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Editorial

This volume provides a variety of reports, some of which have been waiting to be published for several years. Three articles on excavations at Speke Hall during the last ten years show how the detailed development of the Hall is gradually being discovered, adding to the documentary work published in previous volumes of this journal. The Council of the Society is grateful to English Heritage and to the North West Archaeological Trust for financial help with this volume. Many thanks also to all those who contributed to the volume and helped with the production, especially Jenny Woodcock, Jen Lewis and Rob Philpott.

One of the finds from David Higgin's excavations at Speke Hall, illustrated on page 72, Figure 10.67, was the inspiration for our new logo.

An appendix which was omitted from an article in Volume 6 of the Journal by A. D'Arcy ('Considerations relevant to the dating of the Ireland Chapel at Lydiat') is included as the last page of this volume (see page 109).

Contributions to the Journal are welcome in the form of long articles, shorter notes or reviews. Please note that figures and captions should be prepared by the author and submitted with the text. Papers will not be accepted unless they conform to the 'Notes for Contributors'. No extensive re-writing will be allowed once the text is accepted but help and advice on preparing texts will be given, if requested. Please obtain a copy of the 'Notes' from the Editor, (c/o the address below) before writing your article.

The Society organizes a variety of activities, including: a lecture series (held in Liverpool Museum on the third Thursday of the month during term-time); specialist courses run in association with the Centre for Continuing Education, University of Liverpool; a series of summer fieldtrips and outings; opportunities to take part in local excavations and fieldwork; and social events. New members are always welcome and membership is open to all. Please write to the Membership Secretary, at the address below, for details and an application form.

Membership subscriptions from January 1992 are as follows: £8 individual, £5 concessional, £10 family, £12 institutional.

Philippa Tomlinson
Hon. Journal Editor

Front cover: The Gatehouse of the Old Hutt from the north, a drawing by H. Mary Milner, dated 1917.

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CONTENTS

Articles:

Excavation and survey at the Old Hutt, Halewood, in 1960 S. Wrathmell with contributions from D. Charlesworth, R. J. Charlesworth, P. J. Davey and A. M. Slowikowski	1
Speke Hall: Excavations in the west range, 1981-82 D. A. Higgins with contributions from J. R. Baker, C. Fisher, A. R. Goodall, I. H. Goodall, I. V. Innes, J. B. Innes, H. K. Kenward, and P. R. Tomlinson	47
Speke Hall: Excavations in the gardeners' compound, 1987 P. J. Davey and J. Speakman	85
Speke Hall: Archaeology of the east courtyard, 1989 J. M. Lewis	87
Pottery from the Grimescar kiln site, Huddersfield The Reverend E. S. Pickup	95

Shorter Note:

An Inscription at Thurstaston J. Evans	106
Correspondence of masons' marks A. D'Arcy	109
Index	110

ILLUSTRATIONS

Excavation and survey at the Old Hutt, Halewood, in 1960 S. Wrathmell	
Figures	
1: Above: The townships of Hale and Halewood, showing manorial and moated settlements. Inset: General location map. Below: Map showing Wright's Moat and Old Hutt Farm, based on Ordnance Survey, 1st edition 6".	2
2: The precincts and components of The Old Hutt, based on the 1843 Tithe map and other sources.	4
3: The gatehouse: an interpretation of structural phases (simplified; based on plans by W. G. Prosser, Royal Commission on Historical Monuments (England).	7
4: The excavations: general plan of trenches and structures in the eastern half of the moated island.	12
5: The excavations, section S1 through hall block and south moat. Numbered layers are: topsoil (1); rubble (5); clay and plaster (6); sandy buff soil (12, 15); old ground surface (13); sandy red soil (14).	18
6: The excavations, plan of kitchen structures.	19
7: The excavations, sections S2-4 through kitchens. Numbered layers are described in the text.	20
8: Pottery vessels, nos. 1-17.	26
9: Pottery vessels, nos. 18-33.	27
10: Pottery vessels, nos 34-53.	28
11: Pottery vessels, nos. 54-61.	30
12: Clay pipes, nos. 1-6.	35
13: Small finds: copper alloy, no. CA1; iron, nos. IR1-IR3; plaster, nos. P1-P2.	36

14: Glass vessels: nos. 1-7.	37
15: Stone mortar.	38
16: Ceramic roof fittings, nos. 1-8.	40
17: Interpretation plan, the structural phases.	42
18: Wright's Moat excavation, section S5 through moated island. Numbered layers are described in the text.	45
Plates	
I: The gatehouse from the north, a drawing by H. Mary Milner, dated 1917.	5
II: The gatehouse from the north-west in 1960, showing the stone plinth of the brick projections (RCHM(E)).	8
III: The gatehouse from the south-east in 1960 (RCHM(E)).	9
IV: The hall doorway from the west (scale in feet).	10
V: The 17th century brick wall and fireplace (scale in feet).	11
VI: The foundation of the north wall of the hall block, viewed from the north.	14
VII: The stone sill of a timber wall, south wall of the 17th century extension east of the hall screens passage, viewed from the west.	15
VIII: A medieval corbel and arch springer, reused in a 17th century foundation (scale in inches).	17
IX: The kitchen Phase I oven floor (on bottom of trench) with Phase II features, including door threshold (behind ranging poles), on make-up above oven (scale in feet).	21
Speke Hall: Excavations in the west range, 1981-82 D. A. Higgins	
Figures:	
1: i) Location plan. ii) Site plan. iii) Plan showing location of excavation and builders' trenches and boreholes.	48
2: Detailed trench plan	49
3: Section drawings	50
4: Pottery illustrations, nos. 1 - 9.	59
5: Pottery illustrations, nos. 10-16.	61
6: Pottery illustration no. 17.	62
7: Pottery illustrations, nos. 18-37.	63
8: Ceramic ridge tiles, 38-43; roof slate, 44.	67
9: Clay tobacco pipes, 45-47; worked bone, 48-49; leather, 50-52; worked wood, 53-55; glass, 56-66.	70
10: Copper-alloy, 67-70; lead, 71; iron, 72-84.	71
11: Pollen diagram with pollen frequencies calculated as percentages of tree pollen plus ecological group.	80
12: Pollen diagram with pollen frequencies calculated as percentages of total land pollen.	81
13: Summary pollen diagram showing ecological groupings (percentages of total land pollen).	82
Speke Hall: Excavations in the gardeners' compound, 1987 P. J. Davey and J. Speakman	
1: Section drawings: a) northern section; b) eastern section (trench 1.95x0.96m).	86
Speke Hall: Archaeology of the east courtyard, 1989 J. M. Lewis	
1: Features recorded during relaying of the courtyard surface in 1989.	88
2: The dovecote: elevations (reproduced by permission of the Archaeological Survey of Merseyside).	90
3: The Tea Room Passage: east section.	92
Pottery from the Grimescar kiln site, Huddersfield The Reverend E. S. Pickup	
1: Map showing Roman sites c. AD 100 and the area of Fig. 2.	96
2: Location map showing ancient and modern trans-Pennine route systems.	96
3: Pottery illustrations: Flat rims with straight walls, nos. 1-16; Flat rims with curved walls, nos. 17-23.	98
4: Pottery illustrations: Flat rims with curved walls, nos. 24-47.	99
5: Pottery illustrations: Flat rims with curved walls, nos. 48-53; Everted rims, nos. 54-89.	101
6: Pottery illustrations: Bases, nos. 90-106; Lids, nos. 107-115.	103
An Inscription at Thurstaston J. Evans	
1: The inscription at Thurstaston.	107
2: 'Personal' marks from parish church registers in Cheshire and Huntingdonshire.	107

EXCAVATION AND SURVEY AT THE OLD HUTT, HALEWOOD, IN 1960

Stuart Wrathmell

INTRODUCTION

In 1960 two medieval moated sites at Halewood were excavated by Mr Ernest Greenfield on behalf of the Ministry of Works. Wright's Moat (SJ 446841) and The Old Hutt (SJ 450838) were both threatened with destruction because they lay within the area chosen for Ford's motor manufacturing plant. Wright's Moat was, at the time, an empty site, and investigations were confined to a single trench. Given the short time available (five weeks) and the limited resources, it was perhaps inevitable that work should be concentrated upon The Old Hutt, where the position of medieval and 17th century structures was evidenced by standing remains. Even so, the extent and depth of the trenches proved, in the end, too small to provide much more than fragmentary building plans of the phases of occupation.

Until 1985 the full excavation report remained unwritten. This task has now been accomplished at the initiative of English Heritage. The following account of the discoveries is based upon the archive of site records held by English Heritage; it also makes extensive use of surveys and descriptions of the buildings which survived at The Hutt until 1960. These were the work of Mr W. G. Prosser, and are now part of the National Buildings Record. Some of the architectural stonework was probably dismantled and taken to Liverpool Borough Engineer's Depot; its present location is unknown. The excavated finds are to be deposited in Liverpool Museum.

In preparing the material for publication I would like to thank, first of all, those who have contributed specialist reports and identifications of artefacts: Marion Archibald, Lionel Burman, Peter Davey, John Mallet and Anna Slowikowski. Information on the glass vessels had been provided soon after the excavations by R. J. Charleston and Dorothy Charlesworth, and on the coins by Stuart Rigold. This has been incorporated in the present report. The staffs of the Lancashire Record Office, Preston and the Local History Department, Liverpool City Libraries provided valuable assistance in the search for historical sources; and Roger Dickinson of Archaeological Services, Liverpool University, was kind enough to provide the transcript of the 1675 probate inventory used in Appendix B, and to discuss its interpretation. I am indebted to Robert Philpott and Ed Southworth of Liverpool Museum, and to Peter Davey who assisted in the search for additional material related to The Old Hutt and its settlement context. I am grateful to Margaret Wood of English Heritage for her assistance, and to Anna Slowikowski and Chris Philo for, respectively, the drawings of the ceramic finds, and all but two of the other illustrations; Figures 12 and 14

were drawn by Margaret Tremayne (Mrs Mahoney), then of the Archaeological Illustrators' Office, English Heritage.

On behalf of Mr Greenfield and English Heritage I should, finally, acknowledge the assistance of the late Mrs E. M. Minter in the excavations, and the co-operation of the site owners, Fords, and the main contractors, Trenthams.

THE HISTORICAL BACKGROUND

The manors of Hale and The Hutt

For over three centuries the manor house called The Hutt was a residence of the Ireland family of Hale. It lay about 2.5km north-west of the village of Hale (Fig. 1); indeed, it was just outside the vill territory, in the adjacent township of Halewood. Yet in the 17th century the Irelands also held a capital messuage in Hale itself: Hale Hall, which at the end of that century replaced The Hutt as their principal residence. The Hall is dated structurally to the early 17th century, with substantial modifications in the 1670s (Farrer and Brownbill 1907, 147); yet one cannot assume that it was a post-medieval foundation, nor that it was unavailable earlier to the Irelands as a residence. It may even have preceded The Hutt as a manorial centre by several centuries.

The existence of these two capital messuages, as well as a third manorial homestead, Lovel's Hall in Halewood, is a reflection of the rather complicated division of interests in the manor. The complexities began in 1203, when King John granted the vill to Richard of Meath (Farrer and Brownbill 1907, 141). The Hale Charter Roll, a 15th century transcript of manorial charters, shows that Richard in return had to pay a chief rent of £7 annually out of the vill, a rent which had been granted by King John to Nicholas *de la Huse* (Lancs RO DD Ib: Charter Roll, nos. 1, 3 and 5). After Richard's death the succession to his holding became the subject of litigation. He had intended that his illegitimate children and their mother, Cecily of Columbers, should hold the manor of his brother, Henry of Waleton (Farrer and Brownbill 1907, 142). The children of Henry and of Cecily disputed possession, but the claims of the Waletons were settled for a time when Cecily granted them a third of the manor. In the 1270s, however, Adam of Ireland, grandson of Cecily, claimed both the Columbers share and also the Waleton third. The dispute over the latter part of the inheritance continued until 1321: in that year William of Waleton alienated his interest to the Irelands (Lancs RO, DD In 22/5).

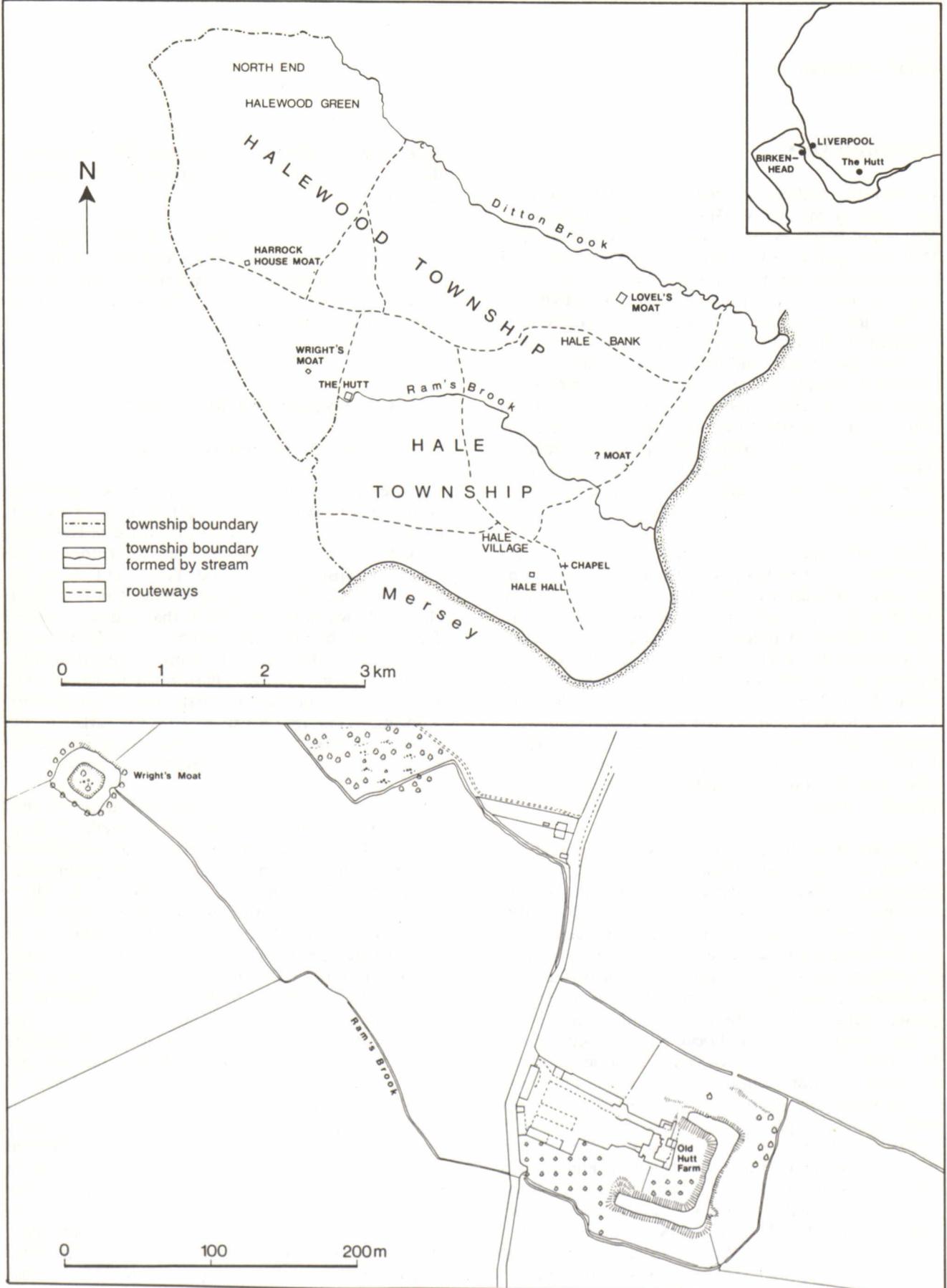


Figure 1: Above: The townships of Hale and Halewood, showing manorial and moated settlements. Inset: General location map. Below: Map showing Wright's Moat and Old Hutt Farm, based on Ordnance Survey, 1st edition 6".

Nevertheless, the manorial control of the Irelands was still circumscribed, for the *de la Huse* family, grantees of the chief rent, had established a mesne lordship. In the 1260s another Nicholas *de la Huse* had been assigned the wardship of Richard of Waletton. Later, he granted his interests to the Holand family (Lancs RO DD Ib: Charter Roll, no. 7). In 1285 Robert of Holand gave his daughter in marriage to Adam of Ireland, along with half the Holand land in Halewood (Lancs RO DD Ib: Charter Roll, no. 9). By 1292, when the various tenants of Hale and Halewood were summoned to prove their title, Adam and his wife were said to hold 200 acres, whilst Robert of Holand had 160 acres (Farrer and Brownbill 1907, 144). The Holands granted Adam a further 60 acres in 1305 (Lancs RO DD Ib: Charter Roll, no. 8); but in the following year the sheriff had to issue a writ ordering them to keep an agreement with Adam over 100 acres of land and 40 acres of wood (Lancs RO DD Ib: Charter Roll, no. 10). An inquisition of 1349 listed the manor of *Hale* as a Holand possession (Farrer 1915, 201), but in the 15th century their holding was described as the manor of *Halewood* (Farrer and Brownbill 1907, 143). Towards the end of that century the Holand lands descended to the Lovel family, whose seat at Hale Bank still bears their name (Fig. 1). Their estate was confiscated by the Crown in 1487 (Farrer and Brownbill 1907, 150).

It is tempting to assume that the Holand-Lovel estate became centred in Halewood as the Irelands established themselves in the vill of Hale itself. Unfortunately, the spheres of interest in the late 13th and 14th centuries are by no means so well defined. Both the Irelands and the Holands held land in various parts of Halewood, and the Irelands, too, erected their principal residence in that township. The earliest reference to The Hutt by name is in a deed of 1422, when William of Ireland of Hale held *manerium de Hale ... ac ecciam manerium del hutte* (Lancs RO DD Ib, deed no. 89). In view of the structural evidence, however, The Hutt seems to have been established at least a century before that date.

Medieval settlement in Halewood

In the 12th and early 13th centuries the vill of Hale lay within the royal forest (Shaw 1956, 10), although the hunting grounds were presumably confined to its appendant wood. The woodland area, which became the township of Halewood, extended from Ditton Brook on the north to Ram's Brook on the south (Fig. 1). By the late 13th century it contained scattered settlements of single and multiple farmsteads, but we do not know whether they were at that date recent creations, or whether they were long-established.

Halewood was called a vill in a deed of 1349 (Farrer and Brownbill 1907, 151), but in the mid-15th century its eastern end, the area known as Hale Bank, was described separately as a vill (Lancs RO DD Ib, deed no. 125). The division of Halewood into two parts has

been attributed to the position of the late 12th century forest boundary, which may have encompassed only the western half of the territory (Cowell 1982, 22). It certainly continued into post-medieval times, for a list of inhabitants, drawn up in 1693, recorded them under two sub-headings: Halewood end and Halebank end (Lancs RO PR 2725/2).

The detailed evidence of medieval and later settlement in the township has been discussed by others (Cowell 1982; Hollinshead 1981), and only the main characteristics need be considered here, to provide a context for the excavated sites. By the later 13th century Halewood contained a number of sub-manorial freehold estates. In 1285, for example, the Halewood lands granted by Robert of Holand to Adam of Ireland included those held by Richard of Holand, Thomas Forester, Robert of Thornihead and Adam of the Bank (Lancs RO DD Ib, deed no. 9). These were all freeholders, who in 1292 possessed, respectively, 60, 16, 8 and 6 acres of land (Farrer and Brownbill 1907, 144).

Some of the freeholders had houses as well as lands in the wood; this is evident from their surnames (including 'of Halewood' and 'of the Bank'), as well as from incidental information. Robert of Holand, for example, granted to Roger Carpenter 2 acres of land in Halewood on either side of Roger's house (Lancs RO DD Ib, deeds, unnumbered).

Some of the houses may have been isolated, set within their own fields. There were, however, at least two places within the wood where messuages were grouped more closely together, and where fields were in multiple ownership. One of these was in Hale Bank. A 1347 lease by William *le Bonker* to John of Ireland concerned 3 acres in *Bonkerfield* (Lancs RO DD Ib, deed no. 42); and the open fields of Halebank survived, at least in part, until the early 19th century (Cowell 1982, 22). The other place is named in the deeds as Crosbyhouses, and it, too, gave the surname to one of the freehold families (Lancs RO DD Ib, deed no. 18). In the late 13th or early 14th century William of Halewood granted to Ralph, son of Elen, 3 acres in Halewood in the field called *Crosbihowsys*, between the land of Henry son of Adam and the land of Richard son of Simon (Lancs RO DD Ib, no. 14). The name Crosbyhouses does not appear to have survived into more recent times, and it seems that this subdivision or 'end' of Halewood township came itself to be called, rather confusingly, Halewood.

