and *c.* £100-£200 can be suggested for 1510-15.

4.6 Output summary

<i>Period</i>	<i>Percentage of national output</i>	<i>Annual estimate</i>	<i>Documented output</i>
1087x1100	< 0.1%		
1100x1135	c. 0.1-0.5%		
1135x1154	c. 0.5%		
1158xc. 1169	c. 0.5-1.0%	c. £20-£40	
1195-1205	c. 0.5-1.0%?		
1205-c. 1209	c. 1.0-1.5%		
1205/6		c. £850-£1,400	
1208-11		£311 6s.?	£742?
1211/12			£162 1s. 8d.?
1253xc. 1256		c. £250-£500	
1280/1		c. £8,100	
1281-91		c. £1,500	
1299-1300		c. £17,500	
1300-10		c. £9,700	
1311-14		c. £5,600	
1314-17		c. £4,700	
1317-19		c. £4,400	
1319-31		c. £1,400	
1344-51		c. £800	
1351-5		≤ c. £30,000	
1355-61		≤ c. £15,000	
1361-9		≤ c. £1,000	
1369-77		≤ c. £3,000?	
1384x1394		≤ c. £200	
c. 1412		c. £900?	
1416/17			£292 16s. 0d.
1418/19			£116 8s. 0d.
c. 1421		c. £200?	
1434/5			£41 12s. 0d. or £52 0s. 0d.?
1438/9			£235 4s. 0d.
1453/4			£115 4s. 0d.
1458/9			£96 0s. 0d.
1459/60		£68 9s. 6d.	£35 14s. 8d.
1460x1463		c. £300-£400+	
1464-70		c. £200-£500	
1471x1483		c. £200-£500	
1485		c. £200-£500	
1486/7		c. £200-£500	
1489x1499		c. £100-£200	
1510-15		c. £100-£200	
1519x1541		c. £50	

5. EXPLANATIONS OF OUTPUT

5.1 Monetisation and mining: 1080s-1279

Richard Britnell (1993, 40) has connected the establishment of a mint in Durham in the late eleventh century with overseas trade and evidence for the use of money in the Bishopric. Money was needed for the construction of Durham Cathedral in 1093-1133, and the contemporary historian Symeon of Durham refers to offerings of money at St Cuthbert's shrine and a revenue of over £300 a year from the Bishopric in 1096-9. The Bishopric yielded £643 15s. 5d. in two years in the *sede vacante* account of 1128-1130. If the revenue of Bishop Hugh of le Puiset (1153-95) increased to about £3,000 (Scammell 1956, 194, 202-3), ten times the size of Symeon's figure, there must have been an increasing quantity of money in the Bishopric, some of it produced by the Durham mint.

There is an unmistakable upward trend in Durham's estimated contribution to English mint output, from less than 0.1 per cent in the late eleventh century to c. 0.1-0.5 per cent in 1100x35, c. 0.5 per cent in 1135x54, and c. 0.5-1.0 per cent in 1158x69. This cannot be attributed to a decline in competition from mints in northern England, as Durham had the only English mint north of York until the opening of the Carlisle mint in the early 1130s. The Durham mint's rising share of output would represent an actual increase in its production of coinage if national output remained relatively stable or increased. Unfortunately, there is no documentary evidence for mint output anywhere in England before the 1190s, if the problematic evidence of *Boldon Book* is excepted, and there are no estimates of output before the Cross-and-Crosslets coinage of 1158-80. D.M. Metcalf (1981, 84-5; 1998, 189) has tentatively estimated that the *Paxs* type of the 1080s may have been made from about 550-1100 reverse dies, but there are no similar estimates for the first half of the twelfth century to compare with this. Single finds of coins may provide some evidence of changes in the relative size of English money supply, and also give

a limited indirect indication of trends in mint output. The Early Medieval Corpus of Coin Finds in preparation at the Fitzwilliam Museum, Cambridge, has provided the interim statistics in table 25 for finds from the British Isles (information from Dr Sean Miller).

Table 25. *Single coin finds in the Early Medieval Corpus, 1042-1180*

<i>Period</i>	<i>Coins</i>	<i>Coins per year</i>	<i>Remarks</i>
Edward the Confessor and Harold II (1042-66)	116	4.8	1 <i>Radiate/Small Cross</i> imitation
William I to type VII (1066-87)	50	2.4	
William II (1087-1100)	31	2.4	6 William I type VIII (<i>Paxs</i>)
Henry I (1100-35)	105	3.0	
Stephen types I-VII (1135-58)	167	7.3	
Henry II Cross-and-Crosslets (1158-80)	92	4.2	2 contemporary forgeries

The number of finds for a period may be related to factors apart from the number of coins circulated, including the frequency of use or velocity of circulation, if the risk of loss increased when a coin was spent or carried on the person with the intention of spending. However, the finds from 100 sites analysed by Rigold (1977) show a broad correlation between numbers of finds and money supply from the mid-twelfth century to the mid-fifteenth century (Blackburn 1989, 73, 83-4). The decline in the number of coins per year of issue after 1066 in the table is consistent with the suggestion of Peter Spufford (1988b, 95-7), that there was a decline in English money supply from the 1070s, during a northern European shortage of silver caused by the exhaustion of the Harz mines. The statistics from 1066 to 1135 might be tentatively interpreted as indicating relative stability in the long term. The increase in 1135-58, to a figure between two and three times the level of 1066-1135, may indicate particularly assiduous reporting of coins from a period with many rare types and mints, but it might also indicate an increase in money supply and mint output. P.D.A. Harvey (1976, 371-2) has suggested that there may have been an influx of silver into England soon after the middle of the twelfth century caused by an increase in exports of wool and, possibly, cloth. This influx, if it occurred, may have begun

in the 1130s or 1140s. The number of finds per year for 1158-80 has probably been depressed by finders not reporting Cross-and-Crosslets (Tealby) coins, which do not have the scholarly and commercial value of earlier issues, and it can be tentatively suggested that the higher level of 1135-58 may have been sustained or surpassed. It may be concluded that the apparent increase in the Durham mint's share of English output from the 1080s to the 1160s, when money supply may have been growing in the long term, probably represents a real increase in the volume of production in Durham.

Seven of the 167 coins of 1135-58 in table 25 have been attributed to northern mints established in the 1130s, when large-scale production of silver from the Pennine lead mines began: Carlisle (2), Corbidge (4), and Newcastle (1). Locally mined silver almost certainly contributed to the output of the Durham mint from no later than the reign of Stephen (1135-54). In the 1140s Laurence of Durham asserted that the bishop received three great talents (360 pounds weight) of mined silver each year (Raine 1880, 20; Allen 1994, 393-5). The bishop's possession of a Weardale mine was confirmed by the king in 1153-4 (Page 1905-28, II, 348), and the moneyer Cristien leased a mine in 1158x1167 (1; Raine 1835a, 210; Allen 1994, 393-4). In the 1195-6 *sede vacante* period there was £124 0s. 4d. joint profit from the bishop's mine and the exchange (3). Ian Blanchard (1992, 9-11; 1996, 29) has asserted that the combined silver output of the Bishopric of Durham, the king's 'Carlisle' mines, and the archbishop of York's workings in Northumberland was 3-4 tonnes a year in c. 1136-8 or c. 1142-5, c. 24 tonnes in c. 1165, and c. 4-5 tonnes in 1195-6. Lyn Willies (1992) has questioned the c. 24 tonnes estimate, which would have required implausibly large quantities of ore and smelting fuel. Blanchard's estimate is of the same order of magnitude as the largest documented output of mined silver in the medieval period: 20-25 tons produced annually by the Kutna Hora mines of Bohemia, at their peak of productivity in the early fourteenth century. Kutna Hora was the principal European supplier of mined silver at this time (Spufford 1988, 110-1, 124-

5). There is no evidence to suggest that the English mines made a major contribution to European silver stocks in the twelfth century, and only 4.2 per cent of the single-find coins of 1135-58 are attributed to mints in the mining area. Blanchard (1996, 30, 39) has suggested that the Bishopric's mines alone provided up to about 17 tonnes of silver a year in the late 1160s, and that silver from this source went to the Durham mint. It is difficult to reconcile this estimate with the recording of only five pairs of dies used in Durham in 1158xc. 1169, which could have struck no more than a few hundred pounds of silver (see pp. 88-9).

The European shortage of mined silver resulting from the exhaustion of the Harz mines in the eleventh century was relieved by new mines in Germany and Italy: at Freiberg from the late 1160s; in Tuscany at about the same time; and at Freisach from the 1190s. This has been associated with an apparent increase in mint activity in England, the Low Countries, northern France, Germany, and Italy in the late twelfth century. The new silver was probably sent to England in payment for exports: particularly wool exports to the Low Countries (Harvey 1973, 26-8; Harvey 1976, 369-71; Spufford 1987, 814, 817; 1988b, 94, 99, 110, 112-18, 139-40, 194-202; Bolton 1993, 3-4; Miller and Hatcher 1995, 191-4). It is possible that the Durham mint received some of this silver: Durham Priory sold wool at the continental fairs in the late thirteenth century, and Durham merchants were prominent in the wool trade in the 1330s and 1340s (Lloyd 1977a, 308; Bonney 1990, 157-8; Nightingale 1995, 64, 165-7).

The Durham mint's estimated contribution to English output in 1205-c. 1209 (c. 1.0-1.5 per cent) is higher than the estimates for earlier periods, and the c. £850-£1,400 estimate of 1205/6 is many times the c. £20-£40 annual estimate for 1158xc. 1169. The recoinage of underweight coins in 1205-7 (Mayhew 1992, 97-9) was presumably a principal cause of this. In 1208-11, after the recoinage, average annual output was only about £300, and output seems to have fallen to about half of this in 1211/12. The estimated annual output of 1253xc. 1256, £250-£500, is of the same order of magnitude as the outputs of 1208-12, possibly indicating that there had been no fundamental change in the factors underlying output.

The Durham mint may have received Weardale silver at various times in the thirteenth century. There were mint and mine profits in the *sede vacante* accounts of 1208-12 (6, 7; Page 1905-28, II, 348; Raistrick and Jennings 1965, 51-3). Ian Blanchard (1973b, 97-8; 1981, 80) has asserted that the Bishopric's lead mining lapsed from the 1240s to the 1370s, but a parliamentary petition, *sede vacante* accounts, and various records of the Bishopric provide evidence of lead mining throughout the fourteenth century (Drury 1992, 22-23). Locally mined silver could have been used for the production of Long Cross coins in Durham between 1253 and 1278.

5.2 Recoinage, wool, and war: 1279-1351

The complete recoinage begun in 1279 caused a substantial increase in English mint output. The output of the London mint rose from £60,663 in a period of over three years in 1275-8 to £93,847 in less than eight months in 1279. The Canterbury output increased more spectacularly from £455 in 1275-8 to £35,640 in its first recoinage accounting period of less than ten months in 1280 (Challis 1992, 675). The Durham mint's estimated output in 1280/1 is *c.* £8,100, over five times the post-recoinage estimate for 1281-91 (*c.* £1,500). Durham provided 4.1 per cent of the Fox class 3 pence of 1280-1 in the aggregated hoards, far exceeding the *c.* 1.0-1.5 per cent estimate of its contribution to English output in the recoinage year of 1205/6. This increasing share of recoinage output is not attributable to a reduction in competition from other mints, as the only other English mint north of York in 1205/6 was at Carlisle, and in 1280 the Newcastle mint provided competition. North eastern England probably had a rising share of England's money, available to be reminted at a local mint. English money supply had also increased substantially during the thirteenth century, making Durham's unprecedented output of 1280/1 possible. Marion Archibald's estimate of £674,053 for the Long Cross coinage of 1247-78 recoined from 1279 (Archibald 1977, 183) significantly exceeds Mayhew's £300,000 figure for the English coinage in 1218, and his estimate of over £400,000 for the Short Cross coins recoined in 1247-50 (Mayhew 1987, 125).

The Durham mint's share of the aggregated hoards falls from 4.1 per cent in class 3 to 2.7 per cent in class 4 (*c.* 1281-*c.* 1289), in spite of the closure of the recoinage mints in six towns and cities before the introduction of class 4. This may indicate that the Durham output was not sustained by imported silver to the same extent as the London and Canterbury outputs. 71.2 per cent of London output in the decade from 30 September 1281 and 96.2 per cent of Canterbury output for that period was described as foreign silver in the accounts (Mate 1972, 75, 78). It has been suggested that the London and Canterbury mints were striking silver paid for

wool exports. Silver may also have been imported, minted, and re-exported in the 1280s. Competition from foreign imitations of English sterlings caused a rapid decline in output from *c.* 1288, reinforced in 1290 by an improvement in the mint price offered by French mints (Crump and Hughes 1895, 61-2; Prestwich 1969, 407-9; Mate 1972, 61-2; Mayhew and Walker 1977, 127; Mayhew 1983, 22-3). The Durham mint probably suffered from the import of foreign sterlings instead of silver that had to be taken to a mint. In 1295 money on nineteen ships sailing from Newcastle was examined, and fourteen ships were found to have more than 4d. per pound in foreign sterlings (Davies 1954, 230-3, 275-96; Metcalf 1977, 12; Brand 1987, 251). Newcastle, which was the customs port for Durham and Northumberland (Carus-Wilson and Coleman 1963, 183), had a recession in wool exports in 1294-7, during the imposition of the severe 'Maltote' wool tax to pay for the war of 1294-8 with France (Davies 1954, 231-2, 238-9). Mint output may also have been reduced by the disruption of trade in the war, and by French debasements from 1295 attracting silver to French mints (Prestwich 1969, 409-10; Mate 1972, 63; Lloyd 1977a, 75-97). The output of the London mint fell to only £2,035 in 1297-8, and the Canterbury mint was closed from 1296 to 1299 (Challis 1992, 676). The only Durham coins from the period of classes 6-8, *c.* 1291-1299, are relatively rare pence from class 6b and class 7b dies (**pl. 2, 45-7**). The aggregated hoards deposited after this period, which had eighty class 4 pence of Durham, contained only five class 6b Durham pence and no Durham coins of class 7b.

In May 1299 the Statute of Stepney prohibited the import of foreign sterlings, and from Christmas 1299 the sterlings were devalued to a halfpenny. They were demonetised from Easter (10 April) 1300, and mints were opened for a recoinage to eliminate them from circulation (Crump and Hughes 1895, 62-4; Prestwich 1969, 412-13; Mate 1972, 66-69; Mayhew and Walker 1977, 137; Mayhew 1983, 24; Mayhew 1992, 137-40). Mayhew (1979, 61) has estimated that the sterlings accounted for about £130,000 of English mint output in 1300, and Durham's

estimated output rises to *c.* £17,500 in 1299-1300. The Durham mint's share of the recoinage seems to have been substantially greater than in 1279-81. Durham provided 9.1 per cent of the coins of class 9 (1299-1300) in the aggregate of hoards, excluding the aberrant Amble hoard: five per cent greater than the class 3 percentage. It is possible that the currency in the vicinity of Durham had a particularly high proportion of foreign sterlings. There is no hoard from north eastern England in the 1290s that would allow this proposition to be tested, but the four hoards of this period that are known to have consisted principally or entirely of foreign sterlings were all found in southern Scotland (Metcalf 1977, 12).

English mint output declined after the end of the recoinage of 1300, but there was new period of high output at the London and Canterbury mints in 1304-9, caused by an influx of foreign silver (Crump and Hughes 1895, 64-5; Mate 1972, 72-3). Michael Prestwich (1969, 413-16) has found an apparent correlation between mint output and booming wool exports. However, output continued to increase after 1305, despite a decline in exports (Mate 1975, 1-2; Lloyd 1977a, 99). French mint officials reported that the high value of English sterlings in debased French money allowed the English mints to offer a better price for silver (Mayhew 1979, 63). The Durham mint probably shared in the influx of foreign silver, whatever its cause. After the permanent closure of the Newcastle mint in 1302 Durham had the only mint in northern England south of Berwick, as the archbishop of York's mint was closed from 1300 to 1331. The estimate of Durham's annual output in 1300-10 (*c.* £9,700) is about six and a half times the *c.* £1,500 post-recoinage estimate of 1281-91.

There is a gap in the accounts of the London and Canterbury mints in 1309-11. Foreign silver made the same contribution to London and Canterbury output in 1311-21 as in 1303-9 (*c.* 99 per cent), but the average aggregate output of the two mints declined from 105,330 lb. of silver per year in 1303-9 to 25,971 lb. in 1311-21 (Lloyd 1977b, 97-9). The Durham mint's estimated output falls from *c.* £9,700 in

1300-10 to *c.* £5,600 in 1311-14. New types of foreign sterlings imitating the crowned head of English pence were made in the Low Countries from *c.* 1310, providing competition for the English mints (Mate 1975, 11-13). Wool exports fell, and trade was disrupted by war with Flanders in 1313-22 (Lloyd 1977b, 103, 105; Mayhew 1992, 143). Newcastle wool exports were further reduced by the establishment of a single Wool Staple at St Omer, from 1313 to 1326, where the poor quality northern wools were uncompetitive (Lloyd 1977a, 127). However, the Durham mint may have been less dependent upon foreign silver than the London and Canterbury mints. Its share of the aggregated hoards increases from 10.8 per cent in class 10 (1300-10) to 16.7 per cent in class 11 (1310-*c.* 1314) and 18.0 per cent in classes 12 and 13 (*c.* 1314-1317/18), declining to 10.3 per cent in class 14 (1317/18-1319/20), during a brief revival of London and Canterbury output. Durham's estimated output declines slightly from *c.* £5,600 in 1311-14, to *c.* £4,700 in 1314-17, and *c.* £4,400 in 1317-19.

The Durham mint's output in the second and third decades of the fourteenth century may have been supplemented by the conversion of silver into cash to pay tribute to Scottish raiders. From 1311 to 1327 Robert I of Scotland mounted a series of raids into northern England, to gather plunder and extort money in return for truces. The Bishopric of Durham bought truces on at least eight occasions, paying a minimum of £4,266-£5,333 towards a total for northern England that may have exceeded £20,000 (Scammell 1958, 385-403; Barrow 1988, 196-8; McNamee 1989, 66-7, 70, 72, 282-95; Lomas 1992, 55-7; McNamee 1992, 77-84). A petition to the Crown claimed that the inhabitants of the Bishopric paid more than £20,000 themselves (Nicholson 1965, 50-1; Prestwich 1977, 46). Some of the tribute was raised by seizures of ready money (Scammell 1958, 396-8; McNamee 1989, 289-90), but silver may also have been minted for the purpose.

The estimated annual output of the Durham mint falls from *c.* £4,400 in 1317-

19 to c. £1,400 in 1319-31. This may have been partly attributable to the Scottish capture of Berwick in 1318, which greatly increased its share of exports of Northumberland and Durham wool, as Scottish customs were much lower than English charges (Fraser 1961, 141; Tuck 1996, 148-52). Berwick probably became the sole mint of a revived Scottish coinage after its recapture (Stewart 1971, 223-4), so that silver received by English merchants at Berwick could be converted into Scottish coins, acceptable in England. However, the Durham mint's share of the aggregated hoards increases from 10.3 per cent in class 14 (1317-1319/20) to 20.0 per cent in class 15 (1319/20-1330/1), probably because it was less dependent upon declining supplies of foreign silver than the London and Canterbury mints. The contribution of foreign silver to London and Canterbury output was at least 99 per cent until 1321, but it was negligible in 1322-4, and it was only 51 per cent in 1324-35 (Lloyd 1977b, 97-8). In the 1320s civil war in Flanders reduced the volume of the wool trade with England (Lloyd 1977b, 105). The wool trade revived in the late 1320s, but there was no revival of mint output, possibly due to the import of gold coins and foreign sterlings instead of silver that might be taken to the mints (Mate 1975, 13; Lloyd 1977b, 107-8; Mayhew 1992, 143-4). The Durham mint did not escape the general reduction of silver supplies in the late 1320s: the only Durham coins definitely attributable to 1327-1343 are class 15d pence, struck from just three pairs of dies (Woodhead 1989, 60-2, 65-7).

The account of the keeper of the Bishopric in the *sede vacante* period of 1333 (PRO E 372/178 rot. 45 m. 2d.) does not mention the mint, but it does include profits from the forges used to process lead and iron ore in Weardale. There is further documentary evidence for the forges in 1306 and 1311, and from the mid fourteenth century onwards (Drury 1992, 22). Silver from Weardale lead could have contributed to the output of the Durham mint at various times after 1279, but it seems to have made no contribution in 1333.

There are no surviving pence produced at the Durham mint or any other English mint in 1335-43, during a continuing scarcity of silver. Chroniclers associated low prices with a scarcity of money, the scarcity was reported in parliament in 1339, and a political song of 1338 complained about its effect on business (Fryde 1969, 263-5, 267; Fryde 1979, 839-40; Mayhew 1974b, 12; Maddicott 1975, 50; Prestwich 1977, 50; Mate 1978, 126; Prestwich 1982, 52). Heavy taxation and restrictions on the wool trade during the war with France from 1337 may have contributed to the shortage (Maddicott 1975, 49; Mate 1978, 127; Mayhew 1992, 144). Edward III spent about £400,000 on war subsidies in the Low Countries in 1338-40, although only relatively small amounts of money may have been exported from England for this purpose (Fryde 1962, 1186; Prestwich 1977, 46; Prestwich 1982, 53-6, 58-9). The king needed foreign gold coinage for war expenditure, and over-valuation of the gold florin encouraged the import of gold and the export of English silver (Prestwich 1977, 47; Mate 1978, 127-8; Prestwich 1979, 481-2; Spufford 1988b, 277-8, 281-2). Two Durham merchants who sent wool worth £360 to Flanders and spent some of the proceeds on goods for import, according to an inquest of 1337 (Lloyd 1977a, 308; Nightingale 1995, 166), may have been paid in gold or foreign sterling. In the 1330s and 1340s the base foreign sterling called 'Lus(s)hebournes' were imported and circulated without being taken to an English mint (Lloyd 1977 00, 110, 185; Prestwich 1977, 47; Mayhew 1979, 63; Mayhew 1983, 26-7).

An ordinance of 1335 attempted to prohibit the export of English coins and required the reminting of all imported foreign coins (Mayhew 1974b, 12). A new issue of debased halfpence and farthings was authorized, which could attract silver to the mint by offering a higher mint price for silver (Hughes, Crump and Johnson 1897, 186-9). Output at the London mint increased from £707 in 1334/5 to £3,289 in 1335/6, all in halfpence and farthings, but it fell back to £1,491 in 1337/8 (Challis 1992, 679). The Durham mint could not participate in this modest revival of output,

as it was not allowed to strike halfpence and farthings. The Statute of Westminster of 1340, which required English merchants to deposit two marks of silver with the customs collectors for every sack of wool exported (Munro 1979a, 193, 226), caused an influx of foreign silver at the London mint in 1341-3 (Lloyd 1977a, 197; 1977b, 109). London output of halfpence and farthings increased to £5,365 in 1341/2 and £14,753 in 1342/3 (Challis 1992, 679), but there seems to have been no English output of sterling silver pence, undebased and uncompetitive in mint price.

In 1343 the Statute of Westminster was re-enacted, requiring the deposit of silver by wool exporters (Lloyd 1977a, 197; Munro 1979a, 226), although merchants complained that they had to sell their wool for gold in the Low Countries (Prestwich 1979, 478). In the same year the mint price of silver in France was reduced (Mate 1978, 128), probably encouraging the flow of silver to English mints. An indenture of 4 December 1343 introduced a gold coinage and improved the mint price for silver, by reducing the weight of the penny to match the weight of pence in circulation, diminished by clipping and wear (Hughes, Crump and Johnson 1897, 192-7; Lloyd 1977b, 110; Mate 1978, 128-30; Challis 1992, 700-1; Mayhew 1992, 163-5). £23,534 in pence was produced at the London mint in about six months from 20 January to 10 July 1344, with £31,949 of the new gold coinage (Challis 1992, 679). Production of pence also resumed in Durham, after the writs of August and October 1344 authorized the dies (56-7). The estimated annual output of the Durham mint in 1344x51 is only c. £800, lower than any other estimate in the first half of the fourteenth century, but this figure may conceal a higher output until c. 1346 followed by a reduced output. The Canterbury mint was open for the production of the new coinage only until 1346, and London output was again restricted to halfpence and farthings from 1346 (Mate 1978, 130-1; Challis 1992, 679-80). Harry Miskimin (1963, 110) associated the sharp fall in output of 1346-51 with war expenditure, diverting foreign silver paid for exports to Flemish mints. The Black Death arrived in the Bishopric of Durham in 1349, possibly killing about half

of the population (Lomas 1989, 128-30; 1992, 54, 160), and it may have disrupted the activity of the Durham mint, like the plague blamed for the closure of the mint in 1520/1 (129). It is also possible that the supply of undebased English coins that could be recoinced profitably because they had lost less than about five per cent of their weight (Lloyd 1977b, 110) had been exhausted. This hypothesis cannot be tested, as the London and Canterbury mint accounts do not distinguish English silver from foreign silver after 1343.

5.3 Mint price, wool, mining, and bullion famine: 1351-1394

The reform of the coinage in 1351, which introduced groats and halfgroats and reduced the weight of the penny to 18 grains, made it profitable to recoin full-weight pence of 1344-51, and earlier coins with up to about 18 per cent loss of weight (Lloyd 1977b, 110-11). This inaugurated a period of exceptionally high English mint output. The average annual output in Durham may have been c. £30,000 in 1351-5 and c. £15,000 in 1355-61, assuming that the London mint's silver output was divided between the denominations in the indenture proportions from 1355. If these estimates are reliable 1351-5 had the largest output in the history of the Durham mint, far exceeding even the exceptional c. £17,500 estimate for the 1299/1300 recoinage year. John Munro (1984, 49-50) has suggested that the high English mint outputs after 1351 were caused by a combination of the improved mint price, a boom in wool and cloth exports, and dishoarding and bullion flows associated with the expenditure and spoils of the Hundred Years War. The apparent decline of the Durham mint's output during the 1350s may have been caused by a combination of the exhaustion of heavy coins suitable for recoinage and a move towards gold in payments for wool. Silver dominated the output of the London mint until 1353, when gold became dominant, coinciding with the grant of a legal monopoly of the wool trade to alien (foreign) merchants (Lloyd 1977a, 239-40).

Harry Miskimin (1963, 111) associated the decline in English mint outputs from 1354 with the competition of French and Flemish mints. The establishment of the Calais mint in 1363 certainly had an adverse effect on the output of the London mint, as the new mint received proceeds of the wool trade from merchants of the Calais Staple, and ordinances of 1363 and 1364 attempted to make this compulsory (Munro 1973, 39-40; Munro 1979a, 193-4, 226). London output fell from an annual average of 100,200 lb. of gold and 36,300 lb. of silver in 1351-62 to only 21,119 lb. of gold and 1,611 lb. of silver in 1362-8. There was no London silver output in 1365-7 (Lloyd 1977a, 240). The Durham output conforms to this trend, falling from a

maximum of c. £15,000 in 1355-61 to c. £1,000 in 1361-9.

John Munro (1979b, 104-8, 139-43, 146, 149) has collated mint output data from England and the Low Countries, England's principal outlet for wool exports, showing the onset of a common 'bullion famine', principally of silver, in the 1370s. T.H. Lloyd (1977a, 241-2) tentatively connected the continued decline of London output in the 1370s with a decline in wool exports and a deteriorating balance of trade. Pamela Nightingale (1990, 561-2) has suggested that the renewal of the French war in 1369 may have adversely effected mint output by disrupting trade, and she has also argued for a connection between declining wool exports and declining English mint outputs from the 1370s. The Durham mint may have briefly defied the general trend: the maximum estimate of annual output increases from c. £1,000 in 1361-9 to c. £3,000 in 1369-77, with the caveat that the 1369-77 estimate may be too high. Silver from Weardale may have been contributing to the Durham output. Leases and indentures of 1380, 1390/1, 1401 and 1404 imply continued mining activity in Weardale (Page 1905-28, II, 348; Raistrick and Jennings 1965, 53; Drury 1992, 23; A. Blackburn 1994, 73). However, the mint seems to have closed by the end of the reign of Edward III in 1377, as there are no known coins of Richard II struck for Bishop Hatfield (1345-81). Newcastle wool exports ceased temporarily in 1377: the Newcastle exporters were granted the first of a series of exemptions from export through the Staple from 1379, following a complaint that there had been no wool exports through their port for two years due to the diversion of northern wools to Berwick (Lloyd 1977a, 227; Munro 1978, 145-6).

John Day (1987, 11-39, 213-4) used mint outputs from various parts of Europe as evidence of a general European bullion famine from c. 1395 to c. 1415. He associated this with the decline of three sources of bullion: the silver mines at Kutna Hora, the Hungarian gold-fields, and the gold trade from West Africa. Day argued that declining supplies of bullion were not sufficient to replace coinage metal

lost through wear, diversion to non-monetary uses, and trade with the East. Peter Spufford (1987, 857-8; 1988b, 339-56, 389) has refined and strengthened this hypothesis, with more evidence, only rejecting the assumed decline in African gold supplies. Nathan Sussman (1990; 1991; 1994; 1995; 1998) has challenged the French mint output statistics of 1384-1415 used to support the hypothesis, introducing new evidence and showing that there was no uniform recession in output. However, Sussman has complete output figures for only five of the twenty French mints, and he acknowledges the importance of mint prices in causing short-term increases of output (Sussman 1995, 774-7, 783; 1998, 140-7, 151-2). He has not challenged the mint output evidence from elsewhere in Europe.

The Durham mint seems to provide some evidence to support the bullion famine hypothesis. The mint's estimated annual output was no more than c. £200 in 1384x1394, and the mint was closed from no later than 1394 to 1412/13. However, the difficulties of the Durham mint may have been partly attributable to the preference of mint customers for gold coins, which it could not provide. Only 4.5 per cent of the aggregate value of coinage recorded for London and Calais in 1360-1412 was in silver (Munro 1984, 38). In 1388 an old regulation that only gold nobles should be received in payment for wool at the Calais Staple was revived, and Flemish imitations competed with the English product until 1402. The issue of licences exempting Newcastle wool from the Staple continued, with a brief interruption in 1406-8 (Lloyd 1977a, 227-8, 234), but the English and Flemish mint prices favoured the payment of gold to England and silver to Flanders from 1390 to 1425 (Munro 1973, 47-58, 62; Lloyd 1977a, 118-19, 244-7; Munro 1981, 71-5, 85-6, 93-4).

5.4 Mint price, wool, mining, and bullion famine revisited: 1412-1464

The reduction of the weight standards of English coins from Easter 1412, with the penny reduced from 18 grains to 15 grains, made mint prices more attractive to holders of gold and silver, and allowed the profitable reminting of coins minted at the old standards. London output of gold increased from £2,176 in 1407/8, the last year of the heavy coinage for which accounts are available, to £149,871 in 1411/12. Silver output in London increased from only £8 in 1407/8 to £2,912 in 1411/12, and £5,464 in 1412/13 (Challis 1992, 682). The Durham mint reopened for the production of the new light coinage before the death of Henry IV in 1413. The survey of *c.* 1421 implies that the output of, most probably, *c.* £900 at the change of weight was exceptional (70). The small size of this output compared with the estimate of up to *c.* £30,000 in 1351-5, after the previous change in weight, may have been due to European bullion shortages, and the continuance of ratios between mint prices that favoured the minting of silver in Flanders and not elsewhere in Europe. Only 1.9 per cent of the total value of the London output in 1411/12 was in silver.

The highest Durham output known between 1416 and 1460 is only £292 16s. 0d., in 1416/17. Output declined to £116 8s. 0d. in 1418/19, and the survey of *c.* 1421 implies an output of probably only *c.* £200. In 1423 a parliamentary petition complained about the scarcity of silver coinage, and asserted that silver was being sold in the market for 32s. a troy pound (Munro 1973, 74 n. 31). The mints had to strike 30s. from each Tower pound (Challis 1992, 709; Mayhew 1992, 134), equivalent to 32s. per troy pound, but the deduction of minting charges would have prevented competition with a 32s. market price. The Durham mint was closed no later than Michaelmas 1423, and it could not immediately benefit from the reductions in the Flemish mint price for silver in relation to gold from 1425, which has been associated with a boom in English silver outputs (Spufford 1963, 131-2; Spufford 1970, 96-7; Munro 1973, 76, 81-2; Munro 1981, 86; Munro 1983, 124).

Exceptional silver outputs in the late 1420s seem to have been predominantly derived from the proceeds of the wool trade with Flanders, dominated by the Calais Staple. Calais output of silver in about forty-seven months in 1424-8 was £101,618, but the London mint produced only £4,054 of silver in nineteen months in 1425-7 (Challis 1992, 683). The Calais Staple Partition and Bullion Ordinances of 1429 attempted to enforce the taking of bullion to the Calais mint, equivalent to one third of the price of wool sold (Power 1933, 82-90; Spufford 1970, 98-100; Munro 1973, 85-6, 99-100; Lloyd 1977a, 257, 259-61, 265, 274, 281; Munro 1979a, 195, 227; Munro 1979b, 114). The exemptions from the Calais Staple granted to merchants of Newcastle and Berwick were abolished, as it was alleged that the northerners did not bring any gold or silver into England (Munro 1973, 86). The Newcastle licences were restored in 1432, revoked in 1433, restored in 1441, revoked again in 1449, restored partly in 1452 and restored wholly in 1454, with statutory recognition from 1463 (Kerling 1954, 68-70; Munro 1973, 95, 100, 120, 140, 147; Lloyd 1977a, 269-70, 272, 274, 276-9; Wade 1995, 13). There is no discernible correlation between the presence or absence of licenses and the few known outputs of the Durham mint in 1429-1460. The highest and lowest outputs were during the 1433-41 abolition of licences: £235 4s. 0d. in 1438/9, and £41 12s. 0d. or £52 in 1434/5. The highest output at a time of licences was only £115 4s. 0d., in 1453/4. The decline from outputs of thousands of pounds in the early fourteenth century to outputs of a few hundred pounds at most in the fifteenth century may indicate that the wool trade had ceased to make a major contribution to the output of the Durham mint. In the early fourteenth-century wool was sold in the Low Countries for cash, or letters of exchange representing cash already received (Lloyd 1977a, 308-9). T.H. Lloyd (1977a, 244) has suggested that there was a decisive growth in selling wool on credit in the 1380s and 1390s, and the use of bills of exchange to defer most of the payment is well documented in the 1470s and 1480s (Power 1933, 65, 79; Power 1941, 55-6; Hanham 1973, 164-71; Spufford 1979, 180; Bolton 1980, 303-4). Bills of exchange could be used to pay for other export goods, although the Calais Ordinances of 1429

attempted a complete ban of this, which was later relaxed, and abandoned in 1473 (Postan 1928, 8-9; Munro 1979a, 195-6, 205-6, 235; Childs 1991, 70-1). From the fourteenth-century letters of exchange were usually drawn on the offices of London importers (Power 1926, 34; Hanham 1975, xix), and bills of exchange, payable in the Low Countries, could also be exchanged for a London bill (Power 1933, 68-70; Power 1941, 56; Hanham 1973, 169-71; Munro 1973, 90). Most provincial centres could not offer bills of exchange (Kermode 1991, 478-9), and the proceeds of northern wool may have been diverted through London's financial system, avoiding the Durham mint.

The second highest recorded output in 1416-60, £235 4s. 0d. in 1438/9, coincided with a severe agrarian crisis in northern England. A pestilence followed by harvest failures in 1438-40 have been associated with falling rents in the countryside and in towns such as Newcastle, and this crisis may also have caused a decline in admissions to commercial and manufacturing guilds in York (Dobson 1973b, 266-7; Pollard 1989, 93-105; Pollard 1990, 49-52). The rents of the Bishop of Durham and Durham Priory were significantly reduced (Dobson 1973b, 270-1, 273, 284, 288-9, 291; Arvanigian 1996, 99-100). In the fifteenth century the city of Durham was a service and retail market centre dependent upon the priory as customer and employer (Dobson 1973b, 44-50), but the mint output of 1438/9 does not provide any evidence of the crisis. The mint may have been insulated from the crisis because the agrarian economy and local, non-export trade made little contribution to its output.

John Day (1981, 59-60; 1987, 39-45) has used mint output data from England, the Low Countries, France, Italy and Catalonia to propose that a general recovery from the bullion famine of c. 1395-1415 was followed by a more severe shortage c. 1440-60. Peter Spufford (1987, 858-60; 1988b, 356-62) has identified more evidence for a bullion famine from the late 1430s or early 1440s to the mid 1460s, partly caused by the gradual exhaustion of the Balkan mines and their eventual loss to

the Turks. John Munro (1983, 121-3) argued that the nadir of English and Flemish mint outputs was from the late 1440s to the mid 1460s. However, Spufford has noted that the London mint's output continued in the 1440s and improved in the 1450s, although mints in continental north-western Europe were closed. He has attributed this to a favourable balance of payments with the Low Countries, the Baltic and Italy (Spufford 1988b, 357). London had an increasing share of the export trade from east coast ports, reinforced by its dominance in the Company of Merchant Adventurers, which had a leading role in exporting (Bolton 1980, 301, 310-11, 316-17). The closure of the Calais mint in the early 1440s would have increased the London mint's supplies of bullion from the wool trade. Durham did not have London's advantages. The Durham mint remained open in the 1450s, but the outputs in 1453/4 and 1458/9 (£115 4s. 0d. and £96 0s. 0d.) were less than half of the 1438/9 output.

Weardale silver may have contributed to the output of the Durham mint in the 1450s, and earlier in the century. The first surviving accounts of the bishop's clerk of mines, from the 1420s, show the bishop receiving all of the ore as a tithe and by purchase, and its centralized processing in Wolsingham Park (Page 1905-28, II, 349; Raistrick and Jennings 1965, 53-4; Blanchard 1973b, 98, 100; Drury 1987, 4-6; Drury 1992, 23-4; A. Blackburn 1994, 73). In May 1429 buyers of the bishop's lead in London included the mint-master of Rouen (*Rohan*, interpreted as Rochester by Drury 1987, 7; 1992, 24), who may have extracted the silver it contained for use in his mint. Accounts show continued production until the 1450s, which often exceeded sales and use of lead by the bishop (Blanchard 1973b, 100-6). The 1458/9 clerk of mines account, which is the only account surviving from 1457-79, records no lead sales, and in the 1463/4 *valor* the mines had no valuation because they were unoccupied (Grainger 1975, 91-3, 225). The Durham mint was also closed during the period of the 1463/4 *valor*, possibly because there was no Weardale silver to mint at a time of a shortage of silver from other sources.

5.5 Mint price, mining, and monastic silver: 1464-1541

A Tower mint indenture of 13 August 1464 reduced the weight of the penny from 15 grains to 12 grains, and improved the mint price of silver from 30s. to 37s. 6d per Tower pound. The London output of silver increased from £17,828 in 1462-4 to £103,753 in 1464-6. There were further improvements in mint price in 1466, 1467 and 1471, to sustain output (Challis 1992, 190-2, 195-7). Nicholas Mayhew (1974, 63-7) has shown that the recoinage of old money was much more complete than after the weight reduction of 1412, and he has estimated that by 1475 that the old heavy coins constituted less than five per cent of the silver currency. The reduction of the weight of the penny must have allowed the Durham mint to offer an improved mint price to attract old coins for recoinage, and it reopened in the 1464/5 accounting year. The single output estimate of *c.* £200-£500 for four periods in 1464x1487 may conceal peaks of output, during the recoinage and later.

The general revival of European minting from the late 1460s has been associated with a resumption of large-scale mining in central Europe and the Tyrol (Day 1987, 46; Spufford 1987, 860; Spufford 1988b, 363-5). John Munro (1983, 117-18) has suggested that silver from south German mines arrived in England through the cloth fairs. There was a weavers' Guild in Durham, regulated by ordinances of 1450 (Surtees 1816-40, IV(2), 20-1; Dodds 1915, 138), but cloth exports from Newcastle were negligible in 1454-1509 (Wade 1994, 39). Silver production in the south German mines may have had an indirect effect on the output of the Durham mint, through a revival of Weardale lead mining. The new German Saigerprozess, which made a major contribution to increased mining outputs, needed argentiferous lead to extract silver from cupric ores (Blanchard 1984, 183; Munro 1991, 132-4; Blanchard 1995, 14-15), and a trade in lead resulted (Blanchard 1995, 40-2). Ian Blanchard (1984, 185) has suggested that this trade was the principal support of English silver-lead mines in the century from 1470. The Saigerprozess needed 'fertile' lead with its silver content intact, but the Durham mint probably

received silver extracted from lead not sent to the German mines. The recognizance of 18 August 1470 required John Orwell to mint up to twenty pounds weight of the bishop's silver (87). The free coinage of up to twenty pounds of silver was recorded in the receiver-generals' accounts from 1469/70 to 1474/5 (89-90, 93, 95, 97), but a space for the weight of silver was left unfilled in 1476/7 and 1478/9 (99-100). The bishop's supply of silver may have declined in the 1470s, or ended. The Weardale mines were still active in the 1480s (Blanchard 1995, 269), but export of 'fertile' lead would have inhibited silver production.

The output estimates for 1464-1541 show an unmistakable decline, from c. £200-£500 in 1464x1487 to c. £100-£200 in 1489x1515 and c. £50 in 1519x1541. The decline in output in the sixteenth century may have been partly caused by local crises in export trade. Ian Blanchard (1973a, 64-76) has suggested that there was a series of depressions in North Sea trade in 1509-37. Weardale production of lead fell after 1509, and it fell again after a short-lived boom in 1518/19 (Blanchard 1973a, 72, 81-3). In 1523-4 Thomas Wolsey reformed the administration of the mines (Blanchard 1973a, 83; 1973b, 110-11; 1995, 270-3), and in 1526 he commissioned the construction of a new 'fining house' at Gateshead to extract silver from the lead, but it was unusable on completion in 1528 (Welford 1884-7, II, 111-12; Blanchard 1973a, 84; 1984, 184; 1995, 273). Wolsey had to negotiate with a German mining engineer for the export of lead still containing its silver (Blanchard 1984, 184-5).

In the second decade of the sixteenth century the Durham mint may have suffered from a national decline in the availability of silver for minting, unrelated to local crises in trade or mining. Half of the mint's rent was unpaid in 1514/15, and the mint accounts provide no further evidence of activity under Bishop Ruthall (1509-23), apart from a rent of probably half a year owed for 1519-20 (see p. 73; Challis 1975a, 93, 101; Challis 1978, 74-5). London output of silver fell from £13,563 in 1512/13 to £958 in 1513/14, and never exceeded £1,486 until 1521/2, when it rose to

£14,238 (Challis 1978, 305; Challis 1992, 685-6). The English mint price or prices for silver were probably too low in comparison with market prices from c. 1513 to 1522. In May 1522 the Tower mint was instructed to make an extra 2s. from each Tower pound of silver, increasing the mint price by that amount (Challis 1978, 70). In April 1523 William Frankeleyn believed that buying silver in London for minting in Durham would be profitable for Wolsey as the new bishop (133), but output in 1523-6 was minimal (Challis 1978, 74-6). Large-scale minting in Durham may have been prevented by a return to the old heavy coinage in 1523: the light silver coinage and its enhanced mint price ended in London on 26 October 1523 (Challis 1978, 70). Wolsey was commissioned to reform the coinage in 1526, and he increased the yield of a troy pound of silver from 40s. to 45s. before deductions, making the recoinage of old coins profitable (Challis 1978, 70-1, 168, 279, 290, 311; 1992, 196-7, 720). London output of silver increased from £17,561 in 1522-3 to £30,832 in 1526-7 and £213,200 in 1527-30, falling back to £90,911 in 1530-3 (Challis 1978, 305; 1992, 686; the accounts of 1523-6 are missing). The Durham mint may have had a relatively high output from its reopening in November 1527 to Wolsey's translation to Winchester in February 1529: ten of the twenty-two Durham pence in the Maidstone hoard 214/E) minted between 1527 and the deposition of the hoard c. 1538 were coins of Wolsey.

The 154 oz. of silver minted for the bursar of Durham Priory in 1530-4 (163) would have yielded only £28 17s. 6d., at the weight standard of 1526. During the Dissolution of the Monasteries in 1536-40 gold and silver taken for the king was minted, with some of the larger houses yielding thousands of ounces (Challis 1978, 157-61). The Durham mint may not have benefited from this windfall in the last years of its existence. Looted treasures from Durham Priory and its shrine of St Cuthbert were delivered to the king's master of the jewels (Turnbull 1836, 32-3), who sent monastic bullion to the Tower mint. In 1556 the Dean and members of his Chapter were still in possession of monastic vessels valued at £70 (Strurge 1938, 263).

5.6 Explanations: summary and conclusions

The rising output of the Durham mint from its beginnings in the late eleventh century into the twelfth century may have been partly attributable to the increasing monetisation of its locality. Durham's rising percentage share of recoinages from 1205-7 to 1300, and the increasing absolute size of recoinage outputs, may also be evidence of the progress of local monetisation. However, the monetary demands of local trade and agriculture may have had no significant effect on the mint's output in the 1430s.

Recoinages and reductions of the weight of the penny always increased the output of the mint, or allowed it to reopen after a period of inactivity. The price offered by the mint for silver, which was improved by reductions of weight, often had a dominant influence on output. The mint price might become uncompetitive as coins in circulation lost weight, increasing the market price of silver. In the 1290s English mints could not compete with the mint prices of foreign sterling. The large outputs of the first decade of the fourteenth century may have been partly caused by the competitiveness of English mint prices compared with French mint prices. From c. 1310 there was renewed competition from foreign sterling. The increasing use of gold coins in the 1330s and the introduction of an English gold coinage in 1344 introduced a new element into the conflict of competing mint prices. From 1390 to 1425 mint prices favoured the minting of gold in England and silver in Flanders, to the detriment of the Durham mint, which was never authorized to produce gold coins. English mint prices for silver were uncompetitive from c. 1513 to 1522, causing the closure of the Durham mint, and in 1523 the chancellor of the Bishopric was aware of the possibility of revived output and profit during a period of improved mint price.

Changing local and European supplies of mined silver influenced the output of the Durham mint from the twelfth century. The bishop had Weardale silver from the reign of Stephen. New supplies of German mined silver in the last quarter of the

twelfth century probably contributed to an increasing local stock of money available for recoinage in Durham. The closure of the Durham mint in the 1370s may be connected with the first onset of a European bullion famine at a time of declining mining outputs. The mint may have been sustained by Weardale silver during a second bullion famine, from the late 1430s. The inactivity of both the mint and the mines in 1463/4 may be connected. The bishop's free coinage of his own silver from 1469 may be evidence of a revival of Weardale mining, caused by the new demand for argentiferous lead in a revived European silver mining industry.

Silver paid for wool exports probably contributed to the Durham mint's output from the thirteenth-century, or before. Output may have been reduced by a recession in wool exports in the 1290s, and increased by an export boom in the first decade of the fourteenth century, although mint price competition may have been important in both cases. Falling exports in the second and third decades of the fourteenth century also probably caused a reduction in outputs, made more acute by the export of northern wool through Berwick, which had favourable customs rates after its recapture by the Scots in 1318. Coinage of silver for tribute payments to the Scots may have had an opposite effect. The exceptionally high outputs of the early 1350s may have been partly attributable to a wool export boom. The dominance of gold in wool trade payments probably had an adverse effect on the Durham mint's output from the 1350s. The relatively low level of outputs in the fifteenth century may be evidence of the change to payment by bills of exchange.

Wool exports probably made a major contribution to the output from the late thirteenth century to the third quarter of the fourteenth century. Reforms of the coinage and mint prices were often of crucial importance in determining the mint's supplies of silver from wool and other sources. Weardale silver probably made smaller contributions to output than the wool trade at its most fruitful, but it was available at various times from the twelfth century to the fifteenth century or later.

Appendix 1. Calendar of documentary evidence

Introduction

This appendix provides English summaries of the published and unpublished documentary evidence for the Durham mint consulted in the preparation of this thesis. There is one numbered entry for each document or extract. Identically worded duplicate copies (e.g. the two copies of **90**) have not been given separate entries. Some of the sixteenth-century receiver-generals' accounts have survived in a paper working copy and a parchment fair copy (e.g. **119** and **120**), which have been given separate entries if they are not identically worded. Each entry has a date or dates, which may be the date of composition, the stated date of signing, an accounting period, or a date in a chronicle. The entries are arranged in chronological order.

The texts of the summaries generally follow the recommendations of Hunnisett (1977, 52-66). Words from the original document are cited, italicised in parenthesis, if they are considered to be ambiguous or particularly important for the interpretation of the document. Editorial comments, and suggested additions to the text, are italicised in square brackets. First names of people are given in the most usual modern English form, if one exists. When there is no modern version of a first name, the Latin nominative case is used, without the case ending if that is pronounceable (e.g. *Mulkinus* contracted to *Mulkin*). Surnames are given in the manuscript spelling, preferring the most common version of an individual's surname if more than one appears in the calendared documents, and noting variant spellings in round brackets. Prefixes in surnames, such as 'de', have not been translated. Place names have been modernised whenever possible, but surnames derived from place names have not been modernised. Dates are given in modern form, with the exception of some references to the principal 'term' or payment days, such as *Michaelmas*.

The Latin word (*es/ex*)*cambium*, literally meaning 'exchange', can refer to a 'mint', with or without an exchange for the payment of new coins for old coins and bullion. This calendar follows the practice of Alice Beardwood (1950, 35-6), in her discussion of mints and exchanges in 1327-36, using 'mint' as the translation of *cambium* when minting, with or without exchanging, is involved. To achieve consistency, *cambium* wardens are always called wardens of the 'mint', even when a document refers exclusively to exchanging. Institutions designated by the Latin word for a die (*cuneus*), its derivatives (e.g. *cunagium*), or its French equivalents (e.g. *coyn*), are called mints.

Published texts, translations, and calendar summaries are listed at the end of each entry. Manuscripts are cited if there is either no published text or no reliable published text. Languages of texts are stated, when texts are not entirely in Latin.

1 1158 x January 1167. Reginald of Durham's *Libellus*, chapter 95.

Christian, moneyer of Durham, rented a mine from the bishop. The moneyer detained a man who was believed to have discovered treasure that should have belonged to the bishop. Christian committed the man to the bishop's prison in Durham Castle. The prisoner invoked the aid of St. Cuthbert and was miraculously released.

[*Text and calendared*: Raine 1835a, pp. 210-12, 314.]

2 March 1183 or 1184. *Boldon Book* (extract).

The mint used to yield ten marks annually, reduced to three marks because of the mint established in Newcastle upon Tyne by King Henry II. Finally the king took away the dies, which had been used for a long time.

[*Text*: Farley and Ellis 1783-1816, IV, p. 565.]

Text and translation: (a) Greenwell 1852, pp. 1-2, 43.

(b) Austin 1982, pp 10-11.

Translation: G.T. Lapsley in Page 1905-28, I, 327.]

3 2 April 1195-c. Feb. 1196. Account of Gilbert Fitz Renfrew and Richard Brewer, keepers of the temporalities (extract).

£130 13s. 8d. spent to make exchange (*ad cambium faciendum*),
£16 3s. 2d. to smelt minerals, and £27 11s. 10d. buying lead for profit.
£40 profit from lead bought, £10 of which is said to be due from Adam de Selebi.
£174 0s. 4d. in bullion, as profit of mine and exchange.

[*Text*: Stenton 1930, p. 261.]

Translation: Greenwell 1852, p. xii.]

4 1195/6. Chronicle of Roger of Howden (extract).

In [*the year ending at Christmas eve*] 1196 the king gave permission to mint coins in Durham to Philip [*of Poitou*], the bishop-elect. Philip's predecessors were without this licence for a long time before.

[*Text*: Stubbs 1868-71, IV, 13.]

5 7 October 1207. Letters patent summoning mint personnel to Westminster.

The moneyers, assayers, and die-keepers of sixteen places in England, including Durham, are ordered to seal up their dies immediately. They are to bring the dies to Westminster on 24 October 1207, accompanied by mint workmen and people who can give advice on minting, to hear the king's commands.

[*Text*: Madox 1711, p. 198 n. 'zz'. Madox 1769, I, 290 n. 'zz'.

Noble 1780, p. 83. Hutchinson 1785-94, I, 212 n.. Hardy 1835, p. 76 col. 1. Brooke 1910, p. 315.]

6 24 June 1208-11 Nov. 1211. Account of Eimeric the archdeacon of Durham and Philip de Ulecote, keepers of the temporalities (extract).

The keepers account for £18 11s. profit of the dies.

[*Text*: Stenton 1953, p. 38.

Translation: Greenwell 1852, p. xvi.]

7 11 Nov. 1211-11 Nov. 1212. Account of Eimeric and Philip, keepers of the temporalities (extract).

The keepers account for £4 1s. ½d. profit of the exchange of one die [*one moneyer*].

[*Text*: Barnes 1962, p. 46.

Translation: Greenwell 1852, p. xx.]

8 21 February 1218. Letters patent assigning exchanges to William Marshall the younger.

William Marshall has been given the profits of the London exchange, paying £500 annually for the maintenance of Dover Castle. The exchange is to be handed over without delay, with the officials remaining in office. Similar instructions to the bishop of Durham and to Winchester, York and Bury St. Edmunds. The instructions to Durham and York are specifically for profits pertaining to the king.

[Text: *PR 1216-1225*, p. 138. Lawrence 1915, p. 72.]

9 22 June 1218 or later. Exchequer memorandum.

The archbishop of York has been ordered by writ to receive the oaths of the bishop of Durham's moneyers [*sic*] and die-keepers, and to notify their names to the barons of the exchequer. Three sets of dies (*iiij cunei*) were sent to the bishop on 22 June 1218, by means of Peter Sagarnium, Nicholas de Hadham, and William de Berneres.

[Text: PRO E368/1, m. 1d.]

10 Michaelmas term (10 October-28 November) 1250. Exchequer memorandum.

The king commands the barons of the exchequer to have the bishop of Durham's dies cut, as was customary at other times. The writ is in the marshal's wallet.

[Text and translation: Wells 1934-7, pp. 101, 107.]

11 12 June 1253. Letters patent confirming the bishop's minting rights.

By the testimony of worthy men, the exhibition of old dies, and money made from the dies being brought before the king by Bishop Walter [*Kirkham*], the king has accepted that the bishop's predecessors customarily had dies. The king has given the bishop legal possession of his dies, to be held as his predecessors were accustomed.

[*Text*: (a) Fox and Fox 1910, p. 128.

(b) Noble 1780, pp. 83-4 ('from a confirmation of liberties in the Durham close rolls', *not traced*). Hutchinson 1785-94, I, 212 n..

Calendared: CPR 1247-1258, p. 197.]

12 16 June 1253. Writ to the exchequer ordering dies.

The king has given Walter [*Kirkham*], bishop of Durham, legal possession of his dies, to hold as his predecessors were accustomed. The barons of the exchequer are ordered to have the dies cut by the king's die-cutters, and to deliver them to the bishop or his representative, as the dies have been sought by the bishop.

[*Text*: CR 1251-1253, p. 370.]

13 16x27 June 1253. Exchequer memorandum.

[*Copy of the writ of 16 June (12)*.] The writ is in the marshal's wallet.

[*Text*: PRO E 368/27 part 2, rot. 14. Fox MSS, file 4.]

14 27 June 1253 or later. Exchequer memorandum.

On 27 June 1253 three pairs of dies (*tres cunei in vj pec'*) were delivered to the attorney of the bishop of Durham [John Silvester], as ordered by the king's writ, which is in the marshall's wallet.

[*Text*: PRO E 368/27 part 2, rot. 15. Fox MSS, file 4.]

15 12 December 1253 or later. Exchequer memorandum.

On 12 December 1253 Roger Rabot, servant of the bishop of Durham, came before the barons of the exchequer and surrendered three pairs of dies (*tria paria cuneorum*). He had three new pairs to be carried to the bishop.

[Text: PRO E 159/27, rot. 15. Fox MSS, file 4.]

16 2 November 1279. Writ to the exchequer ordering dies.

The treasurer and barons of the exchequer are ordered to cause Robert [*of Holy Island*], bishop of Durham, to have legal possession of three sets of dies for the king's new sterlings, with everything belonging to those dies, in the same way as the bishop's predecessors were accustomed to have dies at the exchequer in other recoinages.

[Text: Fox and Fox 1910, p. 136.

Calendared: CCR 1272-1279, p. 542.]

17 2 November 1279 or later. Exchequer memorandum.

The barons of the exchequer are ordered to cause the bishop of Durham to have three sets of dies to make the king's new sterlings, with everything belonging to those dies, in the same way as the bishop's predecessors were accustomed to have dies in other recoinages. This writ is dated 2 November 1279, on which day Henry de Dunolm, the bishop's attorney, came to the exchequer and delivered two piles and two trussels of the old [*Long Cross*] coinage. Later, he delivered the third old set of dies at the exchequer, and three new sets of dies to make the new money in Durham were handed over to him.

[Text: PRO E368/53, rot. 2.]

18 20 Nov. 1279-1 Jan. 1280. Account of Gregory de Rokesle and Orlandinus de Podio, wardens of the London mint (extract).

£900 paid by Orlandinus de Podio to James Orlandi (*Chancocco Orlandini*) of Lucca, warden of the Durham mint.

[Text: PRO E 372/132, rot. 3 m. 2.]

19 20 August 1280. Writ to the warden of the Durham mint.

James Orland[i], merchant of Lucca and warden of the Durham mint, is ordered to pay £500 of the new sterlings from his exchange to Peter de Turnmire, the king's mint-master of York, and John Monet of Florence, to be taken to Newcastle upon Tyne to be exchanged there. And the king shall cause James to have allowance for the £500.

The writ is cancelled, and it is ordered otherwise below [*in a writ of 10 September 1280, ordering the wardens of the York mint to pay £700*].

[Text: PRO C54/97, m. 3.]

Calendared: CCR 1279-1288, p. 32

20 24 August 1280. Writ to the warden of the Durham mint.

James Orlandi, merchant of Lucca and warden of the Durham mint, is ordered to pay £500 of the new sterlings in his exchange to Peter de Turnmire, the king's York mint-master. This is in addition to the £500 that James was recently ordered to pay to Peter [*by 19*], and it is also to be taken to Newcastle upon Tyne for exchange. The king shall cause James to have allowance for the £500.

This writ is cancelled, and it is ordered otherwise below [*in the writ of 10 September to the wardens of the York mint*].

[Text: PRO C54/97, m. 2.]

Calendared: CCR 1279-1288, p. 33.

21 18 Oct. 1280-13 April 1281. Account of Gregory de Rokesle and Orlandinus de Podio, wardens of the London mint (extracts).

£366 13s. 4d. received from James (*Jacocco*) of Lucca, warden of the Durham mint.

10d. spent on letters carried to Durham to raise the weight [*of sterlings*] there.

[*Text*: PRO E372/132, rot. 3 m. 1d-m. 2d.]

22 13 April 1281-15 July 1281. Account of Gregory de Rokesle and Orlandinus de Podio, wardens of the London mint (extract).

£5 spent on the expenses of an exchanger and an assayer, sent to Newcastle upon Tyne, Durham and Bury St. Edmunds, and returning.

[*Text*: PRO E372/132, rot. 2 m. 1.]

23 10 August 1281. Writ to the warden of the Durham mint.

James Orlandi (*Roulandi*), warden of the Durham mint, is ordered to pay 700m. [*£466 13s. 4d.*] of the money from his exchange to Master William de Luda, keeper of the king's wardrobe, for the expenses of the king's household. The king shall cause James to have allowance for the 700m..

[*Text*: PRO C54/98, m. 4.

Calendared: CCR 1279-1288, p. 97.]

24 1279x81? Memorandum concerning the Riccardi tenure of the Durham mint.

There have been certain agreements between the bishop of Durham and Baroncino Galteri with Henrico de Podio, for themselves and their associates, merchants of Lucca [*the Riccardi*], about the profits of the dies and exchange of Durham. The agreements are contained in an indenture, the tenor of which is that the benefits or profits that shall come to the merchants during the term of the indenture shall be entirely renounced by the bishop, and that the bishop shall save the merchants from all liabilities.

[*Text*: PRO C 202/4 no. 68.]

25 30 Sept. 1281-21 Oct. 1283. Account of Gregory de Rokesle, warden of the London mint (extracts).

£2 7s. 3d. received for three and a half dozen dies delivered to the bishop of Durham, and thirty-nine dies for the abbot of Bury St. Edmunds, at 7s. per dozen.
6s. 9d. spent on making the dies, at 1s. per dozen.

[*Text*: PRO E372/132, rot. 2 m. 1.]

26 13 June-4 Sept. 1283. Account of Malcolm de Harle, as joint keeper of the temporalities with Guichard de Charrun (extract).

£13 3s. 6d. received from the profits of the Durham mint during the period of the account.

[*Text*: PRO E372/127 rot. 2d.]

27 14 January 1293. Evidence of a Northumberland Quo Warranto jury (extract).

The bishop has his moneyer in Durham.

[*Text*: Illingworth 1818, I, 604.]

28 c. 1300. Charter witnessed by Gamell the moneyer.

Charter of Amicia de Raby of Durham, granting a tenement with rents of two kilns in Clayport (Claypath), Durham, between the road leading to Kepier and the tenement of Gamell the moneyer. Six named witnesses, including Gamell

[Text: (a) DCD, 5.2.Eleemos.16 [c. 1300]

(b) DCD, Cart. El. Parv. p. 68 [c. 1400-30].]

29 9 May 1300. Writ to the warden of the London mint.

The king informs John de Sandale that he is surprised that a dozen sets of dies for Kingston upon Hull, and a dozen for Durham, that the treasurer recently ordered to be sent promptly under seal to those places, have not been sent. The king orders John to have the dies made with all possible speed, sending them to the exchequer at York under seal, to be sent by the treasurer and barons of the exchequer to Kingston upon Hull and Durham. As the king knows that dies recently sent to Durham at his command were made of such soft metal that they were consumed in a few days' work, John is instructed that the dies now ordered, and others, should be made of the most durable metal.

[Text: PRO E 368/71, rot. 56.]

30 May-July 1300. Exchequer memorandum recording the supply of dies.

[Record of supplies of dies to the mints of Durham, Newcastle upon Tyne, York, and Kingston upon Hull. The Durham entries are extracted here.]

John de Sandale, warden of the London mint, recently sent dies under seal to York, carried by Stolde Angeler, Frescobaldi merchant. John sent two and half dozen dies for the Durham mint, asking by a letter to [*the chancellor of the exchequer*] Philip de Willoughby (*Wileughby*) that they should be handed over to the warden of the Durham mint when he wanted them, receiving an old die in exchange for each new one. Philip immediately delivered the dies, under his seal, to the chamberlains of receipt of the exchequer, to be kept until needed.

Later, William Servat, warden of the Durham mint, sent to the exchequer, by Peter de Batefosse, merchant, a used set of three dies under seal. William, in a letter to Philip, asked him to supply three new dies to Peter, in exchange for three used dies. Philip caused this to be done immediately, and delivered the used dies to the chamberlains.

On 24 May 1300 William sent two used sets of dies under his seal to the chancery, which were delivered to the chamberlains to be kept, and two of the sets of dies recently sent to York for the Durham mint were immediately sent to William under the chancery seal.

On 31 May 1300 William sent one used pile and two used trussels from the Durham mint, which Philip received and delivered to the chamberlains. Philip immediately supplied the same number of new dies to William's messenger.

On 11 June 1300 William sent two used piles and four used trussels, which were delivered to the chamberlains, and the same number of new dies were sent to William by order of the treasurer.

On 17 June 1300 John de Sandale [*Cendale*] sent two dozen dies for the Durham mint, which were delivered to the chamberlains.

On 17 June William sent three used sets of dies, which were deposited in the treasury, and two new sets only were supplied to him.

Later, by order of the treasurer, a third new set of dies was sent to Durham, because the bishop of Durham claimed that three sets ought to be supplied, always at the same time.

On 25 June 1300 William sent two used sets of dies, and two new sets were sent to him.

On 27 June 1300 John de Sandale [*Cendale*] sent, by Lapin Roger and Robert de Cendale, three dozen sets of dies for the Durham mint, consisting of twelve piles and twenty-four trussels.

On 2 July 1300 William sent three used sets of dies, consisting of three piles and six trussels, and the same number of new dies was sent to him for the Durham

mint.

On 16 July 1300 William sent two used sets of dies, consisting of six dies, and the same number of new dies was sent to him by his servant, John Maunsel.

[*Last dated entry, for dies to be used in York, on 29 July.*]

[PRO E 159/73, rot. 29d.]

31 9 June 1300. Writ to the warden of the London mint.

From the king to John de Sandale, warden of the London mint. Recently John has been ordered, before the king's council, to provide adequate dies for despatch to mints throughout the realm. Dies are still being made too small, and too shallow and poorly engraved, so that there is little difference between pence and halfpence, and the inscription is scarcely legible. John is ordered to provide adequate dies for the mints as soon as possible, sending to York a sufficient supply for Newcastle upon Tyne, Kingston upon Hull, and Durham.

[*Text: Mate 1969a, pp. 216-7.*]

32 22 August-7 October 1300. Exchequer memorandum recording the supply of dies.

On 23 August 1300 Peter de Willoughby (*Wilughby*) received eight sets of dies, consisting of twenty-four dies, from William Servat's servant Thomas de Nevill, for the Durham mint, as shown by a letter from John de Sandale which remains in the possession of the chamberlains.

On 23 August 1300 Peter received three used sets of dies from the bishop of Durham's mint, with letters from William Servat. The dies were kept by the chamberlains. On the same day three new sets of dies were handed over to Peter de Batefosse (*Badefosse*), carrier of the letters, as appears on the back of the letters.

On 3 September 1300 Peter received three used sets from the Durham mint, with William's letter, which were kept by the chamberlains. On the same day replacements were handed over to William's servant Thomas de Nevill (*le Neville*), as

appears on the back of the letter.

[*Similar entries on three later occasions:*]

8 September 1300: two piles and four trussels replaced.

18 September 1300: four used piles and six used trussels exchanged for seven new piles and six new trussels.

3 October 1300: two used piles and six used trussels exchanged for three new piles and six new trussels.

[*Separate records of the supply of dies to the royal and archiepiscopal mints of York follow, with the last entry in each case being dated 7 October.*]

[*Text: PRO E 159/73, rot. 58d.*]

33 31 Oct. 1300-20 July 1301. Exchequer memorandum recording the supply of dies.

On 31 October 1300 William Servat, warden of the bishop of Durham's mint, sent to the exchequer, by his servant Thomas de Nevill, two used sets of dies, consisting of six dies. The dies were delivered to the chamberlains. On the same day Thomas received two new sets of dies in exchange, to be carried to William under seal.

On 5 November 1300 Thomas brought three used sets from the Durham mint under William's seal, which were delivered to the chamberlains. On the same day Thomas received one new set and no more, for a reason contained in the 'Recorda' section of this term's memoranda rolls [*see 32*].

On 10 November 1300 Thomas brought a letter to Philip de Willoughby (*Wilughby*), by which William asked for two new sets of dies for the Durham mint. The dies were sent by order of Philip.

On 26 November 1300 Thomas brought a used pile and two used trussels, and received the same number of new dies.

On 4 February 1301 Thomas brought from the London mint, under seal, nine new sets of dies for the Durham mint, three of which were handed over to him to be taken to the Durham mint. Thomas delivered three used sets in exchange, which

were delivered into the custody of the chamberlains with the six remaining new sets.

On 5 May 1301 John de Sandale, warden of the London mint, sent to the exchequer, by means of William Servat's servant Thomas de Nevill (*Neyvill*), twelve piles and twenty-four trussels for the Durham mint, which were delivered to the chamberlains to be kept.

On 27 May 1301 Thomas brought two used sets of dies under William's seal, and received two new sets from the chamberlains to be taken to him.

On 4 June 1301 Thomas brought two used piles and three used trussels under William's seal, and received the same number of new dies to be taken to him.

On 20 July 1301 Thomas brought two used sets of dies under William's seal, and received the same number of new dies for the Durham mint.

[*Text*: PRO E 368/72, rot. 15.]

34 10 November 1300. Letter from Philip de Willoughby and the barons of the exchequer to William Servat.

William is reminded that he was sent, by means of his servant Thomas de Neville, two sets of dies on 31 October 1300, and one set on 5 November 1300, each set consisting of one pile and two trussels. Inspection of the rolls of the exchequer recording the delivery of dies to William [*see* 33] shows that he still has these three sets. William knows that there should be no more than three sets in use in the Durham mint. A letter from William has requested two new sets of dies, as the bishop of Durham will suffer loss if they are not supplied. The two sets are being sent to William by means of Thomas, out of respect for the bishop. William must return two of the three sets he already has immediately. The exchequer cannot rightly send William a new die without receiving a used one in return, and it will not do so in future.

[*Text*: PRO E 159/74, rot. 61 (*French*).]

35 September 1302-28 January 1304. Proceedings of the royal assizes at Durham (extract).

Geoffrey [*de Hertopol*], the king's attorney, accuses Henry Pysane and Gregory the Moneyer of minting money in Durham for the bishop, after the judgement [*of 1 July 1302*] confiscating the bishop's temporalities. Henry and Gregory admit that they minted money on 31 July 1302, but not after, and they say that they neither knew about the judgement on that date, nor did they have notice of it. Henry, Gregory, and Geoffrey submitted to the judgement of a jury. The [*named*] jurors say upon oath that Henry and Gregory made thirty pounds sterling after the judgement, which they paid to Alice the wife of William Servat without the consent of William. Andrew de London and Gregory the Moneyer go bail for Henry, and Henry goes bail for Gregory, to appear in court on 31 January 1303. On that day Henry and Gregory were given a date to hear judgement, on 1 May 1303.

Geoffrey de Hertopole accuses Alice, wife of William Servat, of exchanging all of the bishop's money after the judgement. Alice says that she cannot answer without her husband, William. She was told to cause William to appear in court on 2 October 1303 to answer. William did not appear on that date, and the sheriff was ordered to distrain him by his possessions to make him appear on 28 January 1304. William did not appear, and his possessions were distrained upon to the value of 6s. 8d., but no one was willing to go bail for him. The sheriff was ordered to distrain William and Alice to appear on 22 April 1304.

[*Text: PRO JUST 1/226, m. 1.*]

36 c. 24 Sept. x 30 Sept. 1302. Writ to Robert de Clifford, keeper of the temporalities.

Letters from Sir William Dormesby and Henry de Gudeford have informed the king about the activities of themselves and Robert around Durham. The king understands that Robert is managing the business [*of the temporalities*] well. Robert has sent word that he has taken into his hands the mint (*le coyn*), taxes and tolls of the Bishopric, concerning which he has asked for the king's will. The king defers his reply until the next parliament.

[Text: PRO SC 1/12/155 (*French*)]

37 1306/7. Receiver's account (extract).

£26 10s. received from the rent of the mint this year, after the return of the liberty, from 7 July to 11 November 1307.

[Text: Greenwell 1852, p. xxxi.]

38 1309, 1310 or 1318? Letter from a bishop of Durham, Bishop Richard de Bury's *Liber epistolaris*, fol. 169.

The bishop's dies, sent to London in the customary manner to be replaced, have been detained by the king's officials, who are said to be requiring an assay of the bishop's coins in London. The bishop is not sure whether the dies have been detained for this reason or another. He asks his correspondent to discreetly enquire about the cause, seeking the release of the dies with the help of other friends of the bishop. The bishop also asks whether an assay of the bishop's money in London is due or accustomed, or what else should be done; members of the bishop's council providing advice if required. If a legal dispute has impeded the release of the dies, the bishop's correspondent is requested to deal with it.

[Text: Hardy 1873-8, IV, 425. Montagu 1895, p. 294.]

39 25 May 1309. Writ to the exchequer.

The king informs the deputy-treasurer John de Sandale that he has heard that the bishop should have dies to make money in his Bishopric, and that he now intends to seek them in London. The treasurer is ordered to have the dies handed over to the bishop, so that he is not hindered.

[Text: PRO E159/82, rot. 40. PRO E368/79, rot. 78 (*duplicates; French*).]

40 15 June 1309. Writ to the warden of the London mint ordering dies.

The king informs Emeric de Friscobaldi, the warden of the London mint, that he understands that Bishop Anthony [*Bek*] ought to have dies to make his money in his Bishopric, by the king's grant. The king commands the warden to deliver new dies to the bishop or his representative without delay, as often as they bring old dies to him, as was customary in the time of King Edward I. The bishop should not be seen to be impeded in any way in the making of his money, by the withholding of dies.

[Text: PRO E159/83 rot. 109.]

41 12 January 1310. Writ to the bishop.

The king to Bishop Anthony [*Bek*]. The king has recently caused the money made at the Tower of London and in Canterbury to be assayed at the exchequer, as is customary. The bishop is commanded to send his mint-master to the exchequer on 16 February 1310, with this writ and the pyx in which the bishop has caused money to be collected for assay while he has had a mint, so that the money can be lawfully assayed on that day.

[Text: PRO C54/127, m. 14d.]

Calendared: CCR 1307-1313, p. 241.]

42 3 March-20 May 1311. Account of Robert de Bartone, keeper of the temporalities (extracts).

£12 10s. received from the profits of the Durham mint during the period of the account, as is contained in a roll of particulars.

The expenses of one man going to London with four dies to be replaced there, with his expenses returning, 13s. 4d., as is contained in the roll of particulars.

[Text: Hardy 1873-8, IV, 91, 93. Fox and Shirley-Fox 1912, p. 202.]

43 16 June 1311. Writ to the exchequer ordering dies.

The king has decided that Bishop R[*ichard Kellaw*] shall have as many dies as his predecessors were accustomed to have, to make the king's money in his Bishopric. The king commands the barons of the exchequer to cause the bishop to have his dies, for striking the king's money in the Bishopric, and to cause other things to be done, which customarily relate to this matter.

[Text: Hardy 1873-8, IV, 96. Montagu 1895, p. 291. Fox and Shirley-Fox 1913, p. 115]

44 23 June 1311. Writ to the warden of the London mint ordering dies.

The king has decided that Bishop R[*ichard Kellaw*] shall have as many dies as his predecessors were accustomed to have, to make the king's money in his Bishopric. Emeric de Friscobaldi, warden of the king's London mint, or a deputy, is commanded to cause the bishop to have dies, for striking the king's money in the Bishopric, and to cause other things to be done, which customarily relate to this matter.

[Text: Hardy 1873-8, IV, 96. Fox and Shirley-Fox 1913, p. 115]

45 9 January 1317. Writ to the warden of the London mint ordering dies.

John de Cokermuth, warden of the king's London mint, is commanded that, having received from Robert de Sapy, the king's receiver of Durham, or his attorney, the old dies of the Durham mint, he should deliver new dies to Robert or his attorney, as is customary.

[*Text*: Hardy 1873-8, IV, 151. Montagu 1895, p. 292. Fox and Shirley-Fox 1912, p. 202.

Calendared: CCR 1313-1318, p. 389.]

46 10 October 1316-4 May 1317. Account of Robert de Sapy, keeper of the temporalities (extracts).

£13 6s. 8d. received from the profits of the Durham mint during the period of the account, as is contained in a roll of particulars.

The expenses of one man obtaining dies for the Durham mint at the Tower of London, on four occasions, 13s. 4d.

[*Text*: PRO E 372/164 rot. 34 m. 2.]

47 1 June 1317. Writ to the exchequer ordering dies.

The king commands the treasurer and barons of the exchequer to cause L[ewis de Beaumont], bishop-elect of Durham, to have three sets of dies for sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have.

[*Text*: Hardy 1873-8, IV, 156. Montagu 1895, pp. 291-2. Fox and Shirley-Fox 1912, p. 203

Calendared: CCR 1313-1318, p. 405.]

48 30 July 1317. Writ to the exchequer ordering extra dies.

The king commands the treasurer and barons of the exchequer to cause L[*ewis de Beaumont*], bishop-elect of Durham, to have another three trussels, over and above the three already supplied in execution of the king's order [47] to deliver to him three sets of dies for sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have. The treasurer and barons have delivered three sets of dies consisting of three piles and three trussels, and the bishop-elect has asked the king for a grant of three extra trussels. This shall not prejudice the king's rights or be used as a precedent.

[*Calendared: CCR 1313-1318*, pp. 490-1.]

49 30 November 1318. Writ to the exchequer ordering pyx trials.

The king informs the treasurer and barons of the exchequer that he is surprised that the money struck in the Bishopric of Durham and Bury St Edmunds, in the reigns of Edward I and Edward II, has not been assayed. The king commands the treasurer and barons to cause the assaying to be done, as is lawful and accustomed.

[*Text: Madox 1711*, p. 199 n. 'd'. *Madox 1769*, I, 292-3 n. 'd'.

Noble 1780, p. 84. *Hutchinson 1785-94*, I, 283 n..

Calendared: CCR 1318-1323, p. 34.]

50 20 November 1320. Exchequer memorandum.

The king commanded the barons [*in 47, a writ of 1 June 1317*] to cause L[ewis de Beaumont], bishop-elect of Durham, to have three sets of dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have. On this authority the barons supplied three piles and three trussels only to the bishop. On 30 July 1317 the king, at the request of the bishop, commanded the barons [*in 48*] to provide another three trussels over and above the three already supplied. The bishop has a grant of the three extra trussels until 23 April 1318, to be renewed annually for as long as it pleases the king.

[Text: PRO E159/94, rot. 24.]

51 1 December 1320. Writ to the warden of the London mint ordering dies.

The king informs William de Haustedede that he commanded the exchequer [*in 47*] to cause L[ewis de Beaumont], bishop-elect of Durham, to have three sets of dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have. On this authority the treasurer and barons ordered the then warden [John de Cokermuth], by exchequer writ, to supply only three piles and three trussels. On 30 July 1317 the king commanded the treasurer and barons [*in 48*] to provide another three trussels over and above the three already supplied, at the request of the bishop. The bishop asked to have the grant of the three extra trussels continued. The warden was commanded to supply three extra trussels to the bishop until 23 April 1318, and for whole years from then only for as long as it pleases the king. The three trussels previously granted to the bishop should be returned to the exchequer first, so that the bishop has only two trussels for each pile.

[Text: PRO E 159/94, rot. 159]

52 6 July 1323. Writ to the exchequer ordering dies.

The king commands the treasurer and barons of the exchequer to cause L[ewis de Beaumont], bishop of Durham, to have three sets of dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have.

[Text: PRO E159/96, rot. 42d.]

53 July 1323. Exchequer memorandum.

The king commanded the treasurer and barons of the exchequer [in **52**] that they should cause Bishop L[ewis de Beaumont] to have three sets of dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have.

Rolls being examined for precedents, a writ of 1 June 1317 [**47**] was found in the memoranda rolls of the King's tenth year [1316/17]. The treasurer and barons of the exchequer were commanded to cause L[ewis de Beaumont], bishop-elect of Durham, to have three sets of dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have. By scrutiny of the rolls and memoranda of the exchequer it was found that Augustine le Waleys, warden of the king's mint, was commanded to have the three dies cut by the king's die-cutters, and to deliver them to the exchequer at once. On 10 June 1317 the warden sent to the exchequer, by means of John de Merkyngfeld, die-keeper, three sets of sterling dies for the Durham mint, consisting of three piles and three trussels. The six dies were delivered to William de Ayremynn, who received them in the name of the bishop, and returned three used piles and four used trussels.

[In 1323] William de Denum, who sought at the exchequer a writ to the warden of the London mint for the delivery of dies, was told that he should return used dies first. William said that the used dies had already been delivered to the London mint. Consequently William had a writ [**54**], ordering the warden to have six dies made and delivered to the bishop or his representative, receiving six used dies

in exchange.

[Text: PRO E159/96, rot. 85d.]

54 12 July 1323. Writ to the warden of the London mint ordering dies.

The warden is commanded to cause the die-cutters to make three sets of dies for striking sterlings, consisting of three piles and six trussels, to deliver to Bishop L[ewis de Beaumont] or his representative for the Durham mint, receiving the same number of used dies in exchange.

[Text: PRO E159/96, rot. 145d.]

55 27 November 1336. Writ to the exchequer ordering dies.

The king commands the treasurer and barons of the exchequer to cause R[ichard de Bury], bishop of Durham, to have dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have.

[Text: Hardy 1873-8, IV, 195. Montagu 1895, pp. 292-3. Fox and Shirley-Fox 1913, p. 116.

Calendared: CCR 1333-1337, p. 632.]

56 14 August 1344. Writ to the exchequer ordering dies.

The king commands the treasurer and barons of the exchequer to cause R[ichard de Bury], bishop of Durham, to have three sets of dies for striking sterlings, with everything belonging to them, as bishops of Durham have been accustomed to have.

[Text: PRO C54/176, m. 21.

Calendared: CCR 1343-1346, p. 408.]

57 16 October 1344. Writ to the exchequer ordering dies.

[*Text as in 54.*]

[*Text: Hardy 1873-8, IV, 258. Montagu 1895, p. 293.*

Calendared: CCR 1343-1346, p. 422.]

58 5 August 1345. Writ to the exchequer ordering dies.

The king commands the treasurer and barons of the exchequer to cause T[*homas Hatfield*], bishop-elect of Durham, to have dies for striking sterlings in Durham, with everything belonging to them, as bishops of Durham have been accustomed to have.

[*Text: PRO C54/177, m. 1.*

Calendared: CCR 1343-1346, p. 542.]

59 1358. Proceedings of the prior of Durham's halmote court; first (summer) tourn (extracts).

Bonageus the Moneyer came into court and took a messuage and twenty eight acres of land formerly held by Christiana Ponchoun, paying 13s. 4d. annually during the first three years, and 20s. thereafter. Bonageus shall repair the buildings of the messuage at his own cost, within one year. 13s 4d. of the 20s. entry fine is remitted for the repair of the buildings. Sureties for the payments, Robert Thomson and John Ponchoun (*Punchoun*).

... Bonageus the Moneyer came into court and took a messuage and twenty acres of land lately held by Richard de Aucland, vicar of Pittington, paying the old rent and doing for the prior and the neighbours things that are due. Sureties, John Ponchoun and Robert Thomson. 13s. 4d. paid for the entry fine.

[*Text: Booth 1889, pp. 21-2.*]

60 1364. Proceedings of the prior of Durham's halmote court, second (autumn) tourn (extract).

At the last halmote a messuage and twenty acres of land in the tenure of Bonageus (*Bonagii*) the Moneyer were ordered to be forfeited, because he has left the country and sublet the messuage and land without the prior's permission. The crops are ordered to be seized, for the rent and damage to the buildings of the messuage. Master Richard de Birtely, former bursar, took the crops as security. The value of the crop is to be determined at the next [court]. Robert son of Thomas and John Ponchoun (*Punchon*) became sureties for the distraint of Bonageus.

[Text: Booth 1889, p. 28.]

61 1365. Proceedings of the prior of Durham's halmote court, third (spring) tourn (extract).

A jury found that the crop of the land of Bonageus (*Bonagii*) the Moneyer, which Walter Draper occupied from 1364, was worth 72s.. The crop was seized for the debts of Bonageus.

[Text: Booth 1889, p. 33.]

62 2 November 1367. Indenture of Andrew de Florence and John de Bishopdale.

Indenture between Bishop Thomas [*Hatfield*] and Andrew de Florence, moneyer, and John de Bishopdale, burgess of Durham. The bishop has leased his mint, with its profits, to Andrew and John, to be held by them and their deputies for a year from 11 November 1367. Andrew and John shall pay [*an annual rent of*] four pounds sterling to the bishop's exchequer at the four terms of the Bishopric, the first term commencing at the next feast of St. Cuthbert in March [*20 March 1368*]. They shall bear all the costs of the mint. They shall use the same standards of fineness and weight as the London mint, and save the bishop from liabilities towards the king and all others concerned. Andrew and John agree that the lease will be nullified, and the bishop will be able to take profits, if the English coinage is changed during the term

of the lease. From time to time the bishop's ministers shall take and keep the pyx sample (*lassay*) of the money struck, in the manner of the mints in London and elsewhere in England.

[Text: DCD, Misc. Ch. 6883.]

63 10 February 1384. Writ to the exchequer ordering dies.

The king commands the treasurer and barons of the exchequer that, having received from John [*Fordham*], bishop of Durham, old dies which the late Bishop Thomas Hatfield had to strike sterlings in his liberty, they should deliver new dies to the present bishop without delay; that is, three standards and six trussels, as the late bishop and his predecessors had.

[Text: PRO C54/224, m. 13.]

Calendared: CCR 1381-1385, p. 360.

64 1382/3x1388/9. Rental of the bursar of Durham Priory (extract).

Received from Richard the moneyer, for the rent of Scaltok mill [*in Elvet, in the city of Durham*]: £1 6s. 8d. for Pentecost term, £1 16s. 8d. for Martinmas term.

[Text: DCD, Bursar's Book D, fol. 18.]

65 c. 1391-2. Rental of the bursar of Durham Priory (extract).

Received from Richard the Moneyer and William Prentis, for Scaltok mill, £6 0s. 0d.

[Text: DCD, Bursar's Book E, fol. 81v.]

66 17 November 1394. Proceedings of the bishop's halmote court (extract).

William Warde came into court and took from the bishop a house on the open space [*Palace Green*] in Durham Castle, called the 'moneyour hous', together with another chamber beyond Owengate, to be held until a moneyer shall wish to strike coins in the house. William shall pay 5s. per annum rent, at Pentecost and Martinmas, and the bishop shall maintain the buildings. William has permission to sublet.

[*Text*: PRO DURH 3/13, fol. 146. Hutchinson 1785-94, II, 272 n.. Fowler 1912, pp. 101-2.]

67 1396/7. Rental of the bursar of Durham Priory (extract).

Received from Richard the Moneyer and John de Leventhorpe, for Scaltok mill, £6 0s. 0d. [John de] Leventhorpe [*Leventhorp*] £1 6s. 8d., 13s. 4d., 9s. 4d.; Richard the Moneyer, £2 13s. 4d.

[*Text*: Lomas and Piper 1989, p. 121.]

68 1416/17. Receiver's account (extract).

£3 16s. 3d. received from the profits of the bishop's mint in Durham during the accounting period, as shown by the written details of Mulkin de Florencia, the bishop's mint-master, examined upon accounting. 5d. from each troy pound of silver, checked by the counter-roll of Master Richard Buckley, warden of the mint this year.

[*Text*: CCBpric 189809, m. 3.]

69 1418/19. Receiver's account (extracts).

[*m. 3*] £1 0s. 8d. received from the profits of the bishop's mint in Durham during the accounting period, as shown by the written details of Mulkin de Florencia, the bishop's mint-master, examined upon accounting. 4d. [*over erasure*] from each troy pound of silver, checked by the counter-roll of Master Richard Buckley, warden of the mint this year. A further 3s. 7d. is allowed to Mulkin for repairs to his mint-house (*domo sua*) this year.

[*m. 3d.*] John Armerer accounts for 10 s. paid to Mulkin, the bishop's mint-master, for various sums allowed to Mulkin this year.

[*Text*: CCBpric 189782, mm 3 and 3d.]

70 c. 1421. Survey of the Easington ward of the Bishopric (extract).

Buildings on Palace Green, with a house for the mint on the east side, are worth nothing [*in rent*], because they are occupied by the present constable, chancellor, and mint-master. The mint is operated by Mulkin of Florence, the bishop's mint-master, and is worth forty shillings per annum, but when the money of England changed [*at the weight reduction of 1411-12*] it yielded twenty marks.

[*Text*: CCBpric 220196, fol. 1v.]

Imperfect transcript: Longstaffe 1867, p. 25 (partial text). Fowler 1912, p. 101.]

71 1424/5. Receiver's account (extracts).

[*m. 2*] Nothing received from the profits of the Durham mint during the accounting period, as shown by the written details of Mulkin de Florencia, the bishop's mint-master, examined upon accounting. 4d. from each troy pound of silver minted, checked by the counter-roll of Master Richard Buckley, warden of the mint this year.

9s. rent of the house of the mint-masters (*domus cunatorum*), for 1423/4 and 1424/5.

[*m. 3*] 9s. rent of a house in Durham Castle, lately occupied by Mulkin de Florencia, the bishop's mint-master.

[*Text*: CCBpric 189810, mm. 2 and 3.]

72 8 July 1433. Parliamentary petition of Bishop Langley (extracts).

The bishop and his predecessors have had a moneyer in Durham from time immemorial [*inter alia*]. ... [*The Quo Warranto enquiry of 1293 (see 27) found*] that the bishop had his moneyer in Durham.

[*Text*: Stracey 1767-77, IV, p. 427.]

73 1434/5. Receiver's account (extract).

10s. 10d. received from the profits of the bishop's mint in Durham during the accounting period.

[*Text*: CCBpric 188686, m. 2.]

74 1438/9. Receiver's account (extract).

£3 1s. 3d. received, from 147 lb. of silver, for the profits of the Durham mint during the accounting period, as shown by the written details of Alan Bedale, the bishop's mint-master, examined upon accounting. 5d. from each troy pound of silver minted, checked by the counter-roll of William Raket, warden of the mint this year.

[*Text*: CCBpric 189811, m. 2.]

75 7 March 1454. Proceedings of the bishop's halmote court (extract).

Robert Sotheron leases a piece of the bishop's land, seven ells long and six and a half ells wide, on the east side of Palace Green, west of the archdeacon's house, north of the precentor's house, and on the south side of a yard called 'Coneyour Garth'.

[*Text*: PRO DURH 3/15, fol. 362v.]

Imperfect transcript: Hutchinson 1785-94, II, 272 n.. Fowler 1912, p. 102.]

76 1453/4. Receiver's account (extract).

£1 10s. 0d. received from the profits of the Durham mint, from 72 lb. of silver struck during the accounting period, as shown by the written details of John Arscot, the bishop's mint-master, examined upon accounting. 5d. from each troy pound of silver minted, checked by the counter-roll of Richard Raket, warden of the mint.

[*Text*: CCBpric 189812, m. 2.]

77 1458/9. Receiver's account (extract).

£2 0s. 0d. received from the profits of the Durham mint, from 60 lb. of silver struck during the accounting period, as shown by the written details of John Arscot, the mint-master there, examined upon accounting. 6d. from each troy pound of silver minted, checked by the counter-roll of the warden of the mint.

[*Text*: CCBpric 189814, m. 2.]

78 3 and 10 April 1460. Recognizance of John Orwell.

On 3 April 1460, before the bishop in his chancery at Durham, William Billyngham of Farrington Hall [*Silksworth, County Durham*], Edward Hedley of Stockleigh [*County Durham*], Robert Palmen of Durham, and Robert Preston of Durham bound themselves in the sum of one hundred marks, to be paid to the bishop or his successors on 13 April 1460. If this is not paid, it should be raised from their lands and possessions, for the bishop's use.