The moated sites of Halewood (Fig. 1) are the only medieval homesteads which can be precisely located. Two of them, The Hutt and Lovel's Hall, can be classed as isolated manorial settlements, though it is as well to remember that 'isolated' is not necessarily 'small': the resident population of these two establishments could well have been, at times, larger than that of all the remaining farmsteads combined. The two other certain moats seem also to have been isolated, but they were

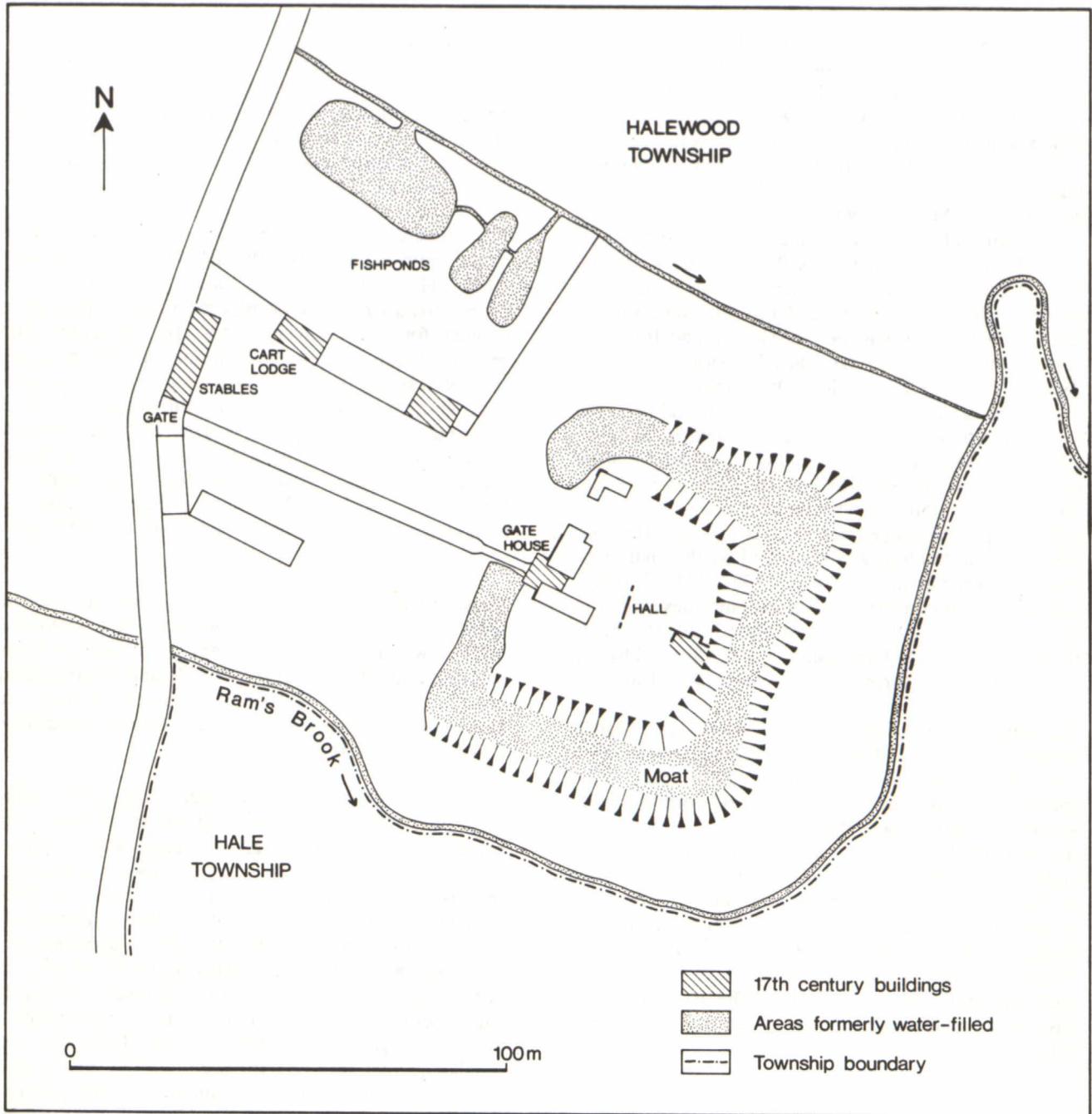


Figure 2: The precincts and components of The Old Hutt, based on the 1843 Tithe map and other sources.

probably sub-manorial in status. One of them, known most recently as Yew Tree House, was investigated briefly in 1976, at the time of its destruction (Warhurst 1977, 5-10). The other, Wright's Moat, was sectioned at the time of The Hutt excavations (Appendix A, below). In neither case was it possible to characterise the occupation, nor indeed to demonstrate occupation by means of structural evidence. Nor has it been possible so far to identify the medieval owners or occupiers. Yew Tree House, formerly Horrock's House and Peacock House (Lancs. RO DRL 1/32), has obviously undergone a series of name changes. Wright's Moat seems to have derived its modern name from the

tenant family which held that land at the time of the first Ordnance Survey.

It is a reasonable presumption, but no more, that these latter moats were associated with the farmsteads of substantial freehold tenants. One freeholder, John of the Mill of Halebank, had a house which in 1420 was called the *Pele* (Lancs. RO DD Ib, deed no. 87), probably the same dwelling which in 1341 had been called a capital messuage (Lancs. RO DD Ib, deed, list no. 29). It may not have been moated, but it was, no doubt, a substantial and protected farmstead.



Plate I: The gatehouse from the north, a drawing by H. Mary Milner, dated 1917.

MANORIAL SETTLEMENT OF THE HUTT

The precincts

The manorial farmstead lay on the southern boundary of Halewood township, close to Ram's Brook. It was delimited by the brook on its south and east sides; and on the north it seems to have been bounded by a smaller stream. The various elements of the settlement are shown in Figure 2: they have been reconstituted from details on the tithe map of 1843 (Lancs RO DRL 1/32), on the survey by W. G. Prosser (Royal Commission on Historical Monuments (England), National Buildings Record, Old Hutt file), and on various editions of Ordnance Survey maps.

The principal component was a moated enclosure measuring about 50m by 55m. Its eastern half contained the residential buildings, focussed upon the medieval hall. To the west, across a courtyard, was a medieval and 17th century gatehouse, fronted by a stone bridge and causeway. These various structures are discussed in more detail below. The water level of the moat was presumably regulated by leets from and to Ram's Brook, but no evidence of these has been recorded.

On the west side of the moated enclosure was an outer precinct containing farm buildings. Until 1960 these were grouped in three ranges. Most were outwardly 19th century brick structures, but three of them at least were earlier in origin. The best preserved was a two-storey building of the 17th century which stood near the east end of the north range. It contained brick-mullioned windows. Further west, behind more recent brick walls, were the remains of two cruck trusses (RCHM(E), photographs). The northern half of the west range contained a building identified as a stable block. The lower, stone-built part was attributable to the early 17th century; one of its two doorways bore the inscription 'John Ireland 1603' (Rylands 1893, 24). By 1960 the upper storey, originally timber-framed (Liverpool City Libraries (LCL) photograph, E. M. Abraham c. 1900), had been rebuilt in brick.

Two other significant features were shown on the tithe map, but did not survive into more recent times. The first was a group of three fishponds to the north of the farm buildings, which may well have originated in the Middle Ages. The second was the line of a trackway running east to west through the outer courtyard. Eastwards, it led directly to the gatehouse of the moated homestead. At its west end, immediately south of the stable block, the remains of a large outer gateway could still be traced in the 19th century (Rylands 1893, 24).

The gatehouse

The most substantial manorial building which remained in 1960 was the gatehouse. Its core was a timber-framed structure of two bays and three storeys, forming an

entrance passage on an east-west axis, with rooms above. The accompanying plan (Fig. 3) is based upon the 1960-61 survey by W. G. Prosser (RCHM(E)). Vertical studding survived in the south-side wall at ground-floor level, whereas the upper storeys on the north side had diagonal studs forming a herringbone pattern (Plate I). The second floor, and the roof with its deep coved eaves, had been destroyed by enemy action in the Second World War.

The surviving records indicate that the gatehouse was modernised in two distinct stages. The first of these was marked by the refronting of the principal, western facade, and by the erection of two projections, on each side of the entrance. The new west front was of brick, and seems to have been in the form of an English-bond skin applied to the front of the timber. The upper storeys were each given an eight-light, mullioned and transomed window of stone. Above the first-floor window was a hood mould which may have been repositioned: it had no terminals and looked oddly placed. It incorporated a central panel bearing, on two shields, the arms of the Ireland and Handford families. These have been ascribed to William Ireland and his wife Ellen, who lived in the early 15th century (Rylands 1893, 24), and may have been the builders of the timber gatehouse.

The projections on each side of the gateway were new constructions, in English-bond brickwork, with small circular stone portholes (Plates II and III). They were designed to appear symmetrical from the west, but were in fact unequal in size. Each contained a chamber at ground and first floor levels, but those of the north were smaller than the southern ones, and they screened a chimney stack. The stack served a fireplace in the room above the western half of the gate passage, which had 'John Ireland 1608' carved upon its mantelpiece (Rylands 1893, 24). The brick projections were founded upon offset, chamfered plinths of sandstone.

The second 17th century rebuild included an extension of the south side of the gatehouse: rooms on two floors, incorporating a chimney stack and brick-mullioned windows (Plate III). It, too, was set upon sandstone blocks, but in this case the height of the plinth was uneven, and there was no chamfer. It is probable that the extension was built partly on top of earlier walling: the sandstone beneath its west wall may in fact have been the medieval perimeter wall, along the inner edge of the moat. The two fine, round-headed stone archways at either end of the entrance passage may also be ascribed to this second rebuild. On the north side of the west front archway, the bottom corner of the stone facade abutted awkwardly the south end of the earlier chamfered plinth, and may have been carried over one of the chamfered stones (Plate II).

During the 18th century a new brick farmhouse was attached to the north side of the gatehouse, and the gatehouse was itself incorporated in the dwelling. The west wall of the house may have been founded like the

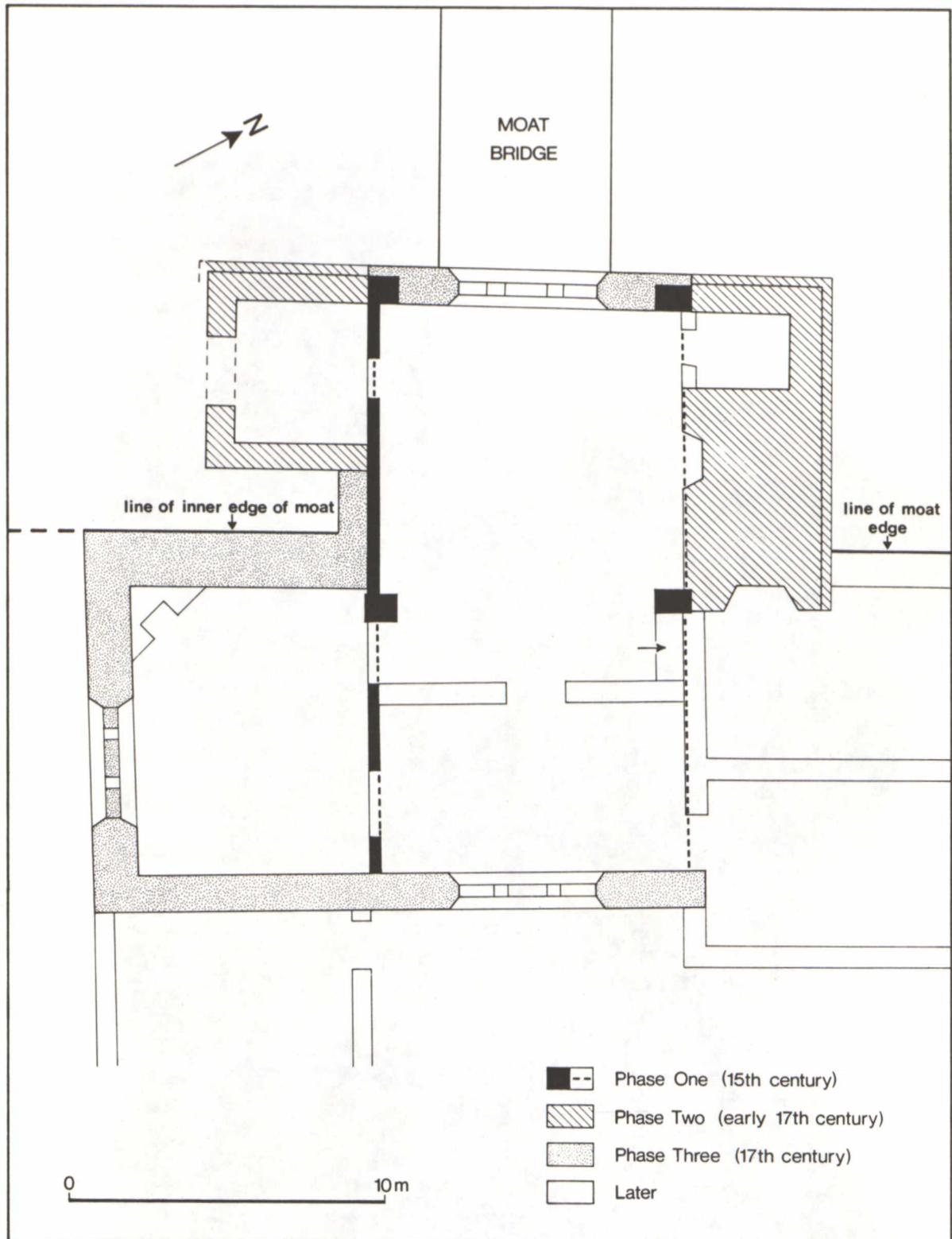


Figure 3: The gatehouse: an interpretation of structural phases (simplified; based on plans by W. G. Prosser, Royal Commission on Historical Monuments (England)).

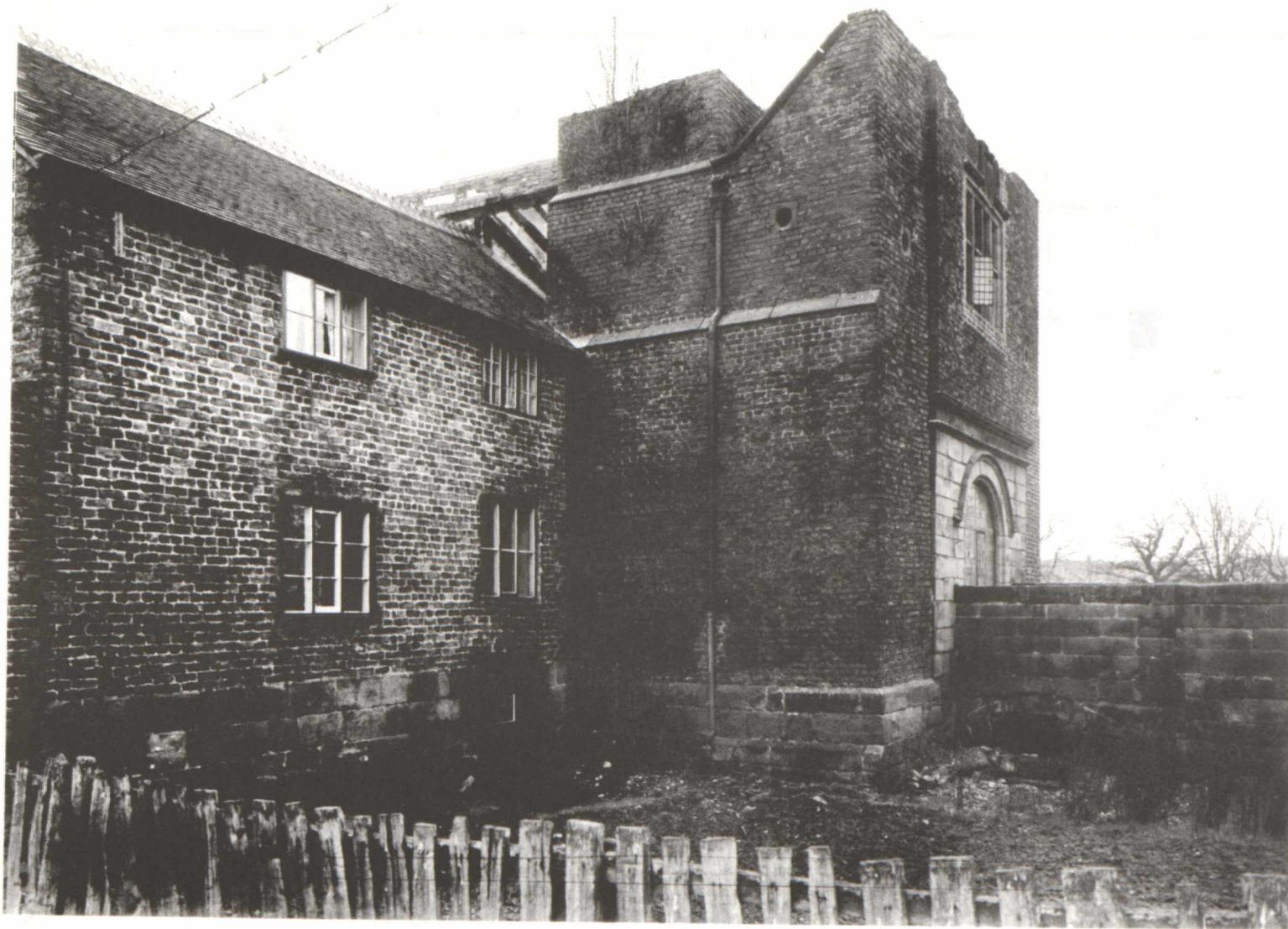


Plate II: The gatehouse from the north-west in 1960, showing the stone plinth of the brick projections (RCHM(E)).



Plate III: The gatehouse from the south-east in 1960 (RCHM(E)).



Plate IV: The hall doorway from the west (scale in feet).



Plate V: The 17th century brick wall and fireplace (scale in feet).

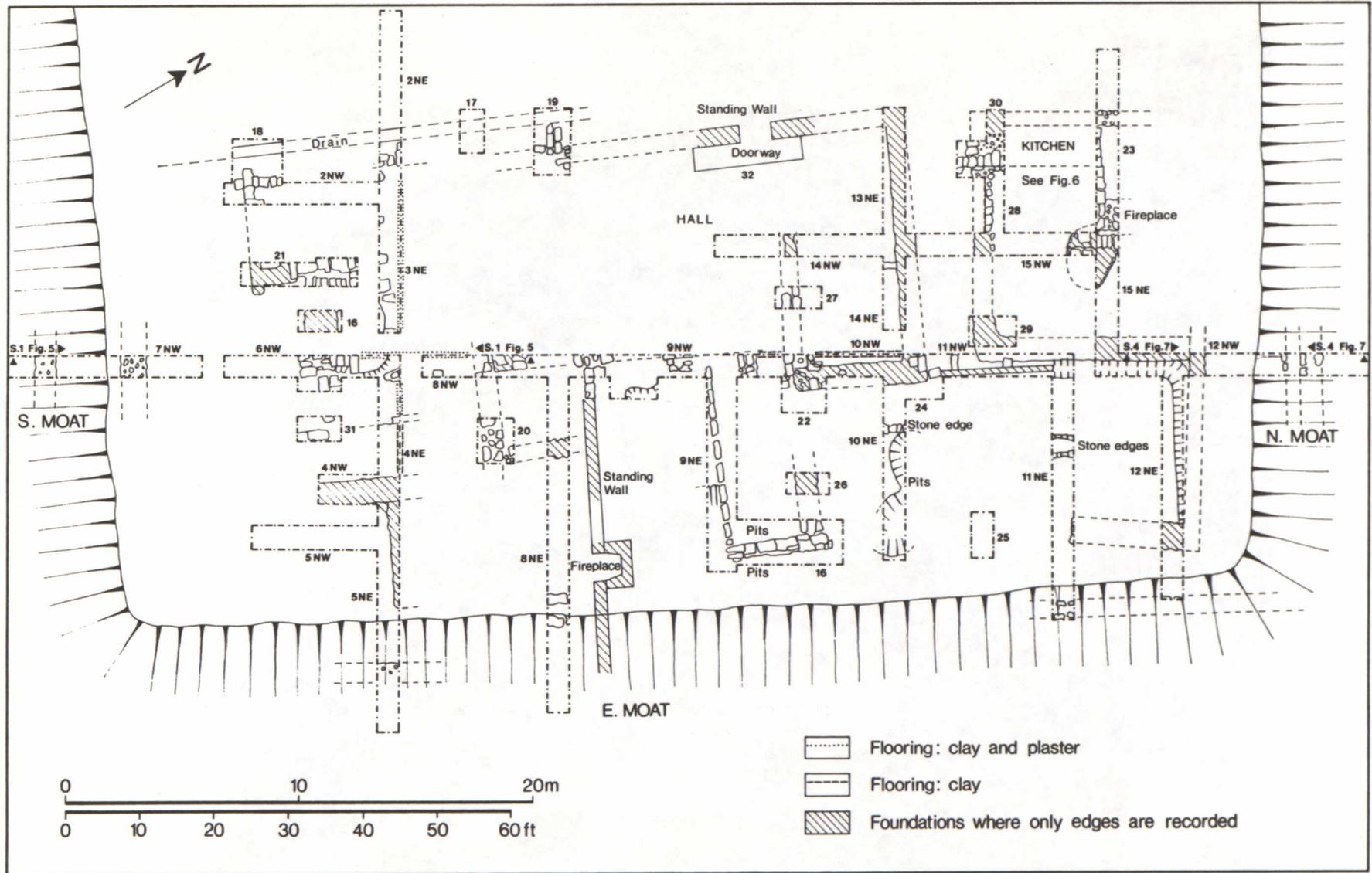


Figure 4: The excavations: general plan of trenches and structures in the eastern half of the moated island.

southern extension, upon an earlier perimeter wall or range, since its lower courses were of sandstone. The line of this stonework was resumed further north, where it formed the foundation of an outbuilding (LCL photograph, J. Henderson 1868). This was certainly at one time the line of the inner edge of the moat; it confirms that the gatehouse had, from its earliest phase, projected into the moat.