John Orwell of Durham, 'cunyour', shall pay the rent of the mint to the bishop in his Durham exchequer: £3 6s. 8d. at both Michaelmas [*29 September*] 1460 and Easter [*5 April*] 1461, or within forty days of both feasts. On 7 April 1461 he shall return to the bishop in his Durham exchequer all of the bishop's dies and other mint equipment, according to the terms of an indenture between John Norwell and John Goldsmyth, lately master of the mint. At the end of the year John Norwell shall enter the safe custody of the bishop, to answer for any damages and defaults in the mint during the year, contrary to the terms of indentures. If these conditions are fulfilled, the recognizance shall be void.

On 10 April 1460, in the bishop's court at Durham before the bishop, John Norwell of Durham, 'cunyour', promised to pay Bishop Laurence [*Booth*] one hundred pounds sterling to be paid on 1 June 1460. If this is not paid, it should be raised from his lands and possessions.

[*Text: PRO DURH 3/50 (Booth chancery roll 3), m. 2d.*]

79 1459/60. Receiver-general's account (extract).

14s. 10½d. received from the profits of the Durham mint, from 22 lb. 4 oz. of silver struck from 29 September 1459 to 7 April 1460, as shown by the written details of John Arscot, the mint-master there, examined upon accounting. 8d. from each troy pound of silver minted, checked by the counter-roll of the warden of the mint

£3 6 s. 8 d. received from John Norwell, farmer of the mint leased to him from 7 April 1460 to 7 April 1461, for the Michaelmas term within the period of the account [29 *Michaelmas 1460*]. Paying £6 13s. 4d. in equal parts at Michaelmas and Easter, as shown by an indenture of the lease.

[Text: CCBpric 189815, m. 3.]

80 1460/1. Book of great receipt (extracts).

[fol. 34v.] £1 6s. 8d. received from John Norwell on 23 March 1461.

£2 0s. 0d. received from the hands of John Norwell on 11 December 1461.

... £1 17s. 0d. received from John Norwell on 18 December 1461, through Henry Gyllowe.

[fol. 43] ... £1 17s. 0d. paid to Henry Gyllowe on 18 December 1461, by John Norwell [*Orwell amended to Norwell*].

[Text: CCBpric 220242, fols 34v. and 43.]

81 1460/1. Receiver-general's account (extract).

£6 13s. 4d. annual rent received from John Norwell, farmer of the Durham mint leased to him by the bishop.

[Text: CCBpric 189816, m. 3.]

82 1463/4. Valor of the Bishopric (extract).

The mint is worth £6 13s. 4d. per annum. Nothing spent on the making of dies (*factura ferrorum*) there. It is worth £6 13s. 4d. net. Nothing paid to the receiver-general. Arrears of this year, £6 13s. 4d.

[Text: CCBpric 189817, m. 1.]

83 1464/5. Receiver-general's account (extract).

£6 13s. 4d. received for the rent of the Durham mint this year, leased to John Orwell (*Norwell*). £13 4s. 10¼d. rent received from John Orwell, farmer of the bishop's mint at Durham. 315 days from 29 September 1464 to 10 August 1465 at 20 marks per annum (£11 10s. 1¾d.), and 50 days from 10 August to 29 September 1465 at £20 per annum (£2 14s. 9½d.).

[Text: CCBpric 189818, mm. 2-3.]

84 1465/6. Receiver-general's account (extracts).

[m. 3] £10 0s. 0d. received from John Orwell (*Norwell*), farmer of the bishop's mint at Durham from the 29 September 1465 to 6 April 1466. He does not answer for money from the mint between 6 April and 29 September 1466, because he did not receive any.

[m. 4] ... 3d. paid for charcoal in Durham Castle on 28 March 1466, for an assay (*say*) of the money of the bishop's mint-master.

... 7s. 0d. paid for the meals of John Hertipole and his servant, being with John Orwell (*Norwell*) in Durham for three weeks, for the renewal of the 'rental' of the mint, at 2s. 4d. per week.

4s. 8d. paid for the meals of John Rode, clerk, and his servant, being in the same place for two weeks to expedite the bishop's business, at 2s. 4d. per week.

9s. 4d. paid to Henry Barbour for the meals of John Hertipole and his servant, being in the same place for the reason stated, for four weeks in the month of July, at 2s. 4d. per week.

2s. 2d. paid for the fodder of John Hertipole's horses during the time stated, together with 1s. 8d. paid for horseshoes; total 3s. 10d. ...

£1 0s. 0d. paid to William Plumer for 12 rods [66 yards] of pipes for the repair of the water pipe between the abbey and castle. 1s. 4d. per rod, over and above 6s. 8d. paid by John Orwell (*Norwell*), deducting 2s. 8d. from the total. ...

6s. 6d. paid to Thomas Lovell, carpenter, for his labour obtaining building material at Frankland [*Durham*], and making a fence in front of the mint-house (*domum cunie*), during thirteen days in July and August 1466, at 6d. per day.

4s. 0d. paid to Thomas Hochonsen, carpenter, working in the same place for eight days, at 6d. per day.

4s. 8d. paid to William Layng for the carriage of seven wagon-loads of timber from Frankland to Durham, for the fence. 8d. for each wagon-load.

1s. 6d. paid to Richard Sanderson, working with Thomas Lovell at Frankland splitting the fence pales, for 4½ days at 4d. per day.

[*m. 5*] ... £10 0s. 0d. paid to the bishop himself on 14 April 1466, by John 'Orwell'.

[*Text*: CCBpric 189819, mm. 3-5.]

85 1466/7. Receiver-general's account (extract).

The receiver-general does not answer for any profits of the Durham mint this year, because they have been handed over to the bishop himself.

[Text: CCBpric 189820, m. 2.]

86 6 March 1469. Letters patent to the deputy of the king's master-worker.

The king has ordered Hugh Brice to determine the bullion values of coins brought to the royal mints. Many silver pence made long ago in the York and Durham mints, and in other places in England, were not as good in fineness as the king's new coins or the coins of Edward III and Richard II. These deficient pence, found among other coins, must be accepted at the mint.

[Text: PRO C66/524, m. 20.]

Calendared: CPR 1467-1477, pp. 149-50.

87 18 August 1470. Recognizance of John Orwell.

On 18 August 1470, in the bishop's chancery at Durham, John Orwell (*Norwell*) of Durham, 'conyour', Robert Brauncepath of Willington [*County Durham*], Thomas Melbet of Durham, yeoman, and Thomas Goldsmyth of Durham, goldsmith, bound themselves in the sum of one hundred pounds, to be paid to the bishop or his executors or attorney on 24 August 1470. If this is not paid, it should be raised from their lands and possessions by the sheriff of Durham, for the bishop's use.

John Orwell (*Norwell*), farmer of the Durham mint, shall pay £20 rent to the bishop, and mint up to 20 lb. of silver for the bishop, if the bishop finds it to mint, in one year from 15 August 1470 to 15 August 1471. During this period John shall make good money in the mint, of the same alloy, assay, and weight as the Tower of London. If these conditions are fulfilled, the recognizance shall be void.

[Text: PRO DURH 3/50 (Booth chancery roll 3), m. 12d.]

88 1469/70. Arrears of account of the receiver-general (arrears of accounts dated 1465/6 - 1468/9; extract).

£10 0s. 0d. paid to John Orwell in part payment of a larger sum owed to him by the bishop for a silver dish

[Text: CCBpric 189757, m. 1.]

89 1469/70. Receiver-general's account (extract).

£20 0s. 0d. received from John Orwell (*Norwell*), the bishop's mint-master, for the annual rent of the money minted in Durham, over and above the [*free*] coinage of 20 lb. troy [*of silver*].

[Text: CCBpric 189823, m. 3.]

90 1470/1. Receiver-general's account (extract).

£10 0s. 0d. received from John Orwell (*Norwell*), the bishop's mint-master, for the annual rent of the money minted in Durham, at £20 0s. 0d. per annum, over and above the [*free*] coinage of 20 lb. troy [*of silver*] per annum.

[Text: CCBpric 189824, m. 2, and CCBpric 189825, m. 3 (*duplicate rolls*).]

91 21 July 1473. Letters patent authorizing the making of halfpence and dies.

Bishop Laurence [*Booth*] and his predecessors, from time immemorial, have been accustomed to strike sterlings in their Bishopric of Durham. The king is not greatly displeased that the bishop intends to strike halfpence, although this is not customary. The king authorizes the bishop to strike sterlings and halfpence as often as he pleases, during the king's pleasure. The king also allows the bishop to have standards and trussels made for these sterlings and halfpence in his Bishopric, during pleasure; without prosecution by the king, the treasurer, the barons of the exchequer or other officials. The rights of the bishop and his successors shall not be prejudiced by this grant.

[*Text*: Rymer 1704-35, XI, 783. Noble 1780, p. 85. Allan 1780x5. Hutchinson 1785-94, I, 357 n..

Calendared: CPR 1467-1477, p. 392.]

92 26 August 1473. Licence to make dies.

The king has licensed Bishop Laurence [*Booth*] to make penny and halfpenny dies, needed by the Durham mint, in Durham Castle. The bishop has appointed and licensed William 'Omorighe', goldsmith of York, to make one dozen standards and two dozen trussels for pence, and four standards and eight trussels for halfpence. The dies are to be made in Durham Castle, under the supervision of Henry Gyllowe, chancellor of the Bishopric.

[*Text*: PRO DURH 3/49 (Booth chancery roll 2), m. 6 (*English*).

Imperfect transcript: Noble 1780, p. 86. Hutchinson 1785-94, I, 357-8 n..]

93 1472/3. Receiver-general's account (extract).

£26 13s. 4d. received from Robert Dixson (*Dyxson* [*over erasure*]), the bishop's mint-master, for the annual rent of the money minted in Durham, over and above the [*free*] coinage of 20 lb. of the bishop's money per annum.

[*Text*: CCBpric 189826, m. 3, and CCBpric 189827, m. 3 (*duplicate rolls*).]

94 4 August 1474. Licence to make dies.

The king has licensed Bishop Laurence [*Booth*] to make penny and halfpenny dies, needed by the Durham mint, in Durham Castle. The bishop has appointed and licensed William Omoryghe, goldsmith of York, to make two dozen standards and three dozen trussels for pence. The dies are to be made in Durham Castle, under the supervision of Henry Gyllowe, chancellor of the Bishopric, and Richard Chadkyrk, clerk.

[*Text*: PRO DURH 3/49 (Booth chancery roll 2), m. 6 (*English*).]

95 1473/4. Receiver-general's account (extract).

£26 13s. 4d. received from Robert Dixson, the bishop's mint-master, for the annual rent of the coinage of pence, over and above the [*free*] coinage of 20 lb. of the bishop's money per annum. £6 13s. 4d. received for this year's rent of the coinage of halfpence.

[*Text*: CCBpric 189828, m. 3.]

96 14 March 1475. Pardon to the bishop for the production of deficient coins.

The king knows how bishops of Durham should administer the king's regalian right within the Bishopric. On this authority the bishops should have moneyers and coinage, to be made according to law and custom in alloy and weight.

The moneyers of Bishop Laurence [*Booth*] lately made money deficient in alloy or weight, but the king has been informed that the bishop did not know of this, and he accepts the bishop's declaration of innocence.

[*Text*: PRO C66/535, m. 14.

Calendared: CPR 1467-1477, p. 511.]

97 1474/5. Receiver-general's account (extract).

Nothing [£26 13s. 4d. *deleted*] received from Robert Dixson, the bishop's mint-master, for the annual rent of the coinage of pence, over and above the [*free*] coinage of 20 lb. of the bishop's money per annum. Nothing [£6 13s. 4d. *deleted*] received for this year's rent of the coinage of halfpence.

[*Text*: CCBpric 189829, m. 2.]

98 21 March 1477. Licence to make dies.

The king has licensed Bishop William [*Dudley*] to make penny and halfpenny dies, needed by the Durham mint, in Durham Castle. The bishop has appointed and licensed William Omoryghe, goldsmith of Durham, to make two dozen standards and three dozen trussels for pence, and one dozen standards and two dozen trussels for halfpence. The dies are to be made in Durham Castle, under the supervision of John Kelyng, chancellor of the Bishopric.

[*Text*: PRO DURH 3/54 (Dudley chancery roll 1), m. 4.

Imperfect transcript: Noble 1780, pp. 86-7. (*English*).]

99 1476/7. Receiver-general's account (extracts).

[*m. 2*] £13 6s. 8d. received from Robert Bagot, the bishop's mint-master, for the annual rent of the money minted in Durham, over and above the [*free*] coinage of [*space for weight*] of the bishop's money per annum.

[*m. 4*] £1 10s. 4d. paid to William Omoryghe (*Omorigh'*), smith, for engraving (*le gravyng*) six piles and twelve trussels, for pence and halfpence, in the mint in Durham Castle at various times during the accounting period. 1s. 8d. per die, deducting 2d. from the total [*equivalent to 6d. less than £1 10s. 4d.*].

16s. 0d. paid to William Yong, smith, for making (*factura*) forty eight piles and trussels for this coinage, at 4d. per die. ...

[*m. 4, repeated on m. 5*] 3s. 4d. paid to William Yong, smith, for making an iron measure called 'le bolle' to weigh the bishop's seacoal at Gateshead.

[*Text: CCBpric 189830, mm. 2, 4, 5.*]

100 1478/9. Receiver-general's account (extract).

£13 6s. 8d. received from Robert Bagot, the bishop's mint-master, for the annual rent of the money minted in Durham, over and above the [*free*] coinage of [*space for weight*] of the bishop's money per annum

[*Text: CCBpric 189831, m. 3.*]

101 1478/9. Valor of the Bishopric (extract).

The Durham mint, £13 6s. 8d. [*per annum*].

[*Text: CCBpric 189676, m. 4.*]

102 12 December 1484 or earlier. Petition requesting dies.

Petition to King Richard III, passed to the chancellor for implementation on 12 December 1484. The king is requested [*in English*] to order the chancellor to send a writ to the treasurer and barons of the exchequer, using a text supplied by the petition [*in Latin*]:

The treasurer and barons are commanded to receive from Bishop John [*Shirwood*] three broken standards and nine broken trussels lately used to strike sterlings in his Bishopric, and to deliver the same number of new dies to the bishop. [*Text*: Rymer 1704-35, XII, 252. Noble 1780, p. 87. Allan 1780x5. Hutchinson 1785-94, I, 369 n.. (*Latin and English*).]

103 1485/6. Book of transumpt (extract).

£6 13s. 4d. due from William Richardson and Robert Bagot, for the rent of the Durham mint in the bishop's second year [*half year(?)*, 1484/5].

[*Text*: CCBpric 220198/1, fol. 19v.]

104 1487/8. Book of transumpt (extract).

[*Text as in 101*].

[*Text*: CCBpric 220198/3, fol. 66v.]

105 1488/9. Book of transumpt (extract).

£6 13s. 4d. due from William Richardson (*Rychardson*) and Robert Bagot (*Bahott*), for the rent of the Durham mint in the bishop's second year [1484/5].

£13 6s. 8d. due from William Richardson (*Rychardson*) and Robert, farmers of the mint in the bishop's fourth year [1486/7].

[*Text*: CCBpric 220198/4, fol. 89v.]

106 20 September 1489. Indenture of George Strayll.

Indenture between Bishop John [*Shirwood*] and George Strayll, goldsmith of Durham. The bishop has appointed George to occupy the Durham mint, striking pence only, for three years from next Michaelmas. George shall pay four marks annually, at Easter and Michaelmas, to the warden of the Tower mint, for as long as minting continues. George shall use the Tower standard of fineness and weight, and shall save the bishop from liability towards the king or others, for silver minted or left in the mint for minting. George Strayll, Richard Fetherstanehalgh of Burn Hall [*Durham*], Thomas Lincolne of Darlington, Christopher Warrenner of Durham, and William Randson of Durham are bound in the sum of £300 for the performance of the indenture, to be paid on 11 November 1489.

[*Text*: PRO DURH 3/56 (Shirwood chancery roll 1), m. 7 (*English*).

Imperfect transcript: Noble 1780, pp. 87-8. Hutchinson 1785-94, I, 370-1 n..

Calendared: Challis 1992, p. 717.]

107 24 September 1489. Recognizance of George Strayll.

George Strayll of Durham, goldsmith, Richard Fetherstanehalgh (*Fethirstanehagh*) of Burn Hall, gentleman, Thomas Lincolne of Darlington, yeoman, Christopher Warrenner (*Warrenne*) of Durham, yeoman, and William Randson of Durham, smith, are bound in the sum of £300 to be paid to Bishop John [*Shirwood*] or his executors or attorney on 11 November 1489.

If George observes all of the conditions specified in indentures made between the bishop and George concerning the lease of the Durham mint, dated 20 September 1489, the recognizance shall be void.

[*Text*: PRO DURH 3/56 (Shirwood chancery roll 1), m. 8.]

108 1489/90. Book of transumpt (extract).

£6 13s. 4d. due from William Richardson (*Rychardson*) and Robert Bagot (*Bagott*), for the rent of the Durham mint in the bishop's second year [1484/5].

£13 6s. 8d. due from William and Robert for the rent in the bishop's third year [1487/8, *recte the fourth year, 1486/7?*].

[Text: CCBpric 220198/5, fol. 139v.]

109 1490/1. Book of transumpt (extract).

£6 13s. 4d. due from William Richardson and Robert Bagot (*Bagott*), farmers of the Durham mint in the bishop's second year [1484/5].

£13 6s. 8d. due from William and Robert for the rent in the bishop's third year [1486/7?].

[Text: CCBpric 220198/10, fol. 212v.]

110 1491/2. Book of transumpt (extract).

[£6 13s. 4d., *deleted*] due from William Richardson and Robert Bagot (*Bagott*), farmers of the Durham mint in the bishop's second year [1484/5].

[£13 6s. 8d., *deleted*] due from William and Robert for the rent in the bishop's third year [1486/7?].

[Text: CCBpric 220198/11, fol. 240v.]

111 6 May 1494. Recognizance of William Richardson.

[*Latin:*] William Richardson (*Richerdson*) of Durham, merchant, Robert Blount of Durham, merchant, Henry Litster of Durham, merchant, Cuthbert Thomson of Durham, merchant, and William Play of Durham, yeoman, are bound in the sum of £200 to be paid to King Henry VII or his heirs, executors or attorney on 24 June 1494.

[*English:*] If William Richardson (*Rycherdson*), keeper of the Durham mint, occupies the mint well and without fraud, makes lawful money of the same alloy, assay and weight as in the Tower of London, and saves the king from liability for silver minted, the recognizance shall be void. It shall be valid for as long as the mint is in the king's hands because of the vacancy in the Bishopric of Durham.

[*Text:* PRO DURH 3/63 (Fox chancery roll 4) m. 1d. (*Latin and English*).]

112 20 January 1495. Indenture of William Richardson.

Indenture between Bishop Richard [*Fox*] and William Richardson, yeoman of Durham. The bishop has appointed William master and workman to occupy the Durham mint, himself or by deputy, during the bishop's pleasure. William has undertaken to make 480 pence per pound [*troy*], using the Tower standard of 11 oz. 2 dwt. fine. William is allowed the Tower remedies of 2 dwt. in weight and fineness. The chancellor of the Bishopric, as comptroller of the mint, shall take a penny from each pound weight minted, to be put in a bag by William. The bag will be kept in a coffer with two locks, the chancellor and William having the two keys. William agrees that his money shall be perfectly struck, with a privy mark specified by the bishop, to distinguish it from counterfeits. William shall save the bishop from liability towards merchants, for silver brought to the mint for minting. William Richardson, Robert Blounte of Durham, William Tychburn of Durham, William P'ley of Durham, and Cuthberte Thompson of Durham are bound in the sum of £200 for the performance of the indenture, by a bond dated 24 January 1495.

[Text: PRO DURH 3/62 (Fox chancery roll 3), m.5.

Imperfect transcript: Noble 1780, pp. 88-9. Hutchinson 1785-94, I, 378 n..

(*English*).

Calendared: Challis 1992, p. 719.]

113 Late 15th century. Valor of the Bishopric (extract).

The rent of the mint in the city of Durham [*no valuation stated*].

[Text: CCBpric 190280, m. 2.]

114 31 December 1500. Privy Seal letters.

The work of the engraver is increasing because the king has 'restrained' the mints of Durham, Canterbury, and York.

[Text: Symonds 1913b, p.352 (*English*).]

115 20 September 1510. Indenture of Roger Richardson.

Indenture between Bishop Thomas [*Ruthall*] and Roger Richardson of Durham. The bishop has appointed Roger master and workman to occupy the Durham mint, himself or by deputy, for seven years from 11 November 1510. Roger has undertaken to make 492 pence per pound troy, using the Tower standard of 11 oz. 2 dwt. fine. Roger is allowed the Tower remedies of 2 dwt. in weight and fineness. The chancellor of the Bishopric, as comptroller of the mint, shall take a penny from each pound weight minted, to be put in a bag in the presence of Roger. The bag will be kept in a coffer with two locks, the chancellor and Roger having the two keys. Roger agrees that his money shall be perfectly struck, with a privy mark specified by the bishop, to distinguish it from counterfeits. Roger shall save the bishop from liability towards the king and merchants, for silver brought to the mint for minting. The bishop shall provide dies, at Roger's cost, and workmen from the Tower of London when Roger needs them. Roger agrees to pay £10 annually, at Whit Sunday and Martinmas. Roger Richardson, John Batmanson, doctor of law,

Ralf Radclyffe of Tunstall [*County Durham*], Robert Blount of Durham, merchant, and John Richardson of Durham, dyer, are bound in the sum of £200 for the performance of the indenture, by a bond dated 1 October 1510.

[*Text*: Challis 1975a, pp. 98-100.

Imperfect transcript: Allan 1780x5. Hutchinson 1785-94, I, 400-1. (*English*.)]

116 1 October 1510. Recognizance of Roger Richardson.

Roger Richardson (*Richerdson*) of Durham, merchant, John Batmanson, doctor of law, Ralf Radclyffe esquire of Tunstall in County Durham, Robert Blount of Durham, merchant, and John Richardson (*Richerdson*) of County Durham, dyer, are bound in the sum of £200 to be paid to Bishop Thomas [*Ruthall*], his successors, executors or attorney on 2 January 1511.

If Roger Richardson (*Richerdson*) well and faithfully observes all of the conditions specified in indentures for the Durham mint made between the bishop and Roger, dated 20 September 1510, the recognizance shall be void.

[*Text*: PRO DURH 3/71 (Ruthall chancery roll 2), m. 2d.]

117 14 Feb. -15 Nov. 1511. Clerk of works account (extract).

£5 0s. 0d. spent on the repair of the bishop's mint in Durham.

[*Text*: CCBpric 190052, m. 2.]

118 1510/11. Receiver-general's account (extracts).

£10 0s. 0d. received from Roger Richardson, farmer of the bishop's mint in Durham this year, for the coinage of pence and halfpence there.

[*Text*: CCBpric 188771, mm. 3, 4.]

119 1511/12. Receiver-general's account [paper] (extracts).

£10 0s. 0d. received from Roger Richardson, farmer of the bishop's mint in Durham this year.

[Text: DCD, CC189567, mm. 2, 6.]

120 1511/12. Receiver-general's account [parchment] (extracts).

£10 0s. 0d. received from Roger Richardson, farmer of the bishop's mint in Durham, for the coinage of pence and halfpence this year.

[Text: CCBpric 189833, mm. 3, 5.]

121 1512/13. Book of great receipt (extract).

£10 0s. 0d. received for the rent of the Durham mint on 3 December 1513, by means of Roger Richardson (*Richerdson*) and [*Christopher*] Brown.

[Text: CCBpric 220201/3, fol. 72v.]

122 1512/13. Receiver-general's account [incomplete] (extract).

Durham mint, £10 0s. 0d.

[Text: CCBpric 189834, m. 1.]

123 1513/14. Receiver-general's account (extracts).

£10 0s. 0d. received from Roger Richardson, farmer of the bishop's mint in Durham, for the coinage of pence and halfpence this year.

[Text: CCBpric 189835, mm. 3, 5.]

124 1516/17. Book of transumpt (extracts).

[*fol. 39v.*] £5 0s. 0d. due from Roger Richardson, farmer of the Durham mint, [*for 1514/15*].

[*fol. 41*] Roger Richardson, farmer of the Durham mint [*in 1515/16; no rent stated*]. It lies waste [as it is said, *deleted*] and is not occupied.

[*Text: CCBpric 220219, fols 39, 39v., 41.*]

125 1517/18. Receiver-general's account (extracts).

£10 0s. 0d. rent of the Durham mint, for the coinage of pence and halfpence, was not received because the mint is not occupied this year.

[*Text: CCBpric 189836, mm. 3, 4.*]

126 1518/19. Receiver-general's account (extracts).

[*Text as in 125*]

[*Text: CCBpric 189837, mm. 3, 4.*]

127 1519/20. Book of transumpt (extract).

Roger Richardson, farmer of the mint, owes £1 13s. 4d.

[*Text: CCBpric 220222, fol. 59v.*]

128 1520/1. Receiver-general's account [paper] (extract).

Nothing received from Roger Richardson, farmer of the Durham mint this year.

[*Text: CCBpric 190296, m. 3.*]

129 1520/1. Receiver-general's account [parchment] (extracts).

£3 6s. 8d. rent not received from Roger Richardson, farmer of the Durham mint, because it is not occupied this year due to the great sickness of the plague in Durham (*magna morba pestilencie ibidem regnantis*).

[Text: CCBpric 189838, mm. 3, 4.]

130 1521/2. Arrears of account of receiver-general (arrears of accounts dated 1515/16-1520/1; extract).

Roger Richardson, farmer of the Durham mint, owes £1 13s. 4d. [*for 1519/20*].

[Text: CCBpric C120, fol. 14.]

131 1522/3. Arrears of account of receiver-generals (arrears of accounts dated 1509/10-1521/2; (extract).

[Text as in **130**]

[Text: CCBpric 220215, fol. 24v.]

132 11 March 1523. Warrant to the warden of the London mint ordering dies.

[The text transcribed by William Dugdale in the seventeenth century closely resembles part of the petition of 1530 (**147**)]

The king commands John Copynger, warden of the Tower mint, to deliver piles and trussels for pence only to the Durham mint of Bishop-Elect Thomas Wolsey. The warden shall pay the customary rate for every dozen dies. He must supply dies from time to time, by indenture, as often as the occupiers of the Durham mint shall consider to be necessary.

[Text: BM Harleian MSS 660, fol. 66 (*English*).

Calendared: Allan 1780x5]

133 11 April 1523. Letter of William Frankeleyn, chancellor of the Bishopric, to Thomas Wolsey (extract).

William Frankeleyn has asked a friend in London to provide silver for the Durham mint, and on 3 April 1523 he received a letter from him promising 1,200 lb. of silver annually, which will be very profitable for Wolsey and the district. William intends to bring from London as much silver as he can get, and two or three more coiners. Many more dies will be needed, as he has received only twenty-four from Mr Tonyes [*Robert Toneys, one of Wolsey's agents*], which will not last long if there is plenty of silver and workmen.

[*Text*: Fiddes 1726, 'collections', pp. 165-8. Noble 1780, p. 70 (partial text) (*English*).

Calendared: LP III(ii), 2946.]

134 1522/3. Clerk of works account (extract).

£2 15s. 9½d. spent on repairing the mint building (*domus cunagii*).

[*Text*: CCBpric 190195, m. 2.]

135 1523/4. Receiver-general's account [paper] (extracts).

Nothing received from [*space for a name left empty*], farmer of the Durham mint this year, because it is not occupied. Recently rented at £3 6s. 8d., and formerly £10 0s. 0d.

Durham mint [*space for amount*].

[*Text*: CCBpric 189569, mm. 6, 10.]

136 1523/4. Receiver-general's account [parchment] (extract).

£3 6s. 8d. rent of the Durham mint for halfpence [*sic*] was not received, because the mint is not occupied this year.

[*Text*: CCBpric 189839, m. 3.]

137 1524/5. Receiver-general's account [paper] (extract).

Nothing received from [*space for a name left empty*], farmer of the Durham mint this year. Recently rented at £3 6s. 8d., and formerly £10 0s. 0d.

[Text: CCBpric 189564, m. 10.]

138 1524/5. Receiver-general's account [parchment] (extract).

£3 6s. 8d. rent of the Durham mint, for halfpence [*sic*] struck there, was not received because the mint is not occupied this year.

[Text: CCBpric 189840, m. 3.]

139 1526/7. Receiver-general's account (extracts).

£3 6s. 8d. rent of the Durham mint, for halfpence [*sic*] and pence struck there, was not received because the mint is not occupied this year.

[Text: CCBpric 189841, mm. 3, 4.]

140 1527/8. Book of transumpt (extract).

Charge of Roger Richardson, farmer of the coinage of pence at Durham from 11 November 1527, during the pleasure of Thomas [*Wolsey*], cardinal bishop of Durham. Roger shall mint money according to the manner and form of the king's mint in the Tower of London, paying £1 6s. 8d. rent in the first year and £2 0s. 0d. in each following year. He shall repair and maintain all of the houses and buildings of the mint at his own expense, as is more fully specified in indentures made between the lord cardinal and Roger, dated [*empty space for the date*].

Roger paid £1 6s. 8d. to William Frankeleyn, clerk of receipt, as shown by the book of great receipt.

[Text: CCBpric 220224/6, fol. 221.]

141 1527/8. Receiver-general's account [paper] (extracts).

£1 6s. 8d. received from Roger Richardson, farmer of the Durham mint this year, leased to him from 11 November 1527, during the pleasure of the lord cardinal bishop of Durham [*Thomas Wolsey*]. Roger shall mint money according to the manner and form of the king's mint in the Tower of London, paying £1 6s. 8d. rent in the first year and £2 0s. 0d. in each following year. He shall repair and maintain all of the houses and buildings of the mint at his own expense, as is more fully specified in indentures made between the lord cardinal and Roger, dated [*date not stated*].

[*Text*: CCBpric 189571, mm. 7, 13.]

142 1527/8. Receiver-general's account [parchment] (extracts).

[*Text as in 141*].

[*Text*: CCBpric 189842, mm. 3, 5.]

143 25 April 1529. Letter of Richard Bellyssis to Thomas Wolsey.

Richard Bellyssis [*chancellor of the Bishopric*] urgently reports the death of Roger Richardson of Durham, Wolsey's 'myntmaister' in Durham, leaving the mint unoccupied. The coinage from the mint has been very profitable and necessary locally, for the payment of the revenues to the bishop, and for other uses. If the mint closed, it would greatly hinder the payment of Wolsey's rents. The bearer of the letter, John Richardson, is of good social rank, and had entire responsibility for refining, assaying, and minting for his father Roger, being very expert. Richard asks Wolsey to obtain the king's authority for John's continued occupation of the Durham mint. Richard does not know anyone else locally who has the expertise required.

[*Text*: PRO SP 1/47 p. 245 (*English*)

Calendared: LP IV(ii), 4201 (25 April 1528).]

144 1528/9. Receiver-general's account (extracts).

£1 5s. 0d. received from the executors of Roger Richardson (12s. 6d.) and from John Richardson (12s. 6d.), farmer or occupier of the Durham mint, for the time of their occupation of the mint. Half a year and forty five days at £2 0s. 0d. per annum.

[Text: CCBpric 189556, mm. 8, 12.]

145 1528/9. Declaration of account (extract).

Durham mint, £1 5s. 0d.

[Text: CCBpric 221233B, fol. 2.]

146 1528/9. Valor (?) of the Bishopric (extract).

Durham mint, £1 5s. 0d.

[Text: CCBpric 189690, fol. 1.]

147 14 June 1530. Petition requesting dies and authority to recruit mint workmen.

Petition from Bishop Tunstall, signed by King Henry VIII, and passed to the chancellor for implementation on 14 June 1530. The bishop requests letters patent to be sent to the warden of the Tower mint from time to time, ordering dies for pence and halfpence [*sic*] only, and letters patent authorizing the master of the Durham mint or representatives of the bishop to recruit mint workmen (*monyours and mynters*) as needed.

[*Warrant ordering dies:*] The king commands John Copynger (*Copinger*), warden of the Tower mint, to deliver piles and trussels for pence only to the Durham mint of Bishop Cuthbert [*Tunstall*]. John shall pay the customary rate for every dozen dies. He must supply dies from time to time, by indenture, as often as the occupiers of the Durham mint shall consider to be necessary.

[*Warrant authorizing the recruiting of mint workmen:*] The king addresses the beneficiary of the warrant [*a space is left for the name*] and his representatives, giving

them authority to recruit mint workmen (*monyers and coyners*) for the Durham mint of Bishop Cuthbert, paying reasonable wages. All mayors, sheriffs, bailiffs and others must advise and assist.

[Text: PRO C82/630/13 (*English*)

Calendared: LP IV(iii), 6490/14.]

148 1529/30. Book of transumpt (extract).

[*Preamble in books of transumpt from 1529/30 to 1542/3, with amendments noted in entries for individual years:*]

Charge of John Richardson, farmer of the coinage of pence in the Durham mint from 4 July 1530, during the pleasure of the bishop [*Cuthbert Tunstall*]. John shall mint money according to the manner and form of the king's mint in the Tower of London, paying £3 6s. 8d. per annum, at the Martinmas and Pentecost terms equally. He shall bear the cost of all of his repairs of the mint-house, as is more fully specified in indentures made between the bishop and John, kept in the chancery of Durham.

[*1529/30 only:*] For the Martinmas term [*11 November 1530*] John paid the receiver.

[CCBpric 195701/1, fol. 38v.]

149 1529/30. Receiver-general's account [paper] (extracts).

£1 13s. 4d. received from John Richardson, farmer of the Durham mint this year.

[Text: CCBpric 189551, mm. 4, 9.]

150 1529/30. Receiver-general's account [parchment] (extracts).

£1 13s. 4d. received from John Richardson, farmer of the Durham mint, for the Martinmas term [*11 November 1530*], for a half year.

[Text: CCBpric 189843, mm. 3, 5.]

151 1529/30. Declaration of account (extracts).

Durham mint this year, £1 13s. 4d.

[Text: CCBpric 220205/1, fols 2v., 5v.]

152 1530/1. Book of great receipt (extract).

£3 6s. 8d. received from John Richardson [*Richerdson*] on 15 December 1531, for the rent of the Durham mint.

[Text: CCBpric 220206/1, fol. 19v.]

153 1530/1. Declaration of account (extracts).

Durham mint this year, £3 6s. 8d.

[Text: CCBpric 220205/2, fols 12v., 16v.]

154 1531/2. Book of transumpt (extract).

[Preamble as in 148].

For the [*Martinmas and Pentecost*] terms John Richardson paid £3 6s. 8d. to William Reidmayn, the receiver-general; shown by a bill remaining in John's possession and by the book of great receipt.

[Text: CCBpric 221670, fol. 29.]

155 1531/2. Receiver-general's account (extracts).

£3 6s. 8d. received from John Richardson, farmer of the Durham mint this year, as shown by his account.

[Text: CCBpric 189557, mm. 6, 10.]

156 1531/2. Declaration of account (extracts).

Durham mint this year, £3 6s. 8d.

[Text: CCBpric 220205/3, fols 22v., 26.]

157 1532/3. Book of transumpt (extract).

[*Preamble as in 148*].

John Richardson paid £3 6s. 8d. to William Reidmayn (*Reydemayn*), the receiver-general; shown by a bill.

[*Text*: CCBpric 195701/2, fol. 71.]

158 1532/3. Book of great receipt (extract).

£3 6s. 8d. received from John Richardson (*Richerdson*) on 19 December 1533, for the rent of the mint.

[*Text*: CCBpric 220206/2, fol. 46.]

159 1532/3. Receiver-general's account [paper] (extracts).

£3 6s. 8d. received from John Richardson, farmer of the Durham mint this year, as shown by his account.

[*Text*: DCD, CC190293, mm. 4, 6.]

160 1532/3. Receiver-general's account [parchment] (extracts).

£3 6s. 8d. received from John Richardson, farmer of the Durham mint this year.

[*Text*: CCBpric 189845, mm. 3, 4.]

161 1532/3. Declaration of account (extracts).

Durham mint this year, £3 6s. 8d.

[*Text*: CCBpric 220205/4, fols 34v., 37v.]

162 1533/4. Book of transumpt (extract).

[*Preamble as in 145*; charge of John 'Rychardson'.]

£3 6s. 8d. received in John Richardson's account, and he is quit.

[*Text*: CCBpric 195701/3, fol. 102.]

163 5 June 1530-24 May 1534 (with dates on fols 47v and 48 to 5 Dec. 1534).

Memorandum book of Robert Benett, bursar of Durham Priory (extracts).

[*fol. 47v., deleted*] On 24 August [1530?] Robert delivered to John Richardson (*Rychardson*), coiner (*coyn'*), an old silver cross weighing 9¼ oz., at 4s. 6d. per ounce. £2 3s. 10d. received.

[*fol. 48*] ... On 27 February [1531] 2½ oz. of silver lent to James Goldsmyth, to be repaid on 20 March 1531. Value 9s. 2d. at 3s. 8d. per ounce. Quit on 10 April 1531. ...

[*Deleted*] 3 1/8 oz. of silver gilt delivered to John Richardson (*Rychardson*), at 4s. 8d. per ounce. 14s. 6d. received, of which 3s. 9¾d. spent on the minting (*in conagio*) of 30½ oz. at 1½d. per ounce.

On 30 June [1530x4] 4s. 0d. spent on the minting (*in conagio*) of 32 oz.; 3s. 6¾d. [3s. 7d. *deleted*] spent on 28½ oz. [30 oz. *deleted*] allowed [*in accounting*].

[*Margin, deleted*] The minting (*conayge*) of 30 oz., 3s. 9d. The minting (*conayge*) of 33 oz., 4s. 1½d.

[*Text: DCD, Bursar's Book K, fols 47v., 48. Raine 1845, pp. 46-7.*]

164 April-May 1535. *Valor Ecclesiasticus* survey of the Bishopric of Durham (extract).

In Durham the site of the castle and palace, with the mint, is worth £3 6s. 8d. [per annum].

[*Text: Caley 1810-34, V, 299.*]

165 1534/5. Book of transumpt (extract).

[*Preamble as in 148*; charge of John Richardson, farmer of the coinage of pence and halfpence [*sic*] in the Durham mint.]

Nothing received because the mint is not occupied, according to John Richardson.

[*Text*: CCBpric 195701/4, fol. 147.]

166 1534/5. Receiver-general's account (extracts).

Nothing received from the Durham mint, through John Richardson its farmer, because it was not occupied in the accounting period. Formerly rented at £3 6s. 8d. per annum.

[*Text*: CCBpric 190311, mm. 3, 5.]

167 14 March 1535-15 March 1536. Particulars of clerk of works account (extracts).

[*fol. 7v., English*] 1s. 6d. paid to Nicholas Rosse and his man for a day and half sawing boards for the fence in front of the mint-house (*coynehouse*).

... 7d. paid to Thomas Robynson, smith, for a pair of [*iron*] bands, with nails and hinges, for the door of the mint-house fence (*coynehousse payle*).

[*fol. 9v., Latin*] Total cost of repairs of Durham Castle, stables, gaol, and mint-house (*domus cunagii*), £20 18s. 7½d.

[*Text*: CCBpric 190067, fols 7v. and 9v. (*Latin and English*).]

168 1535/6. Book of transumpt (extract).

[*Preamble as in 148*; charge of John Richardson, farmer of the coinage of pence and halfpence [*sic*] in the Durham mint.]

[*No reference to receipts.*]

[*Text*: CCBpric 195701/5, fol. 213.]

169 1536/7. Book of transumpt (extract).

[*Preamble as in 148*; charge of John Richardson, farmer of the coinage of pence and halfpence [*sic*] in the Durham mint.]

Nothing received.

[*Text*: CCBpric 195701/6, fol. 262.]

170 1536/7. Declaration of account (extracts).

Durham mint this year, nothing received.

[*Text*: CCBpric 220205/5, fols 43, 47.]

171 1537/8. Book of transumpt (extract).

[*Preamble as in 148*; charge of John Richardson, farmer of the coinage of pence and halfpence [*sic*] in the Durham mint.]

£3 6s. 8d. charged [*for the mint*] this year, of which £1 13s. 4d. is paid to the receiver, as shown by the book of great receipt. John Richardson owes £1 13s. 4d., which is received, and he is quit.

[*Text*: CCBpric 195701/7, fol. 296v.]

172 1537/8. Receiver-general's account (extracts).

£3 6s. 8d. received from John Richardson (*Rychardson*), farmer of the Durham mint this year, as shown by his account.

[*Text*: CCBpric 189579, mm. 4, 7.]

173 1537/8. Declaration of account (extracts).

Durham mint this year, £3 6s. 8d.

[*Text*: CCBpric 220205/6, fols 52, 53.]

174 1538/9. Book of transumpt (extract).

[*Preamble as in 148*; charge of John Richardson, farmer of the coinage of pence and halfpence [*sic*] in the Durham mint.]

£3 6s. 8d. charged this year, which is received in his account, and he is quit.

[*Text*: CCBpric 195701/8, fol. 336v.]

175 1538/9. Receiver-general's account (extracts).

£3 6s. 8d. received from John Richardson (*Richerdson*), farmer of the Durham mint this year, as shown by his account.

[*Text*: CCBpric 189580, mm. 5, 8.]

176 1538/9. Declaration of account (extracts).

Durham mint this year, £3 6s. 8d.

[*Text*: CCBpric 220205/7, fols 60 and 63; CCBpric 221667, fols 2 and 4v.

(*duplicates*).]

177 1539/40. Book of transumpt (extract).

[*Preamble as in 148*; charge of John 'Rychardson', farmer of pence and halfpence [*sic*] in the Durham mint.]

£3 6s. 8d. charged this year, of which £1 13s. 4d. was paid to the receiver, as shown by a bill, and the remainder received in his account, and he is quit.

[*Text*: CCBpric 195701/9, fol. 375.]

178 1539/40. Receiver-general's account (extracts).

£3 6s. 8d. received from John Richardson, farmer of the Durham mint this year.

[*Text*: CCBpric 189847, mm. 3, 5.]

179 1540/1. Book of great receipt (extracts).

£1 13s. 4d. received from John Richardson (*Rychardson*), farmer of the Durham mint, on 17 December 1541.

[Text: CCBpric 220243/1, fols 15v., 25v.]

180 1540/1. Receiver-general's account (extracts).

£3 6s. 8d. received from John Richardson (*Rychardson*), farmer if the Durham mint this year.

[Text: CCBpric 189560, mm. 3 and 7 [paper]; CCBpric 190270, mm. 3 and 4 [parchment] (*duplicates*).]

181 1541/2. Book of transumpt (extract).

[Preamble as in **148**; charge of John 'Rychardson', farmer of pence and halfpence [*sic*] in the Durham mint.]

£3 6s. 8d. charged this year; nothing received because the mint is not occupied.

[Text: CCBpric 195701/10, fol. 416.]

182 1541/2. Receiver-general's account (extract).

No profit from the Durham mint because it was not occupied this year.

[Text: CCBpric 189848, m. 3.]

183 1542/3. Book of transumpt (extract).

[Preamble as in **148**; charge of John 'Rychardson', farmer of pence and halfpence [*sic*] in the Durham mint.]

£3 6s. 8d. charged this year; nothing received because the mint is not occupied.

[Text: CCBpric 195701/11, fol. 457v.]

184 1542/3. Receiver-general's account [paper] (extract).

Nothing received from John Richardson (*Rychardson*), farmer of the Durham mint this year, because it is not occupied.

[Text: CCBpric 189577, m. 1.]

185 1542/3. Receiver-general's account [parchment] (extract).

[Text as in **184**.]

[Text: CCBpric 189849, m. 2.]

186 1543/4. Book of transumpt (extract).

[Panel for the charge of the Durham mint left blank.]

[Text: CCBpric 195701/12, fol. 495v.]

187 1543/4. Receiver-general's account [paper] (extract).

Nothing received from John Richardson (*Rychardson*), farmer of the Durham mint this year, because it is not occupied.

[Text: CCBpric 190223, m. 5.]

188 1543/4. Receiver-general's account [parchment] (extract).

Nothing received from the wife of John Richardson (*Rychardson*), farmer of the Durham mint this year, because it is not occupied.

[Text: CCBpric 189850, m. 2.]

189 1543/4. Declaration of account (extracts).

Durham mint this year, nothing received

[Text: CCBpric 220205/8, fols 68 and 70v.]

190 1544/5. Book of transumpt (extract).

[*Panel for the charge of the Durham mint left blank.*]

[*Text: CCBpric 195701/13, fol. 534v.*]

191 1544/5. Receiver-general's account (extract).

Nothing received from John Richardson, farmer of the mint this year.

[*Text: CCBpric 189562, m. 4.*]

192 1544/5. Declaration of account (extracts).

Durham mint this year, nothing received.

[*Text: CCBpric 220205/9, fols 77, 80.*]

193 1545/6. Book of transumpt (extract).

[*Panel for the charge of the Durham mint left blank.*]

[*Text: CCBpric 195701/14, fol. 566.*]

194 1545/6. Declaration of account (extracts).

Durham mint this year, nothing received.

[*Text: CCBpric 220205/10, fols 84v., 87.*]

195 1546/7. Book of transumpt (extract).

[*Panel for the charge of the Durham mint left blank.*]

[*Text: CCBpric 195701/15, fol. 598.*]

196 1546/7. Receiver-general's account (extract).

Nothing received from John Richardson (*Rychardson*), farmer of the Durham mint this year.

[*Text: CCBpric 189846, m. 3.*]

197 1546/7. Declaration of account (extracts).

Durham mint this year, nothing received.

[Text: CCBpric 220205/11, fols 91, 93v.]

198 1547/8. Book of transumpt (extract).

[Untitled panel for the charge of the Durham mint left blank.]

[Text: CCBpric 195701/16, fol. 629v.]

199 1547/8. Receiver-general's account (extract).

Nothing received from the rent of the Durham mint this year because it lies in decay and is not occupied.

[Text: CCBpric 189851, m. 2.]

200 1547/8. Declaration of account (extracts).

Durham mint this year, nothing received.

[Text: CCBpric 220205/12, fols 98 and 100v.]

201 1548/9. Declaration of account (extracts).

[Text as in **200**.]

[Text: CCBpric 220205/13, fols 104, 106v.]

202 1549/50. Receiver-general's account (extracts).

Nothing received from the rent of the Durham mint.

[Text: CCBpric 189570, mm. 3, 6.]

203 1550/1. Receiver-general's account (extract).

Nothing received from the rent of the Durham mint this year because it is discharged (*exoneratur*) by the king.

[Text: CCBpric 189852, m. 2.]

204 1551/2. Receiver-general's account (extract).

Nothing received from the rent of the Durham mint this year because it is discharged by the king. Formerly rented at £3 6s. 8d.

[Text: CCBpric 189844, m. 2.]

205 1552/3. Receiver-general's account [paper] (extracts).

Nothing received from the rent of the Durham mint this year because it is discharged by the king.

[Text: CCBpric 189787, mm. 4, 7.]

206 1552/3. Receiver-general's account [parchment] (extract).

The receiver-general does not answer for the rent of the Durham mint, formerly rented at £3 6s. 8d., because it is discharged by the king.

[Text: CCBpric 189853, m. 2.]

207 1553/4. Receiver-general's account (extract).

[Nothing] from the rent of the Durham mint this year because it is discharged by the king.

[Text: CCBpric 189854, m. 3.]

208 1554/5. Receiver-general's account [paper] (extracts).

Nothing received from the rent of the Durham mint this year because it is discharged by the king.

[Text: CCBpric 189574, mm. 5, 6.]

209 1554/5. Receiver-general's account [parchment] (extract).

[Text as in **208**]

[Text: CCBpric 189855, m. 3.]

210 1555/6. Receiver-general's account [paper] (extract).

Durham mint, nothing received.

[Text: CCBpric 189561, m. 2.]

211 1555/6. Receiver-general's account [parchment] (extract).

[Text as in **208**].

[Text: CCBpric 189856, m. 2.]

212 1556/7. Receiver-general's account (extracts).

[Text as in **208**]

[Text: CCBpric 189575, mm. 5, 7.]

213 1557/8. Receiver-general's account (extracts).

Nothing received from the rent of the Durham mint this year because it is discharged by the king. Formerly rented at £3 6s. 8d.

[Text: CCBpric 189594, mm. 4, 6.]

214 1558/9. Receiver-general's account (extracts).

[Text as in **211**]

[Text: CCBpric 189553, mm, 3, 5.]

215 1559/60? Receiver-general's account (extracts).

[Text as in **213**]

[Text: CCBpric 190249, mm. 3, 6.]

216 1560/1. Receiver-general's account (extract).

[Text as in **213**]

[Text: CCBpric 189857, m. 2.]

217 1561/2. Receiver-general's account (extract).

[Text as in **213**]

[Text: CCBpric 190281, m. 2.]

218 16 November 1562 and later. Will and inventory of John Richardson.

Will of John Richardson, 'last of Durham myntes master'.

[Text: Durham Probate Records Register II, ff. 59, 59v. (*English*).

Calendared: Raine 1835b, pp. 203-4.]

219 1562/3. Receiver-general's account (extracts).

[Text as in **213**]

[Text: CCBpric 190143, mm. 6, 8.]

220 1564/5. Receiver-general's account (extract).

Nothing received from the Durham mint this year because it is discharged by the king. Formerly rented at £3 6s. 8d.

[Text: CCBpric 189858, m. 3.]

221 1565/6. Receiver-general's account (extract).

Nothing received from the Durham mint this year because it is discharged by the king. Formerly [*reference to the former rent omitted*].

[Text: CCBpric 189859, m. 3.]

222 1567/8. Receiver-general's account (extract).

[Text as in **221**]

[Text: CCBpric 189860, m. 2.]

223 1574/5. Receiver-general's account (extract).

[*Text as in 221*]

[*Text: CCBpric 190200, m. 2.*]

224 1577/8. Receiver-general's account (extract).

The receiver-general does not answer for the Durham mint because it is now derelict and remains in the queen's hands.

[*Text: CCBpric 189862, m. 2d.*]

225 1580/1. Receiver-general's account (extract).

[*Text as in 224*]

[*Text: CCBpric 189863, m. 3d.*]

Appendix 2. Corpus of hoards from the British Isles containing English pence minted 1279-1544

Introduction

This is a comprehensive list of hoards from the British Isles with at least one English penny produced between Edward I's reform of the coinage in 1279 and Henry VIII's Great Debasement of 1544. All adequately recorded hoards with English silver coins minted before Edward III's introduction of larger silver denominations in 1351 contain some pence, and it can be assumed that inadequately reported hoards deposited before 1351 also include pence. Hoards beginning with coins of Edward III or later monarchs are listed only if there is positive evidence that pence were included.

Information has been derived from the sources listed in the entries for individual hoards. Published hoard inventories have been a valuable source of information, although it has been necessary to check the contents of the publications they cite. The geographical coverage of eighteenth- and nineteenth-century hoards in the corpus has been influenced by the regionally-biased rediscovery of early finds led by Michael Dolley and W.A. Seaby (for Ireland; particularly Ulster), George Boon (Wales), Michael Metcalf (Scotland and northern England), and J. Davidson (Dumfriesshire and Galloway). Many of the hoards recorded by Metcalf and Davidson are known from the returns of ministers of Scottish parishes, published in *SAS(a)*, *SAS(b)* and *NSAS*, which had no parallel elsewhere in the British Isles. Manville 1993a and 1993b have minimised geographical bias in the coverage of hoards reported in early antiquarian and archaeological periodical literature, but local newspapers have never been comprehensively searched for notices of hoards. Manville 1995 and 1997 have made hoard reports in British and Irish numismatic periodicals readily accessible, ensuring good coverage of them.

This corpus could not have been compiled without extensive unpublished information provided by numismatists active in the study of hoards. Mr Edward Besly of the National Museum of Wales, Dr Barrie J. Cook of the British Museum, Ms Kristin Bornholdt, Mr. Nicholas M. McQ. Holmes of the National Museums of Scotland, and Mr. Nicholas J. Mayhew of the Ashmolean Museum, Oxford, have been particularly generous in their sharing of information.

Corpus format

Hoard identifier, location, and date

Each hoard has an identifying number, with a regional suffix: **E** for England, **I** for Ireland, **M** for the Isle of Man, **S** for Scotland and **W** for Wales. Hoards have been given place names, preferring names used in numismatic publications, with alternative published names cross-referenced and added in parentheses (e.g. **1/S Abden (=Kinghorn)**). Hoards with the same place name have been distinguished by Roman numerals, and by a more precise description of the location if possible (e.g. **2/S Aberdeen I (St. Nicholas Street/Flourmill Brae)**). The place name is followed by its county or unitary authority area at the time of the discovery of the hoard, the present county or area if different, and the year or period of discovery.

Statistics

Three statistics are listed:

- (a) Number of Durham pence (no hoard is known to have contained Durham halfpence, which were minted in 1473 x 1483 only).
- (b) Number of English pence, excluding Berwick coins, which were produced from local dies not conforming to the classifications and chronology applicable to the coins of Durham and other English mints (North 1989, pp. 79-83). Imitations of English coins recognized as such are also excluded from this total.
- (c) Hoard total: coins of all origins and denominations, including fragments counted with whole coins in hoard reports (other fragments are noted in separate totals).

Statistics are given without qualification if they are taken from fully quantified reports of hoards believed to have been recorded substantially intact. Numbers of coins from incompletely recorded hoards are noted as being 'recorded'. 'Present' indicates that an unknown quantity of coins has been reported. '?' indicates that no information is available, or that only an relative estimate of the size of the hoard (such as 'many coins' or 'a few') is available

Identifications

If the coins recorded possibly, or definitely, do not constitute the whole hoard, the extent of the recording of the hoard is noted. Identifications said to be 'adequate' provide fully quantified information about denominations and mints, the fifteen Fox classes of 'Edwardian' pence of 1279-1335 (as defined in North 1989), and the issues and coinages of later coins (see North 1991). When 'adequate' identifications are believed to be available for at least 95% of the identifiable coins discovered, the identifications are described as 'suitable for analysis' in my calculations of mint output.

Hawkins (1831) devised a simple three-class classification for the Edwardian pence of 1279-1300 in the Tutbury hoard (**299/E**), which was later applied to the Wyke hoard (**324/E**), and his analysis of the Tutbury hoard has been incompletely converted to the Fox classification by North 1995. The Edwardian pence in the Montrave and Berscar hoards (**224/S** and **40/S**) were originally classified according to the system introduced in Burns 1887, I, pp. 186-220, which has been almost completely assimilated to the Fox classification by Tatler and Stewart 1962. In 1905 Sir George Macdonald applied his own classification to the publication of the 1904 Lochmaben hoard (**208/S**), later combining it with aspects of Burns's scheme to publish the Blackhills and Mellendean hoards (**43/S** and **216/S**). The Macdonald classifications can be partially converted to the Fox classification (Stewart and North 1990). If a hoard has been published both without and with the Fox classification, or

if different parcels of the hoard have been published separately, the sets of identifications have been described individually. Entries for other hoards have one description of the identifications, aggregated for more than one set of identifications if necessary.

Latest coin(s)

Dates of coinages and rulers indicate the latest coin(s) in the hoards, based upon the available information. Unfortunately, coins of one ruler might be attributed to another of the same name: coins of King John of Scotland can only be attributed to John Balliol (1292-6), but coins of Robert might belong to Robert I (1306-29), Robert II (1371-90) or Robert III (1390-1406). Attributions of coins to Edward I, II and III can be particularly difficult to interpret. A reference to Edward I (1272-1307) might simply mean that the abbreviated name of a King Edward could be read on the coins, or it might imply adherence to the theory, formulated by Archbishop John Sharpe in the seventeenth century, that the abbreviation EDW referred to Edward I (Sharpe 1785, pp. 25-6). References to Edward II (1307-27) may indicate acceptance of Benjamin Bartlet's association of this king with the abbreviations EDWARD, EDWAR and EDWA (Bartlet 1778, pp. 336-8). Sharpe and Bartlet attributed coins reading EDWARDUS to Edward III. These theories were publicised by the pre-eminent nineteenth-century book on English silver coins, which however correctly attributed some EDWARD coins to Edward III (Hawkins 1841, pp. 90-102). Attributions of pence to Edward III might also refer to the Florin coinage of 1344-51 after the publication of Sainthill 1851 and Evans 1871, but writers depending on Hawkins' standard work would have first encountered this innovation no earlier than 1887 (Hawkins 1887, p. 201 n.). The Bartlet scheme, with or without the later modifications, was eventually superseded by the Fox brothers' classification (Fox and (Shirley-)Fox 1909-13). Similar difficulties surround attributions of coins to Henry IV, V, or VI in early hoard reports, although they are rarely crucial for the dating of a hoard. Attributions of coins to these three kings were unreliable before the

publication of work on the subject in the 1860s and 1870s, summarised in Hawkins 1876 (pp. 213-45).

References to pence of particular bishops of Durham, or to their distinctive episcopal marks - especially those of Bishops Bek (1283-1311), Kellaw (1311-16), and Beaumont (1317-33) - can indicate latest coins. Bartlet and the Fox brothers used the evidence of coins of bishops of Durham to develop their chronological schemes.

Edwardian coins of Durham, Canterbury, London, and York have a *terminus post quem* of 1279 (M. Allen 1996a), but similar coins of Bury St. Edmunds, Bristol, Chester, Lincoln, and Newcastle-upon-Tyne cannot be earlier than 1280. Irish pence of Edward I's recoinage type are also no earlier than 1280. The presence of pence of the Berwick mint provides a *terminus post quem* of 1296 for some hoards. Many other hoards have a *terminus* of 1300, supplied by coins of Exeter or Kingston-upon-Hull, which must be Fox class 9b pence produced in that year.

Hoards including English gold coins were deposited after Edward III's introduction of a gold coinage in 1344. Groats attributed to a King Edward or to Edward I almost certainly have a *terminus post quem* of Edward III's reintroduction of the groat in 1351, as the only adequately recorded hoard containing groats of Edward I is **107/E Dover**.

Date of deposition

Published dates of deposition are cited, disregarding both repetitions of dates in publications after the first, and dates earlier than a securely established *terminus post quem*. The *terminus post quem* is used, with '+' to indicate 'in or after', when there is doubt about the validity of published dates, or no published date.

Bibliographic references

References to periodical articles consist of periodical titles, volume numbers and page numbers only, to achieve brevity. Other references provide fuller bibliographic details, or cite the bibliography.

Hoard inventories

Published inventories are cited, using a prefix and the number of the hoard in the inventory.

- B.: Brown 1955-7, pp. 587-603.
- B.D.: Brown and Dolley 1971.
- D.(a): Dolley 1968
- D.(b): Dolley 1972, pp. 57-83.
- D.S.: Dolley and Seaby 1968, pp. xlviii-l.
- E.T.: Evans and Thain 1989.
- May.: Mayhew 1983, pp. 155-81.
- Met.(a): Metcalf 1960-1.
- Met.(b): Metcalf 1977a.
- N.: North 1989, pp. 96-9.
- Sea.(a): Seaby 1955.
- Sea.(b): Seaby 1966, pp. 454-7.
- S.S.: Seaby and Stewart 1964, pp. 99-106.
- Sym.: Symons 1990, pp. 82-6.
- T.: Thompson 1956.
- W: Woodhead 1996, pp. 95-116.

1/S Abden (=Kinghorn), Fifeshire (now Fife), 1864.

Durham pence: 1 recorded.

English pence: present.

Hoard total: 1,000s.

Identifications: (a) 1862-4 and 1864: parcel of c. 100 coins; unquantified reigns (and mints of Irish coins).

(b) 1958-9: two coins adequately described.

Latest coins: Edward III Florin coinage penny of Durham; David II of Scotland first coinage pence.

Deposited: c. 1353-7 (*BNJ* 29 (1958-9), p. 421); c. 1355 (Dolley 1968, pp. 265, 279).

PSAS 5 (1862-4), pp. 237-8.

NC 2nd ser. 4 (1864), pp. 155-6.

Lindsay 1868, p. 39.

BNJ 29 (1958-9), pp. 419-21.

D. 33; D.S. C.69; May. 63; Met.(b) 144; N. 48; T. 217.

2/S Aberdeen I (St. Nicholas Street/Flourmill Brae), Aberdeenshire (now Aberdeen), 1807.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns, denominations, and mints.

Latest coins: Edwardian and Alexander III of Scotland pence; Edward I (*recte* Edward III?) groats.

Deposited: 1280-1360 (Metcalf 1977, p. 32); 1320+? (Thompson 1956, p.1);

c. 1330 (Wilson 1958, p. 169); 1351+?

SM 69 (1807), p. 955.

GM 77 (1807), p. 1071.

Lindsay 1845, p. 266.

Fraser 1906, pp. 330-1.

Wilson 1958, p. 169.

Thompson 1959, p. 280.

SNC 83 (1975), p. 478.

Manville 1993a, p. 93.

D. 85; E.T. 1; Met.(b) 58; T. 1-2.

3/S Aberdeen II (St. Nicholas Street/Netherkirkgate or Dyer's Hall), Aberdeenshire (now Aberdeen), 1807.

Durham pence: ?

English pence: present.

Hoard total: c. 1,800.

Identifications: unquantified reigns and mints.

Latest coins: Robert (I?) of Scotland.

Deposited: 1318-60 (Metcalf 1977, p. 39).

Fraser 1906, p. 331.

BNJ 45 (1975), p. 36.

SNC 83 (1975), p. 478.

E.T. 2; Met.(b) 121.

4/S Aberdeen III (Wellington Street, Footdee), Aberdeenshire (now Aberdeen), 1827.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: sizes of coins; king's name (Edward).

Latest coins: gold; groats of Edward (III?).

Deposited: 1351+.

AS 3 part 2 (1831), p. 147.

Lindsay 1845, p. 267.

Fraser 1906, p. 331.

E.T. 9; Met.(b) 133; T. 3.

5/S Aberdeen IV (Clarence Street, Footdee), Aberdeenshire (now Aberdeen), 1867.

Durham pence: ?

English pence: present.

Hoard total: >1,000?

Identifications: inscriptions of one coin.

Latest coin: Edward I class 1d-9c, or Edward III Florin coinage, penny of London.

Deposited: 1280-1360 (Metcalf 1977, p. 32).

Lindsay 1868, p. 42.

D.(a) 86; E.T. 3; Met.(b) 59.

6/S Aberdeen V (Upperkirkgate), Aberdeenshire (now Aberdeen), 1886.

Durham pence: 1,118 recorded.

English pence: 11,467 recorded.

Hoard total: 12,236 (including c. 20 fragments).

Identifications: (a) 1886 and 1886-7: reigns and mints.

(b) 1975: adequate descriptions of 9,754 coins.

Latest coin: Edward III class 15d penny of York.

Deposited: 1331-6 (Metcalf 1977, p. 32); 1331-c. 1336 (Mayhew 1983, p. 155).

NM 1 (1886), p. 81.

NC 3rd ser. 6 (1886), pp. 247-8.

PSAS 21 (1886-7), pp. 223-5.

NM 3 (1888), pp. 29-30.

Fraser 1906, pp. 332-5.

BNJ 45 (1975), pp. 33-50.

NC 7th ser. 16 (1976), pp. 85-97.

CH 3 (1977), hoard 330.

CH 4 (1978), hoard 365.

D.(a) 1; D.S. C.53; E.T. 4; May. 1; Met.(b) 58; N. 1; T. 4.

7/S Aberdeen VI (St. Nicholas Street I), Aberdeenshire (now Aberdeen), 1983.

Durham pence: 397.

English pence: 4,065.

Hoard total: 4,493.

Identifications: suitable for analysis.

Latest coin: Edward III class 15d penny of York.

Deposited: mid 1340s (*BNJ* 58 (1988), pp. 41-3).

SNC 92 (1984), p. 183.

BNJ 54 (1984), p. 304.

BNJ 58 (1988), pp. 40-68.

Bateson 1989, pp. 170, 182.

BNJ 66 (1996), pp. 35-7.

Information from Mr N.J. Mayhew.

E.T. 5.

8/S Aberdeen VII (St. Nicholas Street II), Aberdeenshire (now Aberdeen), 1984.

Durham pence: 199.

English pence: 2,242.

Hoard total: 2,538.

Identifications: suitable for analysis.

Latest coins: Edward III Florin coinage pence of London.

Deposited: 1344-5+ (*BNJ* 58 (1988), pp. 41-3).

SNC 92 (1984), p. 183.

BNJ 54 (1984), p. 304.

BNJ 58 (1988), pp. 40-68.

Bateson 1989, pp. 170, 182.

BNJ 66 (1996), pp. 35-7.

Information from Mr N.J. Mayhew.

E.T. 6.

9/S Aberdour, Fifeshire (now Fife), 1978.

Durham pence: 21.

English pence: 199.

Hoard total: 295.

Identifications: suitable for analysis.

Latest coin: Robert II of Scotland groat.

Deposited: 1371+ (Mayhew 1983, p. 155); c. 1375 (*BNJ* 58 (1988), pp. 69-72, 75);

c. 1380 (*CH* 5 (1979), 105); .

BNJ 48 (1978), p. 148.

CH 5 (1979), hoard 288.

BNJ 58 (1988), pp. 69-83.

Bateson 1989, pp. 170, 182.

PSAS 120 (1990), pp. 162-3.

May. 2.

10/E Amble, Northumberland, 1988.

Durham pence: 183.

English pence: 1,041.

Hoard total: 1,120.

Identifications: suitable for analysis.

Latest coins: Edward I/II class 15c pence.

Deposited: c. 1323+.

BNJ 58 (1988), p. 179.

Sotheby's sale 22-23 March 1990, lots 382-403.

Information from Dr B.J. Cook.

11/I Annagassan, Co. Louth, 1928.

Durham pence: 1.

English pence: 11.

Hoard total: 12.

Identifications: inscriptions; coins illustrated; suitable for analysis.

Latest coin: Edward II class 11a1 penny of Bishop Bek of Durham.

Deposited: c. 1316 (Dolley 1968, p. 247); c. 1330 (*CLAJ* 7 (1929-32), p. 45).

CLAJ 7 (1929-32), pp. 42-5, pl..

Jope and Seaby 1959, p. 113.

BNJ 36 (1967), p. 98.

SCMB May 1968, pp. 164-5.

D.(a) 70; D.(b) A.34; D.S. B.9.

12/I Ardquin, Co. Down, 1845.

Durham pence: c. 20.

English pence: c. 250.

Hoard total: 400-500?

Identifications: partly quantified reigns, denominations and mints.

Latest coins: Richard II groat and coins of Robert II (and III?) of Scotland; two groats of Edward IV's first reign (1461-70) possibly intrusive (Dolley 1968, p. 255).

Deposited: 1377+ (Seaby and Stewart 1964, p. 101); c. 1390-5 (Dolley 1968, pp. 255, 279); c. 1395 (Dolley and Seaby 1968, p. xlix); c. late 14th century (Seaby 1966, p. 455); c. 1475? (Thompson 1956, p. 4).

NC 1st ser. 8 (1846), p. 49.

Lindsay 1845, p. 271.

Carruthers 1853, pp. 165-6.

Seaby 1966, pp. 452, 455.

Dolley 1970, pp. 4-5.

D.(a) 2; D.(b) 15; D.S. 30; N. 2; Sea.(a) 13; Sea.(b) 10; S.S. ix; T. 11.

13/S Arkleton, Dumfriesshire (now Dumfries and Galloway), 1883.

Durham pence: 49.

English pence: 164.

Hoard total: 177.

Identifications: reigns and mints.

Latest coin: Edward III Florin coinage penny of Reading.

Deposited: 1344-c. 1355 (Metcalf 1977, p. 41); c.1345-50 (Dolley 1968, pp. 255-7, 279); c. 1350 (Dolley and Seaby 1968, p. liv); c. 1350? (Mayhew 1983, p. 155).

PSAS 18 (1884), pp. 378-9.

Williams 1970, p. 333.

D.(a) 3; D.S. C.65; May. 4; Met.(b) 135; N. 3; T. 12.

Ascog *see* **Bute**

Ashbourne *see* **Doveridge**

14/I Askeaton, Co. Limerick, 1954.

Durham pence: 0.

English pence: 1.

Hoard total: 86.

Identifications: suitable for analysis.

Latest coin: Henry VIII and Anne Boleyn, Irish half-harp.

Deposited: 1535-6 (*BNJ* 37 (1968), pp. 90-1).

BNJ 37 (1968), pp. 85-92.

Dolley 1969, pp. 27, 31.

B.D. IL12; D.(b) D.11.

15/E Aston Church (= Birmingham), Warwickshire (now Birmingham), 1879.

Durham pence: 0.

English pence: 2.

Hoard total: 4.

Identifications: suitable for analysis.

Latest coin: Edward III Treaty period penny of York.

Deposited: 1361+.

BNJ 31 (1963), pp. 164-5.

T. 44.

16/I Athea (=Knocknasna), Co. Limerick, 1928-9.

Durham pence: 2.

English pence: 6.

Hoard total: 8.

Identifications: suitable for analysis.

Latest coin: Edward III Treaty period halfgroat of London.

Deposited: c. 1365+ (Seaby and Stewart 1964, p. 100); c. 1370 (*NMAJ* 8 part 4 (1961), pp. 165, 167).

SNC 37 (1929), col. 165.

NMAJ 8 part 4 (1961), pp. 157-67.

SCMB May 1968, p. 165.

Dolley 1969, pp. 27, 30.

Dolley 1970, pp. 4-5.

D.(b) B.2; S.S. iii; T. 227.

17/E Attenborough, Nottinghamshire, 1966.

Durham pence: 169.

English pence: 931.

Hoard total: 1,102.

Identifications: suitable for analysis.

Latest coins: Henry V type F pence.

Deposited: c. 1420 (*BNJ* 38 (1968), p. 58).

SCMB 576 (July 1966), p. 251.

BNJ 38 (1969), pp. 50-83.

May. 6; N. 4.

18/I Aughrim, Co. Galway, c. 1975-6.

Durham pence: 2 recorded.

English pence: 17 recorded.

Hoard total: c. 50.

Identifications: 21 coins; adequate.

Latest coin: Edward III Florin coinage penny of York.

Deposited: 1344+.

SCMB 797 (Jan./Feb. 1985), pp. 11-13.

19/S Auldgirth (=122/S Dunscore?), Dumfriesshire (now Dumfries and Galloway), late 19th century?

Durham pence: 0 recorded.

English pence: 5 recorded.

Hoard total: ?

Identifications: hoard or parcel of 6 coins; adequate descriptions.

Latest coin: Edward II class 11a2 penny of Bury St. Edmunds.

Deposited: c. 1310+.

Holmes 1994, p. 49.

20/E Avebury, Wiltshire, 1937.

Durham pence: 0.

English pence: 2.

Hoard total: 3.

Identifications: suitable for analysis.

Latest coin: Edward I/II class 10cf penny of Canterbury.

Deposited: c. 1305? (Dolley 1968, p. 250).

Ant. 13 (1939), pp. 223-233.

J.D.A. Thompson, 'The Barber-Surgeon's Coins', *Windmill Hill and Avebury: Excavations by Alexander Keiller 1925-1929*, ed. I.F. Smith (Oxford, 1965),

pp. 178-9.

D.(a) 132; May. 7.

21/S Ayr I, Ayrshire (now South Ayrshire), 1873 or 1874.

Durham pence: 3 recorded.

English pence: 168 recorded.

Hoard total: 100s.

Identifications: (a) 1874: parcel of 227 coins; reigns and mints.

(b) 1973: parcel of 29 Scottish coins; adequate descriptions.

Latest coins: Robert I of Scotland pence.

Deposited: 1318-c. 1320 (Metcalf 1977, p. 28); c. 1320? (Thompson 1956, p. 6); 1330s? (Mayhew 1983, p. 156); .

NC 2nd ser. 14 (1874), pp. 351-2.

Stewart 1973, pp. 142-3.

CH 1 (1975), hoard 369.

D.(a) 4; D.S. C.33; May. 8; Met.(b) 38; N. 6; T. 19.

22/S Ayr II (Old Fort), Ayrshire (now South Ayrshire), 1892.

Durham pence: ?

English pence: 143.

Hoard total: 150.

Identifications: reigns.

Latest coin: King John Balliol of Scotland penny.

Deposited: 1292+ (Dolley 1968, p.249); 1292-1360 (Metcalf 1977, p. 37).

PSAS 26 (1891-2), p. 60.

PSAS 58 (1923-4), p. 168.

D.(a) 108; May. 9; Met.(b) 108; N. 5; T. 18.

23/S Baile Mhaodain, Argyll (now Argyll and Bute), 1829.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name and unquantified mints.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 32).

NSAS, VII, pp. 500-1.

Met.(b) 60.

24/E Balcombe, Sussex (now West Sussex), 1897.

Durham pence: 84.

English pence: 364.

Hoard total: 754.

Identifications: reigns, denominations, mints, inscriptions and marks; Hawkins classification of Edwardian pence.

Latest coins: Richard II groats, halfgroats, pence and halfpence.

Deposited: 1377+ (Seaby and Stewart 1964, p. 104); c. 1380 (Thompson 1956, p.7).

NM 12 (1897), p. 44.

NC 3rd ser. 18 (1898), pp. 8-72.

SussAC 42 (1899), pp. 209-13.

May. 10; N. 7; S.S. xxiii; T. 22; W. 27.

25/M Ballamona, Isle of Man, 1840 or 1841.

Durham pence: present.

English pence: present.

Hoard total: c. 250?

Identifications: unquantified reigns and mints..

Latest coin(s): Robert I of Scotland.

Deposit: 14th cent. (Thompson 1956, p. 7); 1318+.

Clay 1869, pp. 40-1.

D.(a) 5; D.S. C.36; T. 23.

26/M Ballaslig I, Isle of Man, c. 1839.

Durham pence: present.

English pence: present.

Hoard total: ?

Identifications: king's name and unquantified mints.

Latest coins: Edwardian pence.

Deposit: 1279+.

Clay 1869, p 40.

T. 25.

27/M Ballaslig II, Isle of Man, 1978.
Durham pence: 13.
English pence: 166.
Hoard total: 176.
Identifications: suitable for analysis.
Latest coins: Edward II/III class 15c pence.
Deposited: c. 1324 (*CH* 5 (1979), p. 104).
CH 5 (1979), hoard 284.
Information from Ms K. Bornholdt.
May. 12.

28/M Ballayelse, Isle of Man, 1977.
Durham pence: 1
English pence: 5.
Hoard total: 5.
Identifications: suitable for analysis.
Latest coin: Edward I/II class 10 penny of Canterbury.
Deposited: 1302+ (*CH* 4 (1978), p. 109).
BNJ 47 (1977), p. 164.
CH 4 (1978), hoard 359.

29/I Ballkenny, Co. Londonderry, 1980.
Durham pence: ?
English pence: present.
Hoard total: c. 500.
Identifications: unquantified reigns.
Latest coins: Edward II pence.
Deposited: 1307+.
SCMB 740 (April 1980), p. 116.

30/I Ballycastle, Co. Antrim, 1853.
Durham pence: ?
English pence: present.
Hoard total: ?
Identifications: halfgroat and penny attributed to Edward I.
Latest coin: Edward III or IV halfgroat.
Deposited: 1351+ (Thompson 1956, p. 8).
Carruthers 1854-5, p. 63.
D.(b) B.3; Sea.(a) 1; T. 27.

31/I Ballyclare I, Co. Antrim, 1811.
Durham pence: ?
English pence: present.
Hoard total: 1,000s.
Identifications: unquantified reigns.
Latest coins: pence attributed to Edward III.
Deposited: 1351+?
Carruthers 1853, p.164.
Dolley 1970, pp. 4-5.
D.(a) 71; D.(b) A.35; D.S. B.10; Sea.(a) 6.

32/I Ballyclare II, Co. Antrim, 1827.
Durham pence: present.
English pence: present.
Hoard total: 1,000+.
Identifications: unquantified reigns and mints.
Latest coins: Edward I class 9b, Exeter; Edward I/II class 10 x Edward III Florin coinage?
Deposited: 1315 (*SNC* 79 (1971), p. 278).

33/I Ballykinvarga (=Kilfenora, and Lisdoonvarna), Co. Clare, 1872.

Durham pence: ?

English pence: 4 recorded.

Hoard total: c. 500.

Identifications: unquantified kings' names and mints; 4 coins adequately described.

Latest coin: Edward III Florin coinage penny of York.

Deposited: 1344+ (*BNJ* 30 (1960-1), p. 216).

RSAI 27 (1897), p. 124.

RSAI 45 (1915), p. 260.

Seaby 1955, p. 166 n. 7.

Jope and Seaby 1959, p. 113.

Dolley and Seaby 1968, p. xlix n. 1.

NMAJ 11 (1968), pp. 22-6.

Dolley 1969, pp. 27, 29.

Dolley 1970, pp. 4-5.

D.(a) 72, 80; D.(b) A.46; D.S. A.27; T. 206.

34/I Ballyshannon, Co. Kildare, c. 1854.

Durham pence: ?

English pence: 2 recorded.

Hoard total: ?

Identifications: reign and mints of 2 coins.

Latest coins: Edwardian pence.

Deposited: c. 1280-1307 (Thompson 1956, p. 8); c. 1285? (Dolley and Seaby 1968, p. L).

RSAI 3 (1854-5), p. 213.

Dolley 1970, pp. 4-5.

D.(a) 73; D.(b) A.23; D.S. B.3; T. 28.

35/S Banff, Banffshire (now Aberdeenshire), before 1836.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: size; reign of 12 coins.

Latest coins: pence attributed to Edward II (class 10 x Edward III Florin coinage?).

Deposited: 1280-1360 (Metcalf 1977, p. 32); 1300+?

NSAS, XIII, p. 31.

D.(a) 87; Met.(b) 61.

36/I Barntick (=Barnatich), Co. Clare, 1936.

Durham pence: ?

English pence: 5 recorded.

Hoard total: c. 50.

Identifications: adequate descriptions of 7 coins.

Latest coin: Edward I class 4e penny of London.

Deposited: c. 1285 (*IN* 27 (May-June 1972), p. 109).

IN 27 (May-June 1972), pp. 107-9.

D.(b) A.22a.

37/E Beaumont, Cumberland (now Cumbria), 1884 (and 1991?).
Durham pence: 135 recorded, 1885; 9 recorded, 1964; 1 recorded, 1991.
English pence: 1749 recorded, 1885; 39 recorded, 1964; 29 recorded, 1991.
Hoard total: c. 2,400; 31 probable additions, 1991.
Identifications: (a) 1885 and 1885-6: parcel of 2,000 coins; reigns, denominations, mints and inscriptions; Hawkins classification of Edwardian pence.
(b) 1964: parcel of 56 coins; adequate descriptions.
(c) 1991: parcel of 31 coins; adequate descriptions.
Latest coin: Edward III Transitional-Treaty or Treaty A period penny of Durham;
David II of Scotland 'Robert II' head groats.
Deposited: c. 1362 (*BNJ* 33 (1964), pp. 85-6); 1364-70 (Mayhew 1983, p. 157);
1364-70+ (*NC* 3rd ser. 5 (1885), p. 205); c. 1365 (Seaby and Stewart 1964, p. 103).
PSA 2nd ser. 10 (1883-5), pp. 191-3.
NC 3rd ser. 5 (1885), pp. 199-208.
TCWAAS 8 (1885-6), pp. 373-81.
NC 3rd ser. 6 (1886), pp. 170-1.
BNJ 32 (1963), p. 128.
BNJ 33 (1964), pp. 85-9.
BNJ 61 (1991), p. 167.
Information from Dr B.J. Cook.
D.(a) 6; D.S. C.70; May. 14; N. 8; S.S. xiv; T. 38.

38/I Belfast (=Ekenhead), Co. Antrim, 1928.
Durham pence: 8 recorded.
English pence: 48 recorded.
Hoard total: 55.
Identifications: 54 coins adequately described; suitable for analysis.
Latest coin: Edward II class 13 penny of Durham.
Deposited: c. 1315 (*NC* 5th ser. 8 (1928), p. 335); c. 1315-18 (Jope and Seaby 1959,
p. 112); 1315+ (Seaby 1955, p. 161); 1316 or 1317 (Dolley 1968, p. 257).
SNC 36 (1928), col. 486.
NC 5th ser. 8 (1928), p. 335.
SCMB 433 (June 1954), pp. 231-2.
Seaby 1955, pp. 170-1.
Jope and Seaby 1959, pp. 112-13.
SCMB May 1968, pp. 164-6.
Dolley 1970, pp. 4,6.
D.(a) 7; D.(b) A.29; D.S. A.22; May. 122; N. 9; Sea.(a) 9; T. 41.

39/E Benacre, Suffolk, 1767.
Durham pence: ?
English pence: ?
Hoard total: nearly 400.
Identifications: unquantified reigns and mints.
Latest coin(s): Edward I, Dublin.
Deposited: 1280+.
GM 37 (1767), p. 558.
Manville 1993a, p. 94 (hoard 41a).

40/S Berscar (=Borscar, and Closeburn), Dumfriesshire (now Dumfries and Galloway), 1900.

Durham pence: 147 recorded, 1900-1.

English pence: 1,286 recorded, 1900-1.

Hoard total: 1,375 (+ 8?).

Identifications: (a) 1900-1: reigns, mints, inscriptions and Burns classification of 1,375 coins.

(b) 1968: possible parcel of 8 coins; adequate descriptions.

(c) 1977: incomplete conversion of the 1900-1 identifications to the Fox classification.

Latest coin: Edward III class 15d penny of York.

Deposited: 1331-c. 1335 (Metcalf 1977, p. 31); c. 1332-5 (*NC* 150 (1990), p. 199);

c. 1335 (*CH* 5 (1979), p. 105).

SNC 9 (1900-1), col. 4521.

PSAS 35 (1900-1), pp. 639-59.

NM 16 (1901), p. 7.

Davidson 1947-8, p. 107.

TDGNHAS 3rd ser. 45 (1968), pp. 243-4.

Williams 1970, p. 289.

BNJ 47 (1977), pp. 92-101.

CH 5 (1979), hoard 286.

Manville 1995, p. 171.

D.(a) 11; D.S. C.43; May. 15; Met.(b) 1977, 55; N. 10; T. 47.

41/E Beulah Hill, London, 1953.

Durham pence: 4.

English pence: 6.

Hoard total: 138.

Identifications: suitable for analysis.

Latest coins: Edward III Treaty period half-noble, quarter-nobles, and halfgroats.

Deposited: c. 1364 (*NC* 6th ser. 13 (1953), p. 115); c. 1365 (Seaby and Stewart 1964, p. 103).

NC 6th ser. 13 (1953), pp. 115-22.

S.S. xvi; T. 241; W.8.

42/E Beverley, North Yorkshire, 1986x9.

Durham pence: 0.

English pence: 1.

Hoard total: 5.

Identifications: suitable for analysis.

Latest coin: King John Balliol of Scotland penny.

Deposited: 1320s or 1330s? (M. Foreman *et al.*, *Further Excavations at the Dominican Priory, Beverley, 1986-1989* (Sheffield Excavation Reports 4; Sheffield, 1996), pp. 173-4.

Biggar *see* Crosscryne

Birmingham *see* Aston Church

43/S Blackhills (=Parton), Kirkcudbrightshire (now Dumfries and Galloway), 1911.

Durham pence: 225.

English pence: 1,903; 7 possible additions, 1974.

Hoard total: 2,059; 10 possible additions, 1974.

Identifications: (a) 1913: reigns, denominations, mints and George Macdonald classification.

(b) 1990: incomplete conversion to the Fox classification.

(c) 1997: parcel of 380 coins; adequate descriptions.

Latest coins: Edward II class 15b pence.

Deposited: c. 1320 (Thompson 1956, p. 15); c. 1320-5 (Dolley 1968, pp. 258, 278, 281); c. 1322 (Stewart and North 1990, pp. 188, 199); c. 1323 (*CH* 2 (1976), p. 116); c. 1332 (*BNJ* 67 (1997), p. 101).

PSAS 45 (1910-11), pp. 569-71.

PSAS 46 (1911-12), pp. 14, 90.

RBN 69 (1912), pp. 254-5.

NC 4th ser. 13 (1913), pp. 57-118.

Davidson 1947-8, pp. 108-9.

Williams 1970, p. 444.

CH 2 (1976), hoard 456.

Stewart and North 1990, pp. 179-80, 185-204.

BNJ 67 (1997), pp. 99-103.

D.(a) 8; D.S. C.38; May. 16 bis; Met.(b) 39; N. 5; T. 45.

44/I Blacksod, Co. Mayo, 1939.

Durham pence: 3.

English pence: 18.

Hoard total: 20.

Identifications: suitable for analysis.

Latest coins: Edward II class 13 and class 13-14 pence of Canterbury.

Deposited: c. 1315-20 (Dolley 1968, pp. 258, 278).

SNC 91 (1983), pp. 42-3.

D.(a) 9; D.(b) A.30; D.S. A.23.

45/E Bleadon, Somerset (see North Somerset), before 1968.

Durham pence: ?

English pence: 1 recorded.

Hoard total: ?

Identifications: penny attributed to Edward II; Portuguese coin adequately identified.

Latest coin: Alfonso V of Portugal ceitel.

Deposited: 1438+ (*CH* 2 (1976), p. 118).

TBGAS (1971), p. 138.

CH 2 (1976), hoard 460.

46/E Blencogo, Cumbria, 1983 and 1984.

Durham pence: 0.

English pence: 3.

Hoard total: 14.

Identifications: suitable for analysis.

Latest coins: Henry VI Pinecone-Masclé issue groats of Calais.

Deposited: c. 1435 (*BNJ* 54 (1984), p. 304).

Information from Dr B.J. Cook.

Blindwells see Tranent

47/E Bootham I, York, 1896.

Durham pence: 31 recorded.

English pence: 151 recorded.

Hoard total: 163 recorded.

Identifications: probably a parcel; adequate descriptions.

Latest coins: Edward IV second reign pence of Archbishop Thomas Rotheram of York.

Deposited: c. 1480 (Mayhew 1974, p. 65); 1480+ (Thompson 1956, p. 149).

Sotheby's sale, 1 May 1919, lots 231-5.

ARTYPS 1919, p. vii.

T. 384.

48/E Bootham II, York, 1953.

Durham pence: 81.

English pence: 830.

Hoard total: 908.

Identifications: suitable for analysis.

Latest coin: Edward II/III class 15c pence.

Deposited: c. 1325-7 (Mayhew 1983, p. 158); c. 1325-30 (Dolley 1968, pp. 258, 278, 281); c. 1326 (*BNJ* 35 (1966), p. 133); c. 1330 (Dolley and Seaby 1968, p. liii).

TYNF 2nd ser. 1 (2) (1953), pp. 118-22.

SCMB 427 (Dec. 1953), p. 505.

SCMB 428 (Jan. 1954), pp. 12-13.

BNJ 27 (1952-4), pp. 281-93.

Manville 1995, p. 175.

D.(a) 10; D.S. C.54; May. 17; N. 81; T. 385.

Borscar *see* **Berscar**

49/E Boston, Lincolnshire, 1984.

Durham pence: 0.

English pence: 13 recorded.

Hoard total: 26.

Identifications: adequate descriptions of 14 identifiable coins; suitable for analysis.

Latest coin: Edward II class 13 penny of Canterbury.

Deposited: c. 1315+.

BNJ 56 (1986), p. 209.

Information from Dr B.J. Cook.

50/E Bowness, Cumberland (now Cumbria), 1884.

Durham pence: ?

English pence: 3 recorded.

Hoard total: 21 or 22.

Identifications: inscriptions and descriptions of 5 coins.

Latest coin: Edward I class 4e penny of London.

Deposited: 1283+ (Dolley 1968, p. 249).

PSA 1883-5, pp. 137-8.

NC 3rd ser. 5 (1885), pp. 207-8.

TCWAAS 8 (1885-6), p. 381.

TCWAAS 24 (1923), p. 237.

D.(a) 129; T. 50.

51/E Boyton, Wiltshire, 1935.

Durham pence: 329.

English pence: 3,859.

Hoard total: 4,147.

Identifications: suitable for analysis.

Latest coin: Edward II class 15b/c (mule) penny of Durham.

Deposited: 1324 (*NC* 5th ser. 16 (1936), p. 125); 1324+ (Thompson 1956, p. 51);

c. 1325 (*BNJ* 35 (1966), p. 133); 1325-c. 1330 (Dolley 1968, pp. 258-9, 278, 281);

c. 1330 (Dolley and Seaby 1968, p. liii).

SNC 43 (1935), cols. 352-4.

NC 5th ser. 16 (1936), pp. 115-55.

Salisbury Museum Medieval Catalogue Part 1, ed. P. and E. Saunders

(Salisbury, 1991), pp. 140-1, 153.

D.(a) 12; D.S. C.55; May. 18; N. 13; T. 51.

52/S Braemore, Caithness (now Highand), second half of the 19th century.

Durham pence: ?

English pence: 2 recorded.

Hoard total: ?

Identifications: 6 coins adequately described by Stewart 1973, p. 139.

Latest coin: Edward I class 10ab penny of Canterbury.

Deposited: early 1300s (*CH* 1 (1975), p. 94); 1301+ (Stewart 1973, p. 139); 1301-20 (Metcalf 1977, p. 28).

Stewart 1973, pp. 138-9.

CH 1 (1975), hoard 364.

Met.(b) 31.

53/E Braintree, Essex, 1819x1853.

Durham pence: 1 recorded.

English pence: 9 recorded.

Hoard total: 5,000+.

Identifications: king's name; mint of 9 coins; description of one Durham penny (class 4b, cross moline in one quarter).

Latest coins: Edward III Florin coinage pence of Reading.

Deposited: 1345-50 (*SNC* 84 (1976), p. 227).

54/S Brechin I, Angus, 1785.

Durham pence: present.

English pence: present.

Hoard total: ?

Identifications: reigns and mints of 7 coins; unquantified reigns and mints for the hoard.

Latest coin: Edwardian penny of Berwick.

Deposited: 1296+.

SM 47 (1785), p. 153.

GM 55 (1785), p. 314.

AS 3 part 2 (1831), appendix 2, pp. 42, 45.

Lindsay 1845, p. 262.

Manville 1993a, p. 94.

D.(a) 88; Met.(b) 62; T. 55.

55/S Brechin II, Angus, 1891.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: c. 1280-1320 (Thompson 1956, p. 19); 1280-1360 (Metcalf 1977, p. 33).

PSAS 58 (1923-4), p. 168.

D.(a) 89; Met.(b) 63; T. 56.

56/E Brentwood, Essex, 1968.

Durham pence: 21.

English pence: 125.

Hoard total: 305.

Identifications: suitable for analysis.

Latest coins: Henry V groats, halfgroat, and pence.

Deposited: c. 1422 (*BNJ* 38 (1969), p. 225).

Information from Dr B.J. Cook.

57/E Bristol, Avon (now Bristol), 1987.

Durham pence: 25.

English pence: 133.

Hoard total: 234.

Identifications: suitable for analysis.

Latest coins: Richard II group IV halfpence.

Deposited: c. 1396+.

TBGAS 106 (1988), p. 219.

Information from Miss M.M. Archibald.

58/E Broughton, Hampshire, 1964.

Durham pence: 9.

English pence: 255.

Hoard total: 332.