The manor house

By 1960 only two fragments of the manor house remained standing above ground: a piece of sandstone wall containing an arched doorway, and a brick wall on a sandstone plinth, incorporating a fireplace. These perhaps represented the earliest and latest building phases. The two-centred sandstone arch with roll and fillet mouldings (Plate IV) was identified by Rylands (1893, 24-5) as the entrance to the great hall, and dated to the early 14th century. It had a hood mould of which one terminal, at least, had been in the form of a grotesque face. Above the doorway a chase in the masonry indicated that the entrance had once been covered by a porch. The wall in part stood to its original height of about 5m. In Ryland's day there was also, perhaps lying on the ground, part of a 'large pointed window showing parts of two trefoil lights and a circle filled with tracery' (Rylands 1893, 25).

The brick wall and the fireplace (Plate V) are clearly to be dated to the earlier part of the 17th century. The jambs of the fireplace have strapwork, and the lintel scroll decoration. The style is similar to the ornamentation on the fireplace of the State Bedroom at Speke Hall. The structure which incorporated this hearth evidently survived much more substantially at the beginning of the 19th century. In about 1820 Gregson wrote of a 'large stone transom window-frame, the ancient chimney piece, and an upper range of windows, of similar dimensions, that were remaining a few years ago' (Harland 1869, 207). The ground-floor window was photographed by Waite (1888-1921, Plate 41): it had eight lights in a rectangular frame, with a king mullion and ovolo mouldings. According to Rylands (1893, 26) there was also 'a very fine bay-window looking east' which fell into the moat in the early 19th century. He identified this structure as a banqueting hall or great parlour. Its architectural details certainly indicate that it was an imposing two-storey block.

The only other structure which survived into the 1820s was 'the massive stack of the kitchen chimneys' (Harland 1869, 207), which was partly uncovered in the 1960 excavations.

THE EXCAVATIONS

Introduction

The excavations were largely confined to the eastern half of the moated enclosure, to the area which, on the evidence of surviving masonry, had contained the principal buildings (Fig. 4). The cuttings took the form of a series of trenches aligned close to, but not precisely upon, the axis of the known walls; and on the north, south and east sides the longest trenches were carried down the slope of the moat ditch.

Beneath the turf there was generally a layer of black soil containing debris of the 18th, 19th and 20th centuries. This topsoil covered the remains of the 17th century manor house: lines or groups of large, dressed sandstone blocks associated with layers of sandy or clayey loam. It is unfortunate that, on the whole, time did not allow the trenches to be excavated below the level of the final structural phase, for the remains of this phase were very fragmentary, and it is difficult to form them into a coherent building plan. Only towards the north end of the site, in the area of the medieval and later kitchens, did excavation reach the pre-moat soil horizon, beneath a series of make-up and occupation layers.

The surviving records in the site archive reflect the unevenness of discoveries. For the excavations as a whole, the only available plan is at a scale of one inch to 8 feet (1:96). It is this plan upon which Figure 4 is based. Individual stones were drawn in some places, but not in all. Nor were the associated layers recorded: these have been reconstructed from the two long section drawings for trenches 6NW to 12NW and 2NE to 5NE.

The more extensive remains of the kitchen area are recorded in greater detail. There are plans and/or section drawings, at a scale of one inch to 2 feet (1:24), for trenches 11NW, 12NW, 15NE, 15NW, 23 and 28-30. These are the basis of Figures 6 and 7. The written descriptions of layers appear both on the section drawings and, equally briefly, in the finds book which records artefacts by context. Supplementary information and interpretations appear in the typescript interim report submitted to the Ministry of Works in 1960.

The hall block

The principal and earliest datable structure was the medieval hall building. Until 1960 a short stretch of its west wall survived above ground. This contained the two-centred arched doorway described earlier, identified as the main west entrance to the hall. The rubble footings of the north end wall of the building were recovered in trenches 13NE and 14NE. They comprised flat slabs, supporting thicker blocks which were faced externally and occupied rather more than half the width of the foundation (Plate VI). The footings returned southwards through trench 10NW as the east wall of



Plate VI: The foundation of the north wall of the hall block, viewed from the north.



Plate VII: The stone sill of a timber wall, south wall of the 17th century extension east of the hall screens passage, viewed from the west.

the hall block. In this stretch they may, however, have been rebuilt for timber framing: one of the photographs (photo. OH 17) indicates the edge of external paving running along the centre line of the original foundation, as if butting a distinctly narrower, later wall. The wide foundation, and probably the rebuilt footing, turned westwards in line with the north side of the west wall doorway. Within the building the same line was occupied by the remains of a partition wall traced in trench 27 and possibly also in 14NW.

To the south of this line, the position of the original east side of the hall is unknown. The building was probably narrower than at the north end, though in the absence of deep trenching it is impossible to be certain. The medieval foundation may have run beneath the footings in trenches 9NW and 8NW, which were attributed by the excavator to the 17th century. On the west side, the hall extended at least as far as trench 19, where fragments of the medieval foundation were traced.

The structures assigned to the 17th century seem in general to reflect an enlargement of the facilities. To the north of the hall block the kitchen, which in medieval times was free-standing, and which is described in detail below, seems to have been linked to the hall by a single line of ashlar blocks in trench 11NW. The blocks, which had a level top and were backed by reused stones, one with medieval moulding, were presumably the base for timber framing. The rebuilt north wall of the kitchen was extended 8m eastwards beyond the original building, to form an additional room or wing. This foundation, too, incorporated a reused medieval architectural block. The east end wall was traced in trenches 12NE and 11NE, though in the latter it seems to have terminated abruptly.

Another 17th century addition extended east through trenches 9NE, 16, 22 and 26. This comprised, on the south side, another single line of sandstone ashlar blocks with a level top (Plate VII), set on a wider foundation and presumably a sill for timbering. Only two of the original blocks remained on the east end foundation, which incorporated a piece of medieval architectural stonework: a corbel which had probably supported a roof truss of the medieval hall, with an attached springer for an arch (Plate VIII). A third block had been used to increase the width of the sill; if it was the sole survivor of another line, it may indicate the replacement of a timber wall by brick. This room was built over an area containing a number of pits. Some of them, at least, must have been filled at or before the time this structure was erected.

Further south, and running parallel to this addition, was the surviving wall of brick, on a sandstone foundation, which contained a 17th century fireplace. As already recorded, its east end wall is known to have slipped into the moat. The position of the south side wall is not certain, but it may have been represented by the foundations in trench 5NE.

At the south end of the hall block the remains were, if anything, even less coherent than those already described. A key to their interpretation may be an area of clay and plaster flooring which extended through parts of trenches 3NE, 4NE and 8NW (layer 6, Fig. 5, S1). In this last trench the floor was edged on the north by a partly-robbed east-west wall (Fig. 5, S1), which in turn seems to have cut the line of the east side wall of the hall. It indicates that the floor may have belonged to a room athwart the south end of the hall. If so, it will have been established earlier than the wall containing the 17th century fireplace, which at its west end abutted the hall wall.

The trenches on the south side of the flooring contained various groups of masonry. Some, particularly the remains in trenches 2NW and 21, appear to have been small projections from the main building. A stone-lined and stone-capped drain, assigned to the 17th century, ran along the west side of this area, in trenches 2NE, 17, 18 and 19. It probably followed a course parallel to and just outside the line of the west wall.

The kitchens

Beyond the north end of the hall block was a rectangular building, measuring 9m by, probably, 8m, which contained a hearth, an oven and a chimney stack. It was identified as a kitchen. The structure was located in trenches 11NW, 12NW, 15NE, 15NW, 23, 28, 29 and 30. It can be divided into three phases of construction:

Phase I. The first phase is defined by the primary walling (mainly rubble foundations) on the west, east and south sides (Fig. 6). Immediately outside the first two of these walls were drainage gullies. The north wall was not located, because the siting of caravans prevented trenching in the relevant area. Its position can, however, be estimated from the evidence of trench 12NW (Fig. 7, S4), where the north end of the east wall presumably marks the point of return westwards, beneath a secondary wall. The floor base of the first phase was numbered layer 12 in trench 15NE. It comprised buff-brown silt and clay, with patches of sand. It may have been either the disturbed old ground surface, or a deposited levelling layer. The latter is perhaps the more likely, since there was no record of a foundation trench for the east wall cut through it: layer 12 appears to run right up to the facing stones.

Towards the centre of the building was a feature (F2) identified as an oven (Plate IX). It was formed by a setting of stone slabs, their surface on approximately the same level as the surface of layer 12 (Fig. 7, S3). A layer of white wood-ash, layer 11, on top of the stones lends support to the idea of an enclosed oven rather than an open hearth. The stones were set in a depression which extended beyond the slabs on the east side. There, it was filled with sand and burnt clay (layer 10), and was identified as a rake-back. The edge of the depression cut not only layer 12-13, but also layer 18



Plate VIII: A medieval corbel and arch springer, reused in a 17th century foundation (scale in inches).

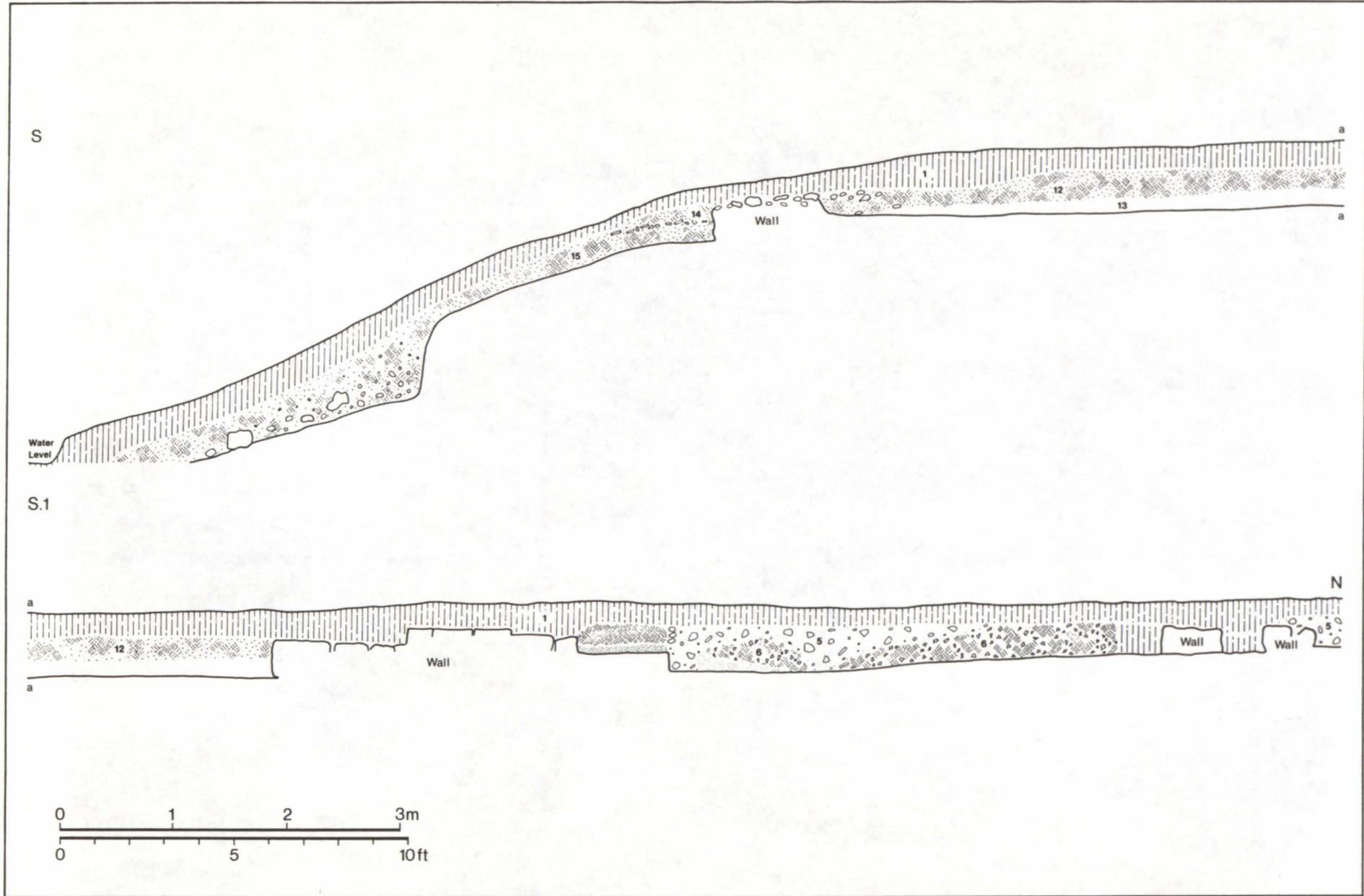


Figure 5: The excavations, section S1 through hall block and south moat. Numbered layers are: topsoil (1); rubble (5); clay and plaster (6); sandy buff soil (12, 15); old ground surface (13); sandy red soil (14).

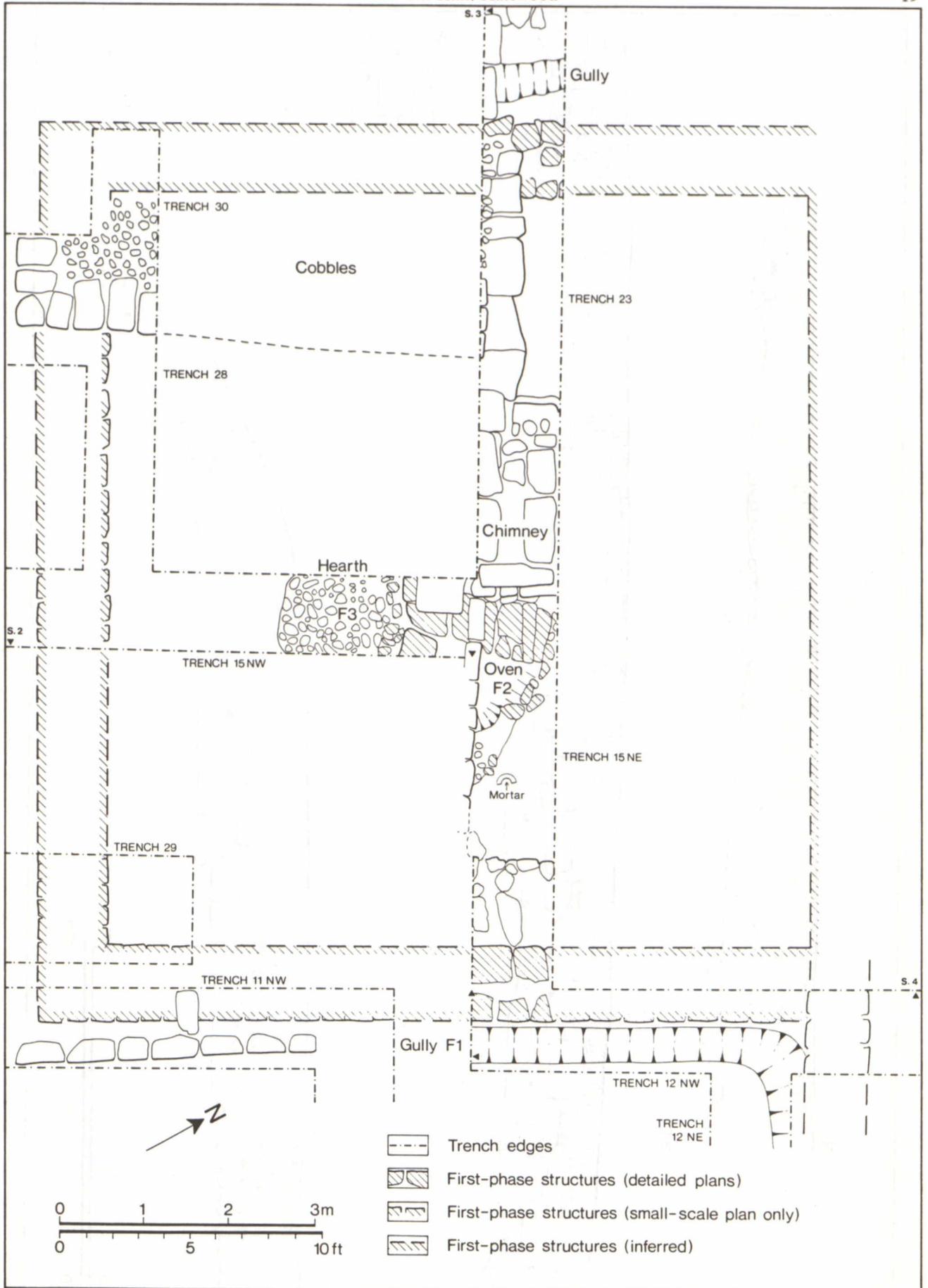


Figure 6: The excavations, plan of kitchen structures.

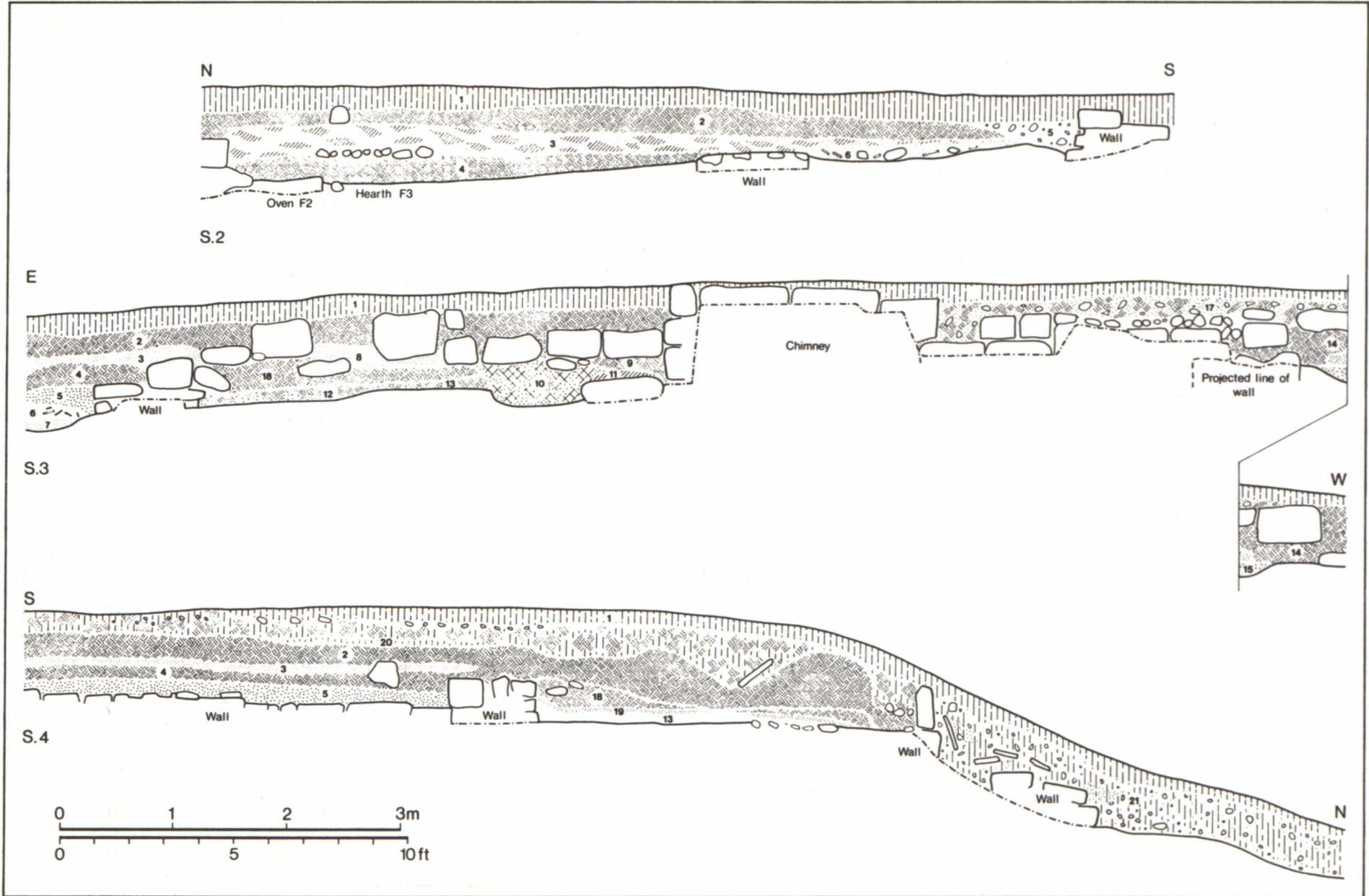


Figure 7: The excavations, sections S2-4 through kitchens. Numbered layers are described in the text.