Identifications: suitable for analysis.

Latest coins: Edward I class 5b pence.

Deposited: c. 1290 (*BNJ* 35 (1966), p. 120).

BNJ 35 (1966), pp. 120-7.

D.(a) 13; D.S. C.17; May. 19; N. 12.

59/S Brownlee, Lanarkshire (now South Lanarkshire), 1770.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified kings' names, and three reverse inscriptions.

Latest coin(s): David II of Scotland second coinage, Aberdeen (ABERDON);

Robert (II?) of Scotland.

Deposited: 1371+? (Seaby and Stewart 1964, p. 104).

SM 32 (1770), p. 166.

Lindsay 1845, p. 160.

Manville 1993a, pp. 94-5.

Met.(b) 130; S.S. xxi; T. 60.

60/I Bunduvowen, Co. Mayo, 1945.

Durham pence: 0.

English pence: 3.

Hoard total: 4.

Identifications: suitable for analysis.

Latest coins: Edward I/II class 10cf pence.

Deposited: c. 1305+.

Numismatic Society of Ireland Occasional Papers 29-38 (1988), p. 56.

61/E Burgh Marsh, Cumberland (now Cumbria), c. 1860.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: reign.

Latest coins: pence attributed to Edward I.

Deposited: 1279+.

PSA 2nd ser. 10 (1883-5), pp. 137-8.

62/E Bury St. Edmunds, Suffolk, 1861.

Durham pence: ?

English pence: 2 recorded.

Hoard total: c. 380.

Identifications: reigns, denominations and mints of 219 coins; descriptions of 7 coins from the remaining c. 160.

Latest coins: Henry VII profile portrait groats.

Deposited: c. 1504+; before 1509 (Mayhew 1974, p. 66).

NC 2nd ser. 2 (1862), pp. 148-51.

NC 7th ser. 14 (1974), pp. 130-1.

Cook 1994, pp. 72-3.

B.D. EL1.

63/S Bute (=Ascog), Argyll (now Argyll and Bute), 1813.

Durham pence: present.

English pence: present.

Hoard total: 4,000?

Identifications: unquantified reigns and mints.

Latest coin(s): Robert I of Scotland; Edward III, Pre-Treaty period or later?

Deposited: 1318+, c. 1335? (*CH* 5 (1979), p. 104); 1318-c. 1335 (Mayhew 1983, p. 159); 1318-60 (Metcalf 1977, p. 39); 1327+? (Thompson 1956, p. 21); 1351+?

Lindsay 1845, p. 266.

SNC 86 (1978), pp. 365-6.

CH 5 (1979), hoard 285.

Bateson 1989, pp. 170, 182.

May. 21; Met.(b) 122; T. 64.

64/W Cae Castell (=Rumney), Gwent (now Cardiff), 1980.

Durham pence: 0.

English pence: 54.

Hoard total: 64.

Identifications: suitable for analysis.

Latest coins: Edward I class 4e pence.

Deposited: c. 1288 (Mayhew 1983, p. 159); c. 1288-9 (*MA* 36 (1992), 134);

c. 1290 (*CH* 7 (1985), p. 351).

BNJ 50 (1980), p. 156.

CH 7 (1985), hoard 552.

Boon 1986, pp. 83-90.

May. 22.

65/W Caernarvon, Caernarvonshire (now Gwynedd), 1911.

Durham pence: 8.

English pence: 31.

Hoard total: 31 (+ 2 intrusive coins).

Identifications: suitable for analysis.

Latest coin: Edward class 14 penny of London; Edward III Pre-Treaty period series C and D pence, probably not deposited with the hoard.

Deposited: c. 1317-20 (*BNJ* 39 (1970), p. 79).

ACamb 6th ser. 12 (1912), p. 168.

BNJ 39 (1970), pp. 78-80.

Boon 1986, pp. 112-14, 119-20.

N. 14.

Cairncross *see* **Coldingham(e)**

66/S Canonbie I (Rowan Burn), Dumfriesshire (now Dumfries and Galloway), 1811.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: pair of inscriptions.

Latest coin(s): Edward I class 1d x Edward III Florin coinage, London.

Deposited: 1280-1360 (Metcalf 1977, p. 33); 1298 (*NSAS*, IV, p. 491).

NSAS, IV, pp. 490-1.

Williams 1970, p. 289.

Met.(b) 64.

67/S Canonbie II (Woodhead), Dumfriesshire (now Dumfries and Galloway), 1863.

Durham pence: 9

English pence: 67.

Hoard total: 76.

Identifications: reigns, denominations and mints.

Latest coins: Edward I halfpence of Berwick.

Deposited: 1298-c. 1302 (Metcalf 1977, p. 28); c. 1300 (Dolley 1968, pp. 259, 278).

PSAS 5 (1862-4), pp. 236-7.

TDGNHAS 1st ser. 1 (1862-4), p. 10.

NC 2nd ser. 3 (1863), p. 218.

Lindsay 1868, p. 38.

PSAS 27 (1892-3), p. 488.

PSAS 58 (1923-4), p. 168.

Davidson 1947-8, p. 107.

Williams 1970, p. 289.

D.(a) 14; D.S. C.22; Met.(b) 30; N. 15; T. 70.

68/I Carnbane, Co. Armagh, 1802.

Durham pence: 0.

English pence: 9.

Hoard total: 9.

Identifications: hoard or parcel; adequate descriptions.

Latest coin: Edward II class 14 penny of Canterbury.

Deposited: 1317+ (Dolley 1968, p. 247); 1318+ (*BNJ* 36 (1967), p. 98); c. 1340 (Dolley and Seaby 1968, p. L).

BNJ 36 (1967), pp. 97-8.

SCMB May 1968, pp. 163, 165.

D.(a) 74; D.(b) A.41; D.S. B.16.

69/I Carns, Co. Roscommon, 1969.

Durham pence: 3.

English pence: 154.

Hoard total: 165.

Identifications: suitable for analysis.

Latest coins: Edward II class 15b pence.

Deposited: *c.* 1325 (*BNJ* 39 (1970), pp. 87-90).

BNJ 39 (1970), pp. 84-90.

D.(b) A.40a; N. 16.

70/I Carrickfergus, Co. Antrim, 1856.

Durham pence: ?

English pence: *c.* 120 recorded.

Hoard total: *c.* 120 + 1.

Identifications: quantified reigns; denomination.

Latest coin: King John Balliol of Scotland penny.

Deposited: 13th-14th centuries (Thompson 1956, p. 23); 1292+.

RSAI 4 (1856-7), p. 51.

D.(a) 75; D.(b) A.21; D.S. A.20; Sea.(a) 7a; T. 72.

'Carrickfergus' (1903) *see* **Monkstown**

71/I Carrowreagh Ford, Co. Roscommon, before 1941.

Durham pence: ?

English pence: 1 recorded.

Hoard total: ?

Identifications: adequate descriptions of 2 coins.

Latest coin: Edward II class 15a penny of London.

Deposited: *c.* 1320+.

IN 85 (Jan.-Feb. 1982), pp. 8-11.

May. 123.

72/S Carsphairn (=Craigengillan), Kirkcudbrightshire (now Dumfries and Galloway), 1913.

Durham pence: 175.

English pence: 2,026.

Hoard total: 2,224.

Identifications: reigns and mints; coins with the initial mark of Bishop Beaumont of Durham quantified.

Latest coins: Edward II pence of Bishop Beaumont; Robert I of Scotland pence.

Deposited: *c.* 1320 (*NC* 4th ser. 14 (1914), p. 382); 1324-*c.* 1335 (Metcalf 1977,

p. 30); *c.* 1325-30 (Dolley 1968, pp. 259, 278); 1328-*c.* 1335 (Mayhew 1983, p. 159);

c. 1330 (Thompson 1956, p. 23).

PSAS 48 (1913-14), pp. 398-401.

NC 4th ser. 14 (1914), pp. 382-3.

Davidson 1947-8, p. 109.

Williams 1970, p. 442.

D.(a) 15; D.S. C.56; May. 23; Met.(b) 52; N. 17; T. 76.

73/S Carstairs, Lanarkshire (now South Lanarkshire), 1838.

Durham pence: ?

English pence: present.

Hoard total: 36.

Identifications: pair of inscriptions.

Latest coin(s): Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 33).

NSAS, VI, pp. 554-5.

Met.(b) 67.

74/I Castlewellan, Co. Down, 1855.

Durham pence: present.

English pence: present.

Hoard total: 200+?

Identifications: unquantified reigns, denominations and mints; reverse inscription of a Durham penny (VILA DUNOLMIE: Edward III Florin coinage).

Latest coins: Edward III groats and halfgroats.

Deposited: c. 1355 (Seaby and Stewart 1964, p. 100); c. late 14th century (Seaby 1966, p. 455).

Carruthers 1856-7, pp. 50-1.

Dolley 1970, pp. 4, 6.

D.(b) 5; May. 124; Sea.(a) 17; Sea.(b) 9; S.S. i.

75/I Castleyons, Co. Cork, 1837x9.

Durham pence: 0

English pence: 2.

Hoard total: 4.

Identifications: reigns, denominations and mints; one penny described.

Latest coin: Edward IV second reign penny of York, suspension of Archbishop Neville (1472-5).

Deposited: 1472+.

Lindsay 1839, p. 135.

D.(b) C.1.

76/W Cefn Coed, Mid Glamorgan (now Merthyr Tydfil), 1986.

Durham pence: 3.

English pence: 26.

Hoard total: 31.

Identifications: suitable for analysis.

Latest coin: Edward II/III class 15c penny of London.

Deposited: c. 1323+.

Morgannwyg 30 (1986), p. 74.

BNJ 63 (1993), pp. 86-7.

Information from Mr E. Besly.

77E Chester I (Lion Brewery), Cheshire, 1899?

Durham pence: 0.

English pence: 22.

Hoard total: 24.

Identifications: reigns and mints.

Latest coin: Bury St Edmunds penny attributed to Edward II (class 10 x Edward III Florin coinage?).

Deposited: 1300+.

NM 14 (1899), p. 33.

Manville 1995, p. 171 (hoard 88a).

78/E Chester II (Pepper Street), Cheshire, 1946 or before.

Durham pence: 8 recorded.

English pence: 87 recorded.

Hoard total: ?

Identifications: parcel of 100 coins; adequate descriptions.

Latest coins: Edward III Florin coinage pence.

Deposited: c. 1345-50 (Dolley 1968, pp. 259-60, 279, 281); before c. 1350 (*BNJ* 27 (1952-4), p. 92); c. 1350 (Dolley and Seaby 1968, p. liv).

BNJ 27 (1952-4), pp. 91-2.

D.(a) 16; D.S. C.66; May. 24; N. 18; T. 87.

79/I Cloghan, Co. Offaly, 1960.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications/latest coins: 'early pennies of Edward I' (Dolley 1968, p. 247 n. 70).

Deposited: c. 1285 (Dolley and Seaby 1968, p. L)

D.(a) 76; D.(b) A.22; D.S. B.2.

80/S Closeburn I (Wallacehall?), Dumfriesshire (now Dumfries and Galloway), in or before 1829.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: reigns and denominations of 5 coins.

Latest coin: Robert II of Scotland groat.

Deposited: 1371+ (Metcalf 1960-1, p. 92).

AS 3 part 2 (1831), appendix 2, p. 132.

Met.(a) 7; Met.(b) 154.

81/S Closeburn II (Croalchapel), Dumfriesshire (now Dumfries and Galloway), 1844 and 1996.

Durham pence: present, 1844; 19 recorded, 1996.

English pence: present, 1844; 194 (including 3 fragments) recorded, 1996.

Hoard total: 10,000+, 1844; 220 (including 3 fragments) recorded, 1996.

Identifications: (a) 1844 find: reigns and denominations of 11 coins; unquantified reigns, denominations and mints for the hoard.

(b) 1996 find: adequate.

Latest coins: David II of Scotland groat, 1844 and 1996; Edward III Pre-Treaty series G(a), 1996.

Deposited: 1357+ (Seaby and Stewart 1964, p. 102); -1370 (*PSAS* 120 (1990), p. 163).

GM new ser. 21 (1844 i), p. 637.

NC 1st ser. 7 (1844-5), p. 193.

Lindsay 1845, pp. 269-70.

AS 5 (1890), appendix, p. 54.

PSAS 35 (1900-1), p. 277.

NM 16 (1901), p. 7.

Davidson 1947-8, pp. 106-7.

Williams 1970, p. 289.

Manville 1995, p. 171 (hoard 93a).

Information from Mr N.M.McQ. Holmes (1996 parcel).

Met.(b) 145; N. 19-20; S.S. xi; T. 92-3.

Closeburn (1900) see Berscar

82/S Cockburnspath, Berwickshire (now Scottish Borders), 1856.

Durham pence: present.

English pence: present.

Hoard total: c. 200.

Identifications: unquantified obverse and reverse inscriptions of 23 English coins; quantified inscriptions of 6 other coins.

Latest coins: Edward I/II class 10 x Edward III Florin coinage pence.

Deposited: c. 1305-25 (*SNC* 70 (1962), p. 80); c. 1310 (Dolley and Seaby 1968, p. lii);

c. 1310-15? (Dolley 1968, pp. 260, 278); c. 1310-1360 (Metcalf 1977, p. 39);

c. 1315? (North 1989, p. 97).

PBNC 3 (1850-6), pp. 259-61.

PBNC 4 (1856-62), pp. 18-19.

SNC 70 (1962), p. 80.

D.(a) 17; D.S. C.31; May. 26; Met.(b) 118; N. 21.

83/S Cocklaw Castle, Roxburghshire (now Scottish Borders), before 1878.

Durham pence: 1 recorded?

English pence: 31 recorded?

Hoard total: c. 1,000.

Identifications: (a) 1878: unquantified reigns.

(b) 1973: probable parcel of 36 coins adequately described.

Latest coin: Edward II/III class 15c penny of Bury St. Edmunds.

Deposited: c. 1323-30 (Stewart 1973, p. 141); 1351-70 (Metcalfe 1977, p. 42).

THAS 1878, pp. 39-40.

Stewart 1973, pp. 140-2.

CH 1 (1975), hoard 372.

May. 27; Met.(b) 142; N. 22.

84/S Coldingham(e) (=Cairncross), Berwickshire (now Scottish Borders), 1853.

Durham pence: ?

English pence: present.

Hoard total: 693.

Identifications: unquantified reigns; 2 coins described.

Latest coin: Robert I of Scotland penny.

Deposited: 1318-60 (Metcalfe 1977, p. 40).

PSAS 1 (1851-4), pp. 224-6.

Lindsay 1858, p. 52.

D.(a) 100; Met.(b) 123; T. 95.

85/E Coppergate, York (formerly North Yorkshire), 1978.

Durham pence: 0.

English pence: 4.

Hoard total: 5.

Identifications: suitable for analysis.

Latest coin: Edward II/III class 15c penny of Bury St Edmunds.

Deposited: c. 1325-1350 (E.J.E. Pirie, *Post-Roman Coins from York Excavations* (The Archaeology of York 18/1; York, 1986), p. 61).

Pirie, pp. 61-2, 67.

86/E Cornwall, 1820.

Durham pence: present.

English pence: present.

Hoard total: ?

Identifications: unquantified reigns, denominations, mints and ecclesiastical initials.

Latest coin(s): Henry VIII second coinage, Bishop Tunstall of Durham.

Deposited: 1530+.

GM 90 (1820 i), p. 541.

Manville 1993a, p. 104.

B. D. EM11.

87/S Corrimony (=Corriemonie or Corriemony), Invernessshire (now Highland), 1870.

Durham pence: ?

English pence: present.

Hoard total: 570.

Identifications: unquantified king's name and a mint (Lincoln); size.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalfe 1977, p. 33); 14th cent. (Thompson 1956, p.36).

PMNS 1 (1871), p. 210.

D.(a) 90; Met.(b) 68; T. 100.

88/S Coulnakyle, Elgin (now Moray), 1869.

Durham pence: ?

English pence: 21 recorded.

Hoard total: ?

Identifications: parcel of 23 coins; reigns and mints.

Latest coin: Edwardian penny of Berwick.

Deposited: 1296+ (Dolley 1968, p 248); 1296-1360 (Metcalf 1977, p. 38); early 14th century (Thompson 1956, p. 36).

PSAS 8 (1868-70), p. 289.

D.(a) 91; Met.(b) 113; N. 23; T. 101.

89/E Coventry I, Warwickshire (now Coventry), 1847.

Durham pence: present.

English pence: present.

Hoard total: 100-200.

Identifications: partly quantified reigns and mints.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: c. 1280-1300 (Thompson 1956, p. 37); c.1285 (Dolley 1968, pp. 260, 277).

D.(a) 18; D.S. C.14; N. 24; T. 102.

90/E Coventry II (Coventry and Warwickshire Hospital), Warwickshire (now Coventry), 1937.

Durham pence: 3 recorded.

English pence: 125 recorded.

Hoard total: c. 500.

Identifications: parcel of 144 coins; adequate descriptions.

Latest coins: Edward I class 5 pence.

Deposited: c. 1285 (Dolley 1968, pp. 260, 277); c. 1286-98 (*BNJ* 23 (1938-40), p. 279); c. 1290 (Mayhew 1983, p. 160); c. 1298 (Thompson 1956, p. 37).

AntJ 17 (1937), pp. 440-1.

BNJ 23 (1938-40), pp. 279-80.

BNJ 40 (1971), p. 49.

D.(a) 19; D.S. C.15; May. 28; N. 25; T. 103.

91/E Coventry III (Foleshill), Warwickshire (now Coventry), 1967.

Durham pence: 22.

English pence: 123.

Hoard total: 225.

Identifications: suitable for analysis.

Latest coins: Edward III Treaty period pence of York, annulet before 'Edwardus'.

Deposited: c. 1363-5 (*BNJ* 43 (1973), p. 62); c. 1365 (*CH* 3 (1977), p. 131).

BNJ 36 (1967), p. 223.

BNJ 43 (1973), pp. 60-6.

CH 3 (1977), hoard 332.

May. 29; N. 26.

Craigengillan *see* **Carsphairn**

92/S Crathes, Kincardineshire (now Aberdeenshire), 1863.

Durham pence: ?

English pence: 17 recorded.

Hoard total: ?

Identifications: hoard or parcel of 21 coins; adequate descriptions.

Latest coins: Edward II class 15b pence of Canterbury.

Deposited: 1320-c. 1336 (Metcalf 1977, p. 29); early 1320s-late 1340s (*CH* 4 (1978), p. 127).

CH 4 (1978), hoard 363.

May. 30; Met.(b) 41.

Croalchapel *see* **Closeburn II**

Crockerton *see* **Warminster**

93/S Crosscryne (=Biggar), Lanarkshire (now South Lanarkshire), before 1867.

Durham pence: 1 recorded.

English pence: 18 recorded.

Hoard total: ?

Identifications: two parcels and a stray coin (21 coins in all); adequate descriptions.

Latest coin: Edward II class 14 pence.

Deposited: c. 1317-1360 (Metcalf 1977, p. 39); c. 1320 (*CH* 1 (1975), p. 95);

c. 1320+ (*PSAS* 100 (1967-8), p. 196); 1320+? (Dolley 1968, p. 249).

PSAS 95 (1961-2), pp. 309-10.

PSAS 97 (1963-4), pp. 251-2.

PSAS 100 (1967-8), pp. 195-6.

Stewart 1973, pp. 139-40.

CH 1 (1975), hoard 371.

D.(a) 109; May. 31; Met.(b) 120; N. 27.

94/S Cummertrees, Dumfriesshire (now Dumfries and Galloway), 1833.

Durham pence: ?

English pence: present.

Hoard total: 100+.

Identifications: unquantified reigns and mints.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 33); c. 1300 (Dolley and Seaby 1968, p. lii);

c. 1300? (Dolley 1968, pp. 261, 278).

Davidson 1947-8, p. 106.

Williams 1970, p. 331.

D.(a) 21; D.S. C.23; Met.(b) 70.

Cummertrees (1860) *see* **Netherfield**

95/S Dalquharran (=Daily), Ayrshire (now South Ayrshire), c. 1818.

Durham mint: present.

English pence: present.

Hoard total: ?

Identifications: unquantified reigns and mints of English coins; quantified coins of Flanders and Scotland.

Latest coin: David II of Scotland penny.

Deposited: c. 1350-60 (Metcalf 1977, p. 41).

AS 3 part 2 (1831), appendix 2, pp. 125-6.

Met.(b) 137; T. 114.

96/S Dalrymple, Ayrshire (now South Ayrshire), 1835.

Durham pence: 1.

English pence: 4.

Hoard total: 4.

Identifications: unquantified reigns; quantified reverse inscriptions; obverse inscription of one coin.

Latest coin: Edward III Pre-Treaty series F x Treaty penny of Durham?

Deposited: 1280-1360 (Metcalf 1977, p. 33); 1356+?

NSAS, V, p. 279.

Met.(b) 71.

97/E Deeping St. James, Lincolnshire, 1956.

Durham pence: 0.

English pence: 2.

Hoard total: 11.

Identifications: suitable for analysis.

Latest coins: Henry VII halfgroats of Canterbury, initial mark tun.

Deposited: c. 1500 (*LAASRP* 7 Part 1 (1957), p. 20).

LAASRP 7 part 1 (1957), pp. 20-1.

LAASRP 9 part 2 (1961), p. 24.

Cook 1994, p. 72.

98/E Derby, Derbyshire (now Derby City), 1927.

Durham pence: 51.

English pence: 567.

Hoard total: 640.

Identifications: suitable for analysis.

Latest coins: Edward III Florin coinage pence and halfpence.

Deposited: c. 1348 (Thompson 1956, p. 44).

BNJ 19 (1927-8), pp. 291-2.

NC 5th ser. 8 (1928), pp. 47-60.

DAJ 3rd ser. 50 (1928-9), pp. 85-9.

BNJ 20 (1929-30), pp. 354-5.

D.(a) 22; D.S. C.64; May. 33; N. 28; T. 118.

99/I Derrynasell (=Dernasell), Co. Monaghan, 1954.

Durham pence: 17.

English pence: 143.

Hoard total: 151.

Identifications: adequate descriptions of 49 coins; reigns and mints for the hoard.

Latest coins: Edward III Florin coinage pence.

Deposited: c. 1345-50 (Dolley 1968, pp. 239, 261-2); c. 1350 (Dolley and Seaby 1968, p. xlix); 1345-75 (*IN* 92 (March-April 1983), p. 50).

SCMB May 1968, p. 165.

Dolley 1970, pp. 4, 7.

IN 92 (March-April 1983), pp. 48-54.

D.(a) 23; D.(b) A.47; D.S. A.28; May. 125.

100/W Derwen, Denbighshire, 1788.

Durham pence: ?

English pence: present.

Hoard total: 100s.

Identifications: one penny described.

Latest coin: Edwardian penny of London.

Deposited: 1279+.

Boon 1986, pp. 113-14.

101/E Derwentwater, Cumberland (now Cumbria), 1856x1862.

Durham pence: 3.

English pence: 32.

Hoard total: 34.

Identifications: reigns, abbreviations of the king's name on the obverse, and mints.

Latest coins: Edward I/II class 10 x Edward III Florin coinage.

Deposited: c. 1320 (Dolley and Seaby 1968, p. lii); c. 1320-5 (Dolley 1968, pp. 262, 278).

TCWAAS 1903, p. 408.

TCWAAS 1904, pp. 272-5.

TCWAAS 1923, p. 255.

D.(a) 24; D.S. C.39; Met.(a) 11; N. 29.

102/E Diss, Norfolk, 1871.

Durham pence: 21 recorded.

English pence: 152 recorded.

Hoard total: ?

Identifications: parcel of 325 coins; reigns, denominations, mints and marks.

Latest coins: Edward IV heavy coinage group IV groats.

Deposited: c. 1465? (Thompson 1956, p. 46).

NA 7 (1865-71), pp. 341-8.

T. 120; W. 73.

103/W Dolgelly (= Dolgellau), Merioneth (now Gwynedd), before 1913.

Durham pence: ?

English pence: present?

Hoard total: 3?

Identifications: gold noble attributed to Edward III; a groat and a penny not described.

Latest coin: groat, Edward III or later?

Deposited: 1351+?

BNJ 10 (1913), p. 352.

Boon 1986, p. 124 n. 8.

T. 121; W. 16.

104/S Dornock I (=Dornoch; and Dornock II?), Dumfriesshire (now Dumfries and Galloway), 1871.

Durham pence: 4 recorded.

English pence: 72 recorded.

Hoard total: ?

Identifications: parcel of 80 coins; reigns and mints.

Latest coin: Edward I/II class 10 x Edward III Florin coinage pence.

Deposited: 1320-c. 1335? (Metcalf 1977, p. 29); c. 1325-30? (Dolley 1968, pp. 262, 279); c. 1330 (Dolley and Seaby 1968, p. liii); early 14th cent. (Thompson 1956, p. 48).

PSAS 9 (1870-2), p. 511.

Williams 1970, p. 331.

D.(a) 25; D.S. C.57; May. 34; Met.(b) 42; N. 30; T. 124.

105/S Dornock II (Stapleton Tower; =Dornock I?), Dumfriesshire (now Dumfries and Galloway), before 1889.

Durham pence: ?

English pence: present.

Hoard total: 300+.

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 34).

Williams 1970, p. 331.

Met.(b) 72.

106/M Douglas, Isle of Man, 1842.

Durham pence: ?

English pence: present.

Hoard total: c. 200.

Identifications: king's name and unquantified mints.

Latest coins: Edwardian pence.

Deposited: 1279+.

J. Train, *An Historical and Statistical Account of the Isle of Man* (2 vols, Douglas, 1845), II, p. 71.

G. Waldron, *A Description of the Isle of Man*, ed. with notes by W. Harrison (Manx Society 11, Douglas, 1865), p. 119.

Clay 1869, p. 41.

T. 126.

107/E Dover, Kent, 1955.

Durham pence: 2.

English pence: 56.

Hoard total: 686.

Identifications: suitable for analysis.

Latest coins: Edward I class 8 penny and farthing.

Deposited: 1295 (*BNJ* 28 (1955-7), 150-5); c. 1295 (Dolley and Seaby p. lii);

1295? (Mayhew 1983, p. 161); 1296? (*ACant* 69 (1955), pp. 66-7).

ACant 69 (1955), pp. 62-8.

SCMB 447 (Aug. 1955), p. 324.

SCMB 458 (July 1956), pp. 269-70.

BNJ 28 (1955-7), pp. 147-68.

D.(a) 26; D.S. C.19; May. 35; N. 31.

108/E Doveridge (=Ashbourne), Derbyshire, 1987.

Durham pence: 4.

English pence: 61

Hoard total: 61.

Identifications: suitable for analysis.

Latest coin: Edward II class 15b penny of London.

Deposited: c. 1330s-1340s (*BNJ* 57 (1987), p. 172).

Information from Dr B.J. Cook.

109/E Downham, Lancashire, 1992.

Durham pence: 5.

English pence: 6.

Hoard total: 13.

Identifications: suitable for analysis.

Latest coins: Henry VII profile portrait halfgroat of York, Archbishop Bainbridge.

Deposited: 1508-10 (Cook 1994, p. 71); 1509-19 (*BNJ* 66 (1996), p. 131).

BNJ 62 (1992), p. 237.

Cook 1994, pp. 71-2.

110/I Drumlane, Co. Cavan, 1868.

Durham pence: 3 recorded.

English pence: 35 recorded.

Hoard total: ?

Latest coin: Edward II penny of Bishop Kellaw of Durham.

Deposited: 1311+ (Dolley 1968, p. 297); c. 1340 (Dolley and Seaby 1968, p. L).

PRIA 2nd ser. 1, Literature (1870-9), pp. 71-2.

SCMB May 1968, p. 165.

Dolley 1970, pp. 4, 7.

D.(b) A.42; D.S. B.17.

111/I Duleek, Co. Meath, 1853.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name; descriptions of two coins.

Latest coins: Edwardian pence and an Edward I groat.

Deposited: c. 1280-90 (Thompson 1956, p. 52); c. 1285? (Dolley and Seaby 1968, p. L).

NC 1st ser. 16 (1853-4), p. 192.

Dolley 1970, pp. 4, 7.

D.(a) 77; D.(b) A.24; D.S. B.4; N. 32; T. 136.

112/S Dumbarton, Dumbartonshire (now West Dumbartonshire), 1896.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns; reference to Edward I groats of Canterbury [*sic*]; reign and mint of one penny.

Latest coins: Edward III groats.

Deposited: *c.* 1351-71 (*CH* 7 (1985), p. 352).

SNC 88 (1980), p. 140.

Bateson 1989, pp. 172, 182.

CH 7 (1985), hoard 555.

113/S Dumfries I, Dumfriesshire (now Dumfries and Galloway), in or before 1849.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns and denominations.

Latest coin: Edward II obole of Aquitaine.

Deposited: *c.* 1310-1330? (Metcalf 1977, p. 28); 1320+? (Thompson 1956, p. 53).

NC 1st ser 12 (1849-50), pp. 14-15.

Williams 1970, p. 331.

D.(a) 110; May. 36; Met.(b) 36, 73; T. 138.

114/S Dumfries II (Traveller's Rest), Dumfriesshire (now Dumfries and Galloway), 1878.

Durham pence: 17.

English pence: 197.

Hoard total: 213 (including 15 fragments).

Identifications: (a) 1923-4: reigns and mints.

(b) 1994: adequate descriptions of 210 coins; suitable for analysis.

Latest coins: Edward II/III class 15c pence of London.

Deposited: *c.* 1322-35 (? *c.* 1332-5) (Holmes 1994, p. 44); *c.* 1324-1335? (Metcalf 1977, p. 29); *c.* 1325 (Dolley 1968, pp. 262-3, 278).

PSAS 16 (1881-2), p. 144.

TDGNHAS 3rd ser. 1 (1912-13), p. 360.

PSAS 58 (1923-4), pp. 160, 162-3.

Davidson 1947-8, p. 105.

Williams 1970, pp. 331-2.

Holmes 1994, pp. 41-9.

BNJ 66 (1996), p. 125.

D.(a) 27; D.S. C.44; May. 37; Met.(b) 43, 119; N. 33; T. 139.

115/S Dumfries III, Dumfriesshire (now Dumfries and Galloway), 1878.

Durham pence: ?

English pence: present.

Hoard total: *c.* 916.

Identifications: Burns classification of 22 coins.

Latest coins: Edward I class 10ab5 or 10ab6 (Burns class A39) pence.

Deposited: *c.* 1310-1360 (Metcalf 1977, p. 39).

PSAS 16 (1881-2), p. 144.

Burns 1887, I, pp. 191-2, 205, 217 n. 1.

Davidson 1947-8, p. 105.

Holmes 1994, pp. 40-3.

BNJ 66 (1996), p. 125.

116/I Dunaghy, Co. Antrim, no later than 1860.
Durham pence: ?
English pence: present.
Hoard total: ?
Identifications: king's name.
Latest coins: Edwardian pence.
Deposited: c. 1300? (Dolley and Seaby 1968, p. L).
RSAI 6 (1860-1), pp. 218.
D.(b) A.27; D.S. B.6.

117/S Dunblane, Perthshire (now Stirling), 1937.
Durham pence: 11.
English pence: 81.
Hoard total: 92.
Identifications: suitable for analysis.
Latest coins: Edward II class 15b pence.
Deposited: c. 1322-1336 (Metcalf 1977, p. 30); c. 1324 (Thompson 1956, p. 53); 1324+ (*BNJ* 23 (1938-40), p. 280).
PSAS 73 (1938-9), pp. 52-4.
BNJ 23 (1938-40), pp. 280-2.
D.(a) 28; D.S. C.42; May. 38; Met.(b) 44; N. 34; T. 140.

118/S Duncansby Head, Caithness (now Highland), 1969.
Durham pence: 1 recorded.
English pence: 76 recorded.
Hoard total: 82 recorded.
Identifications: probably a parcel; adequate descriptions.
Latest coins: Robert I of Scotland pence.
Deposited: c. 1318+ (Metcalf 1977, p. 30); c. 1320 (Stewart 1973, p. 135).
Stewart 1973, pp. 134-7.
CH 1 (1975), hoard 370.
Met.(b) 48; N. 35.

119/S Dunfermline, Fifeshire (now Fife), 1896.
Durham pence: 17 recorded.
English pence: 263 recorded.
Hoard total: c. 300.
Identifications: adequate descriptions of 269 coins.
Latest coins: Edward III Florin coinage pence of London and York.
Deposited: 1344-c. 1355 (Metcalf 1977, p. 41); 1345 (*AntJ* 16 (1936), p. 323);
c. 1345 (Thompson 1956, p. 54); c. 1345? (Mayhew 1983, p. 162).
AntJ 16 (1936), pp. 323-4.
NC 5th ser. 16 (1936), pp. 304-9.
May. 39; Met.(b) 136; N. 36; T. 142.

120/I Dungarvan, Co. Waterford, in or before 1840.
Durham pence: ?
English pence: 20 recorded.
Hoard total: c. 200.
Identifications: reigns, denominations and mints of 142 coins.
Latest coins: Henry VI.
Deposited: c. 1428-30 (Thompson 1956, p. 54); c. 1430s (Mayhew 1983, p. 178).
NC 1st ser. 3 (1840-1), pp. 194-5.
Lindsay 1845, p. 271.
Dolley 1970, pp. 5, 7.
D.(b) B.21; May. 126; N. 37; T. 143.

121/S Duns, Berwickshire (now Scottish Borders), 1811.

Durham pence: ?

English pence: present.

Hoard total: 2,361.

Identifications: unquantified reigns.

Latest coin(s): Robert I of Scotland.

Deposited: 1318-50 (Metcalf 1977, p. 30); early 14th century (Thompson 1956, p. 55).

Lindsay 1845, p. 266.

D.(a) 101; Met.(b) 49; T. 145.

122/S Dunscore (=19/S Auldgirth?), Dumfriesshire (now Dumfries and Galloway), before 1970.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: parcel of 3 coins; king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 34).

Williams 1970, p. 332.

Holmes 1994, p. 49.

Met.(b) 74.

123/E Durham I (Nevilles Cross), Co. Durham, 1889.

Durham pence: 71.

English pence: 165.

Hoard total: c. 300.

Identifications: parcel of 256 coins; reigns, denominations and mints; reverse inscriptions and episcopal marks of Edward III Durham pence; some other inscriptions.

Latest coins: Robert II of Scotland groats and halfgroats.

Deposited: c. 1377-80 (Thompson 1956, p. 55); c. 1380 (*NC* 3rd ser. 9 (1889), p. 321).

Antiq 20 (1889), p. 31.

NM 4 (1889), p. 79.

NC 3rd ser. 9 (1889), pp. 312-21.

NC 3rd ser. 11 (1891), pp. 164-79 *passim*.

ARTYPS 1891, p. 32.

PSAN 5 (1892), p. 133.

AA new ser. 17 (1895), p. xiii.

BNJ 32 (1963), p. 128.

May. 40; N. 38; S.S. xix; T. 148.

124/E Durham II (Beach Crest), Co. Durham, 1930.

Durham pence: 169.

English pence: 411.

Hoard total: 548.

Identifications: suitable for analysis.

Latest coins: Edward III Pre-Treaty series G groats, halfgroats, and pence.

Deposited: c. 1360 (Thompson 1956, p. 56); c. 1360+ (Seaby and Stewart 1964, p. 102).

NC 5th ser. 11 (1931), pp. 201-28.

May. 41; N. 39; S.S. xiii; T. 149.

125/S Durisdeer I (Inglestone), Dumfriesshire (now Dumfries and Galloway), 1832.

Durham pence: ?

English pence: present.

Hoard total: 1,000+.

Identifications: reign and mint of one coin.

Latest coin: Canterbury penny attributed to Edward II (class 10 x Edward III Florin coinage?).

Deposited: 1280-1360 (Metcalf 1977, p. 34); 1300+?.

TDGNHAS 2nd ser. 8 (1891-2), p. 54.

Williams 1970, pp. 332-3, 388.

Met.(b) 75.

126/S Durisdeer II (Chapel), Dumfriesshire (now Dumfries and Galloway), before 1876.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coin(s): Robert I of Scotland.

Deposited: 1318-60 (Metcalf 1977, p. 40).

Davidson 1947-8, p. 108.

Williams 1970, p. 333.

Met.(b) 125.

127/S Eassie, Angus, before 1795.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: reign.

Latest coins: attributed to Edward I.

Deposited: 1280-1360 (Metcalf 1977, p. 34).

SAS(a), XVI, p. 219; *SAS(b)*, XIII, p. 235.

NSAS, II, p. 476.

Met.(b) 76.

128/E East Langdon (= 'Kent'), Kent, 1992.

Durham pence: 2 recorded.

English pence: 17 recorded.

Hoard total: 34.

Identifications: adequate descriptions of 20 coins.

Latest coin: Edward I class 7a penny of Canterbury.

Deposited: c. 1292+.

Information from Mr C. Bailey and Dr B.J. Cook.

129/S Edinburgh, Midlothian (now Edinburgh), 1787.

Durham pence: present.

English pence: present.

Hoard total: ?

Identifications: partly quantified reigns and mints of 9 coins; inscriptions of one coin.

Latest coin: Edward I/II class 10 x Edward III Florin coinage, penny of London.

Deposited: 1300+.

SM 49 (1787), p. 358.

GM 57 (1787), pp. 632, 659.

SAS(a), VI, p. 584; *SAS(b)*, II, p. 23.

AS 3 part 2 (1831), appendix 2, p. 65.

Manville 1993a, p. 97 (hoard 153a).

Met.(b) 77, 78.

130/S Ednam, Roxburghshire (now Scottish Borders), 1995.

Durham pence: 158.

English pence: 1,246.

Hoard total: 1,472.

Identifications: suitable for analysis.

Latest coins: Edward II class 15b pence.

Deposited: c. 1321-2 (*NC* 156 (1996), p. 293).

BNJ 66 (1996), pp. 33-59.

Ekenhead *see* **Belfast**

131/E Eynesford, Kent, 1993.

Durham pence: 0.

English pence: 4.

Hoard total: 8.

Identifications: suitable for analysis.

Latest coin: Edward III Post-Treaty penny of York.

Deposited: 1369+.

BNJ 63 (1993), p. 172.

Information from Dr B.J. Cook.

Falhills *see* **Penicuik II**

132/E Faringdon, Berkshire (now Oxfordshire), 1816.

Durham pence: ?

English pence: ?

Hoard total: c. 100.

Identifications: one obverse inscription and four reverse inscriptions.

Latest coins: Edwardian pence.

Deposited: 1279+.

GM 86 (1816), p. 367.

Manville 1993a, p. 97 (hoard 157a).

133/E Farndon, Nottinghamshire, 1987.

Durham pence: 3.

English pence: 15.

Hoard total: 23.

Identifications: suitable for analysis.

Latest coins: Edward III Pre-Treaty series G groats and pence.

Deposited: 1360s (*BNJ* 58 (1988), p. 179).

Information from Dr B.J. Cook.

134/S Fauldhouse, Linlithgowshire (now West Lothian), 1913.

Durham pence: 6.

English pence: 34.

Hoard total: 37.

Identifications: reigns and mints; episcopal marks of Durham pence.

Latest coins: Edward II pence of Bishop Kellaw of Durham.

Deposited: 1311-c. 1320 (Metcalf 1977, p. 28); c. 1315 (Dolley and Seaby 1968, p. lii); c. 1315-20 (Dolley 1968, pp. 263, 278); c. 1320 (*PSAS* 47 (1912-13), p. 469).

PSAS 47 (1912-13), pp. 468-9.

PSAS 48 (1913-14), p. 17.

D.(a) 29; D.S. C.37; May. 43; Met.(b) 37; N. 40; T. 158.

135/S Flisk, Fifeshire (now Fife), before 1845.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reign and sizes.

Latest coins: Edward III groats and halfgroats (described as halfcrowns and shillings).

Deposited: 1351-c. 1360? (Metcalf 1977, p. 42).

NSAS, IX, p. 601.

Met.(b) 143.

136/E Fonthill Gifford, Wiltshire, 1861.

Durham pence: 0.

English pence: 4.

Hoard total: 9.

Identifications: suitable for analysis.

Latest coin: Henry VII profile portrait half-groat.

Deposited: c. 1505-10 (*CH* 5 (1979), p. 107).

WAM 70-1 (1975-6), p. 131.

CH 5 (1979), hoard 294.

Salisbury Museum Medieval Catalogue Part I, ed. P. and E. Saunders (Salisbury, 1991), pp. 141, 150.

Cook 1994, p. 72.

137/S Forgandenny, Perthshire (now Perth and Kinross), 1876.

Durham pence: ?

English pence: 1 recorded.

Hoard total: ?

Identifications: parcel of 37 coins; reigns, denominations and mints.

Latest coins: James II of Scotland groats.

Deposited: 1437+? (Metcalf 1977, p. 46); c. 1440 (Thompson 1956, p. 60).

PSAS 11 (1874-6), p. 547.

NC 2nd ser. 16 (1876), p. 76.

Met.(b) 174; T. 163.

138/E Gainsborough, Lincolnshire, 1985.

Durham pence: 0.

English pence: 6

Hoard total: 7.

Identifications: suitable for analysis.

Latest coin: Edward II class 15b penny of Canterbury.

Deposited: c. 1321+.

Information from Dr. B.J. Cook.

139/S Galston, Ayrshire (now East Ayrshire), 1922.

Durham pence: 1 recorded.

English pence: 6 recorded.

Hoard total: c. 240-50?

Identifications: parcel of 228 coins; adequate descriptions.

Latest coin: Edward I class 4 penny.

Deposited: 1296+ (Dolley 1968, p. 249); 1296-c. 1302 (Metcalf 1977, p. 27); c. 1300 (*PSAS* 57 (1922-3), p. 122; *NC* 5th ser. 3 (1923), p. 73).

PSAS 57 (1922-3), pp. 120-2.

NC 5th ser. 3 (1923), pp. 60-74.

D.(a) 111; May. 46; Met.(b) 27; N. 41; T. 168.

140/S Gatehouse of Fleet, Kirkcudbrightshire (now Dumfries and Galloway), 1985.

Durham pence: 7.

English pence: 69.

Hoard total: 76.

Identifications: suitable for analysis.

Latest coins: Edward II class 15a pence of London.

Deposited: 1320+ (*NC* 155 (1995), p. 337); c. 1320-35 (? c. 1332-5) (Holmes 1994, p. 50).

BNJ 54 (1984), p. 304.

Bateson 1989, pp. 173, 182.

Holmes 1994, pp. 49-52.

141/S Giffnock (=Giffnoch), Renfrewshire, 1879.

Durham pence: 42 recorded.

English pence: 444 recorded.

Hoard total: ?

Identifications: parcel of 466 coins; reigns and mints.

Latest coins: Edward I class 9b pence of Kingston upon Hull.

Deposited: 1300+? (Thompson 1956, pp. 170-1); 1320-35? (Metcalf 1977, p. 30); c. 1325 (Dolley 1968, pp. 263-4, 278).

PSAS 16 (1881-2), pp. 144, 464.

D.(a) 30; D.S. C.45; May. 47; Met.(b) 45; N. 42; T. 170.

142/I Gifford, Co. Down, before 1779.

Durham pence: ?

English pence: 2 recorded.

Hoard total: ?

Identifications: parcel of 2 coins; reign (Edward I) and mints.

Latest coins: Edwardian pence.

Deposited: 1280+ (Metcalf 1958, p. 82); c. 1315? (Seaby 1966, p. 454); c. 1320? (Dolley and Seaby 1968, p. L).

D.(a) 79; D.(b) A.37; D.S. B.12; Sea.(b) 6a.

143/S Glasgow, Lanarkshire (now Glasgow), 1787.

Durham pence: recorded.

English pence: recorded.

Hoard total: ?

Identifications: (a) 1831: parcel of 9 coins; reigns and mints.

(b)1845: attribution to Edward I; description of a continental sterling.

Latest coin: Gaucher de Chatillon sterling.

Deposited: 1303+ (Dolley 1968, p. 249); 1303-1360 (Metcalf 1977, p. 39); 14th cent. (Thompson 1956, p. 63).

AS 3 part 2 (1831), appendix 2, p. 65.

Lindsay 1845, p. 262.

Metcalf 1960-1, p. 122.

D.(a) 112; May. 50; Met.(b) 117; T. 171.

144/S Glen Quaich, Perthshire (now Perth and Kinross), before 1845.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: 1280-1360 (Metcalf 1977, p. 35).

NSAS, X, p. 467.

Met.(b) 81.

145/S Glenbrerarchan (=Monlin), Perthshire (now Perth and Kinross), before 1835.

Durham pence: present.

English pence: *c.* 20.

Hoard total: 'nearly two dozen'.

Identifications: partly quantified reigns and reverse inscriptions.

Latest coin(s): Durham, Bishop Kellaw x Edward III Florin coinage?

Deposited: 1280-1360 (Metcalf 1977, p. 34); 1311+?

NSAS, X, pp. 467-8, 650-1.

D.(a) 97; Met.(b) 79.

146/S Glenetive, Argyll (now Argyll and Bute), 1830.

Durham pence: ?

English pence: present.

Hoard total: *c.* 30.

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 34).

NSAS, VII, p. 501.

Met.(b) 80.

147/E Grantham, Lincolnshire, 1994.

Durham pence: 78.

English pence: 362.

Hoard total: 462.

Identifications: suitable for analysis.

Latest coins: Edward III Post-Treaty pence of York.

Deposited: *c.* 1375-80 (*NC* 156 (1996), pp. 294).

TTRCAR 1994-5, hoard 26.

NC 156 (1996), pp. 294-5.

148/S Gretna, Dumfriesshire (now Dumfries and Galloway), before 1791.

Durham pence: ?

English pence: 25.

Hoard total: 29.

Identifications: king's name and unquantified mints.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 35).

SAS(a), IX, p. 528; *SAS(b)*, IV, p. 188.

Davidson 1947-8, p. 106.

Williams 1970, p. 333.

D.(a) 113; Met.(b) 82.

149/I Grey Abbey, Co. Down, *c.* 1812.

Durham pence: ?

English pence: 1 recorded.

Hoard total: *c.* 24 or less?

Identifications: probable parcel of 10 coins; adequate descriptions.

Latest coins: Henry VI Leaf-Pellet issue groats of London.

Deposited: *c.* 1454+ (Seaby 1966, p. 455).

Carruthers 1853, p. 167.

UJA 3rd ser. 21 (1958), pp. 91-3, 96-7.

BNJ 35 (1966), p. 196.

Seaby 1966, pp. 452, 455.

D.(b) B.22; Sea.(a) 12; Sea.(b) 12.

150/E Grittleton, Wiltshire, in or before 1903.

Durham pence: 3.

English pence: 46.

Hoard total: 51.

Identifications: suitable for analysis.

Latest coin: Edward II/III class 15c penny of Bury St. Edmunds.

Deposited: *c.* 1325 (Dolley 1968, p. 250); *c.* 1327 (*BNJ* 39 (1970), pp. 81, 83).

WAM 41 (1920-1), p. 98.

BNJ 39 (1970), pp. 80-3.

D.(a) 133; May. 49; N. 43; T. 178.

151/E Guisborough, Yorkshire (now Redcar and Cleveland), *c.* 1848.

Durham pence: 52 recorded.

English pence: 170 recorded.

Hoard total: ?

Identifications: reigns, inscriptions and marks of 227 coins.

Latest coins: Henry VI second reign pence of York.

Deposited: *c.* 1470 (*NC* 3rd ser. 16 (1896), p. 78); 1471+? (Thompson 1956, p. 66).

NC 3rd ser. 16 (1896), pp. 72-84.

T. 179.

152/I Hallyclare, Co. Antrim, 1827.

Durham pence: present.

English pence: present.

Hoard total: 1,000+.

Identifications: unquantified reigns and mints.

Latest coin(s): Edward I class 9b, Exeter.

Deposited: 1300+.

GM 97 (1827), pp. 69-70.

Manville 1993a, p. 98 (hoard 179a).

153/E Hampshire, 1905.

Durham pence: 0 recorded.

English pence: 1 recorded.

Hoard total: *c.* 260?

Identifications: parcel of 131 coins; Hawkins classification of an Edward I penny; other descriptions adequate.

Latest coins: Henry VI Pinecone-Masclie issue groats.

Deposited: *c.* 1435 (*NC* 4th ser. 8 (1908), p. 312).

NC 4th ser. 8 (1908), pp. 311-18.

BNJ 32 (1963), p. 128.

BNJ 48 (1978), pp. 83-4.

May. 52.

154/E Hartlepool, Co. Durham (now Hartlepool), in or before 1841.

Durham pence: present.

English pence: present.

Hoard total: ?

Identifications: unquantified attribution to reigns and Bishop Bek.

Latest coins: Durham pence of Bishop Bek.

Deposited: 1283+ (Metcalf 1960-1, p. 94).

PSAN 3rd ser. 4 (1909-10), p. 211.

D.(a) 124; Met.(a) 18.

155/S Hatton Mill, Forfarshire (now Angus), 1806.

Durham pence: ?

English pence: present.

Hoard total: c. 700.

Identifications: inscriptions of 5 coins.

Latest coin: Edward I class 10ab penny of London.

Deposited: 1300+.

SM 68 (1806), pp. 84-5.

Manville 1993a, p. 98 (hoard 185a).

156/E Hesleyside (=Shaw Moss), Northumberland, 1854.

Durham pence: 28 recorded 1855; 2 recorded 1865.

English pence: 294 recorded 1855; 228 recorded 1865.

Hoard total: 340.

Identifications: (a) 1855: reigns and mints.

(b) 1865: parcel of 263 coins; reigns, mints and inscriptions.

Latest coin(s): Edward I/II class 10 x Edward III Florin coinage.

Deposited: 1300-20? (Thompson 1956, p. 68); 1305-10 (Dolley 1968, pp. 264, 278); c. 1310 (Dolley and Seaby 1968, p. lii); c. 1310? (Mayhew 1983, p. 165);

1329-44 (*AA* new ser. 6 (1865), p. 238).

AA 4 (1855), pp. 104-5.

AA new ser. 6 (1865), pp. 238-43.

D.(a) 31; D.S. C.28; May. 55; Met.(a) 47; N. 44; T. 186.

157/E Highbury, London, 1868.

Durham pence: ?

English pence: present.

Hoard total: c. 7,000.

Identifications: unquantified reigns and denominations.

Latest coins: pence and halfpence attributed to Henry V.

Deposited: 1413-22 (Thompson 1956, p. 88)

NC 2nd ser. 8 (1868), p. 4.

NC 2nd ser. 11 (1871), p. 97.

T. 245.

158/E Hill Deverill, Wiltshire, 1993.

Durham pence: 2.

English pence: 5.

Hoard total: 61.

Identifications: suitable for analysis.

Latest coins: Richard II quarter-noble, groats and half-groats.

Deposited: c. 1400 (*NC* 156 (1996), p. 295).

BNJ 63 (1993), p. 172.

TTRCAR 1994-5, hoard 27.

159/E Holme Cultram, Cumberland (now Cumbria), in or before 1895.

Durham pence: 6 recorded.

English pence: 70 recorded.

Hoard total: 81.

Identifications: adequate descriptions of 76 coins; 3 of the 5 remaining coins identified from documentary evidence; suitable for analysis.

Latest coin: Edward II class 11b penny of Canterbury.

Deposited: c. 1313-16 (*SNC* 83 (1976), 332).

SNC 83 (1975), pp. 332-3.

CH 2 (1976), hoard 454.

May. 56; N. 45.

160/E Holwell, Leicestershire, 1864.

Durham pence: 3 recorded.

English pence: 254 recorded.

Hoard total: c. 900.

Identifications: (a) 1867: parcel of 754 coins; reigns, denominations and mints.

(b) 1979: parcel of 27 coins; adequate descriptions.

Latest coins: Henry VI Leaf-Pellet issue.

Deposited: c. 1450 (*CH* 5 (1979), p. 112); c. 1455 (*BNJ* 48 (1978), p. 83).

TLAS 8 (1865-6), pp. 205-11.

NC 2nd ser. 7 (1867), pp. 8-19, 38, 40.

CH 5 (1979), hoard 290.

T. 192.

161/S Horsleyhill, Roxburghshire (now Scottish Borders), 1991.

Durham pence: 2.

English pence: 51.

Hoard total: 56.

Identifications: 5 of the 56 coins (2 of Durham) possibly unrelated losses; adequate descriptions; suitable for analysis.

Latest coins: Edward I class 7b penny of London; Edward I/II class 10 pence (the 5 questionable coins).

Deposited: 1292+ (*NC* 155 (1995), p. 336); c. 1292- c. 1310

(Holmes 1994, p. 67).

Holmes 1994, p. 66-9.

162/E Houghton (-cum-Wyton), Cambridgeshire, 1876.

Durham pence: 4 recorded.

English pence: 42 recorded.

Hoard total: 313.

Identifications: 216 coins identifiable; denominations only of Edward IV coins; descriptions otherwise adequate; suitable for analysis.

Latest coin: Elizabeth I threepence, 1579.

Deposited: 1580 (*BNJ* 28 (1955-7), p. 593).

NC 2nd ser. 17 (1877), pp. 163-4.

Cook 1994, p. 80.

B. 15; B.D. EN10; W. 136.

163/E Huntington, Cheshire, 1986.

Durham pence: 2.

English pence: 17.

Hoard total: 42.

Identifications: suitable for analysis.

Latest coin: Henry VI Rosette-Masclé issue groat of Calais.

Deposited: c. 1435 (*SNC* 94 (1986), p. 263; *BNJ* 56 (1986), p. 209).

Information from Mr D. Robinson, Grosvenor Museum, Chester, and Dr B.J. Cook.

W. 67.

164/E Hurstbourne Tarrant, Hampshire, 1985.

Durham pence: 2.

English pence: 8.

Hoard total: 11.

Identifications: suitable for analysis.

Latest coin: Henry VI Leaf-Trefoil B issue groat of London; James II of Scotland first coinage groat (fragment).

Deposited: c. 1438+.

Information from Dr B.J. Cook.

165/E Ickfield (=Wingham), Kent, 1990 and 1991.

Durham pence: 6.

English pence: 434.

Hoard total: 502.

Identifications: suitable for analysis.

Latest coins: Edward I class 7a pence.

Deposited: mid-1290s (*BNJ* 60 (1990), p. 178).

Information from Dr B.J. Cook.

166/E Ilkley Moor, Yorkshire (now Bradford), 1967 (and 1960-1?).

Durham pence: 1 recorded.

English pence: 41 recorded.

Hoard total: 43 (+6?).

Identifications: 1967-70: reigns, unquantified for English pence; adequate description of an English penny; reference to 6 similar coins found in the same location in 1960-1 (attributed to Edward I in 1964).

Latest coin: Edward class 11b penny of Durham.

Deposited: c. 1311 (Mayhew 1983, p. 165).

TYNF 2nd ser. 2 (1) (1964), p. 41.

YAJ 42 (1967-70), p. 113.

Manville 1995, p. 172 (hoard 195b).

May. 59.

167/S Inchaffrey Abbey, Perthshire (now Perth and Kinross), 1989.

Durham pence: ?

English pence: 3?

Hoard total: 3.

Identifications: series and denomination.

Latest coins: Edwardian pence.

Deposited: 1279+.

BNJ 59 (1989), p. 255.

168/S Innerwick, East Lothian, 1979.

Durham pence: 1.

English pence: 1.

Hoard total: 259.

Identifications: suitable for analysis.

Latest coins: James III of Scotland group IV groats and pence.

Deposited: 1484+ (*BNJ* 52 (1982), p. 134).

SCMB 733 (Sept. 1979), p. 292.

BNJ 49 (1979), p. 145.

BNJ 52 (1982), pp. 132-50.

Bateson 1989, pp. 174, 182.

169/I Inniscarra (=Matchy), Co. Cork, in or before 1902.

Durham pence: 2.

English pence: 15.

Hoard total: 15.

Identifications: reign, denomination, mints and reverse inscriptions.

Latest coins: Edward II pence of Bishop Kellaw of Durham.

Deposited: 1311+.

JCHAS 2nd ser. 8 (1902), p. 123.

170/S Inverarity, Angus, before 1797.

Durham pence: ?

English pence: present.

Hoard total: *c.* 700? (improbably said to have exactly the same numbers of English and Scottish coins as **212/S Longforgan**).

Identifications: quantified reigns.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: 1280-1360 (Metcalf 1977, p. 35).

SAS(a), XIX, p. 560; *SAS(b)*, XI, p. 413.

Met.(b) 84.

171/S Inverness, Invernessshire (now Highland), in or before 1824.

Durham pence: ?

English pence: ?

Hoard total: 3,000+.

Identifications: unquantified reigns and mints.

Latest coin(s): David II of Scotland.

Deposited: *c.* 1350-1370 (Metcalf 1977, p. 42).

GM 94 (1824), p. 453.

Manville 1993a, p. 99 (hoard 197a).

Met.(b) 138.

172/E Ipswich, Suffolk, in or before 1965.

Durham pence: 4.

English pence: 5.

Hoard total: 35.

Identifications: hoard or parcel; adequate descriptions.

Latest coin: Henry VI Cross-Pellet issue penny of Durham.

Deposited: 1457+.

BNJ 35 (1966), pp. 195-8.

SCMB May 1968, p. 164.

PSIANH 31 (1967-9), p. 79.

173/I Island Magee, Co. Antrim, 1853.

Durham pence: ?

English pence: 2 recorded.

Hoard total: ?

Identifications: 3 coins, possibly a parcel; reigns, denominations and mints.

Deposited: *c.* 1280-1307 (Thompson 1956, p. 74); *c.* 1315 (Dolley and Seaby 1968, p. xlix); *c.* 1317? (Dolley 1968, p. 265).

Carruthers 1854-5, p. 63.

D.(a) 32; D.(b) A.31; D.S. A.24; Sea.(a) 5; T. 200.

174/S Keir (=Keir Mill), Dumfriesshire (now Dumfries and Galloway), 1865.

Durham pence: 23.

English pence: 139.

Hoard total: 141.

Identifications: mints and unquantified reigns.

Latest coin: Edwardian pence of Berwick.

Deposited: 1296-1360 (Metcalf 1977, p. 38); *c.* 1300 (Thompson 1956, p. 75).

PSAS 6 (1864-6), p. 457.

NC 2nd ser. 6 (1866), p. 253.

Lindsay 1868, p. 39.

Davidson 1947-8, p. 107.

Williams 1970, p. 333.

D.(a) 114; Met.(b) 114; N. 46; T. 204.

175/I Kells, Co. Meath, late 1950s.
Durham pence: ?
English pence: 6 recorded.
Hoard total: ?
Identifications: hoard or parcel of 7 coins; adequate descriptions.
Latest coin: Edward II class 14 penny of Canterbury.
Deposited: c. 1325-50 (*RNM* 8 no. 1 (1987), p. 110).
RNM 8 no. 1 (1987), pp. 110-12.

Kelso *see* **Mellendean**

Kennoway *see* **Montrave**

'**Kent**' *see* **East Langdon**

Kilfenora *see* **Ballykinvarga**

176/M Kilkenny, Isle of Man, 1982.
Durham pence: ?
English pence: ?
Hoard total: 587.
Identifications: adequate descriptions of 171 coins; denomination (sterlings) for the hoard.
Latest coins: Edward II class 11 pence.
Deposited: 1310+ (*BNJ* 54 (1984), p. 304).
Information from Ms K. Bornholdt.

177/I Killedan (=Killeaden), Co. Mayo, 1881.
Durham pence: ?
English pence: 1 recorded.
Hoard total: ?
Identifications: unquantified reigns; London penny attributed to Edward II.
Latest coins: Edward I/II class 10 x Edward III Florin coinage pence?
Deposited: c. 1320? (Dolley and Seaby 1968, p. L).
BNJ 8 (1911), pp. 362-3.
Dolley 1970, pp. 4, 7.
D.(a) 81; D.(b) A.38; D.S. B.13; T. 210.

178/I Kilmallock, Co. Limerick, c. 1830.
Durham pence: present.
English pence: present.
Hoard total: ?
Identifications: 5 Irish coins illustrated; unquantified attribution of Durham, London, and York pence to Edward IV.
Latest coin: Richard III penny of Waterford.
Deposited: 1483+? (Thompson 1956, p. 78); 1487+? (Dolley 1969, p. 31)
Lindsay 1839, pp. 135-6.
Dolley 1969, pp. 27, 31.
D.(b) C.6; T. 214.

Kinclaven Castle *see* **Perth I**

179/E King's Lynn, Norfolk, 1972.

Durham pence: 2.

English pence: 29.

Hoard total: 41.

Identifications: suitable for analysis.

Latest coins: Edward I class 5 pence.

Deposited: c. 1290 (*CH* 1 (1975), p. 93); c. 1296-7? (Mayhew 1983, p. 166).

CH 1 (1975), hoard 363.

May. 65; N. 47.

Kinghorn *see* **Abden**

180/S Kinghornie I, Kincardineshire (now Highland), 1893.

Durham pence: 62 recorded.

English pence: 410 recorded.

Hoard total: 1,000+.

Identifications: parcel of 437 coins; mints and unquantified reigns; unquantified reigns of Scottish coins not in the parcel.

Latest coin: Edward I class 9b penny of Kingston upon Hull.

Deposited: c. 1300 (Thompson 1956, p. 79); c. 1320-1336? (Metcalf 1977, p. 30);

c. 1325? (Dolley 1968, p. 248).

NM 8 (1893), p. 99.

SNC 2 (1893-4), col. 485.

PSAS 28 (1893-4), p. 277.

Manville 1995, p. 172.

D.(a) 103; May. 64; Met.(b) 46; N. 49; T. 218.

181/S Kinghornie II, Kincardineshire (now Highland), 1902.

Durham pence: 54.

English pence: 462.

Hoard total: 494.

Identifications: reigns, denominations and mints; Burns types of Scottish coins.

Latest coins: Edward I class 9b pence of Exeter and Kingston upon Hull.

Deposited: 1300+.

PSAS 36 (1901-2), pp. 633, 668-70.

D.(a) 104; Met.(a) 24; Met.(b) 110.

182/S Kinneff, Kincardineshire (now Highland), c.1788.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns and sizes.

Latest coins: Edwardian and Alexander III of Scotland; pence and halfpence.

Deposited: 1280-1360 or 1336? (Metcalf 1977, p. 35); c. 1336 (*SAS(a)*, VI, p. 209; *SAS(b)*, XIV, p. 160).

D.(a) 105; Met.(b) 86 .

183/S Kinnell, Angus, 1790 and 1805.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified inscriptions and denominations; one Scottish coin described

Latest coin: King John Balliol of Scotland halfpenny.

Deposited: 1292?-1360 (Metcalf 1977, p. 35).

SAS(a), II, p. 494; *SAS(b)*, XIII, p. 323.

NSAS, XI, p. 398.

D.(a) 94, 95; Met.(b) 87, 109.

184/S Kinross, Kinrossshire (now Perth and Kinross), 1820.

Durham pence: present.

English pence: present.

Hoard total: 300-400.

Identifications: unquantified reigns and mints.

Latest coins: King John Balliol of Scotland pence; pence attributed to Edward II.

Deposited: 1292-1360 (Metcalf 1977, p. 38); c. 1315 (Dolley and Seaby 1968, p. lii);

c. 1315? (Dolley 1968, pp. 265, 278).

NSAS, IX, p. 11.

D.(a) 34; D.S. C.34; Met.(b) 111.

185/S Kirkcowan (=255/S Penningham(e) Forest, and 321/S Wigtownshire ?), Wigtownshire (now Dumfries and Galloway), in or before 1836.

Durham pence: ?

English pence: 4 recorded.

Hoard total: ?

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 35).

AS 5 (1890), appendix, pp. 33, 36.

Davidson 1947-8, p. 112.

D.(a) 115; Met.(a) 27; Met.(b) 88.

186/S Kirkcudbright I (Lochfergus), Kirkcudbrightshire (now Dumfries and Galloway), before 1845.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 36).

NSAS, IV, p. 24.

Williams 1970, p. 443.

Met.(b) 89.

187/S Kirkcudbright II, Kirkcudbrightshire (now Dumfries and Galloway), in or before 1850.

Durham pence: 0.

English pence: 5.

Hoard total: 98.

Identifications: reigns and mints.

Latest coins: continental sterlings of Brabant, Douai, Herstal, Mons, and *Signum Crucis* type.

Deposited: c. 1296-c. 1302 (Metcalf 1977, p. 27); c. 1300 (Thompson 1956, p. 80).

NC 1st ser. 13 (1850-1), pp. 86-94.

PRIA 2nd ser. 1, Literature (1870-9), pp. 70-1.

PSAS 57 (1922-3), p. 120.

Davidson 1947-8, p. 108.

Williams 1970, p. 443.

D.(a) 35; D.S. C.24; May. 67; Met.(b) 26; N. 50; T. 221.

188/S Kirkmichael (Dumfriesshire), (now Dumfries and Galloway), 1821.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: 1280-1360 (Metcalf 1977, p. 36).

NSAS, IV, p. 71.

Davidson 1947-8, p. 105.

Williams 1970, p. 388.

Met.(b) 90.

189/S Kirkmichael (Perthshire), (now Perth and Kinross), 1867.

Durham pence: 0.

English pence: 4.

Hoard total: 5.

Identifications: reigns and mints.

Latest coin: Gaucher de Chatillon sterling.

Deposited: 1303+ (Dolley 1968, p. 248); 1303-c. 1330 (Metcalf 1977, p. 28); c. 1320 (Thompson 1956, p. 81).

PSAS 7 (1866-8), pp. 197-8.

D.(a) 96; May. 68; Met.(b) 33; T. 223.

Kirtling *see* Saffron Walden

190/E Knaresborough Priory, Yorkshire (now North Yorkshire), 1805.

Durham pence: 91 recorded.

English pence: 1,000 recorded.

Hoard total: c. 1,600.

Identifications: parcel of 1,037 coins; adequate descriptions.

Latest coin: Edward II/III class 15c pence (including Bury St. Edmunds, wedge stops).

Deposited: c. 1327-9 (*BNJ* 32 (1963), pp. 119, 126); c. 1328 (Mayhew 1983, p. 167).

GM 75 (1805), p. 574.

BNJ 32 (1963), pp. 117-26.

Manville 1993a, p. 100 (hoard 225a).

D.(a) 126; May. 69; N. 51.

Knockagh *see* Monkstown

Knocknasna *see* Athea

191/I Lacken, Co. Kilkenny, 1868.

Durham pence: ?

English pence: present.

Hoard total: c. 50.

Identifications: reign (Edward III) of 3 coins; sizes.

Latest coins: groats.

Deposited: later 14th century (*CH* 2 (1976), p. 118); 1351+.

RSAL 10 (1868-9), pp. 216-17.

SNC 83 (1975), p. 425.

CH 2 (1976), hoard 459.

192/E Lake, Wiltshire, 1767.

Durham pence: ?

English pence: present.

Hoard total: 67.

Identifications: unquantified reigns, denominations and three mints (London, York, and Calais).

Latest coins: attributed to Henry V (Henry IV, Henry V, or Henry VI?).

Deposited: 1415+ (Thompson 1956, p. 82); 1422+?

CH 3 (1977), hoard 335.

T. 228.

193/E Lancaster, Lancashire, c. 1800.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1279+.

Contrebis 12 (1985-6), p. 73.

194/S Langhope, Selkirkshire (now Scottish Borders), 1880.

Durham pence: ?

English pence: present.

Hoard total: 4,000+.

Identifications: unquantified reigns.

Latest coin(s): Robert I of Scotland.

Deposited: 1318-60 (Metcalf 1977, p. 40); 14th century (Thompson 1956, p. 82).

PSAS 16 (1881-2), p. 144.

PSAS 58 (1923-4), p. 168.

D.(a) 106; May. 70; Met.(b) 127; T. 229.

195/I Larne, Co. Antrim, 1845.

Durham pence: ?

English pence: c. 200.

Hoard total: c. 200 + 1 groat.

Identifications: unquantified reigns of pence; reign and mint of a groat.

Latest coin: Edward III groat of Calais.

Deposited: 1363+.

Carruthers 1853, p. 165.

D.(b) B.8; Sea.(a) 4.

196/S Leadburn, Midlothian, 1989.

Durham pence: 2.

English pence: 16.

Hoard total: 17.

Identifications: suitable for analysis.

Latest coin: Edward II class 13 penny of Canterbury.

Deposited: c. 1315+ (Holmes 1994, p. 65).

Holmes 1994, pp. 65-6.

NC 155 (1995), p. 336.

197/S Leith, Midlothian (now Edinburgh), 1980.

Durham pence: 1.

English pence: 2.

Hoard total: 358.

Identifications: suitable for analysis.

Latest coins: Edward IV halfpenny of London, Blunt and Whitton type Xa; James III of Scotland class A pence.

Deposited: c. 1470-5 (*BNJ* 53 (1983), pp. 78, 80).

BNJ 50 (1980), p. 156.

BNJ 53 (1983), pp. 78-107.

PSAS 115 (1985), pp. 419-20.

Bateson 1989, pp. 175-6, 182.

198/S Lesmahagow, Lanarkshire (now South Lanarkshire), c. 1825.

Durham pence: ?

English pence: present.

Hoard total: c. 100.

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 36).

NSAS, VI, p. 33.

D.(a) 116; Met.(b) 91.

199/E Lincolnshire, 1800.

Durham pence: 39.

English pence: 1,040.

Hoard total: 1,142.

Identifications: mints, inscriptions, and relative sizes of letters; episcopal marks of Durham pence.

Latest coins: Edward I class 10ab6 x Edward III Florin coinage.

Deposited: c. 1308 (Mayhew 1983, p. 168).

CH 4 (1978), hoard 360.

May. 72.

Lisdoonvarna *see* **Ballykinvarga**

200/E Little Wymondley, Hertfordshire, 1973.

Durham pence: 16.

English pence: 96.

Hoard total: 652.

Identifications: adequate descriptions, but 52 Henry VIII second coinage pence all attributed to London, possibly in error.

Latest coins: Edward VI first period pence.

Deposited: 1547 (*CH* 1 (1975), p. 98); c. 1547 (*BNJ* 60(1990), p. 85).

SCMB 661 (Sept. 1973), p. 331.

BNJ 43 (1973), p. 170.

CH 1 (1975), hoard 383.

Sym. 10.

201/W Llandeilo'r Fan, Breckonshire (now Powys), c. 1800.

Durham pence: ?

English pence: present.

Hoard total: 20.

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1279+.

Boon 1986, p. 114.

202/W Llanfared, Breckonshire (now Powys), in or shortly before 1771.

Durham pence: ?

English pence: present.

Hoard total: >200.

Identifications: inscriptions of two coins.

Latest coin: Edward I class 9b penny of Newcastle.

Deposited: 1300+.

TRS 1948, 16.

Boon 1986, p. 113.

203/W Llysdinam, Powys, 1996.

Durham pence: 8.

English pence: 94.

Hoard total: 105.

Identifications: suitable for analysis.

Latest coins: Edward III Florin coinage pence and halfpence.

Deposited: c. 1350 (*BNJ* 67 (1997), p. 104).

BNJ 67 (1997), pp. 104-5.

204/W Llysaen, Denbighshire, 1825.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coin(s): attributed to Edward III.

Deposited: 1351+?

Boon 1986, p. 114.

205/S Loch Doon, Kirkcudbrightshire (now Dumfries and Galloway), 1966.

Durham pence: 178.

English pence: 1,724.

Hoard total: 1,887.

Identifications: suitable for analysis.

Latest coin: Edward III class 15d penny of York.

Deposited: 1331-5 (Mayhew 1983, p. 168); 1331-c. 1335 (Metcalf 1977, p. 31);

c. 1332-5 (*BNJ* 38 (1969), pp. 32-4, 40).

SCMB 575 (June 1966), p. 205.

BNJ 38 (1969), pp. 31-49.

SCMB 627 (Nov. 1970), p. 417.

D.(a) 36; D.S. C.58; May. 73; Met.(b) 56; N. 52.

206/S Lochar Moss, Dumfriesshire (now Dumfries and Galloway), 1765.

Durham pence: ?

English pence: 1 recorded.

Hoard total: ?

Identifications: parcel of 4 coins; reigns and denominations; mint of a Scottish groat; description of a Scottish gold coin.

Latest coin: James I of Scotland, second fleur-de-lys issue groat of Stirling

Deposited: c. 1430+ (Metcalf 1960-1, p. 96).

W. Smellie, *Account of the Institution and Progress of the Society of Antiquaries of Scotland Part II* (Edinburgh, 1784), p. 53.

Lindsay 1845, p. 260.

Davidson 1947-8, p. 105.

Williams 1970, p. 332.

Met.(a) 30; Met.(b) 168.

207/S Lochmaben I (Whitehills Moss), Dumfriesshire (now Dumfries and Galloway), before 1823.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coins: groats (*recte* pence) attributed to Edward I and Alexander I (*recte* III) of Scotland.

Deposited: 1280-1360 (Metcalf 1977, p. 36).

AS 3 part 2 (1831), p. 78n.

Davidson 1947-8, p. 106.

Williams 1970, p. 388.

D.(a) 117; Met.(b) 92.

208/S Lochmaben II (Eastcroft Park), Dumfriesshire (now Dumfries and Galloway), 1904.

Durham pence: 40.

English pence: 415.

Hoard total: 476?

Identifications: (a) 1904-5: parcel of 448 coins; reigns; mints and obverse inscriptions of English pence.

(b) 1905: same parcel as above; reigns, mints, inscriptions and George Macdonald classification.

(c) 1990: incomplete conversion to the Fox classification.

Latest coin: Edward III class 15d penny of Canterbury.

Deposited: *c.* 1330 (*NC* 150 (1990), pp. 182, 199); 1329-35 (Mayhew 1983, p. 168); 1329-*c.* 1335 (Metcalf 1977, p. 31).

PSAS 39 (1904-5), pp. 403-5.

NC 4th ser. 5 (1905), pp. 63-82.

Davidson 1947-8, p. 106.

Williams 1970, p. 388.

NC 150 (1990), pp. 179-85, 199.

D.(a) 37; D.S. C.46; May. 74; Met.(b) 54; N. 53; T. 239.

209/S Lockerbie, Dumfries and Galloway, 1977.

Durham pence: ?

English pence: present.

Hoard total: 13.

Identifications: 2 coins; reign and mint.

Latest coins: Edward I pence of Canterbury.

Deposited: 1279+.

Discovery and Excavation in Scotland 1979, p. 4.

Bateson 1989, pp. 176, 182.

Information from Mr D. Lockwood, Dumfries Museums, and Mr N.M.McQ. Holmes.

210/E London I (Camberwell), no later than 1768.

Durham pence: ?

English pence: 2 recorded.

Hoard total: ?

Identifications: reigns and denominations of 3 coins.

Latest coin: groat attributed to Edward III.

Deposited: 1351+ (Metcalf 1958, p. 84).

211/E London II (Friday Street), 1845.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coins: Edwardian pence.

Deposited: 1279+.

NC 1st ser. 7 (1844-5), p. 192.

C. Roach Smith, *Catalogue of the Museum of London Antiquities* (London, 1854), p. 114.

AJ 59 (1902), p. 7.

Thompson 1956, key to pl. iii.

Wilson 1958, p. 170

Thompson 1959, p. 280.

212/S Longforgan, Perthshire (now Perth and Kinross), before 1797.

Durham pence: ?

English pence: c. 700.

Hoard total: c. 700 + 4.

Identifications: king's name and one reverse inscription of English coins; inscriptions of 4 Scottish coins.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: 1280-1360 (Metcalf 1977, p. 36).

SAS(a), XIX, pp. 559-60; *SAS(b)*, XI, pp. 412-13.

Met.(b) 93.

213/S Maidens, Ayrshire (now South Ayrshire), 1978-9.

Durham pence: 0.

English pence: 42.

Hoard total: 49.

Identifications: suitable for analysis.

Latest coin: Edward II class 15b penny of Canterbury.

Deposited: early 1320s? (Mayhew 1983, p. 169).

SCMB 733 (Sept. 1979), p. 292.

Bateson 1989, pp. 176, 182.

BNJ 49 (1989), p. 145.

Information from Mr N.M.McQ. Holmes.

May. 78.

214/E Maidstone, Kent, 1952.

Durham pence: 68.

English pence: 234.

Hoard total: 503.

Identifications: suitable for analysis.

Latest coins: Henry VIII second coinage groats of London, initial mark arrow.

Deposited: c. 1538 (*BNJ* 27 (1952-4), pp. 58, 65).

SNC 60 (1952), p. 258.

BNJ 27 (1952-4), pp. 58-65.

SCMB 433 (June 1954), pp. 234-5, 238-9.

W. 107.

Matehy see Inniscarra

215/E Mayfield, Sussex (now East Sussex), 1968.

Durham pence: 0.

English pence: 348.

Hoard total: 355.

Identifications: suitable for analysis.

Latest coins (all of the 348 English pence): Edward III class 10cf3, London.

Deposited: c. 1307 (M.M. Archibald, 'The Mayfield (Sussex) 1968 hoard of English pence and French Gros, c. 1307', in R.A.G. Carson (ed.), *Mints, Dies and Currency: Essays Dedicated to the memory of Albert Baldwin* (London, 1971), pp. 151-9, at p. 156).

SCMB 601 (Sept. 1968), p. 319.

BNJ 37 (1968), p. 241.

N. 54.

216/S Mellendean (=Kelso), Roxburghshire (now Scottish Borders), 1911.

Durham pence: 35.

English pence: 698.

Hoard total: 890.

Identifications: (a) 1911-12: parcel of 532 coins; reigns and mints.

(b) 1913: 890 coins; reigns, mints and George Macdonald classification.

(c) 1990: incomplete conversion to the Fox classification.

Latest coin: Edward I class 8 penny of London.

Deposited: c. 1295 (Dolley 1968, pp. 266-7, 278); c. 1295-c. 1302 (Metcalf 1977, p. 27); c. 1296 (Thompson 1956, p. 102).

PSAS 46 (1911-12), pp. 90, 200-1, 374.

PSAN 3rd ser. 5 (1911-12), pp. 139.

RBN 69 (1912), pp. 255-6.

NC 4th ser. 13 (1913), pp. 57-118.

PSAS 48 (1913-14), p. 17.

PSAN 4th ser. 2 (1925-6), p. 138.

PSAS 86 (1951-2), pp. 211-12.

NC 150 (1990), pp. 179-80, 185-204.

D.(a) 38; D.S. C.20; May. 79; Met.(b) 25; N. 55; T. 266.

217/E Mendelsham Green, Suffolk, 1992.

Durham pence: 0.

English pence: 1.

Hoard total: 28.

Identifications: suitable for analysis.

Latest coin: Henry VII groat of London, initial mark greyhound's head.

Deposited: c. 1504 (Cook 1994, p. 70).

BNJ 63 (1993), p. 172.

Cook 1994, pp. 70-5.

218/E Meols, Cheshire (now Wirral), in or before 1863.

Durham pence: ?

English pence: 4.

Hoard total: 5.

Identifications: reigns and denominations; mints of 3 coins.

Latest coins: York pence attributed to Henry IV.

Deposited: 1399+ (Metcalf 1960-1, p. 97).

Met.(a) 33.

219/E Middridge, Co. Durham, 1974.

Durham pence: 164.

English pence: 2,612.

Hoard total: 3,072.

Identifications: suitable for analysis.

Latest coins: Edward II class 11a pence.

Deposited: c. 1310 (Mayhew 1983, p. 169); 1310+ (*CH* 2 (1976), 115); 1310-15 (*CH* 1 (1975), p. 94).

SCMB 665 (Jan. 1974), p.9.

BNJ 44 (1974), p. 98.

CH 1 (1975), hoard 365.

CH 2 (1976), hoard 453.

CH 3 (1977), hoard 329.

May. 80; N. 56.

220/S Minto, Roxburghshire (now Scottish Borders), 1831.

Durham pence: ?

English pence: present.

Hoard total: c. 400.

Identifications: unquantified reigns.

Latest coin(s): Robert I of Scotland.

Deposited: 1318-60 (Metcalf 1977, p. 41).

NSAS, III, p. 371.

D.(a) 107; Met.(b) 128.

221/S Mochrum, Wigtownshire (now Dumfries and Galloway), before 1950.

Durham pence: ?

English pence: 7.

Hoard total: 8 + 2 fragments.

Identifications: reigns and mints.

Latest coin: John the Blind sterling of Luxemburg.

Deposited: 1309?-1360 (Metcalf 1977, p. 36).

TDGNHAS 3rd ser. 28 (1949-50), p. 55.

Williams 1970, p. 492.

Met.(b) 94.

222/S Monifieth, Angus, 1854.

Durham pence: present.

English pence: present.

Hoard total: c. 700.

Identifications: parcel of c. 200 coins; unquantified reigns and mints.

Latest coin(s): Edward I class 9b, Kingston upon Hull.

Deposited: 1300+ (Mayhew 1983, p. 169); 1300-1360 (Metcalf 1977, p. 38); c. 1320 (Thompson 1956, p. 104); c. 1325 (Dolley 1968, pp. 267, 278).

PSAS 2 (1854-7), pp. 63, 68-9.

Lindsay 1859, p. 52.

D.(a) 39; D.S. C.47; May. 81; Met.(b) 115; N. 57; T. 271.

223/I Monkstown (= 'Carrickfergus', and Knockagh), Co. Antrim, 1903.

Durham pence: 3 recorded, 1955.

English pence: 38 recorded, 1955.

Hoard total: 153.

Identifications: (a) 1903 and 1904-5: reigns, denominations and mints.

(b) 1955: parcel of 124 coins; adequate descriptions.

Latest coin: Robert III of Scotland first issue groat.

Deposited: 1390+ (Seaby and Stewart 1964, pp. 101-2); c. 1391 (Dolley 1968, p. 267); no later than 1395 (Seaby 1955, p. 162); c. 1400 (Dolley and Seaby 1968, p. xlix).

RSAL 33 (1903), pp. 423-4.

SNC 13 (1904-5), col. 8147.

SCMB 433 (June 1954), pp. 231-2.

Seaby 1955, pp. 162, 168-70.

Seaby 1966, p. 452.

Dolley 1970, pp. 4, 8.

D.(a) 40; D.(b) B.16; D.S. A.31; May. 127; Sea.(a) 8; S.S. x.; T. 73.

Monlin *see* Glenbrerarchan

224/S Montrave (=Montraive, and Kennoway), Fifeshire (now Fife), 1877.

Durham pence: 668 recorded, 1887 and 1962.

English pence: 8,229 recorded, 1887 and 1962.

Hoard total: 9,618.

Identifications: (a) 1881-2: reigns, denominations and mints; obverse inscriptions of Edwardian pence.

(b) 1887: 8,229 Edwardian pence; reigns, mints and Burns classification.

(c) 1962: incomplete conversion to Fox classification.

(d) 1976: imitative sterlings from the hoard (in the National Museum of Antiquities, Edinburgh) adequately described.

Latest coins: Edward III Treaty period; David II of Scotland second coinage.

Deposited: c. 1360 (*CH* 3 (1977), p. 130); c. 1360-5 (Dolley 1968, pp. 267-8, 279, 281); 1363+? (Seaby and Stewart 1964, p. 102); 1363+ (Metcalf 1977, p. 43); c. 1365 (Dolley and Seaby 1968, p. liv).

PSAS 16 (1881-2), pp. 144, 466-71.

Burns 1887, I, pp. 187-219, 222, 232, 242-7, 252-4, pl. A.

BNJ 31 (1962), pp. 80-7.

NC 7th ser. 16 (1976), pp. 85-97.

CH 3 (1977), hoard 331.

PSAS 120 (1990), p. 163.

D.(a) 41; D.S. C.71; May. 82; Met.(b) 147; N. 58; S.S. xii; T. 272.

225/S Montrose I (High Street), Angus, 1859.

Durham pence: ?

English pence: present.

Hoard total: 19.

Identifications: series.

Latest coins: Edwardian.

Deposited: c. 1296? (Metcalf 1977, p. 27).

MS note in National Museum of Antiquities, Edinburgh (cited by Metcalf 1977 but not found).

Information from Mr N.M.McQ. Holmes.

Met.(b) 24.

226/S Montrose II (Castle Street), Angus, 1973.

Durham pence: 11.

English pence: 69.

Hoard total: 77.

Identifications: suitable for analysis.

Latest coins: Edward II class 15b pence.

Deposited: 1322+ (*CH* 1 (1975), p. 95); c. 1322-40 (*BNJ* 46 (1976), pp. 39-41);
c. 1322-40? (Mayhew 1983, p. 170); 1322-70 (Metcalf 1977, p. 30).

SCMB 664 (Dec. 1973), p. 442.

CH 1 (1975), hoard 373.

BNJ 46 (1976), pp. 39-43.

CH 4 (1978), hoard 364.

May. 83; Met.(b) 51; N. 59.

227/W Morlais Castle, Glamorganshire (Now Merthyr Tydfil), 1859.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: reigns, not quantified for English coins.

Latest coins: Edwardian and Alexander 'I' (*recte* III) of Scotland pence.

Deposited: 1279+.

ACamb 3rd ser. 5 (1859), p. 101.

BNJ 63 (1993), pp. 86-7.

228/S Morton, Dumfriesshire (now Dumfries and Galloway), 1866.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: hoard or parcel of 10 coins; king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 36).

Williams 1970, p. 388.

Met.(b) 95.

229/I Muckamore Priory, Co. Antrim, 1973.

Durham pence: 0

English pence: 14.

Hoard total: 15.

Identifications: suitable for analysis.

Latest coin: Edward II class 11a penny of London.

Deposited: 1315 (*Irish Archaeology Research Forum* 1 part 1 (1974), p. 29); c. 1315 (*CH* 1 (1975), p. 94).

Irish Archaeology Research Forum 1 part 1 (1974), pp. 25, 28-31.

CH 1 (1975), hoard 366.

230/I Muckinish, Co. Clare, 1933 and 1934.

Durham pence: 1.

English pence: 5.

Hoard total: c. 20?

Identifications: adequate descriptions of 5 coins.

Latest coins: Edward I/II class 10 pence.

Deposited: c. 1316? (Dolley and Seaby 1968, p. L); 1318? (Dolley 1969, p. 29).

RSAl 65 (1935), pp. 147-8.

Dolley and Seaby 1968, p. L n. 1.

Dolley 1969, pp. 27, 29.

D.(a) 82; D.(b) A.33; D.S. B.8; T. 275.

231/I Mullaghsandall, Co. Antrim, 1840 or 1841.

Durham pence: ?

English pence: c. 50.

Hoard total: c. 50 + 1 Scottish coin.

Identifications: (a) 1853: quantified reigns.

(b) 1959: adequate descriptions of 2 coins.

Latest coin: Edward I class 3c penny of York.

Deposited: c. 1300? (Dolley and Seaby 1968, p. L).

Carruthers 1853, p. 165.

Jope and Seaby 1959, pp 113, 115 n. 16.

Dolley 1970, pp. 4, 8.

D.(a) 83; D.(b) A.28; D.S. B.7; Sea.(a) 3.

232/I Mullynure, Co. Armagh, early 19th century.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns, denominations and mints.

Latest coins: Robert II of Scotland.

Deposited: 1371+ (Seaby and Stewart 1964, p. 101); c. 1375-85 (Dolley 1968, p. 268); c. 1380 (Dolley and Seaby 1968, p. xlix); late 14th cent. (Mayhew 1983, p. 178).

UJA new ser. 6 (1900), pp. 31-3.

Dolley 1970, pp. 4, 8.

D.(a) 42; D.(b) B.10; D.S. 29; May. 128; S.S. viii.

233/W Neath I, Glamorganshire (now Neath Port Talbot), 1956.

Durham pence: 11.

English pence: 94.

Hoard total: 100.

Identifications: suitable for analysis.

Latest coins: Edward II class 15c pence.

Deposited: 1326 (*BNJ* 28 (1955-7), pp. 294, 297-8); c. 1326 (Dolley and Seaby 1968, p. liii); c. 1330 (North 1989, p. 98).

SNC 65 (1957), col. 72.

BNJ 28 (1955-7), pp. 294-8.

Boon 1986, pp. 109-12, 114-17.

D.(a) 43; D.S. C.51; May. 84; N. 60.

234/W Neath II, Glamorganshire (now Neath Port Talbot), 1957.

Durham pence: 4.

English pence: 59.

Hoard total: 66.

Identifications: suitable for analysis.

Latest coin: Edward II class 15b penny of Canterbury.

Deposited: 1326 (*BNJ* 28 (1955-7), pp. 557-9); c. 1326 (Dolley and Seaby 1968, p. liii); c. 1330 (North 1989, p. 98).

SCMB 466 (March 1957), p. 104.

BNJ 28 (1955-7), pp. 555-9.

Boon 1986, pp. 109-12, 118-19.

D.(a) 44; D.S. C.52; May. 84; N. 61.

235/S Nether Corsock (=Parton), Kirkcudbrightshire (now Dumfries and Galloway), c. 1840.
Durham pence: ?
English pence: present.
Hoard total: ?
Identifications: coins said to be similar to those in **43/S Blackhills (Parton)**.
Latest coins: Edwardian pence.
Deposited: 1280-1360 (Metcalf 1977, p. 36).
PSAS 45 (1910-11), p. 571.
Davidson 1947-8, p. 109.
D.(a) 120; Met.(a) 40; Met.(b) 96.

236/S Netherfield (=Cummertrees), Dumfriesshire (now Dumfries and Galloway), 1860.
Durham pence: 23.
English pence: 180.
Hoard total: 195.
Identifications: reigns and mints.
Latest coins: Edwardian pence of Berwick; Edward I/II class 10 x Edward III Florin coinage?
Deposit: c. 1300-7 (Thompson 1956, p. 278); 1305-c. 1320 (Metcalf 1977, p. 28);
c. 1310 (Dolley and Seaby 1968, p. lii); c. 1310? (Dolley 1968, pp. 268-9, 278);
c. 1315+ (Mayhew 1983, p. 170).
NC 2nd ser. 1 (1861), pp. 56-7.
PSAS 4 (1860-2), p. 397.
Lindsay 1868, p. 37.
Davidson 1947-8, p. 106.
Williams 1970, p. 331.
D.(a) 45; D.S. C.29; May. 85; Met.(b) 34; N. 62; T. 278.

237/S New Cumnock, Ayrshire (now East Ayrshire), in or just before 1828.
Durham pence: ?
English pence: present.
Hoard total: c. 100.
Identifications: unquantified reigns; some inscriptions.
Latest coins: Edwardian pence of Canterbury, Lincoln, and London; Alexander III of Scotland pence.
Deposited: 1280-1360 (Metcalf 1977, p. 36).
Stewart 1973, pp. 137-8.
CH 1 (1975), hoard 368.
D.(a) 118; Met.(b) 97.