Plate IX: The kitchen Phase I oven floor (on bottom of trench) with Phase II features, including door threshold (behind ranging poles), on make-up above oven (scale in feet).

above, interpreted as a make-up layer for the second phase. The rake-back seems, therefore, to have been at least partially disturbed after Phase I. On the east side of the building, the silt filling of gully F1 (layer 7) was overlain by a spread of roofing slates (layer 6). This presumably represented the removal of the first-phase kitchen roof covering. Above it was layer 5, a sandy layer said to contain occupation material, which was probably first-phase debris levelled during the construction of Phase II.

Phase II. The start of the second phase was marked by a widespread levelling layer of red-brown clay, perhaps derived from the moat ditch. In trenches 15NE and 23 it was numbered layers 9, 14 and 18; in trenches 15NW and 12NW, layer 4 (Fig. 7). Above it was a spread of ash and silt, layers 3 and 8, which marked the second-phase occupation. The internal feature which can certainly be attributed to this phase was a circular open hearth or oven floor of cobbles, F3, set in a shallow depression in the surface of layer 4 and overlain by layer 3. Another feature possibly of this phase was the chimney-stack foundation, built partly over the site of the Phase I oven: it was thought by the excavator to have been a third-phase insertion, but the section drawings show no evidence of a foundation trench for it, cut through the second-phase layers.

Evidence for the walling associated with this phase is ambiguous. At the north-east corner layer 3 lapped over the inner facing stones of what was, presumably, the north side wall foundation of both phases (Fig. 7, S4). On the south side, layer 4 lapped over the inner face of the primary wall foundation, but layer 3 extended above it completely, and continued as far as the north wall of the hall building (Fig. 7, S2). On both the west and east sides there were, again, indications that the levelling and occupation layers extended over the lines of the Phase I walls (Fig. 7, S3). A partition wall running through the eastern half of the building can be attributed to this phase. Its west end, formed by two dressed rectangular blocks placed end to end, may have been the threshold of a doorway abutting the chimney stack (Plate IX). To the west of the stack, an area of cobbles edged with larger stones seems to have extended over the Phase I walls on both the west and south sides. The cobbles were underlain by a single line of large blocks of stone which may have represented a first-phase or an earlier second-phase partition.

Phase III. The occupation material of Phase II was overlain by another band of red clay, layer 2. It formed a fairly uniform spread over all the building remains except the chimney stack. To the north of the kitchens it extended as far as the inner of two moat-edge walls, in trench 12NW (Fig. 7, S4); it probably marks the demolition of the kitchen, and the re-levelling of its site for other purposes. Only in trench 12NW, however, had the superimposed occupation layer (layer 20) survived as a distinct spread beneath the topsoil.

THE FINDS

1. Introduction to the contexts and artefacts

It will be evident from earlier observations that information about the stratigraphic sequence of contexts is very patchy. The kitchen building is relatively well documented, and the sequences to the east and south east of the Kitchens can be partially reconstructed. Elsewhere, however, only the final phase floors and overlying demolition material were excavated, and only three section drawings remain to indicate the stratigraphy.

In the original finds records each object (including each potsherd) is given a unique number. The object numbers are grouped into bag numbers, which distinguish material from a particular context. In some cases a context is represented by more than one bag number. These have now been grouped into the phases of activity identified in various parts of the site, and phase/area codes are used below to record the context of each find. The codes are as follows:

A The Kitchens

- A1** Phase I occupation features: bag nos. 49, 52, 57, 70, 71, 74.
Layers: 7, 12, 13, 15 in Figure 7, S3.
Dating: There was no precise dating evidence, though the pottery types would be consistent with a 13th to 14th century period of use.
- A1/2** Demolition material marking the end of Phase I: bag nos. 48, 50, 51, 56.
Layers: 6 and 10 in Figure 7, S3.
Dating: There was no clear dating evidence, and there were few finds of any kind. It is assumed that demolition of the Phase I kitchens and construction of Phase II (see below) took place over a short period of time.
- A2/1** Make-up material for construction of Phase II: bag nos. 23, 26, 27, 45, 46, 47, 68.
Layers: 4, 5, and 18 in Figure 7, S3.
Dating: The pottery from these contexts and the demolition material A1/2 was consistent with a rebuilding in the 15th or 16th century.
- A2** Occupation features of Phase II: bag nos. 36, 43, 54, 65, 66.
Layers: 3 and 8 in Figure 7, S2 and S3.
Dating: The occupation of this building phase should be ascribed to the 16th and 17th centuries. The sherds of Mottled Ware in these contexts were presumably intrusive.

- A3** Red clay levelling after demolition of Kitchens: bag nos. 3, 42.
Layers: 2 in Figure 7, S3.
Dating: This clay is presumably part of B3, below, which has been assigned to the 18th century, and linked to the erection of the new farmhouse.

B East and south-east of the Kitchens

- B1** Phase I occupation:
Layer: 'Old ground surface'
Dating: This phase of occupation is the same as for A1, above.

- B2/1** Make-up material for Phase II: bag nos. 28, 38, 39
Layer: 4 in Fig. 7, S4
Dating: This phase of construction is the same as for A2/1, above.

- B2** Filling of pits: bag nos. 24, 25, 29, 64
Layer: --
Dating: Some at least of these pits should have been filled before the erection of the narrow room projecting eastwards from the hall and presumably dating to the 16th or 17th century. A few of the finds attributed (unspecifically) to the pits are, however, of the early 18th century (e.g. clay pipe no. 4).

- B3/1** Demolition material of Phase II: bag nos. 2, 19, 41, 44.
Layer: 3 (different from layer 3 in A2 above)
Dating: This material was sealed by layer B3. It contained three clay-pipe bowls, of which one (clay pipe no. 5) has been dated to the period 1710-1740.

- B3** Red clay levelling after demolition of Phase II
Layer: 2
Dating: The clay contained a very worn coin of c. 1700 and the clay pipe bowls in B3/1, below B3, give a *terminus post quem* of 1710. It is probable that this clay was deposited as a levelling layer in the 18th century, when most of the manor house had been demolished, and when the new farmhouse, next to the gatehouse, had been erected.

C The Moat

- C3/1** Demolition and occupation material in north moat
Layer: 21 in Fig. 7, S4
Dating: 17th century onwards

Other than pottery, few artefacts were apparently recovered. Those described below are principally the

ones from stratified contexts. The absence of animal bones is surprising; but none was recorded. Only a fish bone and an oyster shell are listed, and these had been discarded during the excavations. The architectural stonework was evidently destined for Liverpool Museum, but does not seem to have reached it. Neither the 14th century hall doorway, nor the 17th century fireplace can now be located, although the individual stones of both were numbered for dismantling and may have been removed by the Borough Engineers. Nor have the excavated architectural blocks been found, though some appear in their archaeological contexts in the photographic archive.

2. The pottery vessels (Figs 8-11)

A. M. Slowikowski

Introduction

The quantity of pottery from The Old Hutt was not great, and the vessels were very fragmentary. In view of the large proportion of rims and bases, it may be that many body sherds were discarded during the excavations. The following analysis comprises all the surviving excavated pottery, and takes account also of another small collection of objects, in Liverpool Museum (accession numbers 1961. 68. 1 -). This latter material seems to have been recovered from The Old Hutt moat after the excavations had taken place. Nothing more is known of its content, and it consists mainly of 18th and 19th century black-glazed wares, transfer-printed wares and stonewares. Only two of the vessels seem to be earlier in date, and to belong to the manorial occupation. These have been included in the following quantifications and descriptions.

The pottery was examined within its stratigraphic groups (Table 1). Sherds belonging to the same vessel were brought together and quantified within the earliest context. There were very few cross-contexts; these are presented in Table 2. A type-series was defined, primarily by fabric examination, both by eye and by a x10 lens, but taking into account also the forms, decoration and manufacturing techniques. The definition of a pottery type is that used in the Sandal Castle report (Moorhouse 1983, 84): a sequence of pottery representing either broad geographical traditions, or regional styles within the more general traditions.

The vessels chosen for illustration are representative of what survives (Table 3). They are published at a quarter of the original size, with hatched sections to show hand-built or applied portions. Pottery quantification was by vessel and sherd count. In the tables, however, all totals refer to numbers of vessels, since the numbers of sherds may be the result of selection.

Type number	Kitchen							Area south-east of kitchen and pit fills		Moat	Top soil and unstratified soil
	Phase I Occupation			Phase II Construction		Phase II Occupation	Phase III Abandonment	Phase II Construction	Phase II Demolition and Pit Fills		
	A1		A1/2	A2/1		A2	A3	B2/1	B2 and B3/1	C 3/1	
	49, 55, 70 Early occupation	51, 71, 74 Primary occupation	52 Fill of gully	48, 50, 51 Demolition of roof	23, 47 Levelling	26, 45, 46, 68 Make up	36, 43, 54, 65, 66 Occupation silt	42 Levelling	28, 38, 39 Make up		
1	1										
2	1										
3	4		2			1					
4		1	1								
5		1									
6		4			1	1					
7			1								
8					1						
9				1							
10					3	2		1			
11				1	2	2	2	3			1
12			3								
13						1					
14						1	2		3		2
15						1	4	1	2	2	1
16							1				1
17										1	1
18											1
19									2	9	2
20								1	6	6	2
21									3	7	1
22									1	1	
23									1	2	
24									2		
25								1	5	6	1

Table 1: Pottery quantification, minimum number of vessels by type and phase.

Table 2: Cross-context vessels

Illustration Number	Type	Form	Phases (OH No.)
not illustrated	3	jug	1 - A1(OH 52) 1 - A 1/2 (OH 50)
not illustrated	12	vessel	1 - A1 (OH 52) 1 - A1 (OH57) 1 - A1/2 (OH 50)
13	11	cistern	1 - A2/1 1 - B2/1 1 - U/S

Pottery type definitions

Type 1. Fairly hard, finely but abundantly gritted. Buff in colour throughout, oxidized. Unglazed and undecorated. Only one rim fragment from a jar was found.

Illustration: 1.

Type 2. Fairly hard, lightly gritted fabric with frequent red-orange inclusions, possibly haematite. Pale pink in colour with buff external surface. No sign of any glaze. **Forms:** only one body sherd was found, possibly from a round-shouldered jug.

Illustration: 2

Type 3. Fairly hard to hard fabric, gritty in texture but varying from finely and evenly gritted to inclusions of grits of varying size. Both oxidized and reduced colours occur, sometimes patchily on the same vessel, light orange where oxidized and dark grey where reduced. Reduction only occurs where there is glaze, indicating accidentally rather than deliberate reduction. Cores vary in colour from dark grey to buff (but only where the thickness of the vessel is more than 3mm), otherwise the fabric is orange throughout.

Forms: mainly unidentifiable body sherds, possibly from jugs. Spots of glaze occur, usually externally, but can be seen internally on one vessel which was probably a wide-mouthed jar. Glaze colour is orange or green, sometimes both colours occurring on the same vessel. This appears to be a local variation of the general category, Gritty ware, found all over the north of England, dated to the 13th to 15th centuries (Le Patourel 1966, 43)

Illustrations: 7 - 8

Type 4. Fairly soft, very finely and evenly gritted fabric with tiny, shiny inclusions, either very fine quartz or

mica. Colour is bright orange on external surfaces and buff-orange on internal surfaces, with occasional light grey core.

Forms: pipkins, jugs. Only one example of each was found. Glaze on the pipkin was patchy and mainly on the interior surface. External splashes were probably accidental. Glaze on the jug was external only and almost worn away. Colour on both vessels was green-brown. There was thumbing in groups of at least four around base of the jug.

Illustrations: 3, 6.

Type 5. Fairly hard, very fine and smooth fabric. Tightly knit with few obvious inclusions, besides small amounts of red inclusions (?haematite) and a few fine quartz particles. The colour is buff-orange with patchy bright orange external glaze.

Forms: one possible jug.

Illustration: 4

Type 6. Very hard, very evenly gritted fabric. Quartz inclusions are very fine and white in colour, and appear to have been sprinkled in a crushed form. A few large quartz inclusions are present, up to 0.5mm in diameter. Both reduced and oxidized examples occur. Oxidation gives a light brown colour to the fabric and darker brown surfaces. The glaze, which is external only, is a bright orange colour. When reduced the fabric is dark grey, allowing the quartz particles to show very clearly, and the glaze is dark green to brown-purple in colour. On both reduced and oxidized vessels the glaze is patchy and applied in powdered form.

Forms: jugs vary from quite large examples with strap handles and triple thumbing above and below them, to smaller examples of which only plain body sherds were found. One example (no. 10), has a mock lug or twisted knob applied to the body. Both lug and handle are applied by gently pushing from inside. Finger marks, but not prints, were left on the interior of the body.

Illustrations: 5, 10.

Type 7. Very fine, smooth, hard fabric. No inclusions were visible to the naked eye, but a x10 lens revealed some very fine quartz. Partially oxidized, the colour of the surfaces was buff-brown and the core light grey.

Forms. one probable jug with thumbing in pairs around the base. This is a good quality, well made vessel.

Illustration: 9.

Type 8. Surrey ware (Orton 1977, 82). Smooth, very fine, hard fabric, very finely gritted so that almost no inclusions are seen by eye, although tiny quartz particles can be seen by x10 lens. The fabric is white with a light buff internal surface, oxidized. Glazed patchily on the interior but with a good cover on the exterior, light to dark olive green with tiny brown speckles, possibly caused by iron.

Forms: only one sherd was found, probably from a jug.

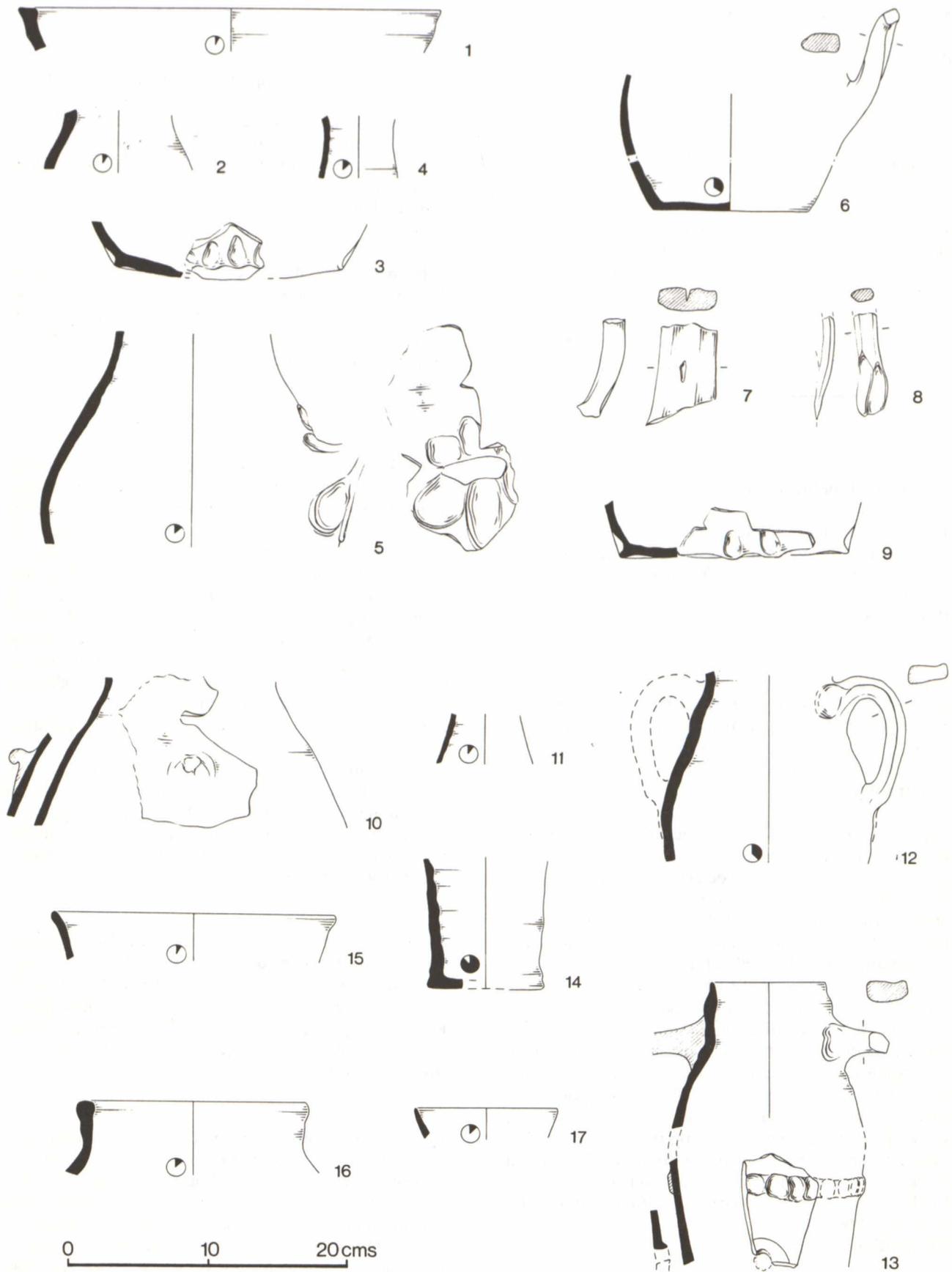


Figure 8: Pottery vessels, nos. 1-17.

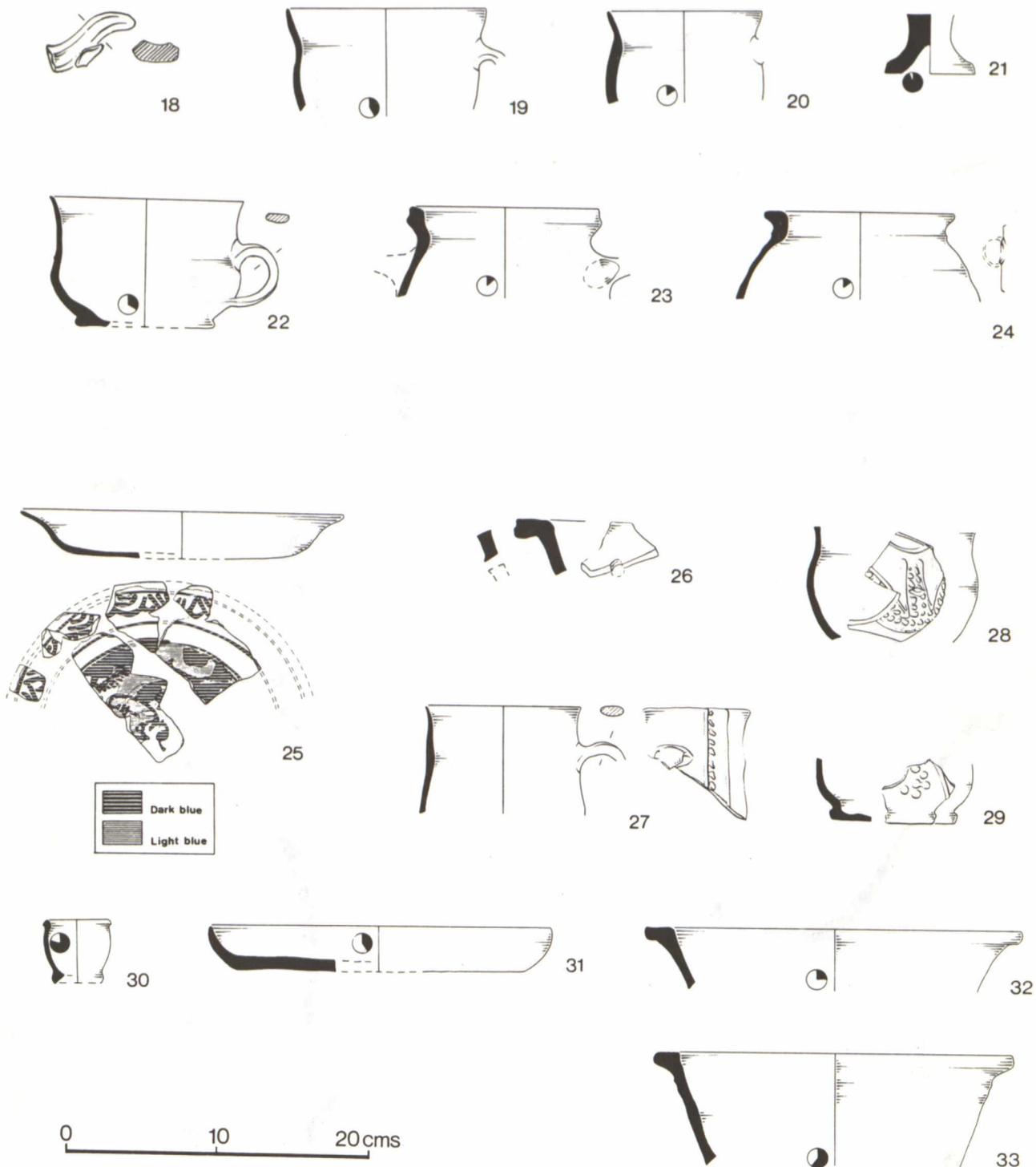


Figure 9: Pottery vessels, nos. 18-33.

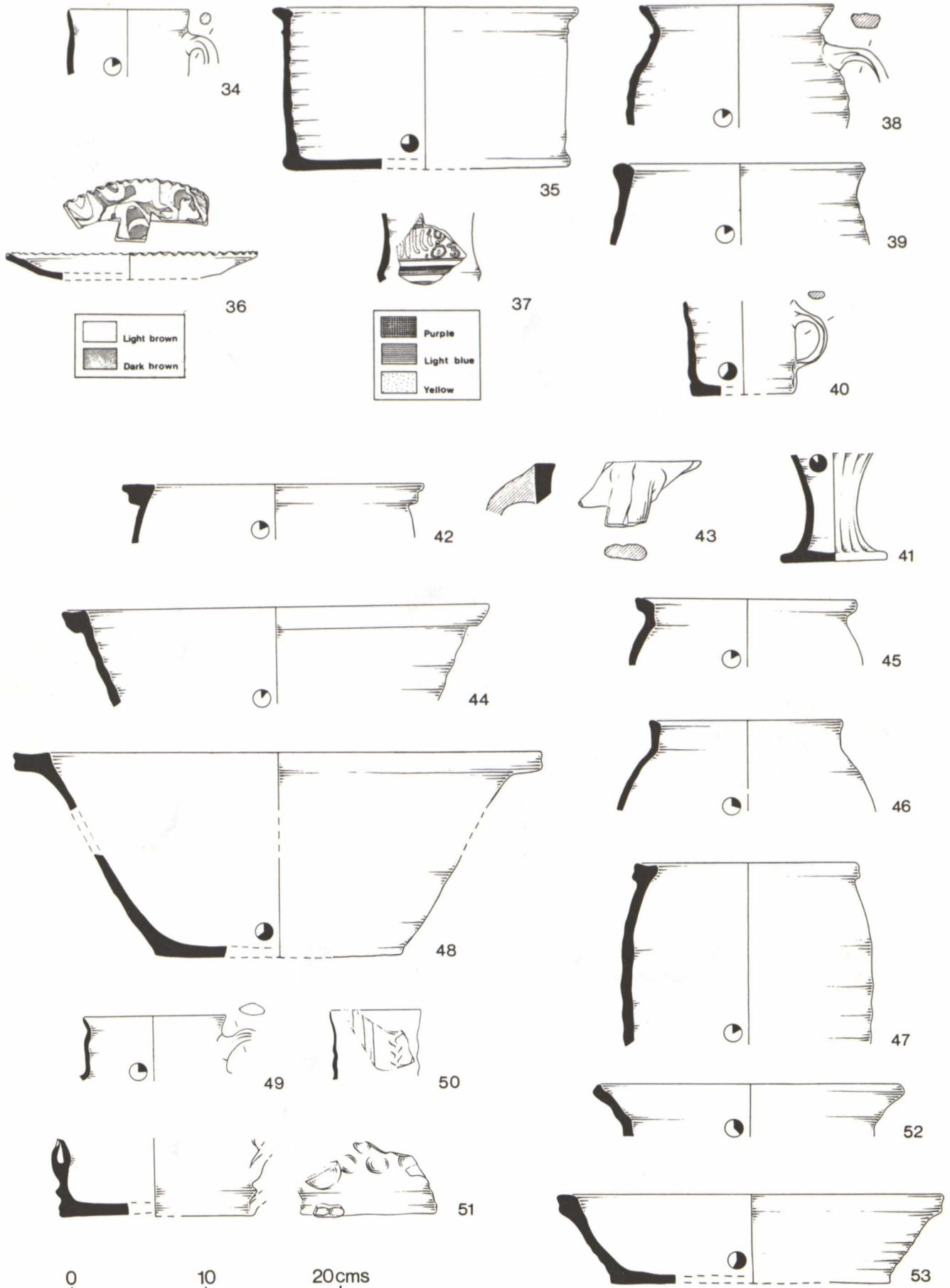


Figure 10: Pottery vessels, nos. 34-53.

This vessel was very thin-walled, 3mm.

Illustration: 11.

Type 9. Tudor green ware (Hurst 1964, 140-42; Moorhouse 1979, 53-61). Very fine, smooth, well made, high quality fabric. Oxidized, white in colour. It has a characteristic bright green glaze on the exterior.

Forms: only one tiny body sherd was found. It was very thin, about 2mm.

Unillustrated.

Type 10. Vitrified Earthenware (Moorhouse 1983, 93, Type 49W). Very hard, almost vitrified fabric, gritty but with grits occasionally fused by heat to give a smooth, almost stoneware appearance to the break. Colour is usually a purple-brown, with some variety to the shade. Characterised by its high firing. Common as a general category in the 15th and 16th centuries throughout England, but with local variations.

Forms: cisterns, both rounded and sagging-bellied.

Illustration: 12.

Type 11. Red ware. Very hard, medium gritty fabric with some tiny quartz inclusions. Usually oxidized, bright orange throughout, sometimes with dark orange-brown surfaces. Glaze is patchy but rather heavier on the exterior, bright orange in colour but can be purple-brown where applied over a brown surface.

Forms: cisterns, probably two handled, and jars with upright rims; one urinal with internal white residue, from the Liverpool Museum collection. One reduced example occurred, dark grey throughout with patchy, dark purple, almost black, glaze on the exterior.

Illustrations: 13, 16, 61

Type 12. Hard, gritty fabric, oxidized to an orange-brown colour with an occasional light grey core. The fracture is very rough due to the quartz inclusions. Surfaces can be light brown in colour, with a patchy brown glaze.

Forms: unrecognisable, but possibly wide mouthed, open forms as the glaze has often been splashed onto the interior, either deliberately or accidentally.

Unillustrated.

Type 13. Hard, smooth, tightly knit fabric, oxidized, orange-brown in colour with orange-buff surfaces. Unglazed.

Forms: jugs, of similar fabric and form to Skipton-on-Swale drinking jugs from West Yorkshire (Moorhouse 1983, 91, Type 29f), with presumably the same function. Dated by a coin hoard from Chester to after 1361 (Rutter 1975, 18-21).

Illustration: 14.

Type 14. Cistercian type ware (Brears 1967, 19-21). Hard, fine, purple-brown to grey fabric. Glazed thickly,

both externally and internally, with an overall coat of brown. One example has a purple-brown exterior but an olive green interior, indicating that the interior had been reduced.

Forms: usually cups of various types, but not enough sherds were found to give complete profiles. Numbers 19, 20 and 34 are round-bodied cups. Cistercian ware was made at various centres, with regional differences, and is often difficult to distinguish from the Black ware (Type 19) into which it develops in the 17th century. The earliest date for Cistercian ware is in the late 15th century (Le Patourel 1955, 23), although it does not occur in 1484-5 contexts at Sandal Castle (Brears 1983, 215).

Illustrations: 17, 19-21, 34

Type 15. Mottled ware. Hard, fine, light buff fabric with occasional streaks of white or red, probably from admixtures of different clays. Glazed internally and externally with a good cover of dark yellow glaze with purple-brown streaks in it. There is also a very dark version; the fabric colour remains the same but the glaze is red-brown with dark purple, almost black, streaks. A locally made ware, the clay was obtained from the South Lancashire coalfield, and although a number of kilns are known from Prescot, none has been found in Liverpool itself (Peter Davey pers. comm.). Corresponds to Fabric 1 of the South Castle Street typology, and dated late 17th to mid-18th centuries (Philpott 1985A, 50-55). Traditionally called Manganese-glazed Ware, but X-ray spectroscopy on the South Castle Street material has shown only minute quantities of manganese, iron being more likely to have produced the mottling effect (Philpott 1985A, 54-55).

Forms: both coarse and fine wares were made, round rimmed bowls and internally glazed dishes predominating.

Illustrations: 15, 22, 35, 54

Type 16. Slipware. Hard, fine, off-white fabric with no inclusions visible. Glazed thickly, both internally and externally, yellow with olive green patches. Some combed red slip decoration beneath the glaze.

Forms: only one tiny fragment of rim was found, possibly a cup with slightly flaring, simple rim.

Illustration: 55

Type 17. Staffordshire-type slipware. (Davey 1985A, 33-49). Very fine, smooth fabric, creamy buff in colour, with few inclusions visible, except occasional red fragments, possibly haematite. Decorated with a dark-brown, light-brown and white slip beneath a clear glaze. This type is not necessarily from Staffordshire itself: it could be a local product. Probably 18th century.

Forms: press-moulded plates with scalloped edges.

Illustration: 36

Type 18. Tin-glazed earthenware. Fairly hard, tightly knit fabric with no inclusions visible. Buff in colour, with a thick, flaky, off-white glaze and blue painted decoration.

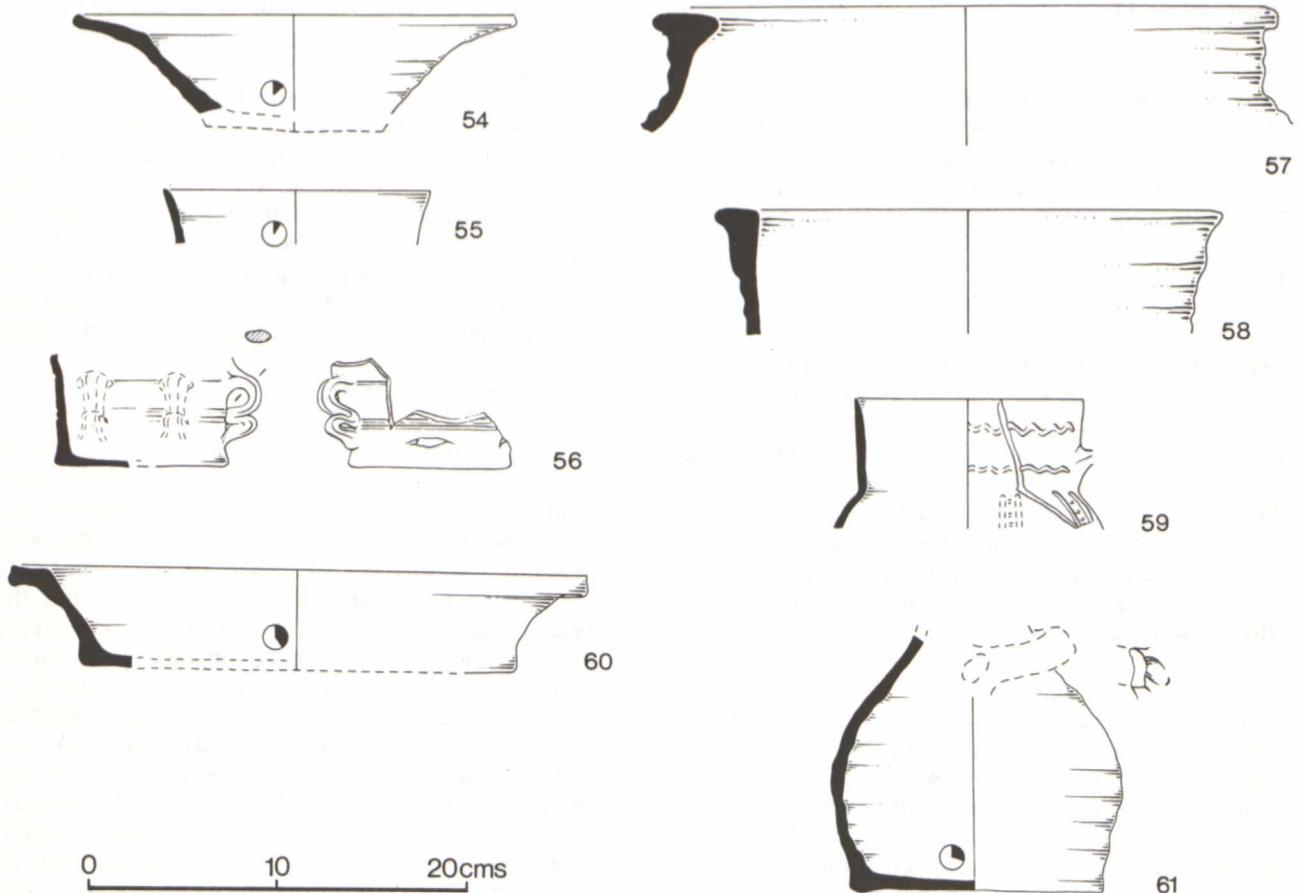


Figure 11: Pottery vessels, nos. 54-61.

Forms: Two vessels were found, with dark blue and light blue decoration. Both were shallow dishes; no.25 was made in Liverpool, the other fragment, unillustrated, was made either in Liverpool or Bristol. I am grateful to Lionel Burman for these identifications.

Illustrations: 25

Type 18(a). Imported tin-glazed vessel. Mr. John Mallet, formerly of the Victoria and Albert Museum reports that a sherd of tin-glazed earthenware with blue, yellow and purple decoration 'is very probably from a small Netherlands drug-pot of albarello form ... The rather coarse, greyish glaze with slight crazing and semi-matt appearance is very similar to our no. 649-1906, a drug-jar which we have labelled as "Netherlandish; second half of the Sixteenth Century". I would guess that yours might be a little earlier, say mid-16th Century ...'

Illustration: 37

Type 19. Black ware (Philpott 1985B, 85). Hard, smooth, tightly knit fabric, usually brick-red in colour, but can be overfired, when it is purple-brown. Very

sparse, small grits. Glazed, internally and externally, an overall deep black or dark brown. A local variation of the general Black ware tradition, dated mid to late 17th century.

Forms: Mainly fine wares, usually cups, either single- or multi-handled; yalso a bottle from the Liverpool Museum collection. There is an underfired version, a body sherd (OH 41) possibly from a jug, and a jug rim (OH 132). Both have an orange-red farbic and a red-brown internal and external glaze.

Illustrations: 38-41, 56

Type 20. Coarse black ware (Philpott 1985B, 85-86). Coarse, very hard and rough fabric, with frequent white inclusions. Colour can vary with the degree of firing and/or reduction, from brick-red to purple-brown. Surfaces vary from light to dark brown. Glaze is dark brown to black, sometimes coating both the interior and the exterior, and at other times only the interior.

Forms: heavy, thick-bodied vessels, either bowls or jars. Because coarse wares are not likely to have travelled far, these were almost certainly made locally, and probably in the 18th century.

Illustrations: 26, 42-4, 57-8

Type 21. Vitrified black ware. Very hard, gritty fabric, although the grits have often been fired out to leave a fairly smooth, compact, almost vitrified fabric. Colour is red-brown to purple, depending on the degree of firing. Glaze is patchy, purple in colour and usually only on the exterior.

Forms: mainly jars with simple rounded or squared rims.

Variants: There are two (nos. 45-6) totally unglazed examples, with grey outer surfaces. Jar no. 46 is probably a non-local product (Peter Davey pers. comm.).

Illustrations: 23-4, 45-7

Type 22. Slipped black ware (Philpott 1985B, 86). Hard, fairly rough, light red to pink fabric, with frequent white and red inclusions. Characterised by an all-over red slip to give a good black colour to the glaze, which is well applied, both internally and externally. The slip is thin and difficult to distinguish.

Forms: Only two examples occur, both are bowls, probably 18th century.

Illustration: 48

Type 23. 'Reversed' Slipware (Davey 1985A, 34). Hard, smooth, compact, buff fabric, covered with an overall red slip and glazed to give a good, even, glossy black appearance to the vessels. Some applied white slip decoration is present. Probably local, but no sources are known. Dated early to mid-18th century.

Forms: mainly jugs

Illustration: 30

Type 25. Dark yellow ware. Hard, buff to light orange-pink fabric, fairly smooth with a good glaze beneath which, occasionally, is a slip of the same clay as the fabric. The darker the colour of the fabric, the more orange will be the glaze, with some vessels almost brown. This type corresponds to the 'self coloured' wares from South Castle Street (Innes 1985, 106-115). There are two variations of this type: one is a pink fabric with large (up to 5mm), white, angular inclusions that show through the light orange glaze as large white patches; the other is a fine fabric, smooth, buff-pink in colour, with no visible inclusions.

Forms: bowls, puzzle jugs, pipkins.

Illustrations: 18, 31-3, 51-3, 60

Discussion

Three major groups were identified, A, B and C, of which only Group A, from the kitchen area was well documented (see Table 1). This group was the only one that produced medieval pottery, and because so little is as yet known from the Liverpool area, it forms an important group, even though the quantity was not large and it must be regarded as incomplete. The kitchen area produced mainly locally made pottery, with

jugs predominating. The pipkin (no. 6) is a rare form in this area. Cisterns (e.g. nos. 12-13) are a common late medieval form, used either for storage or brewing of liquids. The noticeable absence of ceramic jars, the commonest form of the early medieval period throughout the country, suggests that metal was already in use for cooking. The pottery was very fragmentary with the bulk of it being residual. Presumably the kitchen area was kept well cleared of debris. The pottery cannot be precisely dated, but most of it occurred in Phase 1 levels which have been dated structurally to the 14th to 15th centuries. Types 1-4 could well be earlier. In West Yorkshire the Gritty wares, of which Type 3 seems to be a local variant, begin sometime in the 13th century, but they have a long life and continue into the 15th century (Moorhouse and Slowikowski 1987, 111).

The pottery from Group B, the area south-east of the kitchen and the pit fills, forms a less well stratified collection. It has been dated to Phase II (construction and occupation). The pottery was mixed, with four late medieval vessels (Types 10 and 11) occurring in the make up levels (B2/1) and the rest dating to the 17th to 18th centuries, with some residual 16th century material.

The pottery from Group C also dated to the 17th to 18th centuries and consisted of the same types as in the pit fills. This material was probably tipped into the moat as rubbish either during the use of the house or immediately after.

The coarse wares considerably outnumber the fine wares, especially in the 18th century. By this time the fine Black table ware had declined in popularity and been replaced by stonewares and Mottled wares as at South Castle Street, Liverpool (Philpott 1985b, 87). The coarse wares continued to be made for domestic and farm use, with large bowls predominating presumably for dairying.

Manufacturing techniques

Manufacturing techniques were examined to try to determine characteristic methods of each pottery type. Not enough of the medieval pottery survived to be able to say much beyond the fact that it was all wheel-made. The application of handles on Type 6 has already been mentioned.