238/E Newbury, Berkshire, 1756.
Durham pence: 317.
English pence: 3,347.
Hoard total: 3,530 (published total = 3,520).
Identifications: reigns and mints.
Latest coins: Edward I class 9b pence of Exeter and Kingston upon Hull.
Deposited: c. 1305-7 (Thompson 1956, p. 107); c. 1325-30 (Dolley 1968, pp. 269, 279); c. 1325-30?
(Mayhew 1983, p. 171); c. 1330 (Dolley and Seaby 1968, p. liii).
T. Snelling, *A View of the Silver Coins and Coinage of England* (London, 1763),
p. 13 n. o, figs. A-D.
D.(a) 46; D.S. C.59; May. 87; N. 63; T. 280.

239/E Newcastle upon Tyne I (Gunner Tower), Northumberland (now Newcastle upon Tyne), 1821.
Durham pence: ?
English pence: present.
Hoard total ?
Identifications: unquantified reign (Edward I) and denominations ('shillings' and 'sixpences').
Latest coins: Edward III groats or halfgroats?
Deposited: 1351+.
AA new ser. 18 (1896), p. 13.
AA 4th ser. 45 (1967), p. 126.
D.(a) 127; T. 281.

240/E Newcastle upon Tyne II (Butcher Bank), Northumberland (now Newcastle upon Tyne), 1860.
Durham pence: ?
English pence: 7 recorded.
Hoard total: ?
Identifications: parcel of 8 coins; reigns and mints, unquantified for English coins.
Latest coins: Edwardian pence; Edward I Irish penny of Waterford.
Deposited: c. 1290? (Dolley 1968, pp. 269-70); early 14th cent. (Thompson 1956, p. 107).
AA new ser. 5 (1861), p. 169.
D.(a) 47; D.S. C.18; T. 282.

241/E Newminster (=Newminster Abbey), Northumberland, 1925.
Durham pence: 28.
English pence: 426.
Hoard total: 486.
Identifications: suitable for analysis.
Latest coins: Edward I/II class 10cf pence.
Deposited: c. 1304 (Dolley 1968, p. 270, 277); c. 1305 (Dolley and Seaby 1968, p. lii); 1307+ (Thompson 1956, p. 108).
SNC 34 (1926), col. 245.
PSAN 4th ser. 2 (1925-6), pp. 47, 137-8.
NC 5th ser. 7 (1927), pp. 277-9.
D.(a) 48; D.S. C.25; May. 89; N. 64; T. 286.

242/E Newport, Isle of Wight, 1849.
Durham pence: 132 recorded.
English pence: 2,183 recorded.
Hoard total: 1,000s.
Identifications: parcel of 2,320 coins; reigns and mints.
Latest coins: Edward II class 13 x class 15c pence of Bishop Beaumont of Durham; Robert I of Scotland (not included in the parcel recorded).
Deposited: c. 1325-30 (Dolley 1968, pp. 270-1, 279); c. 1330 (Dolley and Seaby 1968, p. liii); c. 1330? (Mayhew 1983, p. 171); c. 1340 (Thompson 1956, p. 108).
JBAA 5 (1849), pp. 362-5, 378.
JBAA 6 (1850), p. 151.
NC 1st ser. 13 (1850-1), pp. 140-2.
JBAA 8 (1852), p. 325.
D.(a) 49; D.S. C.60; May. 90; N. 65; T. 287.

243/I Newtonards, Co. Down, 1977.

Durham pence: 0.

English pence: 1.

Hoard total: 14.

Identifications: suitable for analysis.

Latest coins: David II of Scotland third (light) coinage groats.

Deposited: c. 1370 (*PSAS* 120 (1990), p. 163); c. 1380 (*UJA* 3rd ser. 41 (1978), p. 103).

CH 4 (1978), hoard 367.

UJA 3rd ser. 41 (1978), pp. 102-3.

244/S North Berwick, Haddingtonshire (now East Lothian), 1882.

Durham pence: present.

English pence: present.

Hoard total: 63.

Identifications: reigns and mints, not quantified for English and Irish coins.

Latest coins: pence attributed to Edward II and Edward III.

Deposited: 1302-c. 1330 (Metcalf 1977, p. 28); c. 1310 (Dolley and Seaby 1968, p. lii); c. 1310? (Dolley 1968, pp. 271, 278); early 14th cent. (Thompson 1956, p. 110).

PSAS 16 pp. (1881-2), 465-6.

D.(a) 50; D.S. C.30; Met.(b) 32; N. 67; T. 291.

245/E Northampton, Northamptonshire, 1873.

Durham pence: 5.

English pence: 197.

Hoard total: 199.

Identifications: reigns and mints; inscriptions of 197 coins; descriptions of lettering and portraits.

Latest coins: Edward I pence (no later than class 3?).

Deposited: c. 1280-90? (Thompson 1956, p. 110); before 1285? (Dolley 1968, p. 249).

NC 3rd ser. 2 (1882), pp. 108-24.

Burns 1887, I, pp. 188-9, 192, 209, 228-9.

D.(a) 131; N. 66; T. 290.

246/E Nottingham, Nottinghamshire, 1786.

Durham pence: ?

English pence: present.

Hoard total: c. 100.

Identifications: reigns and denominations, unquantified for English coins; some reverse inscriptions and descriptions of types; adequate description of an Edward I halfpenny of London.

Latest coins: Edward III Blunt class 8b halfpence of Berwick.

Deposited: 1333+.

W. Merrey, *Remarks on the Coinage of England* (London, 1789), p. 104.

NC 6th ser. 15 (1955), p. 300.

247/E Nuneaton, Warwickshire, 1889.

Durham pence: 0 recorded.

English pence: 13 recorded.

Hoard total: c. 400.

Identifications: parcel of 18 coins; Edwardian pence partly classified; adequate descriptions of other coins.

Latest coin: Edward IV first reign light coinage groat of Bristol.

Deposited: c. 1470 (Mayhew 1974, p. 65); c. 1470-90? (Thompson 1956, p. 111).

N. 68; T. 296.

248/E Oxford, Oxfordshire, 1868.

Durham pence: 26 recorded.

English pence: 185 recorded.

Hoard total: <250?

Identifications: parcel of 225 coins; reigns, denominations, mints and inscriptions; Hawkins classification of Edwardian pence.

Latest coin: Edward III Pre-treaty period penny of London.

Deposited: 1351+ (Thompson 1956, p. 113); c. 1353 (Dolley 1968, p. 271).

Evans 1871.

Burns 1887, I, p. 209.

NC 3rd ser. 11 (1891), p. 175-6.

D.(a) 51; D.S. C.68; May. 91; N. 69; T. 301.

249/S Paisley I, Renfrewshire, 1791.

Durham pence: present.

English pence: present.

Hoard total: c. 515.

Identifications: reigns, quantified for Scottish coins in a parcel ; some inscriptions.

Latest coin(s): Edward III Pre-Treaty period, Durham.

Deposited: 1351+.

SM 53 (1791), p. 201.

Lindsay 1845, p. 263.

Manville 1993a, p. 101.

D.(a) 119; Met.(b) 112; T. 303.

250/S Paisley II (Dykebar Hospital), Renfrewshire, 1987.

Durham pence: 12.

English pence: 192.

Hoard total: 221.

Identifications: suitable for analysis.

Latest coins: Edward III Pre-Treaty series C penny of Durham; David II of Scotland first coinage pence.

Deposited: 1351+ (NC 155 (1995), p. 337); c. 1351-60 (Holmes 1994, pp. 53-4).

BNJ 57 (1987), p. 172.

Bateson 1989, pp. 173, 182.

Holmes 1994, pp. 53-8.

Parton *see* **Blackhills and Nether Corsock**

251/E Peckleton, Leicestershire, 1994.

Durham pence: 1.

English pence: 1.

Hoard total: 18.

Identifications: suitable for analysis.

Latest coins: Henry VIII second coinage groats of London, initial mark arrow.

Deposited: c. 1540 (Cook 1994, p. 77).

Cook 1994, pp. 76-8.

TTRCAR 1994-5, hoard 19.

NC 156 (1996), p. 296.

252/E Peldon, Essex, c. 1968.

Durham pence: 1.

English pence: 9.

Hoard total: 14.

Identifications: 11 coins adequately described; 3 pence not identified.

Latest coin: Edward IV Blunt and Whitton type VII.6/VIII groat of London.

Deposited: c. 1468+ (*EAH* 3rd ser. 9 (1977), p. 149).

EAH 3rd ser. 9 (1977), pp. 147-9.

253/S Penicuik I (Eastfield farm), Midlothian, 1792.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: 1280-1360 (*Metcalf* 1977, p. 37).

PSAS 28 (1893-4), p. 239.

Met.(b) 98.

254/S Penicuik II (Falhills), Midlothian, 1898.

Durham pence: 19 (including 1 coin attributed to London in 1897-8).

English pence: 256.

Hoard total: 273.

Identifications: (a) 1897-8: reigns and mints; episcopal marks.

(b) 1952-4: parcel of 115 coins; adequate descriptions.

Latest coins: Edward II/III class 15c pence.

Deposited: c. 1324-40 (*Metcalf* 1977, p. 31); c. 1325-30 (*Dolley* 1968, pp. 271-2, 279, 281); c. 1325-40 (*Mayhew* 1983, p. 172); c. 1330 (*Dolley and Seaby* 1968, p. liii).

PSAS 32 (1897-8), pp. 297-8.

NM 13 (1898), pp. 12-13, 19-20.

PSA 2nd ser. 18 (1899-1901), p. 371.

BNJ 27 (1952-4), pp. 215-8.

Manville 1995, pp. 173-4.

D.(a) 52; D.S. C.61; *May*. 94; *Met.*(b) 53; N. 70; T. 308.

255/S Penningham(e) Forest (=185/S Kirkcowan, and 321/S Wigtownshire?), Wigtownshire (now Dumfries and Galloway), 1835.

Durham pence: present.

English pence: present.

Hoard total: 1,200-1,500.

Identifications: unquantified reigns and mints.

Latest coin(s): Robert (I?) of Scotland; coins larger than a sixpence (groats or halfgroats?).

Deposited: c. 1325 (*Dolley and Seaby* 1968, p. liii); c. 1325? (*Dolley* 1968, pp. 272, 278); 1351+?

GM 3rd ser. 4 (1835 ii), p. 540.

Manville 1993a, pp. 101-2 (hoard 308a).

D.(a) 53; D.S. C.48; *Met.*(b) 99.

256/E Pennyrock Falls, Cumbria, 1978.

Durham pence: 24.

English pence: 54.

Hoard total: 63.

Identifications: suitable for analysis.

Latest coin: Henry VII sovereign type penny of Bishop Fox.

Deposited: c. 1500 (*CH* 5 (1979), p. 106).

CH 5 (1979), hoard 292.

Information from Miss M.M. Archibald.

257/S Perth I (Kinclaven Castle), Perthshire (now Perth and Kinross), 1803.

Durham pence: ?

English pence: 1 recorded.

Hoard total: ?

Identifications: hoard or parcel of 4 coins; incorrect attribution to reigns; 2 coins illustrated.

Latest coins: Edwardian penny of London and Alexander III of Scotland pence.

Deposited: 1280-1360 (Metcalf 1977, p. 35).

SM 66 (1804), pp. 4-5 and pl., 108, 168.

SM 67 (1805), p. 651.

SM 68 (1806), p. 85.

Lindsay 1845, p. 265.

Manville 1993a, p. 102 (hoard 309a).

D.(a) 93; Met.(a) 23; Met.(b) 85.

258/S Perth II (High Street or Parliament House), Perthshire (now Perth and Kinross), 1812.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns and denominations; descriptions of continental sterlings.

Latest coin(s): Robert I (?) of Scotland.

Deposited: 1318-60 (Metcalf 1977, p. 41).

NSAS, X, p. 73.

May. 95; Met.(b) 129.

259/S Perth III (Little College Yard), Perthshire (now Perth and Kinross), 1920.

Durham pence: 0.

English pence: 3.

Hoard total: 1,128+.

Identifications: adequate; a few coins probably not recorded; suitable for analysis.

Latest coin: James IV of Scotland light coinage groat.

Deposited: 1496+ (Metcalf 1977, p. 48).

AntJ 1 (1921), p. 240.

PSAS 55 (1920-1), pp. 278-85.

NC 5th ser. 1 (1921), pp. 294-316.

Met.(b) 193; T. 309.

260/S Portobello, Midlothian (now East Lothian), 1852.

Durham pence: ?

English pence: present.

Hoard total: c. 600.

Identifications: parcel of 46 coins; obverse inscription (EDW) of the English coins; reign and reverse types of 11 Scottish coins.

Latest coins: Edward I and Alexander III of Scotland pence.

Deposited: c. 1280-1300 (Thompson 1956, p. 116); 1280-1360 (Metcalf 1977, p. 37);

c. 1325 (Dolley 1968, pp. 272, 278);

PSAS 1 (1851-4), pp. 224-6.

AA 4 (1855), p. 20.

Lindsay 1858, pp. 51-2.

D.(a) 54; D.S. C.49; Met.(b) 100; T. 311.

261/I Portrush, Co. Antrim, 1854 or 1855.

Durham pence: present.

English pence: present.

Hoard total: *c.* 100.

Identifications: unquantified reign and mints.

Latest coin(s): Edward I, Dublin.

Deposited: *c.* 1280-1307? (Thompson 1956, p. 117); *c.* 1290? (Dolley 1968, pp. 272-3, 277).

RS&I 3 (1854-5), p. 373.

Carruthers 1856-7, p. 49.

D.(a) 55; D.(b) A.26; D.S. A.21; Sea.(a) 2; T. 313.

262/E Ramshaw Moor, Northumberland, 1762.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: attribution of a penny to Edward III; unquantified reigns; sizes of coins.

Latest coins: Edward III groats (?) (described as shillings of Edward I and II).

Deposited: 1351+?

SM 25 (1763), p. 57.

GM 33 (1763), p. 42.

Metcalf 1958, p. 85.

Manville 1993a, p. 102 (hoard 313a).

D.(a) 128.

263/E Reculver, Kent, 1926.

Durham pence: 0.

English pence: 3 + 1 fragment.

Hoard total: *c.* 70.

Identifications: adequate descriptions of 64 coins.

Latest coins: Henry VI Cross-Pellet issue groats and half-groat.

Deposited: *c.* 1460 (*BNJ* 48 (1978), p. 83); *c.* 1460-1 (Thompson 1956, p. 117).

BNJ 48 (1978), pp. 83-4.

T. 316.

264/S Redgorton I (Balmblair Farm), Perthshire (now Perth and Kinross), 1789.

Durham pence: ?

English pence: present.

Hoard total: 100-200?

Identifications: unquantified reigns and denominations; pair of inscriptions.

Latest coins: David II of Scotland groats of Edinburgh.

Deposited: 1357+ (Metcalf 1977, p. 43); -1370 (*PS&S* 120 (1990), p. 163).

NS&S X, p. 177.

Met.(b) 146; S.S. xxviiiia.

265/S Redgorton II (Thistle Bridge), Perthshire (now Perth and Kinross), 1834.

Durham pence: present.

English pence: present.

Hoard total: *c.* 1,500.

Identifications: partly quantified inscriptions of 872 coins.

Latest coin(s): Edward II pence of Bishop Kellaw of Durham.

Deposited: *c.* 1325 (Dolley and Seaby 1968, p. liii); *c.* 1325? (Dolley 1968, pp. 273, 278).

NS&S, X, p. 177-8.

D.(a) 56; D.S. C.50; Met.(b) 116.

266/E Reigate I (Gatten Park or Wray Lane), Surrey, 1972.

Durham pence: 0.

English pence: 2.

Hoard total: 984.

Identifications: suitable for analysis.

Latest coins: Henry VI Leaf-Pellet issue groats.

Deposited: c. 1450-5 (*CH* 1 (1975), p. 96); c. 1454-5 or c. 1455 (*BNJ* 48 (1978), pp. 80, 83).

SurrAC 70 (1974), p. 166-7.

CH 1 (1975), hoard 376.

CH 4 (1978), hoard 370.

BNJ 48 (1978), pp. 80-97.

CH 6 (1981), hoard 385.

May. 98; W. 70.

267/E Reigate II (Brokes Road or Pilgrims Way), Surrey, 1990.

Durham pence: 50.

English pence: 653 + 2 fragments.

Hoard total: 6702 + 2 fragments.

Identifications: suitable for analysis.

Latest coins: Henry VI Cross-Pellet issue groat and penny.

Deposited: c. 1460 (*BNJ* 60 (1990), p. 178).

Information from Dr B.J. Cook.

W. 71.

268/S Renfrew, Renfrewshire, 1963.

Durham pence: 25.

English pence: 451.

Hoard total: 674.

Identifications: suitable for analysis.

Latest coins: Edward II class 15a pence.

Deposited: 1320-22 (Metcalf 1977, p. 29); c. 1321 (*BNJ* 35 (1966), pp. 131, 142).

SCMB 551 (April 1964), pp. 136-7.

BNJ 35 (1966), pp. 128-47.

GAJ 1 (1969), pp. 72-4.

D.(a) 57; D.S. C.40; May. 99; Met.(b) 40; N. 71.

269/S Rhoneston, Dumfriesshire (now Dumfries and Galloway), 1961.

Durham pence: 0.

English pence: 2.

Hoard total: 83.

Identifications: suitable for analysis.

Latest coins: James III of Scotland class C billon pence.

Deposited: c. 1490 (*PSAS* 93 (1959-60), p. 240).

PSAS 93 (1959-60), pp. 238-44.

TDGNHAS 3rd ser. 38 (1961), p. 204.

PSAS 95 (1961-2), p. 312.

BNJ 34 (1965), pp. 109-17.

Williams 1970, p. 332.

Met.(b) 180, 187.

270/E Rickerby (=Stanwix), Cumbria, 1986.

Durham pence: 128 recorded.

English pence: 1565 recorded.

Hoard total: c. 2,700.

Identifications: parcel of 2,269 coins + fragments; adequate descriptions.

Latest coins: Edward III Pre-Treaty series C pence.

Deposited: c. 1352 (*TCWAAS* 91 (1991), p. 298 n. 8); c. 1350s (*BNJ* 57 (1987), p. 172).

SCMB 833 (Sept. 1988), p. 206.

Woodhead 1989, pp. 74-6.

TCWAAS 91 (1991), pp. 295-8.

Information from Dr B.J. Cook.

271/I Roscrea, Co. Tipperary, no later than 1935.

Durham pence: 2 recorded.

English pence: 11 recorded.

Hoard total: ?

Identifications: adequate.

Latest coin: Richard II type IIb penny of York.

Deposited: c. 1400 (*NMAJ* 11 (1968), p. 73).

NMAJ 11 (1968), pp. 71-3.

SCMB May 1968, pp. 163-4.

Dolley 1969, pp. 27, 30.

D.(b) B.17.

272/S Roslin, Midlothian, before 1845.

Durham pence: ?

English pence: 3.

Hoard total: 3.

Identifications: reign and size.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 37).

NSAS, I, p. 352.

Met.(b) 101.

273/E Rothersthorpe, Northamptonshire, 1996.

Durham pence: 0.

English pence: 30.

Hoard total: 32.

Identifications: suitable for analysis.

Latest coins: Edward I/II class 10cf pence.

Deposited: c. 1310 (*NC* 157 (1997), p. 233).

Rumney see Cae Castell

274/S Rutherglen, Lanarkshire (now Glasgow), before 1793.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: unquantified reigns.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: c. 1320 (*CH* 6 (1981), p. 141).

SNC 97 (1979), p. 70.

CH 6 (1981), hoard 380.

Bateson 1989, pp. 177, 182.

275/E Ryther, North Yorkshire, 1992.

Durham pence: 119.

English pence: 532.

Hoard total: 817.

Identifications: suitable for analysis.

Latest coins: Henry VII facing bust type I pence of York.

Deposited: c. 1487 *BNJ* 65 (1995), p. 138.

BNJ 62 (1992), p. 237.

Medieval Ceramics 18 (1994), pp. 82-3.

BNJ 65 (1995), pp. 135-50.

YN 3 (1997), pp. 170-1.

276/E Saffron Walden (=Kirtling), Cambridgeshire (now Essex), 1842.

Durham pence: ?

English pence: present.

Hoard total: c. 150.

Identifications: reigns and denominations, partly quantified.

Latest coins: Henry VIII gold George-nobles.

Deposited: 1526+.

NC 1st ser. 5 (1842-3), p. 203.

PNS 1842-3, p. 98.

B.D. EL7; W. 109.

277/I Saintfield, Co. Down, c. 1843.

Durham pence: ?

English pence: present.

Hoard total: c. 200.

Identifications: unquantified reigns; reign and mint (Exeter) of one penny.

Latest coin(s): attributed to Edward III.

Deposited: 1300+ (Dolley 1968, p. 248); c. 1315+ (Seaby 1966, p. 454); c. 1320? (Dolley and Seaby 1968, p. L); 1351+?

Carruthers 1853, p. 165.

Dolley 1970, pp. 4, 8.

D.(a) 84; D.(b) A.40; D.S. B.15; Sea.(a) 16; Sea.(b) 7.

278/S Saltcoats I (Mr Cunningham's Canal; = 279/S Saltcoats II?), Ayrshire (now North Ayrshire), in or before 1782.

Durham pence: ?

English pence: 3 recorded.

Hoard total: ?

Identifications: attribution to Edward I.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 37).

W. Smellie, *Account of the Institution and Progress of the Society of Antiquaries of Scotland. Part I* (Edinburgh, 1782), p. 57.

D.(a) 121; Met.(a) 45; Met.(b) 102.

279/S Saltcoats II (Stevenston Burn; = 278/S Saltcoats I?), Ayrshire (now North Ayrshire), in or before 1782.

Durham pence: ?

English pence: 20 recorded.

Hoard total: ?

Identifications: attribution to Edward I.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 37).

Smellie, p. 57.

D.(a) 121; Met.(a) 45; Met.(b) 102.

280/E Sandsfield, Cumberland (Cumbria), c. 1845.

Durham pence: 1 recorded.

English pence: 6 recorded.

Hoard total: 1,000+?

Identifications: (a) 1885-6: parcel of 9 coins; reigns, denominations, and mints.

(b) 1964: same parcel as in 1885-6; adequate descriptions.

Latest coins: Edward III Pre-Treaty series G groat and pence.

Deposited: c. 1360.

NC 3rd ser. 5 (1885), p. 207.

TCWAAS 8 (1885-6), pp. 380-1.

BNJ 33 (1964), pp. 85-7.

T. 321.

281/S Sanquhar, Dumfriesshire (now Dumfries and Galloway), 1892.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 37).

TDGNHAS 2nd ser. 8 (1891-2), p. 122.

Williams 1970, p. 388.

Met.(b) 103.

282/I Scarden, Co. Westmeath, 19th century.

Durham pence: 5 recorded (including 1 plated forgery).

English pence: 16 recorded.

Hoard total: ?

Identifications: hoard or parcel of 28 coins; adequate descriptions.

Latest coins: Edward III Treaty period penny of York; David II of Scotland 'Robert II' head groat.

Deposited: c. 1365 (*CH* 1 (1975), p. 96); 1365+ (*RNM* 5 no. 4 (1974), pp. 79-80, 83).

RNM 5 no. 4 (1974), pp. 78-86.

CH 1 (1975), hoard 374.

283/E Scotton, Yorkshire (North Yorkshire), 1924.

Durham pence: 21.

English pence: 304.

Hoard total: 319 (+ fragments).

Identifications: suitable for analysis.

Latest coins: Edward II/III class 15 pence.

Deposited: 1324+ (Thompson 1956, p. 120); c. 1325-30 (Dolley 1968, pp. 274, 279); c. 1330 (Dolley and Seaby 1968, p. liv).

NC 5th ser. 4 (1924), pp. 325-6.

TYNF 2 (5) (1925), pp. 183-7.

Manville 1995, p. 174.

D.(a) 60; D.S. C.62; May. 101; N. 72; T. 325.

Shaw Moss *see* **Hesleyside**

284/S Sherifflatts, Lanarkshire (now South Lanarkshire), 1996.

Durham pence: 9.

English pence: 35.

Hoard total: 37.

Identifications: suitable for analysis.

Latest coins: Edward I/II class 10cf2b pence.

Deposited: c. 1307 (*NC* 157 (1997), p. 232).

NC 157 (1997), pp. 232-3.

285/E Skegby, Nottinghamshire, 1967.

Durham pence: 6.

English pence: 406.

Hoard total: 450.

Identifications: suitable for analysis.

Latest coin: Edward I class 5 penny of Canterbury.

Deposited: c. 1290 (*BNJ* 40 (1971), pp. 44, 47-8).

SCMB 586 (June 1967), p. 232.

BNJ 36 (1967), p. 223.

BNJ 40 (1971), pp. 44-56.

N. 73.

286/E Skipton Bridge (=Skipton), Yorkshire (now North Yorkshire), 1949.

Durham pence: 54.

English pence: 288.

Hoard total: 383.

Identifications: suitable for analysis.

Latest coins: Henry IV heavy coinage pence of York.

Deposited: c. 1400 (Mayhew 1983, p. 173); c. 1405 (Dolley and Seaby 1968, p. liv).

NC 6th ser. 9 (1949), pp. 253-7.

ARTYPS 1950, p.17.

SCMB 433 (June 1954), pp. 233-4, 238-9.

Medieval Ceramics 18 (1994), p. 82.

D.(a) 61; D.S. C.73; May. 102; N. 74; T. 331.

287/E Skipton Castle, Yorkshire (now North Yorkshire), 1958.

Durham pence: 0.

English pence: 3.

Hoard total: 5.

Identifications: suitable for analysis.

Latest coin: Edward I class 4b penny of London.

Deposited: c. 1285 (Dolley 1968, pp. 275, 277); c. 1285-1300 (*NC* 6th ser. 19 (1959), p. 200).

NC 6th ser. 19 (1959), pp. 119-20.

TYNF 2nd ser. 1 (5) (1960), p. 31.

Manville 1995, p. 174.

D.(a) 62; D.S. C.16.

288/S Stanley, Perthshire (now Perth and Kinross), 1834.

Durham pence: present.

English pence: 20 recorded.

Hoard total: c. 800.

Identifications: reigns and mints, not quantified for English coins.

Latest coins: Robert I of Scotland pence.

Deposited: 1318-c. 1340 (Metcalf 1977, p. 30); c. 1320 (Thompson 1956, p. 128)

Lindsay 1845, p. 268.

AS 5 (1890), appendix, p. 33.

D.(a) 98; May. 105; Met.(b) 47; T. 341.

Stanwix *see* **Rickerby**

289/E Streatley, Berkshire, 1980.

Durham pence: 18.

English pence: 41.

Hoard total: 47.

Identifications: suitable for analysis.

Latest coins: Edward IV second reign pence of Bishop Booth of Durham, local dies.

Deposited: c. 1475 (*BNJ* 50 (1980), p. 156).

Information from Dr B.J. Cook.

290/E Sutton-on-Sea, Lincolnshire, 1990.

Durham pence: 3.

English pence: 20.

Hoard total: 21.

Identifications: suitable for analysis.

Latest coin: Edward III Post-Treaty penny of York.

Deposited: 1380s (*BNJ* 60 (1990), p. 178).

Information from Dr B.J. Cook.

291/W Swansea, Glamorganshire (now Swansea), 1840.

Durham pence: 9.

English pence: 145.

Hoard total: 160.

Identifications: (a) 1840-1: reigns and mints; unquantified obverse inscriptions.

(b) 1986: Edward I penny (class 3d, Bristol) adequately described.

Latest coin(s): Edward I class 10 x Edward III Florin coinage.

Deposited: 1302-c. 1310 (Boon 1986, p. 112); c. 1303 (Dolley 1968, pp. 275-6); 1303+ (Mayhew

1983, p. 173); c. 1305 (Dolley and Seaby 1968, p. lii).

NC 1st ser. 3 (1840-1), pp. 60-1.

Boon 1986, pp. 111-12.

D.(a) 64; D.S. C.26; May. 107; N. 75; T. 348.

292/E Terrington St. Clement, Norfolk, 1940.

Durham pence: 13.

English pence: 183.

Hoard total: 189 + 7 fragments.

Identifications: reigns and mints; issues of Henry V and VI coins; Edwardian pence and 100 Edward III coins not classified.

Latest coins: Henry VI Annulet issue pence.

Deposited: c. 1422-5 (Mayhew 1983, p. 174); c. 1425 (Mayhew 1974, p. 65);

c. 1425+ (Thompson 1956, p. 134).

NC 6th ser. 7 (1947), pp. 183-5.

May. 108; N. 76; T. 353.

293/E Thame, Oxfordshire, 1889.

Durham pence: ?

English pence: present.

Hoard total: c. 500.

Identifications: unquantified reigns.

Latest coin: Louis IV of Bavaria sterling.

Deposited: 1314+.

N 5 (Jan. 1890), p. 53.

CH 4 (1978), hoard 366.

May. 109.

294/E Thrapston, Northamptonshire, 1778.

Durham pence: 10 recorded.

English pence: 312 recorded.

Hoard total: 100s.

Identifications: parcel of 360 coins; reigns, denominations and mints.

Latest coins: Edward I/II class 10 x Edward III Florin coinage pence.

Deposited: c. 1302 (Dolley 1968, p. 276); c. 1305 (Dolley and Seaby 1968, p. lii); 1307+ (Thompson

1956, p. 136).

Noble 1780, pp. 60-1.

D.(a) 65; D.S. C.27; May. 111; N. 77; T. 359.

295/I Tonlegee, Co. Galway, 1978.

Durham pence: 11.

English pence: 122.

Hoard total: 140.

Identifications: reigns, denominations and mints; dates of issue of some coins.

Latest coin: Robert II of Scotland groat.

Deposited: 1371+ (Mayhew 1983, p. 179); 1372-5 (*IN* 81 (May-June 1981, p. 117).

IN 81 (May-June 1981), pp. 117-21.

May. 129.

296/I Tory Island, Co. Donegal, before 1950.

Durham pence: ?

English pence: 1.

Hoard total: 3.

Identifications: mint of English penny not specified; descriptions otherwise adequate.

Latest coin: Edward I class 10 penny.

Deposited: 14th century. (Mayhew 1983, p. 179).

May. 130.

297/S Tranent (=Blindwells), East Lothian, 1980.

Durham pence: 21.

English pence: 79.

Hoard total: 150.

Identifications: suitable for analysis.

Latest coins: Robert II of Scotland groats, halfgroats, and pence.

Deposited: c. 1375-80 (*PSAS* 120 (1990), pp. 162-3); late 14th century (*CH* 7 (1985), p. 352).

CH 7 (1985), hoard 554.

Bateson 1989, pp. 179, 182.

PSAS 120 (1990), pp. 161-8.

May. 112.

298/E Tredington, Warwickshire, c. 1914-30?

Durham pence: ?

English pence: present.

Hoard total: c. 40.

Identifications: unquantified reigns.

Latest coin(s): Edward IV second reign.

Deposited: 1471+ (Thompson 1959, p. 281).

Manville 1993a, p.91 (hoard 361a).

299/E Tutbury, Staffordshire, 1831.

Durham pence: 126 recorded, 1831.

English pence: 1,404 recorded, 1831.

Hoard total: 50,000+ (North 1995, p. 335).

Identifications: (a) 1831: parcel of 1,489 coins, probably representative (North 1995, p. 335 n. 21); reigns and mints; inscriptions, sizes of lettering and marks.

(b) Another parcel recorded by *Descriptive Catalogue of the Series of Coins found at Tutbury in the County of Stafford in the bed of the River Dove in June 1831 and supposed to have been part of the military chest of the Earl of Lancaster. Temp. Ed II* (Derby, no date): unquantified reigns, mints, inscriptions, and marks.

(c) 1995: (a) and (b) parcels incompletely converted to current classifications.

Latest coins: Edward II class 15b pence (Dolley 1968, p. 276).

Deposited: c. 1321-9 (Thompson 1956, p. 138); 1322 (*Arch.* 24 (1831), pp. 161-4);

c. 1322 (Dolley and Seaby 1968, p. liii).

GM 101 (1831), p. 546.

Hawkins 1831.

R 21 (1880-1), 17-24.

SCMB 432 (May 1954), p. 185.

Manville 1993a, pp. 103-4.

SNC 103 (1995), pp. 220, 262-3, 299-301, 335.

D.(a) 66; May. 113; N. 78; T. 363.

300/S Twynholm, Kirkcudbrightshire (now Dumfries and Galloway), 1842.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: king's name.

Latest coins: Edwardian pence.

Deposited: 1280-1360 (Metcalf 1977, p. 37).

Williams 1970, p. 491.

D.(a) 122; Met.(b) 105.

301/I Tynagh, Co. Galway, 1938.

Durham pence: 2.

English pence: 22.

Hoard total: 22.

Identifications: suitable for analysis.

Latest coin: Edward II class 11b penny of London.

Deposited: c. 1318 (Dolley and Seaby 1968, p. L).

Dolley and Seaby 1968, p. L n. 2.

SNC 90 (1982), pp. 272-3.

D.(b) A.36; D.S. B.11.

302/U Unknown site, in or before 1902.

Durham pence: 1 recorded.

English pence: 1 recorded.

Hoard total: ?

Identifications: hoard or parcel of 322 coins; adequate descriptions.

Latest coin: Henry VIII second coinage groat of London, initial mark pheon.

Deposited: 1541+.

PNS 1901, pp. 8-9.

NC 4th ser. 2 (1902), pp. 34-54.

Cook 1994, pp. 71, 77.

B.D. EL14.

303/E Unknown site, England I, before c. 1870.

Durham pence: ?

English pence: ?

Hoard total: 200-300.

Identifications: 69 continental sterlings described.

Latest coin: Louis of Bavaria as Holy Roman Emperor, sterling.

Deposited: late 1320s (Mayhew 1983, p. 175).

RBN 69 (1912), p. 249-54.

May. 114.

304/E Unknown site, England II, c. 1890-1900.

Durham pence: 66 recorded.

English pence: 198 recorded.

Hoard total: ?

Identifications: hoard or parcel of 432 coins; adequate descriptions of 209 coins.

Latest coin: Richard III penny of York.

Deposited: c. 1483 (Mayhew 1974, p. 66); c. 1483-5 (Thompson 1956, p. 142).

SNC 8 (1900), cols. 3857-8.

T. 371.

305/I Unknown site, Ireland I, before 1872.

Durham pence: 3 recorded.

English pence: 97 recorded.

Hoard total: ?

Identifications: hoard or parcel of 104 coins; reigns and mints; some inscriptions and marks.

Latest coin: John the Blind sterling of Luxemburg.

Deposited: 1309+ (Dolley 1968, p. 297); c. 1340 (Dolley and Seaby 1968, p. xlix); mid-14th century (Mayhew 1983, p. 180).

PRIA 2nd ser. 1, Literature (1870-9), pp. 70-1.

SCMB May 1968, p. 163.

D.(b) A.45; D.S. A.26; May. 134.

306/I Unknown site, Ireland II, before 1959.

Durham pence: 4 recorded.

English pence: 26 recorded.

Hoard total: ?

Identifications: hoard or parcel of 33 coins; adequate descriptions.

Latest coins: Edward II class 14 penny of Durham.

Deposited: c. 1318 (Mayhew 1983, p. 179); c. 1342? (*SCMB* May 1968, p. 165).

SCMB May 1968, pp. 161-6.

D.(b) A.43; D.S. B.18; May. 131.

307/I Unknown site, Ireland III, in or before 1974.

Durham pence: 1 recorded.

English pence: 16 recorded.

Hoard total: ?

Identifications: hoard or parcel of 17 coins, with two intrusive coins (pence of Edward the Confessor and Edward III Pre-Treaty series E); adequate descriptions.

Latest coin: Edward II class 13 penny of London.

Deposited: 1315+ (*CH* 1 (1975), 94).

IN 72 (March-April 1974), pp. 79-80.

CH 1 (1975), hoard 367.

308/S Unknown site, Scotland I, in or before 1783.

Durham pence: 10 recorded.

English pence: 43 recorded.

Hoard total: ?

Identifications: parcel of 55 coins; quantified reigns, mints and inscriptions.

Latest coin: Robert I of Scotland penny.

Deposited: 1318-50 (Metcalf 1977, p. 30).

D.(a) 58; D.S. C.35; Met.(a) 63; Met.(b) 50.

309/S Unknown site, Scotland II, 19th century?

Durham pence: 13 recorded.

English pence: 793 recorded.

Hoard total: ?

Identifications: hoard or parcel of 807 coins; adequate descriptions.

Latest coins: Edward III Florin coinage pence of London.

Deposited: 1344+ (Metcalf 1977, p. 41); c. 1345? (*BNJ* 28 (1995-7), p. 196);

c. 1345-50 (Dolley 1968, pp. 274, 279, 281); c. 1350 (Dolley and Seaby 1968, p. liv).

BNJ 28 (1955-7), pp. 196-201.

D.(a) 59; D.S. C.67; May. 115; Met.(b) 131.

310/I Upper Cullmore, Co. Londonderry, 1980.

Durham pence: ?

English pence: present.

Hoard total: c. 1,200.

Identifications: unquantified reigns and Irish mints.

Latest coin(s): Edward II, class 13.

Deposited: c. 1315-20 (Mayhew 1983, p. 179).

CH 7 (1985), hoard 553.

May. 132.

311/E Urswick, Lancashire (now Cumbria), c. 1800.

Durham pence: ?

English pence: present.

Hoard total: 30+.

Identifications: reign and size.

Latest coins: Edward III pence.

Deposited: 1327+? (Metcalf 1960-1, p. 101).

TCWAAS 26 (1926), p. 49.

D.(a) 130; Met.(a) 51.

312/E Wainfleet All Saints, Lincolnshire, 1875.

Durham pence: 1 recorded.

English pence: 5 recorded.

Hoard total: ?

Identifications: parcel of 5 coins adequately described; unquantified reigns and denominations for the hoard.

Latest coins: Edward III groats and halfgroats.

Deposited: 1351+ (*CH* 5 (1979), p. 105).

SNC 86 (1978), pp. 475-6.

CH 5 (1979), hoard 287.

313/E Wallington, Surrey (now Sutton), in or before 1933.

Durham pence: 0.

English pence: 31.

Hoard total: 37.

Identifications: suitable for analysis.

Latest coins: Edward I/II class 10 pence of London.

Deposited: 1300+.

SurrAC 41 (1933), p. 137.

SurrAC 42 (1934), pp. 116-17.

314/S Wandel, Crawford, South Lanarkshire, 1997.

Durham pence: 7.

English pence: 34.

Hoard total: 39.

Identifications: suitable for analysis.

Latest coins: Edward II class 15b pence.

Deposited: c. 1321-44.

Information from Mr N.M.McQ. Holmes.

315/E Warminster (=Crockerton), Wiltshire, 1972.

Durham pence: ?

English pence: 15.

Hoard total: 35.

Identifications: mints of pence not stated; descriptions otherwise adequate.

Latest coins: Henry VII.

Deposited: c. 1505-10 (*CH* 1 (1975), p. 97).

SCMB 661 (Sept. 1973), p. 331.

BNJ 43 (1973), p. 170.

CH 1 (1975), hoard 378.

316/E West Rudham, Norfolk, 1994 and 1995.

Durham pence: 25.

English pence: 366.

Hoard total: 393.

Identifications: suitable for analysis.

Latest coins: Edward I/II class 15c pence.

Deposited: c. 1330 (*NC* 156 (1996), p. 293).

TTRCAR 1994-5, hoard 25.

NC 156 (1996), pp. 293-4.

317/E West Whelpington, Northumberland, 1976.

Durham pence: 1.

English pence: 5.

Hoard total: 5.

Identifications: suitable for analysis.

Latest coins: Edward II class 11 pence of Canterbury and Durham.

Deposited: c. 1310 (*BNJ* 47 (1977), p. 164); c. 1310+ (*CH* 4 (1978), p. 110).

BNJ 47 (1977), p. 164.

CH 4 (1978), hoard 361.

318/E Westlecote, Wiltshire, before 1874.

Durham pence: ?

English pence: present.

Hoard total: ?

Identifications: hoard or parcel of 3 coins; inscriptions; attribution to Edward II.

Latest coin: Edward III Pre-Treaty period penny of London.

Deposited: 14th century (*CH* 4 (1978), p. 110); 1351+.

WAM 14 (1874), p. 182.

CH 4 (1978), hoard 362.

319/S Whitburn, West Lothian, 1988.

Durham pence: 13.

English pence: 206.

Hoard total: 243.

Identifications: suitable for analysis.

Latest coins: Edward II class 14 pence; Robert I of Scotland pence.

Deposited: 1317+ (*NC* 155 (1995), pp. 336-7); 1317-c. 1322

(Holmes 1994, pp. 59-60).

Holmes 1994, pp. 58-65.

BNJ 66 (1996), p. 36.

320/E Whittonstall, Northumberland, 1958.

Durham pence: 217.

English pence: 1,069.

Hoard total: 1,206.

Identifications: suitable for analysis.

Latest coins: Edward II class 11a pence.

Deposited: 1311? (*BNJ* 31 (1962), p. 84); c. 1311 (Dolley and Seaby 1968, p. lii);

1311-12 (*AA* 4th ser. 41 (1963), p. 70); 1311-c. 1312 (Dolley 1968, pp. 276-7).

SCMB 478 (March 1958), p. 109.

BNJ 31 (1962), pp. 83-4.

AA 4th ser. 41 (1963), pp. 65-83.

D.(a) 67; D.S. C.32; May. 117; N. 79.

321/S Wigtownshire, (=185/S Kirkcowan, and 255/S Penningham(e) Forest?) (now Dumfries and Galloway), in or before 1838.

Durham pence: ?

English pence: 3 recorded.

Hoard total: ?

Identifications: kings' names of 4 coins.

Latest coins: Edwardian and Alexander III of Scotland pence.

Deposited: c. 1280+ (Metcalf 1960-1, p. 101); 1280-1360 (Metcalf 1977, p. 37).

AS 5 (1890), appendix, p. 35.

Davidson 1947-8, p. 112.

Met.(a) 54; Met.(b) 107.

322/E Winford, Somerset (now North Somerset), 19th century.

Durham pence: ?

English pence: 3 recorded.

Hoard total: 11.

Identifications: reigns; denominations and mints of 4 coins.

Latest coin: Edward III Post-Treaty period groat.

Deposited: 1369+ (*CH* 2 (1976), p. 118).

TBGAS 90 (1971), p. 140.

CH 2 (1976), hoard 458.

Wingham *see* **Ickfield**

323/E Witchingham, Norfolk, 1805.

Durham pence: 1 recorded.

English pence: 2 recorded.

Hoard total: 382?

Identifications: adequate descriptions of 18 coins.

Latest coin: Henry VII halfgroat of York, Archbishop Bainbridge.

Deposited: c. 1510 (*BNJ* 33 (1964), p. 109).

BNJ 33 (1964), pp. 107-9.

W. 102.

324/E Wyke, Yorkshire (now Kirklees), 1836.

Durham pence: 61 recorded.

English pence: 871 + c. 35 recorded.

Hoard total: c. 2,000?

Identifications: parcel of 1,023 + c. 35 coins; reigns, mints, inscriptions, sizes of lettering and marks.

Latest coins: Edward II/III class 13 x class 15c pence of Bishop Beaumont of Durham.

Deposited: c. 1320 (Thompson 1956, p. 148); c. 1325-30 (Dolley 1968, pp. 277, 279); c. 1328-35

(Mayhew 1983, p. 176); 1329+ (*Arch.* 28 (1840), pp. 72-4);

c. 1330 (Dolley and Seaby 1968, p. liv).

GM 3rd ser. 10 (1838 ii), p. 80.

Arch 28 (1840), pp. 47-74.

Manville 1993a, p. 104.

D.(a) 68; D.S. C.63; May. 120; N. 80; T. 382.

325/E Wyre Piddle, Worcestershire (now Hereford and Worcester), 1967.

Durham pence: 8.

English pence: 43.

Hoard total: 219.

Identifications: suitable for analysis.

Latest coins: Edward IV Blunt and Whitton type VII groats, initial mark crown.

Deposited: c. 1467 (*NC* 7th ser. 10 (1970), p. 139).

BNJ 36 (1967), p. 223.

NC 7th ser. 10 (1970), 133-62.

326/E Yarmouth, Norfolk, 1857.

Durham pence: ?

English pence: present.

Hoard total: 700-1,000.

Identifications: unquantified reigns; inscriptions of some coins.

Latest coins: Edward I/II class 10ab6 x Edward III Florin coinage pence.

Deposited: c. 1302+.

NA 5 (1859), pp. 358-60.

327/E York Minster, York, 1971.

Durham pence: 1.

English pence: 14.

Hoard total: 16.

Identifications: suitable for analysis.

Latest coin: Edward III Pre-Treaty series E/series F penny of Durham.

Deposited: 1356+.

Information from Mr N.J. Mayhew.

328/I Youghal, Co. Cork, c. 1830.

Durham pence: present.

English pence: present.

Hoard total: c. 8,000.

Identifications: unquantified reigns and mints; denominations, partly quantified.

Latest coins: Robert I of Scotland pence.

Deposited: 1320s-50s? (Mayhew 1983, p. 180).

Lindsay 1839, p. 133.

R. Sainthill, *An Olla Podrida* [Vol. I] (London, 1844), p. 101.

Lindsay 1845, p. 271.

Dolley 1970, pp. 4, 9-10.

D.(a) 69; D.(b) A.32; D.S. A.25; May. 133; T. 394.