Medieval pottery was not fired in saggars, like the later fine wares, but stacked directly one on top of another. Yellow wares (Type 25) were also fired in this way, and this can be clearly seen from the pipkin handle (no. 18) that has a fragment of another pipkin handle still adhering to it. They had been stacked one on top of another, and one vessel had slipped and stuck to the one below it. It was, however, still sold, possibly as a second. The direction that the glaze has run also indicates the position of vessels in the kiln. The scar

Illus. Number	Type	Form	Phase	Bag Number	OH Number
1	1	jar	A1	49	-
2	2	jug	A1	70	287
3	4	jug	A1	57	262
4	5	jug	A1	71	291
5	6	jug	A1	74	294
6	4	pipkin	A1	52	248
7	3	handle	A1	52	241
8	3	handle	A1	52	247
9	7	jug	A1	52	240
10	6	jug	A2/1	47	-
11	8	jug	A2/1	47	-
12	10	cistern	A2/1	47	225
13	11	bowl	A2/1	68	280
14	13	jug	A2/1	46	223
15	15	cistern	A2/1	45	222+28
16	11	jar	A2	66	278
17	14	cup	A2	43	214
18	25	pipkin	B2/1	39	-
19	14	cup	B2	29	172
20	14	cup	B2	29	173
21	14	pedestal	B2	29	178
22	15	cup	B2	29	171
23	21	cistern	B2		179
24	21	jar	B2		176
25	18	plate	B3/1		115
26	20	colander	B3/1		221
27	23	jug	B3/1		112
28	23	cup	B3/1		209
29	23	vessel	B3/1		209
30	24	albarello	B3/1		-

Illus. Number	Type	Form	Phase	Bag Number	OH Number
31	25	shallow bowl	B3/1		84
32	25	bowl	B3/1		105
33	25	bowl	B3/1		103
34	14	cup	C3/1		135
35	15	bowl	C3/1		116
36	17	plate	C3/1		51
37	18a	albarello	C3/1		148
38	19	jar	C3/1		122
39	19	jar	C3/1		127
40	19	cup	C3/1		40
41	19	pedestal	C3/1		144
42	20	jar	C3/1		125
43	20	Dutch oven	C3/1		133
44	20	bowl	C3/1		34
45	21	jar	C3/1		119
46	21	jar	C3/1		118
47	21	jar	C3/1		120+136
48	22	bowl	C3/1		139
49	23	jug	C3/1		36
50	23	jug/cup	C3/1		145
51	25	puzzle jug	C3/1		143
52	25	bowl	C3/1		131
53	25	bowl	C3/1		117
54	15	bowl	U/S	12	49
55	16	cup	U/S	12	50
56	19	cup	U/S		76
57	20	jar	U/S	12	47
58	20	bowl	U/S	12	48
59	23	jug	U/S	12	52
60	25	bowl	U/S		66
61	11	urinal	Moat	-	-

Table 3. Pottery information table (descriptions for vessels on Figs 8-11).

Type no.	Jar	Jug	Pipkin	Cistern	Urinal	Cup	Bowl	Dish	Plate	Colander	Albarello	Puzzle jug	Unrecognised vessel
1	1												
2		1											
3		4											3
4		1	1										
5		1											
6		4											2
7		1											
8		1											
9													1
10				1									5
11	1			1	1								8
12													3
13		1											
14		1				4							3
15	1					2	3	3					2
16						1							1
17								2					
18									1				
19	1	1				9							2
20	7						5			1			2
21	6						1						4
22							2						
23		2											1
24	1										1		
25						1	9					1	2

The Old Hut, Halewood

Table 4: Vessel forms by pottery type.

and glaze drip on the rim of a Coarse Black ware (Type 20) bowl indicate that it was stacked upside down, directly on top of another vessel; while another bowl of the same type has glaze runs away from the rim, indicating an upright position.

The fine Black ware cups of the 17th century were removed from the wheel using a wire and a sawing motion. This leaves parallel grooves under the base. Cistercian wares (Type 14), however, were removed from the wheel with a loop of wire pulled tight, leaving concentric grooves on the base, with their centre at one side of the base.

Both Cistercian and Black wares were fired in saggars leaving no scars of other vessels (Moorhouse and Slowikowski, forthcoming). Mottled wares (Type 15) were propped up on three broken sherds or purpose made props to prevent them from sticking. Scars from these props have been found on bowls and cups of this type.

Evidence of Use

Evidence for the use of the pottery was sparse and consisted of sooting and wear marks. No residues survived except for that in the urinal (no. 61) which is typical of such vessels.

Wear marks were infrequent and only occurred on bases. The base angles of several Yellow ware (Type 25) bowls were worn, usually all the way round, indicating a circular motion such as mixing the contents of the bowl, resting on a surface harder than the pot, such as stone. The worn base of a medieval jug, Type 4 (no. 3), indicates long use, as does the completely worn base of a vessel of Type 11. No evidence of wear was found on any rims and it must be assumed that, if lids were used, they were of a material softer than pottery.

Sooting was rare on the late vessels because it does not adhere to glazed surfaces. One Yellow ware (Type 25) bowl was sooted heavily externally, with the sooting extending half way down the body and just inside the rim.

Sooting was slightly more frequent on the medieval vessels from the Kitchen, indicating either their use in the cooking process or the fact that soot adhered well to the unglazed vessels of this period. A pipkin of Type 4 (no. 6) is sooted under the base as one would expect from a cooking vessel. Sooting also occurs on the interior of unidentifiable vessels of Types 7, 11 and 12 and a jug of Type 13 (no. 14), which is also sooted on the exterior. The clean breaks indicate that it was sooted during use rather than after it had been discarded. The most obvious way that a vessel became sooted internally was in its use for containing embers, either in place of a curfew or to carry the embers from room to room to light another fire. The jug, however,

is more likely to have been used to burn something inside it, such as herbs for medicinal purposes (Culpepper n.d., 301)

3. Six clay tobacco pipes (Fig. 12)

P.J. Davey

From the 1960 excavations at The Old Hutt six pipe bowls survive. Such a small number of finds, lacking in stems and detailed stratigraphy, cannot provide the kind of absolute dating or socio-economic interpretative evidence which can be expected from large groups of pipes in complex excavated sequences. The most that can be suggested is a *terminus post quem* for the contexts in which the pipes occur and some idea of the production centres from which they derive.

The six pipes cover a date range of around 1630 and 1740. The earliest of them (no. 1) may be an 'import' from London or Bristol, the rest appear to be local products, whether from the dispersed industry at Rainford (Davey 1978), or from Liverpool itself (Davey 1985b). The catalogue below provides a summary description, comparanda and site details.

Catalogue

1. Well made and finished bowl with flat heel; burnished; very dense, off-white fabric with few inclusions; slight grey reduction zones within the body. This is not a typical north-western form or fabric for this period and is probably London or Bristol in origin (*cf.* Jackson and Price 1974, 89, no.20).

1630 - 1650

Stem bore: 7/64"

OH 194 (CP6) Context uncertain; described as 'buff sandy' in trench 5NE; layer above natural, but other relationships and exact provenance not recorded.

2. Damaged, flat heeled bowl; low quality uneven moulding; milled; off-white clay body, with a fairly coarse texture and a few opaque white inclusions. On grounds of form and fabric probably a South Lancashire product (*cf.* Davey and Pierce 1977, 104, nos. 2-3).

1650 - 1670

Stem bore: 8/64".

OH 25 (CP4) Context group B 3/1.

3. Well made and finished spurred bowl; burnished and partially milled; coarse grained, off-white creamy fabric, high fired, with many inclusions and dark grey reduced core. A South Lancashire type, but in view of the good quality, colour and firing temperature possibly a Liverpool, rather than Rainford product. The Rainford makers appear to have continued to use local pipe clays until the middle of the 18th century (Davidson and Davey 1982), whilst pipe clay movements into Chester and Liverpool were a frequent occurrence

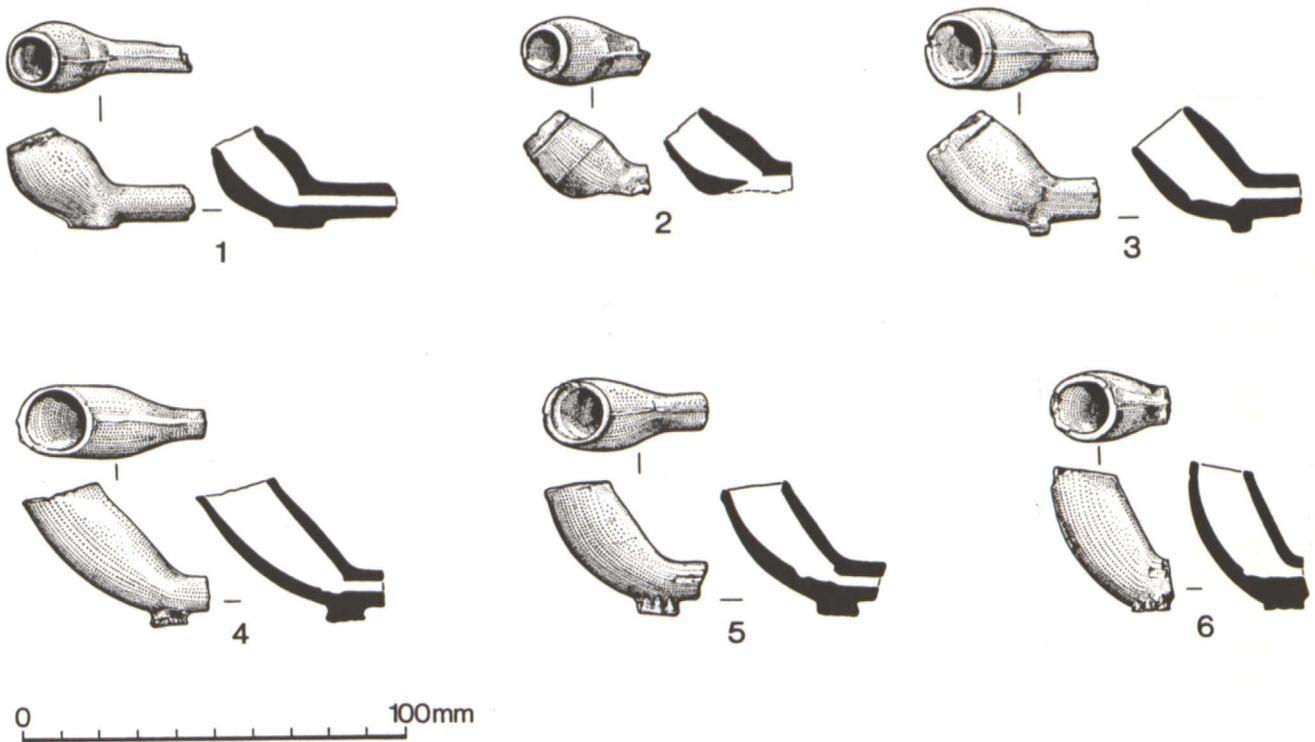


Figure 12: Clay pipes, nos. 1-6.

in the middle to late 17th century (Rutter and Davey 1980; Grant and Jemmett 1985, 482-486). This particular pipe resembles others recovered from Liverpool itself in the 1976 and 1977 excavations (Davey 1985b, 124-5, fig. 44, nos. 1-9).

1650 - 1670 Stem bore: 7/64"

OH 24 (CP3) Context group B 3/1.

4. Elegant, very well made bowl, with small, flat, oval heel; cut off mouth, angled to horizontal; very dense, highly refined fabric, white on the exterior only, reduced nearly black throughout the core. Probably made in Liverpool. This example is indistinguishable from the major group of c. 1727 from South Castle Street (Davey 1985b, 126, fig.45, nos. 28-30).

1710 - 1730 Stem bore: 5/64".

OH 181 (CP5) Context group B2.

5. Elegant, narrow, bowl with ribbed heel; cut off

mouth, slightly angled to the horizontal; milled on the front only, burnished; dense, very white medium grained fabric with many very small, angular white and red inclusions. Although rather a narrow example, on grounds of fabric and form a South Lancashire product related to Rainford Form H (cf. Davey 1978, 7, fig. 3).

1710 - 1740 Stem bore: 5/64" (damaged).

OH 23 (CP2) Context group B3/1.

6. Bowl with ribbed heel, as no. 5; a poorer quality mould not milled or burnished; similar fabric, with reduced grey core. A more typical South Lancashire form; cf. a very similar example from Norton Priory (Davey 1985c, 182-3, fig. 7, no. 53).

1710 - 1740 Stem bore: 6/64".

OH 5 (CP1) From demolition rubble, below topsoil.

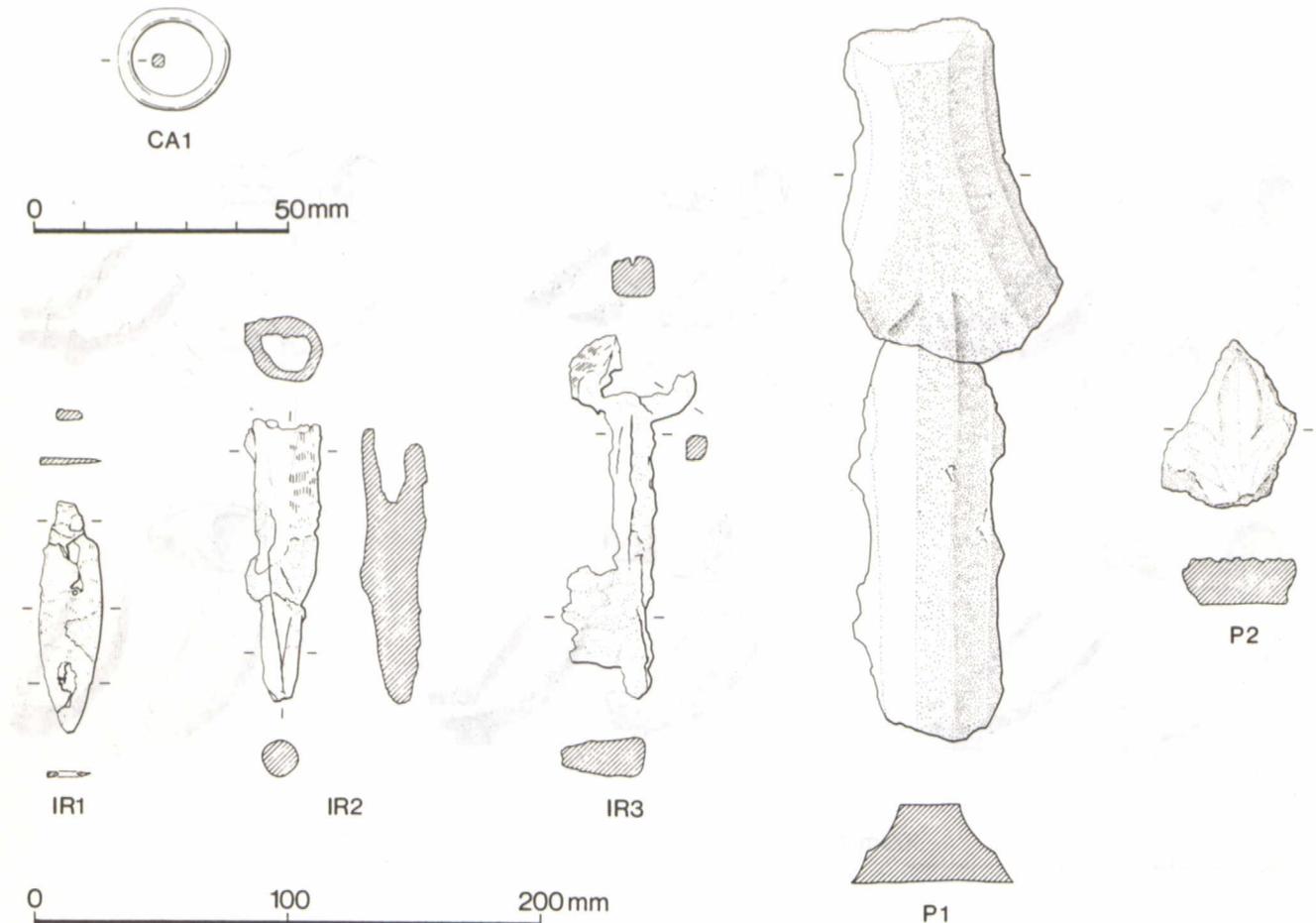


Figure 13: Small finds: copper alloy, no. CA1; iron, nos. IR1-IR3; plaster, nos. P1-P2.

4. Coin and jetton

1. The only coin recorded in the excavations was provisionally identified by S.E. Rigold as a groat of ?Mary II; cleaning has rendered it totally illegible. (Context group B3)

2. A jetton found in the excavations was provisionally attributed by S.E. Rigold to Hans Krauwinkel. Miss M. Archibald has confirmed the reading 'HANS KRAUWINCKEL IN NU' and suggests it was fairly fresh when lost (?c. 1600-1625). (Below demolition rubble, in silt on floor of the early 17th century south-east wing.)

5. Copper alloy (CA) and Iron (IR) objects (Fig. 13)

The excavation archives record the discovery of five copper alloy and three iron small-finds. One of the bronze numbers relates to material from the filling of the first-phase kitchen oven (context A1/2), but the artefact is now missing. Of the rest, three copper alloy objects were from demolition or topsoil contexts, and were clearly more recent in date than the manorial settlement. The remaining items are illustrated here:

CA 1. Harness ring, plain, copper alloy (context group A1/2).

IR 1. Iron knife blade (broken) and part of the whittle tang (context group A1).

IR 2. Iron socketed tapering bar with broken end; in view of its provenance, possibly the end of a flesh-hook (context group A2).

IR 3. Iron key (context group B2).

6. Glass vessels

Report by R. J. Charleston (nos. 2, 5,6) and Dorothy Charlesworth, prepared in 1963 (Fig.14)

G1. Sack bottle in green glass with brownish enamelly weathering; irregular rim outplayed, rounded short neck expanding towards shoulder (context group B3/1).

G2. Foot of a small jug, of the type called generically (and almost certainly erroneously) 'Nailsea'; a date in the first quarter of the 19th century would be reasonable (demolition rubble below topsoil).

G3. Sack-bottle rim, roughly finished, trail below (demolition rubble below topsoil).

G4. (Not illustrated) Fragments of bowl in blue glass, decorated with opaque white threads; analysis showed the opacifier to be calcium antimony oxide ($\text{Ca}_2\text{Sb}_2\text{O}_7$); probably a 17th century import (demolition rubble below topsoil).

G5. Seal from bottle, bearing the name **PIERMONT WATER**; probably dates from the first half of the 18th century; such bottles were no doubt imported with their contents (Pymont was a German spa) since the glass of the bottles does not seem to be English in quality; see Hume 1961, 109 and fig. 8 (demolition rubble below topsoil).

G6. Apothecary's bottle in blue glass, rim knocked off and fire polished; thick base with small kick and pontil mark (demolition rubble below topsoil).

G7. Rim of urinal in green glass, flaking irridescent weathering; rim outplayed and folded over at top; for type see Barrelet 1953, pls xxiii and xxvii (centre) (context group B2 17th century deposit).

7. Stone mortar (Fig.15)

Two fragments of a red sandstone mortar were found in the Kitchens, trench 23, in different contexts. The smaller piece, containing a lug with a runnel, came from layer 18 (context group A 2/1). A larger one, from layer 12 (context group A 1), contained the opposite lug with a runnel, and one of the side lugs. Unfortunately, only the first of these fragments has been found amongst the site finds: this is the basis for the drawing in Figure 15. The second piece was recorded quite definitely as part of the same mortar, and it is shown, *in situ*, on one of the archive photographs (Photo. OH. 46).

The surviving lug has a U-shaped runnel which widens out both internally and externally. The exterior face of the lug is in the shape of a shield. As far as can be seen in the photograph, the opposite lug was similar. The side of the bowl survives to the internal basal angle. It does not appear to have been attenuated by grinding. The provenance of both pieces indicated that it was used in the Phase I Kitchens, in the late 13th or 14th century. The date range accords with that of many other stone mortars found in England (see Dunning 1977, 320-323).

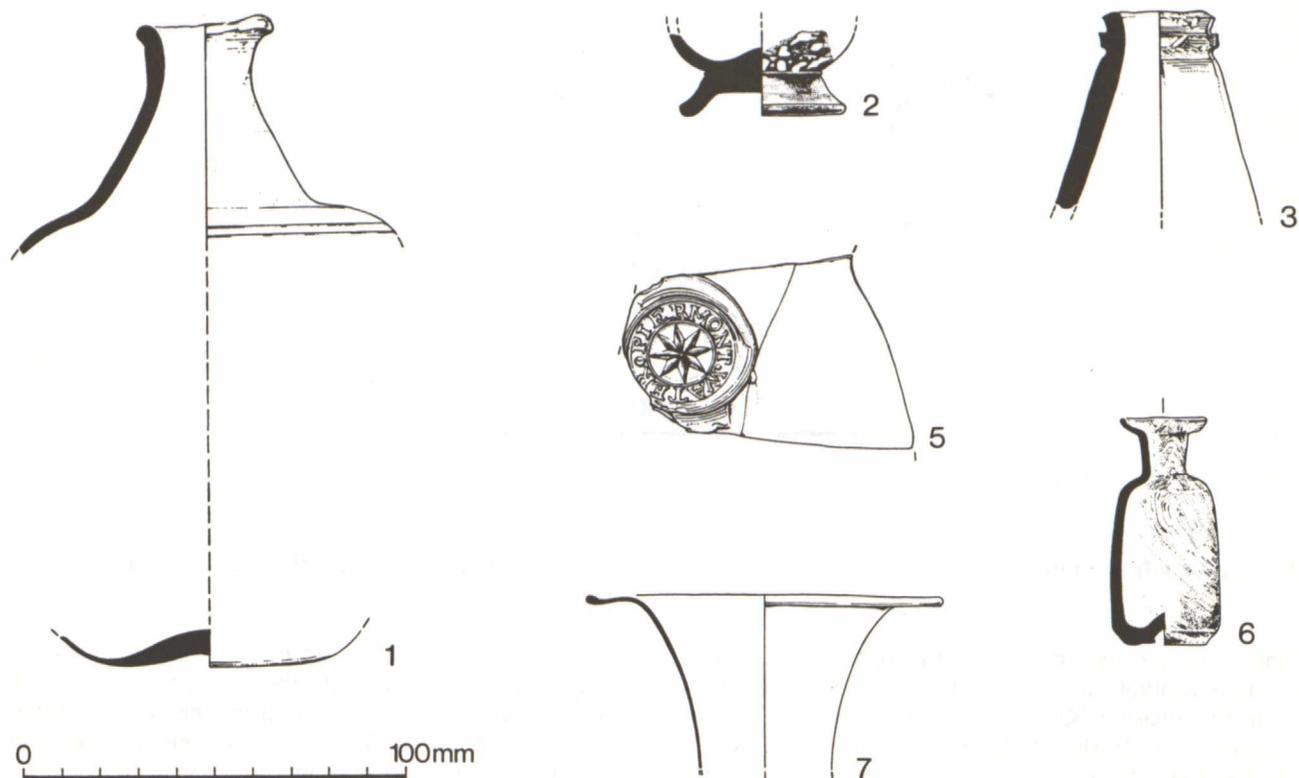


Figure 14: Glass vessels: nos. 1-7.

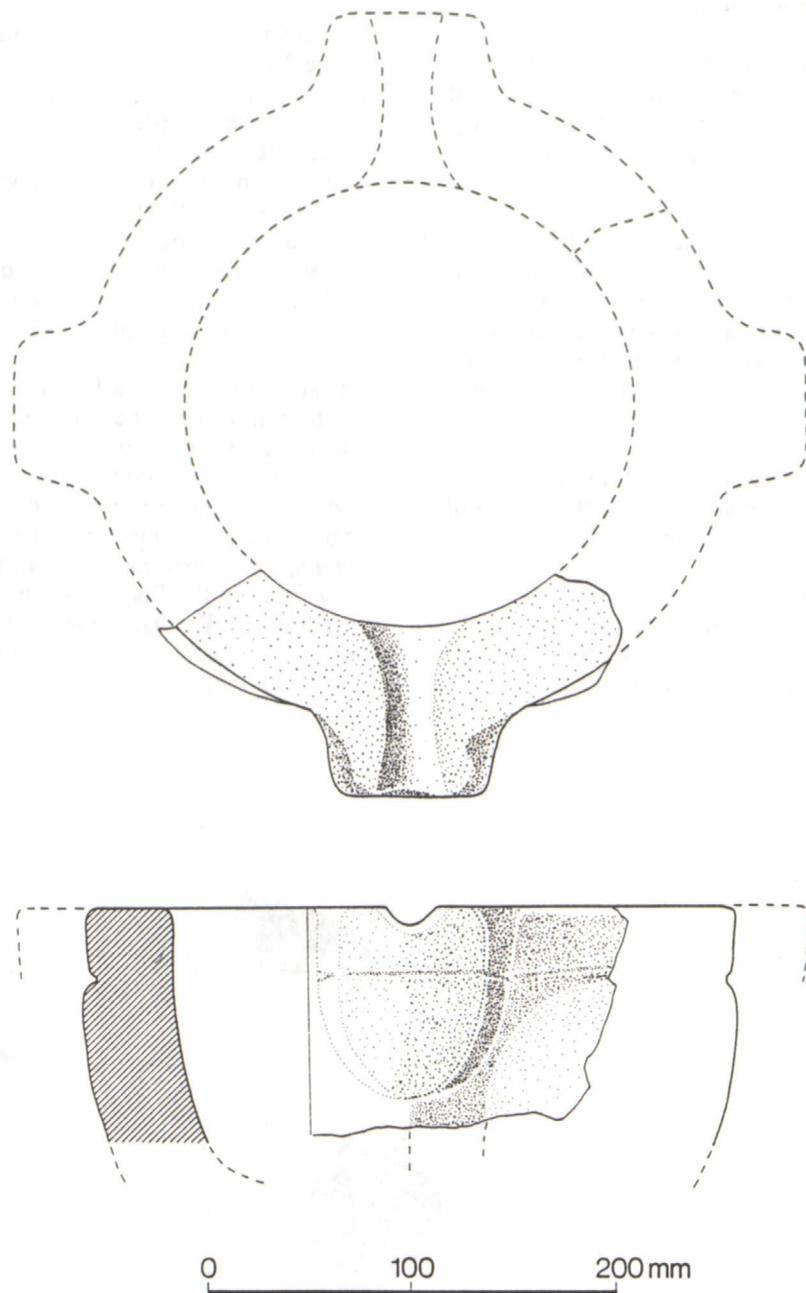


Figure 15: Stone mortar.

8. Stone roofing materials

The excavation records indicate two significant deposits of stone roofing tiles, both of them apparently derived from the Phase I Kitchens. The first of these was a dump of 'purple slates' (layer 6, context group A1/2) in the east-side drainage gully. The second, said to comprise 'York Stone slates', was on the south side, in an equivalent stratigraphic position. Both are likely to have fallen from the Kitchen roof; their occurrence on adjacent sides of a square-plan building indicates that the kitchens had a pyramid roof. The difference in

materials may well have arisen because one roofing plane was re-tiled.

All the roofing slates were left on site but the dimensions of three of them (without recorded provenances, but presumably from the contexts listed above) were noted. The only complete purple slate measured 23 inches by 11 inches (585mm by 280mm). It had an original, single, central peghole, as well as a secondary one off-centre. Two York stone slates measured 12½ inches by 10 inches (313mm by 254mm) and 14½ inches by 9 inches (368mm by 229mm). These also had central pegholes.

9. Ceramic roof tiles (Fig. 16)

A.M. Slowikowski

Thirty-one roof tiles were recovered, and all were of the same type.

Type description

Hard, very finely gritted fabric although there are infrequent fragments of quartz up to 1.5mm diameter. The upper surface is fairly smooth and frequently glazed, although the glaze does not always reach the edges of the tile. The colour of the fabric varies depending on the degree of reduction, which is often patchy. Where oxidized, the fabric is orange-brown in colour and, where reduced, light grey. Number 6 is slightly harder fired with brown fabric sandwiched between purple-grey margins. The glaze colour also varies with the degree of reduction, between green or green and light brown patches where oxidized, and dark brown or purple where reduced.

Discussion

All surviving tiles are ridge tiles with the possible exception of the tiny, unidentifiable fragments. Most of them come from the Kitchen area (twenty in all), and are found in Phase I occupation levels or Phase II construction levels. A small number (six in all) also

occurred in the Phase II make-up levels south-east of the kitchen. The moat and pit fills produced one tile each, and the trenches immediately east of the Hall produced three tiles. Two tiles were unstratified. The occurrence of purple slate and York-stone roofing slabs (section 8, above), and the absence of flat ceramic tiles indicates that pottery was used only for the ridge tiles.

Six of the more complete examples are decorated. The most common form of decoration is a coxcomb crest with knife incisions along one side (nos. 3-4). Three different versions of an applied and thumbbed crest are found (nos. 5-7). The crest on no. 6 corresponds in shape and reduction to no. 25 from Hen Blas (Davey and Morgan 1975, 47) although the Old Hutt fabric appears to be slightly finer. It appears that replacement of broken ridge tiles occurred in a piecemeal fashion, with tiles being bought in when needed, rather than a special order being made to the tiler for tiles that matched those still remaining.

Number 8 is a crested ridge tile with part of the opening for a finial at one end. Fragments of two finials (nos. 1-2) were also found, in Phase I occupation levels. The bodies are globular in shape (see Wood 1965, 298) and have been turned on a wheel. The necks were hand made and then luted on to the body. Finger marks (but not prints) are clearly visible on the inside. A cordon applied to strengthen the join between neck and body as well as for decoration, has come away leaving a scar.

Kitchen				South-east of kitchen	Pit fills	Moat	Hall	U/S
A/1	A 1/2	A 2/1	A/3	B 2/1	B 2	C 3/1		
257	233	153	207	168	184	30	45	279
289	236	154		169		146	188	
296 (3)	243 (4)	155		197			265	
	244	156		199				
	245	164 (5)		201				
	292	165 (6)						
		166						
		167 (8)						
		293 (7)						

Table 5. Ceramic roof tile, distribution in context groupings, by catalogue number (illustration numbers for Fig. 16 in brackets).

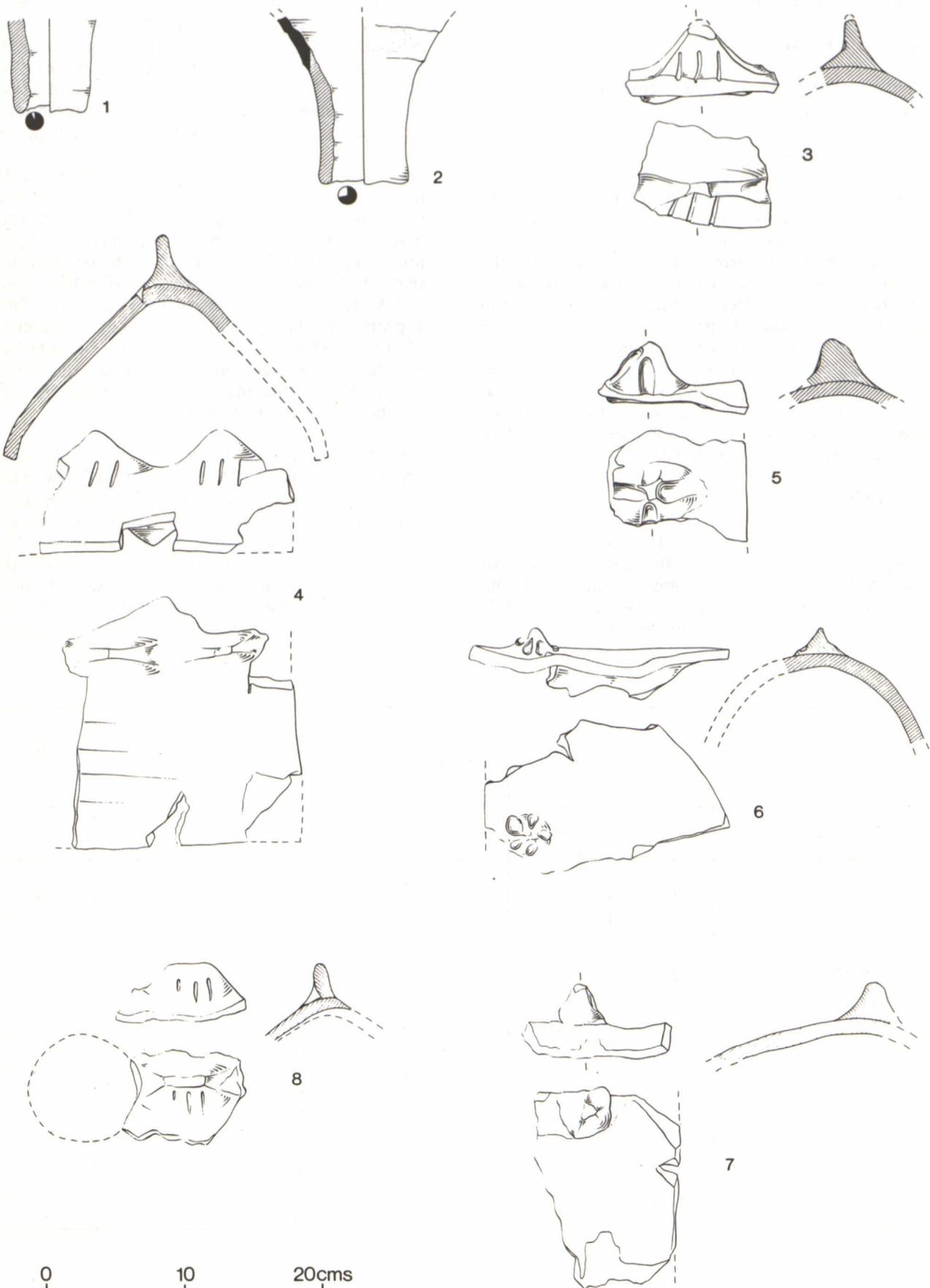


Figure 16: Ceramic roof fittings, nos. 1-8.

The fabric of both the finials is finer than the tile fabric and has no large quartz particles. It is oxidized throughout to an orange-brown colour with a light brown outer surface. There is some speckling of light green glaze, indicating that the main body of the finials was glazed. The necks show only accidental speckling. Remains of mortar are found both internally and externally on the neck extending all the way down to the cordon on the exterior but only part way down the interior.

Although they were found in the kitchen area, the finials were probably not derived from that building: the square plan suggests a pyramid roof with central louvre, rather than one with a horizontal ridge and gables. Instead, they probably came from the hall roof.

All the tiles have been listed in Table 5, by OH number, with illustration numbers in brackets.

10. Decorated plaster (Fig.13)

The recorded fragments of moulded plaster all came from the demolition rubble or topsoil above the 17th century room at the south end of the hall.

P1. Part of a moulded framework for decorative motifs (demolition rubble below topsoil).

P2. Part of a fleur-de-lis (topsoil).

CONCLUSIONS

Archaeological evidence for the layout of the manor house is very fragmentary. What is known of the various rooms through excavation and through records of standing masonry has been assembled for the interpretation plan, Figure 17. There are, in addition, two documentary sources which provide a substantial amount of detailed information. These are the probate inventories taken after the death of Sir Gilbert Ireland in 1626, and after the death of the last Sir Gilbert of The Hutt, in 1675 (Lancs RO WCW). The buildings and rooms which are named in these valuations are listed, in order, in Appendix B. The two inventories seem by and large to follow the same order of description, allowing for changes in the function and naming of rooms during the intervening fifty years. Both start with a group of principal residential and reception rooms (hall, parlour, best chamber, drawing chamber etc). In 1626 the great parlour (no. 1) contained 'statutes', and the best chamber (no. 5) held the 'glasse of Armes'. In 1675 the 'Looking Glass with Severall Coates of Armes' was recorded in the parlour (no. 7). Both inventories then move to outbuildings and service rooms: in 1626 the gatehouse (no. 15) is followed by store house, dairy etc.; in 1675 the little parlour (no. 19) is followed by dairy, kiln, mills etc. Thereafter, both return to domestic rooms: the old hall (no. 35) and adjoining chambers in 1626; and in 1675 the women's

(?) chamber (no. 30), old drawing room etc.

It seems at first sight that there are two distinct sets of residential buildings, especially as the 1626 inventory records both a hall (no. 3) and an old hall (no. 35). When the lists are examined in detail, however, it is clear that the description begins at the upper end of the residential block, works out, via the gatehouse, to the outbuildings, and then returns to the lower end of the manor house. This explains, for example, the occurrence of the knight's chamber (no. 10) in the first part of the 1675 inventory, and of a room or space next to the knight's chamber (no. 39) in the second part. The record of two halls in 1626 can also be explained, for most items listed under 'halle' (no. 3) - the great ash table, the carpets and hangings - are said specifically to be in the new end. The old hall (no. 35) may have been that part of the original structure which had not been rebuilt, and which had gone out of domestic use: it contained a great chest and other 'implements'.

Bearing in mind these descriptions, as well as the excavated evidence of buildings and structural materials, we may now attempt to infer the plan of the manor house, and the development of its layout.

Phase I

The principal medieval structure, dating to the 14th century, was a hall with stone walls and a timber roof supported on corbels. The doorway, which survived until 1960, gave access to the screens passage, with service rooms on the north. The kitchen was a detached square-plan building beyond the services, with a pyramid roof. Presumably the private chambers of the lord and his immediate family lay at the south end of the hall.

Phase II

By the second quarter of the 17th century the upper end of the hall had been remodelled. The most notable architectural units must have been the gallery, with various chambers off, and the great parlour. Much if not all this work may have been undertaken by John Ireland, whose rebuilding of the gatehouse and the outer-court stables has already been noted. It no doubt included the wing projecting eastwards from the south end of the hall, with its Jacobean fireplace and its mullioned and transomed windows. The first floor of this wing could well have contained the gallery.

By this time also, the lower end of the hall had gone out of use as a reception room, though various chambers attached to it still provided service and residential facilities. Archaeological evidence attests the erection of a chamber block east of the screens passage, and the reconstruction of the kitchens, to bring them within the building complex. Further rooms were added to the east side of the kitchens.

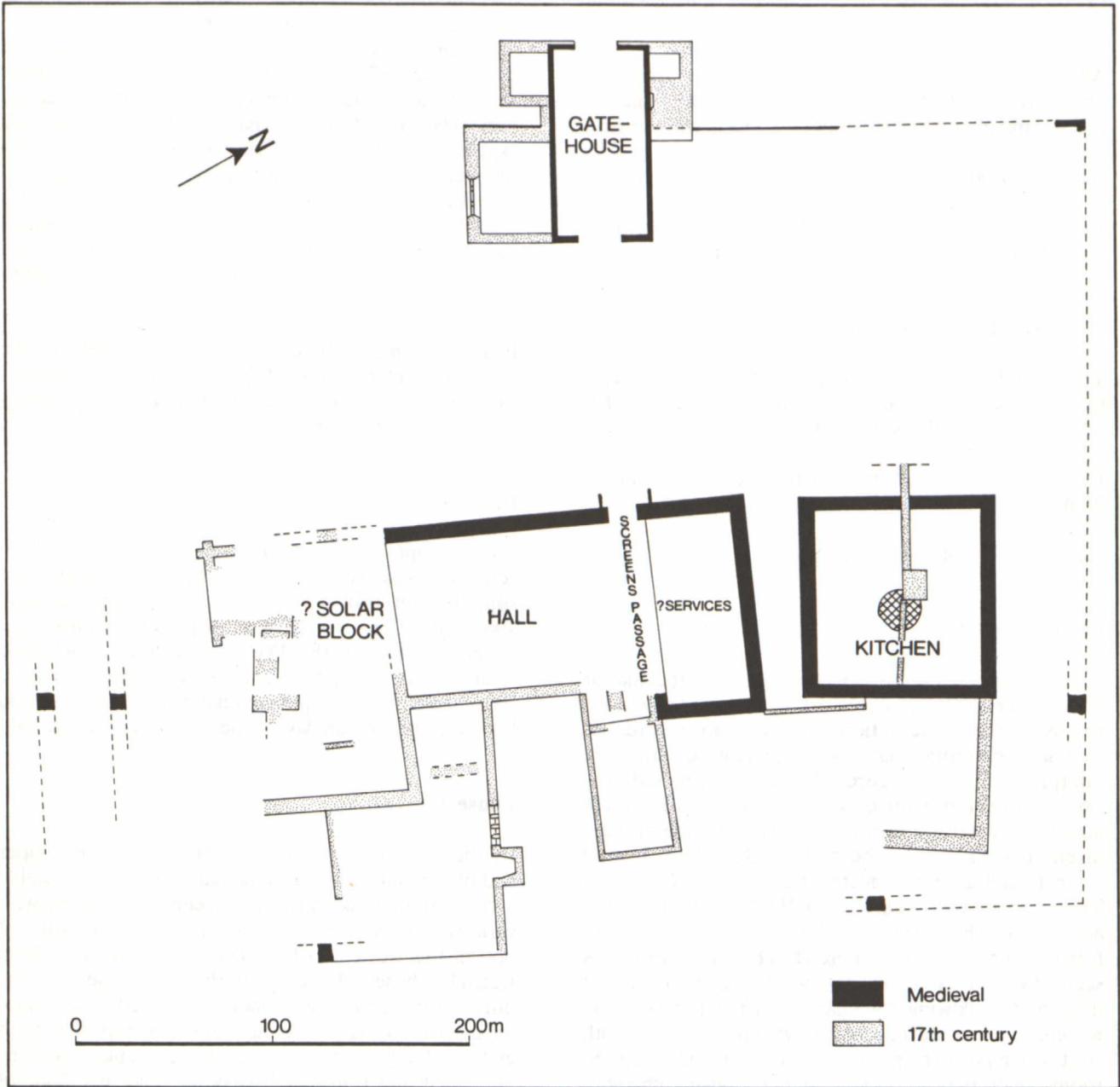


Figure 17: Interpretation plan, the structural phases.