Appendix 3. A revised chronology of the English coinage, 1317-1333

Peter Woodhead and Ian Stewart (1966, 129-41) used the recorded outputs of the London and Canterbury mints, and the representation of those mints in the Montrave hoard (224/S), to calculate that Fox class 15 was probably introduced in 1320. The choice of 1 October 1317 as an arbitrary starting date for class 14, to coincide with the beginning of an accounting period, was a useful working hypothesis, with a stated error of a few months either way. Woodhead and Stewart assumed that class 13 was still in production at Durham in April 1317. The class 13 pence of Durham with the lion and lis mark of Bishop Lewis de Beaumont (1317-1333) were struck no earlier than June 1317. The writ authorizing the supply of dies for Bishop Beaumont was issued on 1 June 1317 (47), and the first dies were at the exchequer on 10 June (53). The numbers of class 13 and class 14 coins of Bishop Beaumont in hoards seem to indicate that class 14 was introduced relatively early in the period between June 1317 and the inception of class 15. Table 26 shows data from five hoards, published substantially intact using the Fox classification. The 1886 Aberdeen hoard is tabulated separately, as only 9,754 coins from over 12,000 found have been adequately published. There is considerable variation in the statistics from the smaller hoards, but the predominance of class 14 pence is undeniable.

Table 26. *Bishop Beaumont pence in hoards*

<i>Hoard</i>	<i>Class 13</i>	<i>Class 14</i>	<i>Ratio</i>
Aberdeen 1983 (7/S)	7	15	
Aberdeen 1984 (8/S)	0	6	
Boyton (51/E)	4	13	
Ednam (130/S)	1	16	
Loch Doon (205/S)	0	5	
<i>Totals</i>	12	55	1:4.6
Aberdeen 1886 (6/S)	9	54	1:6.0

Woodhead and Stewart had to use statistics from only one hoard, Montrave, which provided the largest adequately recorded hoard group of Edwardian pence available when they wrote. This hoard was published by Edward Burns using his

own classification, which unfortunately cannot be completely converted to the Fox classification. Burns types A48 and A49 seem to have been approximately equivalent to Fox classes 14 and 15a-c respectively, but the Woodhead and Stewart statistics assuming exact equivalence must be compared with data from hoards published according to the Fox classification. Table 27 provides a comparison between the Montrave hoard and three of the hoards analysed so far. Nicholas Mayhew (1975, 37-9), compared the 1886 Aberdeen find with the Loch Doon hoard, and suggested that the Aberdeen hoard's representation of the Canterbury and London mints was relatively unaffected by the dispersal of over 2,000 coins. However, this hoard's ratio between London coins of class 14 and classes 15a-c (1:1.73) is abnormally high, and it has been excluded from table 27. The Boyton and Ednam hoards have also been excluded, as they seem to have been deposited during the issue of class 15c and class 15b respectively, causing under-representation of classes 15a-c.

Table 27. *Pence of classes 14-15c in hoards*

<i>Mint</i>	<i>Hoard</i>	<i>Class 14</i>	<i>Classes 15a-c</i>	<i>Ratio</i>
Canterbury	Aberdeen 1983	55	76	1:1.38
	Aberdeen 1984	42	41	1:0.98
	Loch Doon	26	35	1:1.35
	Montrave	180	35	1:0.19
London	Aberdeen 1983	41	38	1:0.93
	Aberdeen 1984	22	20	1:0.91
	Loch Doon	16	19	1:1.19
	Montrave	103	33	1:0.32

The differences between the ratios suggest that the Montrave coins of type A48 included substantial numbers of class 15 pence, in addition to the class 14 pence expected, preventing further use of the Montrave statistics. In tables 28 and 29 aggregates for the other hoards in table 23 are compared with the recorded Canterbury and London outputs from 1 October 1317 to 29 September 1327, listed by Challis (1992, 678).

Table 28. *Canterbury hoard aggregates and mint output*

<i>Class</i>	<i>Coins</i>	<i>Cumulation</i>	<i>Period</i>	<i>Output</i>	<i>Cumulation</i>
			1.10.1317- 30.9.1318	£21,751 (33%)	33%
14	123 (45%)	45%			
15a	34 (12%)	57%	1.10.1318- 30.9.1319	£17,883 (27%)	60%
			1.10.1319- 30.9.1320	£16,060 (24%)	84%
15b	84 (31%)	88%	1.10.1320- 30.9.1321	£5,618 (8%)	92%
			1.10.1321- 6.10.1322	£3,811 (6%)	98%
15c	34 (12%)	100%	7.10.1322- 30.9.1323	£1,090 (2%)	100%

Table 29. *London hoard aggregates and mint output*

<i>Class</i>	<i>Coins</i>	<i>Cumulation</i>	<i>Accounts</i>	<i>Output</i>	<i>Cumulation</i>
			1.10.1317- 30.9.1318	£13,185 (30%)	30%
14	79 (51%)	51%	1.10.1318- 30.9.1319	£8,729 (20%)	50%
15a	14 (9%)	60%	1.10.1319- 30.9.1320	£8,577 (20%)	70%
15b	37 (24%)	84%	1.10.1320- 30.9.1321	£9,325 (21%)	91%
			1.10.1321- 6.10.1322	£1,189 (3%)	94%
15c	25 (16%)	100%	7.10.1322- 29.9.1327	£2,500 (6%)	100%

It is probable that the earlier classes in tables 28 and 29 are under-represented in the hoards, due to losses from circulation, so that the true cumulations should be larger than the stated percentages, possibly implying later dates. Furthermore, it is possible that class 14 began later than 1 October 1317, requiring later estimated dates for subsequent types than would otherwise be suggested. Nevertheless, some tentative conclusions are possible. Class 14 probably ended in 1319. Woodhead and Stewart (1966, 131) may have been right to suggest that class 15a was struck for only a few months, and it was probably produced in 1319 or 1319-1320. The production of class 15b seems to have ended in 1321.

Woodhead, in his review of the early coinages of Edward III, has shown that class 15c dies were still being used in London in November 1326, during the 1 October 1326-30 September 1327 accounting year. Class 15d dies seem to have been used in Canterbury from November 1328, and from February 1329 in London (Woodhead 1989, 58-9). The class 15d pence of Durham belong to the same early variety, class 15d1, as the London coins and some of the Canterbury coins. Woodhead (1989, 60-2, 66-7) has tentatively dated these Durham coins to 1328-30. It is possible that the crown in the centre of the class 15d1 reverse dies of Durham symbolized the bishop's quasi-regal palatine rights, which included the mint. Bishop Beaumont petitioned for the maintenance of his palatine rights in both of the parliaments that met in 1327, obtaining an apparently unprecedented judgement confirming them in the January 1327 parliament (Hutchinson 1785-94, I, 275-6; Surtees 1816-40, I, xl-xli). Class 15d2 dies seems to have been used at Canterbury to strike the silver received between 20 December 1330 and 26 March 1331, and class 15d2 dies were certainly supplied to York between 5 July and 28 December 1331 (Woodhead 1989, 59-60, 64-5, 77-8).

Table 30. *Summary of the revised chronology, 1317-35*

<i>Class</i>	<i>Dates</i>
14	1317/18-1319
15a	1319 <i>or</i> 1319-1320
15b	1319/20-1321
15c	1321-1327/8
15d1	1327/8-1330/1
15d2	1330/1-1335

Appendix 4. The coins of the Durham mint

Introduction

This appendix summarises the known issues of the Durham mint, attributing them to bishops and *sede vacante* periods as far as possible. Reverse legends are listed, with obverse legends when they are required for the classification of the coins. Marks of abbreviation have been standardized as commas. Other elements of inscriptions and variations in lettering have been disregarded, to avoid unduly long and complicated lists. Initial marks and other symbols are included when they are specific to the Durham mint.

Sources of coins illustrated

AM	Ashmolean Museum, Oxford
BM	British Museum
DM	Mr D. Martin
FM	Fitzwilliam Museum, Cambridge
IT	Dr I. Taylor
JB	Mr J. Bispham
MA	The author
RT	Mr R. Thomas
SM	Sunderland Museum and Art Gallery

William II(?) - Stephen (1080s-1140s)

Allen 1994 (396-7, pl. 81, nos 1-13) lists and illustrates the thirteen die-combinations known. The suggested dates for the various issues are based upon the evidence discussed in Allen 1994.

Bishop William of St Calais (1080-96)

William II(?) PAXS type (*BMC* William I type VIII)

Moneyer: Cutthbrht

CVTDBRHTONDVNE

1087x8?

Allen 1

Pl. 1, 1 (BM)

William II *BMC* type II (*Cross in Quatrefoil*)

Moneyer: Ordwi

ORDPIONDVN

1091x6?

Allen 2

Pl. 1, 2 (SM)

William II *BMC* type III (*Cross Voided*)

Moneyer: Ordwi

ORDRIIIONDVNL

1091x6?

Allen 3

Pl. 1, 3 (BM)

Bishop Ranulf Flambard (1099-1128)

Henry I *BMC* type X (*Full Face-Cross Fleury*)

Moneyer: Ordwi

ORDPIOND[.].hA

c. 1117-19?

Allen 4

Pl. 1, 4 (BM)

Henry I *BMC* type XIV (*Pellets in Quatrefoil*)

Moneyer: Ordwi

ORDPI:ON:DVRhAN

c. 1123-5?

Allen 5

Pl. 1, 5 (IT)

Bishop Geoffrey Rufus (1133-41) or William Cumin (usurper, 1141-4)

Stephen *BMC* type I (*Cross Moline or Watford*), 'better style'

Moneyer: H[en]ri

h[.].RI:ON:DVNhO:

1135x44

Allen 6

Pl. 1, 6 (IT)

Stephen *BMC* type I, 'poorer Style', Dunwich or Durham

Moneyer: Henri

hENRI[....]DVN

1135xc. 1145

Allen 7

Pl. 1, 7 (JB)

William Cumin?

Stephen *BMC* type I, local dies

Moneyer Fobund

(a) [...]VND:ONDVN

Allen 8

(b) F[...]ND:*OND*VNh

Allen 9

(c) FOBVND:ONDVNI:

Allen 10

(d) FOBVND:ONDVNI:E:

Allen 11

(e) FINDINEDON:EI

Allen 12

(f) FOB[.]D:ON:DVNI.Cm

Allen 13

1141x4?

Pl. 1, 8 (BM: f)

Henry II Cross-and-Crosslets (Tealby) coinage (1158-80)

Four Cross-and-Crosslets die-combinations have been illustrated in Derek Allen's *BMC* (1951, 45-7, pl. IV, nos 6-7, pl. IX, nos 16-17, pl. X, no. 18, pl. XIV, no. 11), and by the author (1994, 397, pl. 81, nos 14-17). One further pair of dies is illustrated here, from the first recorded Durham coin of class A1. T.C.R. Crafter (1998) has revised the classification of classes A and C, and proposed a new chronology.

Bishop Hugh of le Puiset (1153-95)

Class A1

Moneyer: Waltier

WALTIER:ON:DVN[.]L

BMC -, Allen -

1158xc. 1162

Pl. 1, 9 (MA)

Class A2

Moneyer: Waltier

WALTIER:ON:DVN:

BMC 254-6, Allen 14

1158xc. 1162

Pl. 1, 10 (BM)

Class A transitional (*BMC* class A2)

Moneyer: Waltier

WALTIER:ON:DVN:

BMC 257-7a, Allen 15

1158xc. 1162

Pl. 1, 11 (BM)

Class B1 or B2

Moneyer: Iohan

IOhAN:ON:DVNhOL

BMC 251a-3, Allen 16

c. 1162-3

Pl. 1, 12 (BM)

Class C3 (*BMC* class C1)

Moneyer: Cristien

CRISTIEN:ON:DVN

BMC 250-1, Allen 17

c. 1163-7

Pl. 1, 13 (BM)

Short Cross coinage (1180-1247)

Allen 1979 (pl. VIII, no. 56-pl. IX, no. 105) illustrates fifty die-combinations found in a die-study of the Short Cross coins of Durham. Obverse dies are identified by numbers with upper-case prefixes, and reverse die numbers have lower-case prefixes. The class 4a die-combinations of the moneyer Alein have been rearranged in the order indicated by the style of the dies, disregarding the order I inferred in 1979 from the apparent progression from DVR to DVN roots in the mint-signatures

Sede vacante (1195 or 1195-6), and Bishop Philip of Poitiers (1195/6-1208)

Class 4a	DU415
Moneyer: Adam	
ADAM.ON.DVR	du412-du415
1195-c. 1196	Pl. 1, 14 (BM)
Class 4a	DU415-DU435
Moneyer: Alein	
(a) ALEIN.ON.DVRA	du418
(b) ALEIN.ON.DVRE	du433
(c) ALEIN.ON.DVNOI	du436
(d) ALEIN.ON.DVRO	du423
(e) ALEIN.ON.DVRO.	du426
1195-c. 1200	Pl. 1, 15 (MA: a)
<i>Bishop Philip of Poitiers</i>	
Class 4b	DU443-DU455
Moneyer: Alein	
(a) ALEIN.ON.DVNO	du442-du448
(b) ALEIN.ON.DVN	du455
c. 1200-4	Pl. 1, 16 (BM: b)
Class 4b	DU465
Moneyer: Pieres	
PIRES.ON.DVNOL	du465
c. 1204	Pl. 1, 17 (MA)
Class 5a2	DU513, DU516
Moneyer: Pieres	
(a) PERES.ON.DVRE	du513
(b) PERES.ON.DVR:	du516
1205	Pl. 1, 18 (FM: b)

Mule: Class 5a2/5b1 Moneyer: Pieres PIERES.ON.DVRE 1205	DU516 du523, du526 Pl. 1, 19 (BM)
Class 5b1 Moneyer: Pieres PIERES.ON.DVRE 1205	DU523, DU526 du523, du526 Pl. 1, 20 (BM)
Class 5b2 Moneyer: Pieres (a) PIERES.ON.DVRE (b) PIERES.ON.DVR. (c) PIERES.ON.DVR 1205-7	DU533-DU556 du533 du536 du543-du556 Pl. 1, 21 (BM: a)
<i>Bishop Philip of Poitiers, and sede vacante (1208-17)</i> Class 5c Moneyer: Pieres (a) PIERES.ON.DVR (b) PIERES.ON.DVRE 1207-c. 1209	DU563-DU588 du563-du585 du588 Pl. 1, 22 (FM: a)
<i>Sede vacante</i> Class 6a2 Moneyer: Pieres PIERES.ON.DVR c. 1209-c. 1212	DU612-DU618 du612-du618 Pl. 1, 23 (FM)
<i>Bishop Richard Marsh (1217-26)</i> Class 7aB Moneyer: Pieres PIERESONDVR 1218x1222	DU713, DU718 du712-du718 Pl. 1, 24 (MA)

Long Cross coinage (1247-78)

L.A. Lawrence (1913, 91-2) listed Long Cross coins of three Durham moneyers: Ricard (classes Va-Vc), Roger (Vg), and Roberd (VI). He later added coins of Philip (IIIb), Ricard (Vc/Vd), Willem (Vg), and Robert (VII) (1938-41, 29-30). Philip was recorded from a coin that should be attributed to Northampton (Churchill 1994), and the class Vc/Vd mule is a contemporary imitation (North 1994a; 1994b, 228 n. 466).

The class Va3 pence of Ricard (**pl. 2, 25**) may have been struck from dies in the first supply of 27 June 1253 (**13**). There seems to have been transitional period when the letter R might be with or without the 'ball-tail' characteristic of class Va, resulting in otherwise similar dies attributable to either class Va3 or class Vb2, and coins combining the class Va letter with the 'wedge-tail' letter R of class Vb on their obverse. Some coins from pairs of dies supplied during the transitional period might have to be classified as mules between class Va3 and class Vb2: the earliest coins of the Bury St Edmunds moneyer Randulf le Blund, presented at the exchequer in the Easter term of 1252, are class Vb2/Va3 mules (Eaglen 1989, 273; 1998, 118).

The date of introduction of class Vc, the last type produced by Ricard, is uncertain. Lawrence (1913, 71) assumed that Nicholas of St Albans, who died no later than March 1253 (*CPR 1247-1258*, 181), produced the class Vc coins of 'Nicole', but Nicholas de Hadlon, given a life grant of office in the Canterbury mint on 10 January 1256 (Lawrence 1912, 160) is an alternative candidate. The absence of Durham pence of classes Vd-Vf suggests that the mint closed at some time during the production of dies of class Vc, which ended c. 1256. The London moneyer John Hardel, who was probably appointed between May and October 1256, issued coins of class Vc (Dolley, Pagan, and Delme-Radcliffe 1974, 39). The Bury St Edmunds moneyer Reginald Fitz Henry was presented in 1258, and his first coins belong to class Vg, which seems to have begun in that year (Eaglen 1989, 274-6). Class Vg was also the first type of John de Burnedisse, presented on 29 January 1265 (Fox and

Fox 1910, 94, 129). There were no class Vg pence of the Durham moneyer Willem in the Brussels hoard (information from Mr C. Wren), the English element of which can be dated to c. 1264 (Lawrence 1912, 170). The coins of the Canterbury moneyer Richard L'Espece, appointed in 1268 (Dolley 1958, 121 n. 1), belong to class Vh. The absence of class Vh pence of Durham from any source may indicate a period of closure, beginning in the late 1260s or early 1270s. The *sede vacante* account of the Bishopric for the period from 20 August to 12 November 1274 does not mention the mint, implying that it was closed (PRO E372/118 rot. 18 m. 1d.). H.B. Earle Fox and Shirley Fox (1910, 93-4) assumed that the issue of class VI at Durham followed an undocumented grant of minting rights to Bishop Robert de Insula, appointed in 1274. J.D. Brand suggested that class VI may have followed the appointment of Ralph le Blund as engraver in 1269 (Eaglen 1989, 276-7), but there are no known class VI pence of the Canterbury mint, which struck £1,717 between December 1270 and 24 June 1274 (Challis 1992, 674). Class VII seems to have been in issue before 1278, as the Bury St Edmunds moneyer John de Burnedis used two sets of class VII dies before his replacement by Jocus the Goldsmith in the spring of 1278 (Eaglen 1989, 277). The class VII dies used by the Durham moneyer Robert have a Roman form of the letter V, which was superseded by a 'Lombardic' form on the reverse dies of the London moneyer Philip de Cambio, sworn in on 18 May 1278 (Fox and Fox 1910, 95).

Bishop Walter Kirkham (1249-60)

Class Va3

Moneyer: Ricard

RICARD ON DVRh'

1253xc. 1256

Pl. 2, 25 (RT)

Class Vb2

Moneyer: Ricard

RICARD ON DVRh'

1253xc. 1256

Pl. 2, 26 (BM)

Class Vc

Moneyer: Ricard

RICARD ON DVRh'

1253xc. 1256

Pl. 2, 27 (BM)

Bishop Walter Kirkham, sede vacante (1260), or Bishop Robert Stichill (1260-74)

Class Vg

Moneyer: Roger

ROGER' ON DVRh'

1258x74

Pl. 2, 28 (MA)

Bishop Robert Stichill

Class Vg

Moneyer: Willem

[-]ILLEM ON DVR[-]

c. 1264x74

Pl. 2, 29 (BM)

Bishop Robert de Insula (1274-83)

Class VI

Moneyer: Roberd

ROBERD ON D[--]'

1274xc. 1277

Pl. 2, 30 (BM)

Class VII

Moneyer: Robert

ROBERT ON DVRE

1274x8

Pl. 2, 31 (BM)

Edwardian series (1279-1335)

North 1989 provides a comprehensive series of Durham pence of the Edwardian type. The classification used by North has been followed here, with some amendments of the chronology. Class 2b was introduced no later than December 1279, and it probably ended c. July 1280 (Allen 1996a). Class 3g was probably produced in the Chester mint at some time after 5 December 1280, and it was the last type at recoinage mints closed no later than November 1281 (Fox and Fox 1910, 124-5), but it may have continued after that date. Class 4e seems to have been the first type of the Bury St Edmunds moneyer Richard de Lothbury, admitted to office in 1287 (Fox and Fox 1911, 140, 147). D.I. Greenhalgh (1989, 77-8) has dated class 7 to c. 1290-3, probably followed by the production of class 6 c. 1293-6. Only one class 6 obverse die is known to have been used at the Canterbury mint, which received no new dies in the five years from Michaelmas 1294 (Mate 1969a, 217). Appendix 3 discusses the chronology of classes 14 and 15.

Bishop Robert de Insula

Class 2b CIVITAS DVREME, no episcopal mark (to class 4b) 1279-80	North 71-2 Pl. 2, 32 (FM)
Class 3b 1280	North 86-7 Pl. 2, 33 (FM)
Class 3c 1280	North 103-4 Pl. 2, 34 (FM)
Class 3e 1280 or 1280-1	North 124-7 Pl. 2, 35 (FM)
Class 3g 1280x2	North 182-5 Pl. 2, 36 (FM)
Class 4a (4a2-4a4) 1281x3	North 213-16 Pl. 2, 37 (FM: 4a3)
Class 4b 1281x3	North 230 Pl. 2, 38 (FM)

<i>Bishop Antony Bek (1283-1311)</i>	
Class 4b	
CIVITAS DVREME, cross moline in one quarter of rev.	North 231
1283?	Pl. 2, 39 (FM)
Class 4b, cross moline initial mark both sides (to class 9a)	
CIVITAS DVREME	North 232-5
1283x7	Pl. 2, 40 (FM)
Class 4c	North 242-3
1283x7	Pl. 2, 41 (BM)
Class 4d (or class 4d/4c mule)	North 254
1283x7	Pl. 2, 42 (FM)
Class 4e	North 266-7
c. 1287-c. 1289	Pl. 2, 43 (FM)
Class 5b	North 281-2
c. 1289xc. 1290	Pl. 2, 44 (FM)
Mule:	
Obv.: class 5b	
Rev.: class 7b	North 280
c. 1290x3	
Illustration: North 1989, pl. 11.	
Class 7b, same rev. die as last	North 321
c. 1290x3	Pl. 2, 45 (FM)
Mule:	
Obv.: class 5b	
Rev.: class 6b	North -
c. 1293x6	
Composite illustration: Fox and Fox 1911, pl. VII, no. 24.	
Mule:	
Obv.: class 6b	
Rev.: class 7b, same rev. die as above	North -
c. 1293x6	Pl. 2, 46 (FM)
Class 6b	North 298-9
c. 1293x6	Pl. 2, 47 (AM)
Class 9a1	North 348-50
CIVITAS DVRENE (to class 9b)	
1299-1300	Pl. 2, 48 (FM)
Class 9a2	North 361
1299-1300	Pl. 3, 49 (BM)

Class 9, local dies, imitating class 9a 1300	North 362-3 Pl. 3, 50 (MA)
Mule: Obv.: local die, class '9a' Rev.: class 9b 1300	North 364 Pl. 3, 51 (FM)
Class 9, local dies, imitating class 9b 1300 Illustration: North 1989, pl. 15.	North 392
Mule: Obv.: local die, class '9b' Rev.: class 9b 1300	North 393-4 Pl. 3, 52 (DM)
Mule: Obv.: class 9b Rev.: local die, class '9b' 1300	North 396 Pl. 3, 53 (FM)
Class 9b1, cross moline on obverse only, or no mark 1300	North 395, 397-401 Pl. 3, 54 (FM)
Class 9b2, cross moline on obverse only, or no mark 1300	North 436-44 Pl. 3, 55 (FM)
Mule: Obv.: class 9b1 Rev.: class 9c, CIVITAS DVRENE or DVREME 1300x1	North 461-2 Pl. 3, 56 (FM)
Mule ('class 10x'): Obv.: class 9b1 Rev.: class 10ab2 1300xc. 1302	North 475 Pl. 3, 57 (MA)
Mule: Obv.: class 10ab2 Rev.: class 9c 1300xc. 1302	North 502 Pl. 3, 58 (BM)
Class 10ab2, no mark (to class 10ab3) CIVITAS DVRENE, DVRENIE, or DVREMIE 1300xc. 1302	North 500-1, 503 Pl. 3, 59 (BM)

Mule: Obv.: class 10ab3 Rev.: class 9c c. 1302-3	North 525-6 Pl. 3, 60 (BM)
Class 10ab3 CIVITAS DVRENE or DVREME c. 1302-3	North 524, 527 Pl. 3, 61 (FM)
Class 10ab5, cross moline on obverse only CIVITAS DVREME (to class 11a2) c. 1303-5	North 553-5 Pl. 3, 62 (BM)
Class 10cf1, cross moline or no mark (to class 10cf3) c. 1305-6	North 593-7 Pl. 3, 63 (FM)
Class 10cf2 c. 1306-7	North 615-19, 626-7 Pl. 3, 64 (FM)
Class 10cf3 c. 1307-9	North 650, 667-73, 691-7, 713-14 Pl. 3, 65 (BM)
Class 10cf4, cross moline c. 1309	North 719 Pl. 3, 66 (FM)
Class 10cf5, cross moline or no mark (to class 11a1) c. 1309-1310	North 729-31, 754-8 Pl. 3, 67 (FM)
Class 11a1 1310x11	North 777-9 Pl. 3, 68 (FM)
<i>Bishop Antony Bek, and sede vacante (1311)</i> Class 11a2, cross moline 1310x11	North 791-2 Pl. 3, 69 (FM)
<i>Bishop Richard Kellaw (1311-16)</i> Mule (Bek/Kellaw, class 11a2): Obv.: cross moline Rev.: CIVITAS DVNELM, crozier head at one end of cross (to class 13)	North 793
1311? Illustration: North 1989, pl. 30	
Class 11a2, no bishop's initial mark (to class 13) 1311-c. 1312	North 794 Pl. 3, 70 (BM)

Mule (Bek/Kellaw):

Obv.: class 11a2, cross moline

Rev.: class 11a3, crozier head
c. 1312

North -

Pl. 3, 71 (FM)

[The reverse was attributed to class 11b3 by North 1989, pl. 30, n. 84, citing Fox and Shirley-Fox 1913, pl. XII, no. 6, but inspection of the coin itself allows a reattribution to class 11a3.]

Mule (Kellaw/Bek):

Obv.: class 11a3, no bishop's initial mark

Rev.: class 11a2, CIVITAS DVREME
c. 1312

North -

Pl. 3, 72 (DM)

Mule (Kellaw):

Obv.: class 11a2

Rev.: class 11a3
c. 1312

North -

Pl. 4, 73 (BM)

Class 11a3

c. 1312

North 802-4

Pl. 4, 74 (BM)

Class 11b1

Crozier heads at two ends of the cross on one die

c. 1312x14

North 811-13

Pl. 4, 75 (FM)

Class 11b2

c. 1312x14

North 829-30

Pl. 4, 76 (FM)

Class 11b3

c. 1312x14

North 843-4

Pl. 4, 77 (FM)

Class 11c

c. 1312x14

Illustration: North 1989, pl. 32

North 852

Mule:

Obv.: class 11c

Rev.: class 11b3 or 12a?

c. 1312x14

North -

Pl. 4, 78 (FM)

Class 12a

c. 1314x1317

North 869-71

Pl. 4, 79 (FM)

Bishop Kellaw, and sede vacante (1316-17)

Class 13, crozier head on the reverse

c. 1315-1317

North 890-2

Pl. 4, 80 (FM)

Bishop Lewis de Beaumont (1317-33)

Class 13, lion and lis initial mark

CIVITAS DVNELM, no mark (to class 15c)

1317 or 1317-c. 1318

North 893

Pl. 4, 81 (BM)

Class 14 (plain cross initial mark on one obv. die)

1317x1319

North 907-13

Pl. 4, 82 (FM)

Pl. 4, 83 (FM: plain cross)

Class 15a

1319 or 1319-20

North 923

Pl. 4, 84 (FM)

Class 15b

1319x21

North 928-31

Pl. 4, 85 (FM)

[Mayhew 1975, p. 44 lists a coin with a plain initial mark in the 1886 Aberdeen Upperkirkgate hoard (**6/S**)]

Mule:

Obv.: class 14 (plain cross initial mark)

Rev.: class 15c

1321x7

Illustration: North 1992, fig. 2

Class 15c (plain cross initial mark on one obv. die)

1321x7

North 940-3

Pl. 4, 86 (FM)

Pl. 4, 87 (FM: plain cross)

Mule:

Obv.: class 15c, lion and lis initial mark

Rev.: London reverse die: London mint?

1321x7

North 936

Pl. 4, 88 (FM)

Class 15d1

CIVITAS DUNELMI, crown in centre of the reverse

1327x33

North 952

Pl. 4, 89 (BM)

Edward III third ('Florin') coinage (1344-51)

The Florin coinage pence of Durham were discussed and illustrated by J. Shirley-Fox (1928, 21-2, 24, 31-6, pl. IV, nos 1-10). Shirley-Fox assumed that coins without episcopal marks belonged to the *sede vacante* period of April-June 1345, after Bishop Richard de Bury's death. F. Elmore Jones (1958-9; 1960-1) corrected the order of the coins, and demonstrated that the unmarked coins were the first Durham pence

after the introduction of the Florin coinage in 1344. Bishop Richard de Bury had writs in 1344 for dies of the new coinage (53-4), and the so-called *sede vacante* coins were probably produced for him. J.J. North (1989, 40-1) found a mule between an obverse of this type and a class 15c reverse die of Bishop Beaumont. Bishop Hatfield seems to have had two marks: a pellet in the centre of the reverse and a crozier.

Bishop Richard de Bury (1333-45)

Mule:

EDW R ANGL DNS HYB (Florin coinage type D1)
 CIVITAS DVNELM, class 15c die
 1344x5
 Illustration: North 1989, pl. 40

North 1092

Type D1
 CIVITAS DVNEL(M/N), no marks
 1344x5

North 1093-4
Pl. 4, 90 (MA)

EDWAR R ANGL DNS YB (type D2)
 CIVITAS DVNOLM, no marks
 1344x5

North 1095
Pl. 4, 91 (BM)

EDWAR R ANG DNS HYB (type D3)
 CIVITAS DVNOLM, no marks
 1344x5

North -
Pl. 4, 92 (BM)

Bishop Thomas Hatfield (1345-81)

Type D3
 CIVITAS DVNOLM, pellet in the centre of the cross
 1345x51

North 1096
pl. 4, 93 (FM)

Type D3
 CIVITAS DVNELM, crozier before CIVI
 1345x51

North 1097
pl. 4, 94 (FM)

EDWARDVS REX AIN (type D4)
 CIVITAS DVNELM, crozier before CIVI
 1345x51

North 1098
pl. 4, 95 (BM)

Type D4
 CIVITAS DVNOLME, crozier before CIVI
 1345x51

North 1099
pl. 4, 96 (FM)

Type D3
 VILA DVNOLMIE, crozier after VIL, pellet in centre
 1345x51

North -
Pl. 5, 97 (FM)

Edward III fourth coinage and Richard II (1351-99)

L.A. Lawrence's survey of the coinages of Edward III from 1351 to 1377 lists the issues of the Durham mint in detail (1937, 50-1, 112-13, 178-81, 192-3, 242-3, 256-7, 283-4). Ian Stewart (1974; 1985) has suggested that coins of the 'Anglie DN' type, which is specific to Durham, were produced between the ratification of the Treaty of Bretigni in October 1360 and the introduction of the Treaty A coinage in 1361. W.J.W. Potter (1960, 173; 1962, 216-17) argued that the Treaty A coinage was produced from March to June in 1361, comparing numbers of dies with recorded outputs to decisively reject the alternative date, 1361-3. Archibald (1969, 52, 71, pl. II, no. 635) published a Treaty/Post-Treaty mule unknown to Lawrence.

Bishop Thomas Hatfield
Pre-Treaty period (1351-61)

Mule:

Obv. Florin coinage type D3.

Rev.: Pre-Treaty series A, VILLA DVRREM, crozier after VIL, pellet in centre
1351 **Pl. 5, 98 (FM)**

Mule:

Obv. Pre-Treaty series A

Rev.: Florin coinage, VILA DVNOLMIE
1351

Pl. 5, 99 (BM)

Series A

1351

Pl. 5, 100 (FM)

Series C

CIVITAS DVNELMIE, crozier before CIVI (to series E)
1351-2

Pl. 5, 101 (FM)

Series D [crude bust on some coins]

1352-3

Pl. 5, 102 (BM)

Series E [crude bust on some coins]

1354-5

Pl. 5, 103 (FM)

Mule:

Obv.: series E

Rev.: series F, CIVITAS DVREME, crozier before CIVI
1356

Pl. 5, 104 (BM)

- Mule:
Obv.: series F
Rev.: series E
1356 **Pl. 5, 105 (BM)**
- Series F [crude bust on some coins]
1356 **Pl. 5, 106 (BM)**
- Mule:
Obv.: series E
Rev.: series Ga
1356-61 **Pl. 5, 107 (BM)**
- Mule:
Obv.: series Ga
Rev.: series F
1356-61
Listed: Lawrence 1937, pp. 62-3
- Series G [crude bust on some coins of series Ga]
CIVITAS DVREME, DEREME (some Ga), DOREME (some Gc), DVRELMIE
(Gh); crozier before CIVI
1356-61 **Pl. 5, 108 (FM: Ga)**
Pl. 5, 109 (FM: Gg/Gh)
- 'Anglie DN' type (1360-1)*
EDWARDVS REX ANGLIE DN
CIVITAS DVRENE, crozier after CIVI
1360-1 **Pl. 5, 110 (BM)**
- Treaty A or Transitional Treaty period (1361)*
Mule:
Obv.: Treaty A, EDWAR ANGLIE DNS HIB
Rev.: CIVITAS DVRENE, 'Anglie DN' type
1361
Illustration: De Shazo 1970.
- Treaty A
CIVITAS DORELME, crozier before CIVI
1361 **Pl. 5, 111 (MA)**
- Treaty B period (1361-9)*
Mule:
Obv.: Treaty B
Rev.: Treaty A, CIVITAS DORELME
1361? **Pl. 5, 112 (MA)**

Treaty B

CIVITAS DVREME, crozier before CIVI; or CIVITAS DVNELMIS, no crozier

1361-9

Pl. 5, 113 (FM: crozier)

Pl. 5, 114 (FM: no
crozier)

Post-Treaty period (1369-77)

Mule:

Obv.: Treaty B

Rev.: Post-Treaty, CIVITAS DVNOLM, crozier before CIVI

1369x77

Pl. 5, 115 (MA)

Post-Treaty

1369x77

Pl. 5, 116 (BM)

Bishop John Fordham (1381-8), and/or Bishop Walter Skirlaw (1388-1406)

Richard II type Ia

CIVITAS DVNOLM, no mark

1384x94

Pl. 5, 117 (MA)

Henry IV, Henry V, Henry VI, and Edward IV heavy coinage (1399-1464)

A Henry IV obverse die used with London reverse dies was altered by the addition of a mullet, which seems to have been a mark of the coinage of Henry V (Potter 1960-1, 128-9), and used with a Durham reverse die. G.C. Brooke (1930, 82-3, pl. VII) classified the Henry V pence of Durham. The simpler classification of the coinage of Henry V later developed by Brooke (1950, 143-4) is used here. Peter Woodhead (1996, 25) has suggested that Henry V class G was superseded by the Annulet issue shortly after the appointment of Bartholomew Goldbeter as master of the king's mints on 13 February 1422, but class G pence must have continued in production in Durham until the closure of the mint at or before Michaelmas 1423. Woodhead (1996, 29-30, 80-4) has used comparisons of hoards with the mint outputs of London and Calais to propose a tentative chronology for the coinage of Henry VI until 1441. Dies of the Pinecone-Mascle issue, dated to 1431-2 by Woodhead, probably provided the Durham mint's profit of 1434/5 (70), and they could have continued in use in Durham until the death of Bishop Langley in 1437. The first coins of Bishop Neville (1438-57) belong to the Leaf-Trefoil issue, dated to 1436-8 by Woodhead, and dies of this type provided the output of 1438/9 (71). C.A. Whitton (1938-41, 403, 411, 414) associated the Leaf-Pellet issue with a large output of halfpence in London in 1445-7, and suggested that it was introduced in 1445. Leaf-Pellet dies must have been used to produce the output of 1453/4 (73), and dies of this type were altered for use by Bishop Booth after the death of Bishop Neville in 1457. The heavy coinage pence of Edward IV from local dies are listed by Blunt and Whitton (1945-8, 49-50). Brooke (1950, 157) described coins of this issue with a rose initial mark, but this was in error (Blunt and Whitton 1945-8, 182).

Bishop Thomas Langley (1406-37)

Henry IV light coinage

CIVITAS DVNOLM, no mark

1412x13

Pl. 5, 118 (MA)

Mule:

Obv.: Henry IV light coinage with Henry V mullet

Rev.: Henry V, class C or G.

1413x23

Pl. 5, 119 (FM)

Henry V class C, quatrefoil at the end of the obv. legend

CIVITAS DVNOLM, quatrefoil after each word (to class G)

1413x23

Pl. 6, 120 (FM)

Henry V class D, no quatrefoil on obv.

1413x23

Pl. 6, 121 (AM)

Henry V class G

1413x23

Pl. 6, 122 (MA)

Henry VI Rosette-Mascle issue (star to left of the crown)

CIVITAS DVNOLMI, no mark (to Pinecone-Mascle issue)

c. 1430-1

Pl. 6, 123 (MA)

Henry VI Pinecone-Mascle issue, no mark

c. 1431x7

Pl. 6, 124 (FM)

Bishop Robert Neville (1438-57)

Henry VI Leaf-Trefoil issue

CIVITAS DVNOLM, double ring in the centre

1438xc. 1445

Pl. 6, 125 (BM)

Henry VI Leaf-Pellet issue

CIVITAS DVNELM, double ring in the centre

c. 1445x1457

Pl. 6, 126 (FM)

Bishop Lawrence Booth (1457-76)

Henry VI Cross-Pellet issue: John Arscot mint-master (until April 1460)?

Dies of Bishop Neville Leaf-Pellet issue, B added to the right of the portrait

1457x60?

Pl. 6, 127 (AM)

Henry VI Cross-Pellet issue: John Orwell mint-master (from April 1460)?

Dies as last, with cross to the left of portrait and lines between the pellets in quarters of the reverse cross

1460-1?

Pl. 6, 128 (MA)

Mule ('Henry VI/Edward IV'):

Obv.: Bishop Neville Leaf-Pellet issue, no added marks

Rev.: CIVITAS DVNOLIN, local dies

1460x1?

Pl. 6, 129 (MA)

Edward IV heavy coinage, local dies

CIVITAS DVNOLIN, DVNOLI', DONOLI', DONOLI, or DONOL; rose in the centre on most coins

1461x3

Pl. 6, 130 (BM: no rose)

Pl. 6, 131 (MA: rose)

Edward IV light coinage, Richard III, and Henry VII facing bust type (1464-89)

The Edward IV light coinage pence of Durham are listed in detail by Blunt and Whitton (1945-8, 48-52). They tentatively dated their type VIII to 1467-8 (1945-8, 12-14), but the absence of Durham coins of the remaining types of Edward IV's first reign (types IX-XI) seems to indicate that type VIII dies were used in Durham until the end of the first reign in 1470.

Bishop Lawrence Booth

Edward IV first reign light coinage

Type V, B and D by bust; crude bust with no marks on one obv. die

CIVITAS DERAM, B in centre

1464-5

Pl. 6, 132 (MA)

Pl. 6, 133 (MA: crude bust)

Mule:

Obv.: type VI

Rev.: CIVITAS DON[O]LI' or [DO]NOLIN.(?), local dies

1465x6?

Pl. 6, 134 (FM)

Mule:

Obv.: type VI, quatrefoil and B by bust

Rev.: type V

1465x6

Listed: Blunt and Whitton 1945-8, p. 50

Type VI

CIVITAS DVNOLM, no mark in centre

1465-6

Pl. 6, 135 (BM)

Type VII, quatrefoil and B, D and quatrefoil, or two quatrefoils by bust

CIVITAS DERAM or DERRAM, no mark in centre

1466-7

Pl. 6, 136 (FM)

Type VIII, two trefoils or two lis by bust

CIVITAS DERAM, no mark in centre (to type XII)

1467x70

Pl. 6, 137 (FM)

Edward IV second reign
Type XII, no marks by bust
1471

Pl. 6, 138 (FM)

Type XIII, no marks, or B and trefoil by bust
CIVITAS DERAM, D in the centre on some coins
1471-2

Listed: Blunt and Whitton 1945-8, p. 51

Type XIV, B and trefoil by bust (to type XVa)
CIVITAS DERAM, D in the centre (to type XVa)
1472-3

Pl. 6, 139 (MA)

Type XVa
1473

Pl. 6, 140 (BM)

Type XVb, two lis by bust
CIVITAS DERAM or DERRAM, D in the centre
1473

Pl. 6, 141 (BM)

Mule:

Obv.: Local dies, initial mark pansy, B to left of crown and V on breast

Rev.: London-made dies, CIVITAS DERAM, D in centre

1473-6

Listed: Blunt and Whitton 1945-8, p. 51

Local dies, initial mark pansy, B to left of crown and V on breast; two crosses by bust on some coins

CIVITAS DVNOLMIE, D in centre, V in CIVI quarter of the reverse

1473-6

Pl. 6, 142 (BM)

Bishop Lawrence Booth, and/or Bishop William Dudley (1476-83)

Local dies, initial mark rose, two crosses above crown, and cross on breast on some coins

CIVITAS DVNOLMIE, D in centre, V in CIVI quarter sometimes

1473x83

Pl. 6, 143 (BM)

Local dies, initial mark rose, no marks by bust

CIVITAS DVNOLMIE, D in centre, V in CIVI quarter

1473x83

Pl. 6, 144 (BM)

Halfpenny, local dies, initial mark rose, V or nothing by bust

CIVITAS DERAM

1473x83

Pl. 7, 145 (BM)

Bishop William Dudley

Local dies, initial mark rose, V to the right of bust, or D and V by bust

CIVITAS DVNOLMIE, D or nothing in centre

1476x83

Pl. 7, 146 (BM)

Bishop John Shirwood (1484-94)

Richard III London-made dies, S on breast
1485

Pl. 7, 147 (MA)

Henry VII facing bust, S on breast
1486-7?

Pl. 7, 148 (BM)

Henry VII and Henry VIII sovereign type (1489-1544)

Allen 1996b summarises and classifies the dies used to produce Henry VII 'sovereign' pence in Durham between 1489 and 1499. Whitton (1949-51, 205-6, 211-12) provided a detailed account of the Henry VIII sovereign pence of Durham. The purpose of the piedforts (**pl. 7, 162, 168**) is obscure, but their weights are relatively consistent. The piedfort of Bishop Ruthall, which is worn and pierced, weighs 52.5 grains, about 4.4 times the 12 grains standard weight. The Bishop Tunstall piedfort, less heavily worn, weighs 46.0 grains, about 4.3 times the 10 2/3 grains standard current from 1526. Lawrence (1921-2, 113-14, 117) recorded twenty-one piedforts of six mints, including Durham, from Edward I to Henry VIII.

Bishop John Shirwood

Henry VII type 1ii

CIVITAS DIRRAM, DS either side of shield, crozier above (to type 2)

1489x94

Pl. 7, 149 (FM)

Henry VII type 2, crozier to the right of the king

1489x94

Pl. 7, 150 (AM)

Bishop Richard Fox (1494-1501)

Henry VII type 3ii

CIVITAS DIRRAM, DR beside shield, mitre above (to type 3iii)

1495x9

Pl. 7, 151 (MA)

Henry VII type 3iii

1495x9

Pl. 7, 152 (BM)

Mule:
Obv. type 3iii
Rev.: type 3iv, CIVITAS DIRRAM, RD beside shield, mitre above (to type 3v)
1495x9 **Pl. 7, 153 (AM)**

Mule:
Obv.: type 3iv
Rev.: type 3ii or 3iii
1495x9 **Pl. 7, 154 (BM)**

Henry VII type 3iv
1495x9 **Pl. 7, 155 (BM)**

Mule:
Obv.: type 3v
Rev.: type 3iv
1495x9 **Pl. 7, 156 (BM)**

Henry VII type 3v
1495x9 **Pl. 7, 157 (BM)**

Bishop Thomas Ruthall (1509-23)

Mule:
Obv.: Henry VIII first coinage, initial mark lis
Rev.: Henry VII type 3v
1510? **Pl. 7, 158 (MA)**

Henry VIII first coinage, initial mark lis
CIVITAS DVRRAM, TD above the shield
1510x23 **Pl. 7, 159 (BM)**

Henry VIII first coinage, initial mark lis or radiant star
CIVITAS DVRRAM, TD beside the shield, above the cross
1510x23 **Pl. 7, 160 (BM)**

Henry VIII first coinage, initial mark lis or radiant star
CIVITAS DVRRAM, TD beside the shield, below the cross
1510x23 **Pl. 7, 161 (BM)**

Piedfort, types as last, initial mark lis
1510x23 **Pl. 7, 162 (FM)**

Cardinal Bishop Thomas Wolsey (1523-9)

Henry VIII first coinage, initial mark spur rowel
CIVITAS DVRRAM, DW beside shield, cardinal's hat below
1523x6 **Pl. 7, 163 (BM)**

Mule:

Obv.: Henry VIII first coinage, as last

Rev.: Henry VIII second coinage, initial mark trefoil, TW beside shield, hat below
1527? **Pl. 7, 164 (BM)**

Henry VIII second coinage, initial mark trefoil, crescent or star

CIVITAS DVRRAM, TW beside shield, hat below

1527-9 **Pl. 7, 165 (BM)**

Sede vacante (1529-30)

Henry VIII second coinage, initial mark star or radiant star

CIVITAS DVRRAM, no marks

1529 **Pl. 7, 166 (MA)**

Bishop Cuthbert Tunstall (1530-59)

Henry VIII second coinage, initial mark star or radiant star

CIVITAS DVRRAM, CD beside shield

1530x41 **Pl. 7, 167 (FM)**

Piedfort, types as last, initial mark star

1530x41 **Pl. 7, 168 (BM)**

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Plate 4



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