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APPENDIX A: WRIGHT'S MOAT

Excavation at this second moated site (see Fig. 1) was confined to a single trench, dug across the axis of the island from north-east to south-west. The results are recorded in a surviving section drawing (Fig. 18). Below topsoil was a scatter of stones and occupation debris (layer 2). The debris included, towards the south-west, a number of large burnt stones with pieces of coal intermixed. This material lay on the surface of layer 3, a red-brown clayey soil which was described at the time as 'make-up', and seems to have been the moat platform, derived from the ditch. The brown sandy soils below it (principally layer 4) might have been either original sub-soil or a primary make-up layer. If the latter, then the thin layer 5, described as black sandy clay, could be the compressed pre-moat soil horizon. Beneath it, further shades of sandy soil overlay red clay.

The only artefacts recovered were sherds of medieval pottery, all of them from the occupation layer 2. The pots were very fragmentary, and the majority were represented by single, abraded sherds. All the vessels have been identified as Type 3 (see page 25, above): four are jugs and two are bowls. Such as it is, the evidence indicates occupation during, but not beyond the Middle Ages. It may be that this site was one of the 14th century freehold farmsteads, and that it was abandoned when the Irelands bought up the holding: they certainly owned the moat in the early 19th century (Lancs RO, DRL 1/32).

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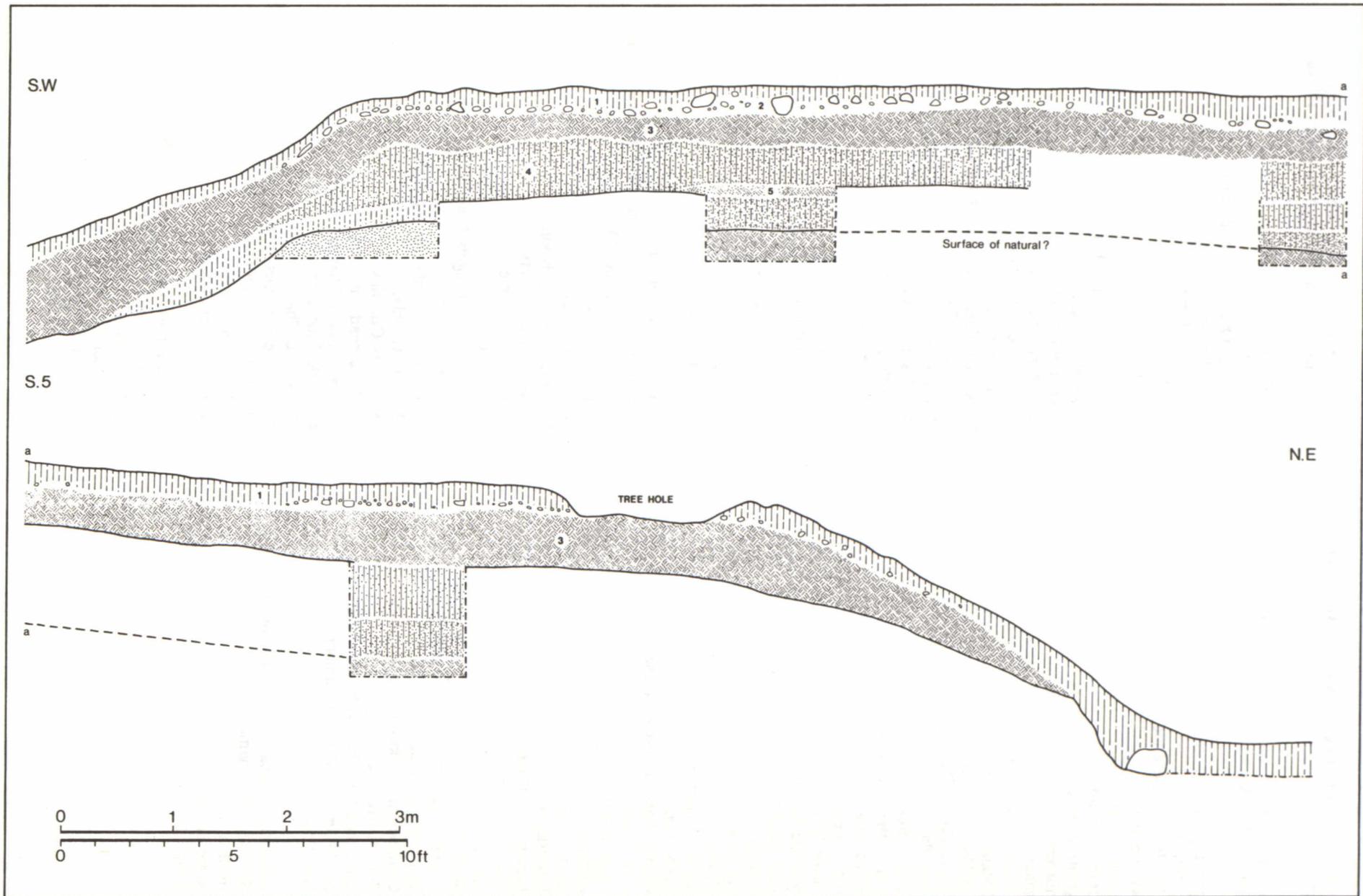


Figure 18: Wright's Moat excavation, section S5 through moated island. Numbered layers are described in the text.

APPENDIX B: PROBATE INVENTORIES OF THE HUTT

1626: Inventory of Sir Gilbert Ireland, proved 1628 (Lancs RO WCW)

1. greate parlor
2. parlor Sellar
3. the Halle (newe ende)
4. wyne Sellar
5. beste Chamber
6. drawing Chamber
7. greate gallerie
8. nurcerie
9. gallerie Chamber
10. Poarche Chamber
11. knights Chamber
12. Middle Chamber
13. Staire Foote Chambre
14. little Parlor
15. gate House
16. top of the gate howse
17. Store Howse
18. old Closett
19. meale lofte
20. boltinge house
21. wett Larder
22. Kitchin
23. dry larder
24. Dayrie
25. Maide Chamber
26. wash howse
27. buttrie, Pantree, bread house
28. salte house
29. waine howse
30. Armor (*insert*)
31. Garners, Barne
32. Butterie, Seller
33. Brewhouse, Dayrie
34. Cookes Charge
35. olde halle
36. Swine howse
37. Chamber adioyninge to the olde halle
38. The other chamber
39. Chamber at the lower end of the halle
40. Porters Chamber
41. Captaines Chamber with the Closet
42. Mr Thomas Irelandes Chamber
43. Red Chamber
44. Nurcerie
45. under the staires to the store howse
46. Sir Gilbertes Chamber
47. maids Chamber
48. Store house
49. Ladies Closet

1675: Inventory of Sir Gilbert Ireland (Lancs RO WCW), based on a transcript by Roger Dickinson.

1. hack house
2. lyme house
3. Roome Over the Lyme house
4. Cart house
5. Groomes Chamber
6. Hall
7. parlor
8. Nursery
9. mr Stanleys Chamber
10. Knights Chamber
11. poarch chamber
12. Gallery Chamber
13. Sir Gilberts Clossett
14. Cheese Chamber
15. Roome next to my Ladys Clossett
16. my Ladys Clossett
17. Buttery
18. old So(?)ehouse
19. Little parlor
20. Dayrey
21. Inner Dayrer
22. Kitchen
23. weete Larder
24. Brewhouse
25. Servants Chamber
26. Kilne
27. wynd milne
28. water Milne
29. ?
30. weomens Chamber
31. Starehead Chamber near the (?Dining) Roome
32. chamber over the (?)
33. Long Clossett
34. Round Clossett
35. Ould Draweing Roome
36. Severall Chambers
37. Dyneing Roome
38. Black Chamber
39. Next to the Knights Chamber
40. New Roome
41. Furthest Chamber in the Gallery
42. Redd chamber
43. Taffety Curtains
44. Stare head Chamber
45. Low butlers Chamber
46. Little Syde Roome
47. passage Chamber next the great Stares
48. Roome next mrs Dones
49. mrs Dones Chamber
50. Long Clossett
51. high Butlers Chamber
52. Roufes
53. ould mr Robert Irelandes Chamber
54. men Servants Chamber
55. Little Clossett belowe
56. Garden Chamber
57. farther Storehouse
58. Nearer Storehouse

SPEKE HALL: EXCAVATIONS IN THE WEST RANGE, 1981-82

D. A. Higgins

SUMMARY

Restoration and underpinning of the west range of Speke Hall, Merseyside, was carried out during 1981-82. This provided the opportunity for limited excavation within the standing structure which dates to c. 1540-70. The excavation provided evidence of at least three earlier phases of building on the site and located deep deposits filling a late medieval water course. These deposits were rich in artefactual and environmental material and have provided considerable information about the lifestyle of this high status household during the late 15th and first half of the 16th centuries. This is particularly valuable in a region where few excavations of medieval domestic sites have been carried out and where finds assemblages tend to be poor.

THE EXCAVATION

Speke Hall stands on the north east bank of the Mersey about 11km (7 miles) south east of Liverpool (Fig. 1). It is a fine example of a Tudor half-timbered manor house built in the style typical of south Lancashire and Cheshire. The existing Hall was probably built in stages during the 16th century (Nicholson 1983a, 6-7) and consists of four main ranges enclosing a courtyard. It had a moat, which is now dry, and stables and outbuildings to the east during the later stages of its use. The manor itself is mentioned in Domesday and references to it occur throughout the medieval period, a building being mentioned on the site in 1314. During an extensive restoration programme a series of small trenches in and around the building were excavated by the contractors. This enabled the Liverpool University Rescue Archaeology Unit to examine the medieval developments leading up to the construction of the present Hall.

Builders' trenches observed by D. Freke in 1980 (see Fig. 1, A and B) in the east courtyard and to the south west of the Hall revealed a group of sandstone blocks (Trench A) and two sandstone walls (Trench B) belonging to earlier building phases. Traces of earlier walls were also found in the trenches excavated at the northern end of the west range showing that the medieval buildings are likely to have occupied approximately the same area as the present Hall. The trenches in the western range were excavated during 1981-82 to facilitate underpinning of the central wall (Fig. 1, C). Ultimately, areas of the Library, Corridor and most of the Billiard Room were examined (Fig. 2). This range was constructed in a single building phase and is thought to have been erected c. 1540-70. For convenience a date of c. 1550 is used in the text. The site code for the 1981-82 excavations was 81 895.

All the areas examined were floored with well fitting

sandstone flags bedded on a sand layer. This flooring is the result of a complete refitting of the western range in 1867/8, following neglect in the early 19th century.

The following notes on the 19th century refurbishment of the Hall were kindly provided by Mr A Tibbles: Mr S.C. Hall described the western range in 1848: 'This side of the house has been quite neglected: windows are partially boarded up, and it is difficult to trace any architectural features, except the two fine chimneys, all else is a complete wreck ...'. In October 1867 Frederick Leyland leased the Hall and by 11 December had issued instructions to restore the old kitchen as a Billiard Room - the work being nearly complete by 5 February 1868. The family were using the 'new rooms in the corridor' by October of that year. Some additional drainage work was carried out in 1869 and 1872 following flooding of the courtyard and ground floor of the Hall. This was represented archaeologically by the insertion of a ceramic drain from the courtyard through the Billiard Room and into the grassed moat to the west.

Excavation in the Library was confined to a small area along the east wall. Under the 1867/8 floor a lead pipe in a brick lining ran E-W across the room from the Corridor and, apparently, replaced an earlier pipe which had passed through a hole in the sandstone footings. Both phases date from during or after the 1867/8 refit. Two post holes from the 1867/8 refit were also found. The post holes measured c. 60 x 25 mm and were formed when pointed timbers were driven in c. 150 mm, and then removed when the floor was laid, so the sand bedding ran into them. Similar holes were found near the walls of the Billiard Room and may have been from light internal scaffolding or setting out pegs. The Library trench was too narrow to go below the footings of the 16th century wall but the surrounding layers were similar to those found in the Corridor.

In the Corridor, the sand bedding for the 1867/8 floor rested on sandy soils mixed with building waste. No traces of earlier floors survived, although these soils did cover the foundation trench for the 16th century wall and, were therefore built up after its construction. The construction of the wall was marked by packed red sandstone masons' waste which came from dressing the foundations. The timber superstructure is supported on two courses of dressed masonry which are bedded on large foundation blocks. These lie across the wall line and project from both sides of it. The layers cut through by this construction and, therefore, earlier than c. 1550, consisted of sandy soils mixed with builders' waste from earlier phases of the Hall.

The footings of an earlier N-S wall were found in the eastern side of the trench. This consists of five courses of rough sandstone blocks running at a slight angle to

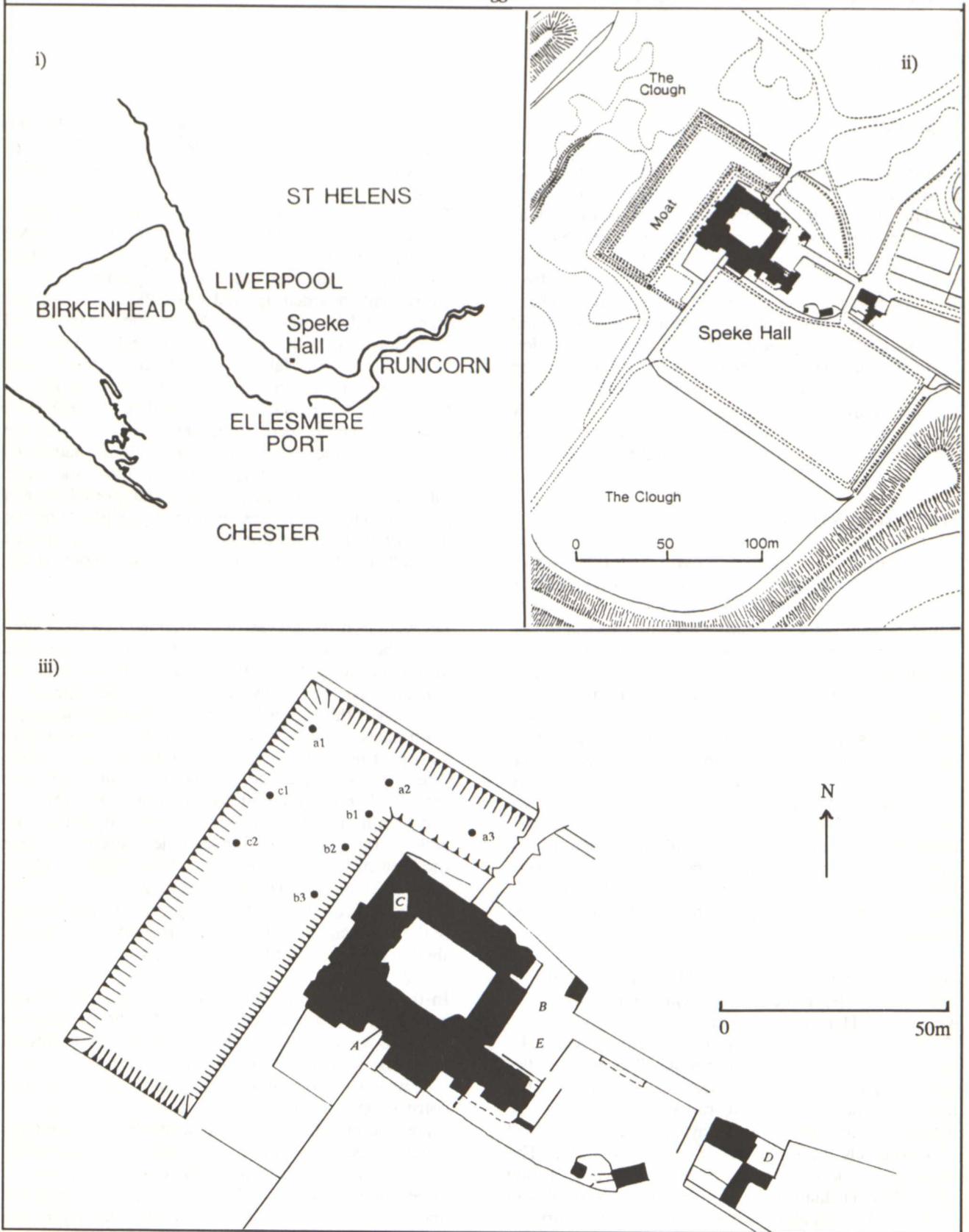


Figure 1: i) Location plan. ii) Site plan. iii) Plan showing location of excavation and builders' trenches and boreholes. Key: A. Freke, 1980, builders' trench observations to the SW of the Hall. B. Freke, 1980, builders' trench observations in the east courtyard (see page 88, trench 32). C. Higgins, 1981-82, excavations in the west range. D. Davey and Speakman, 1987, excavations in the gardeners' compound (see page 85). E. Lewis, 1989, excavations in the east courtyard (see page 87). Boreholes a1-c2. Innes and Innes, 1982 (see page 83).

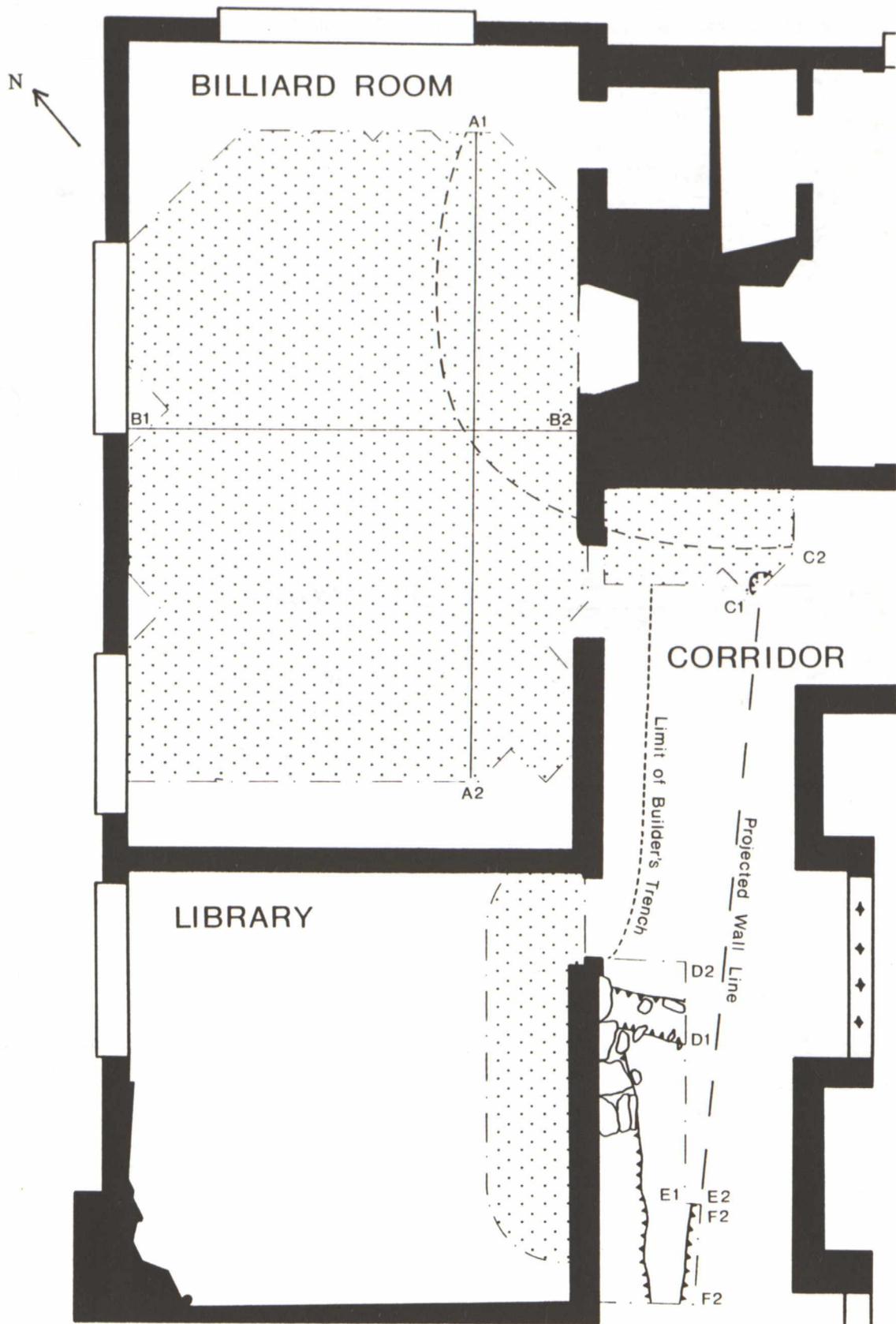


Figure 2: Detailed trench plan

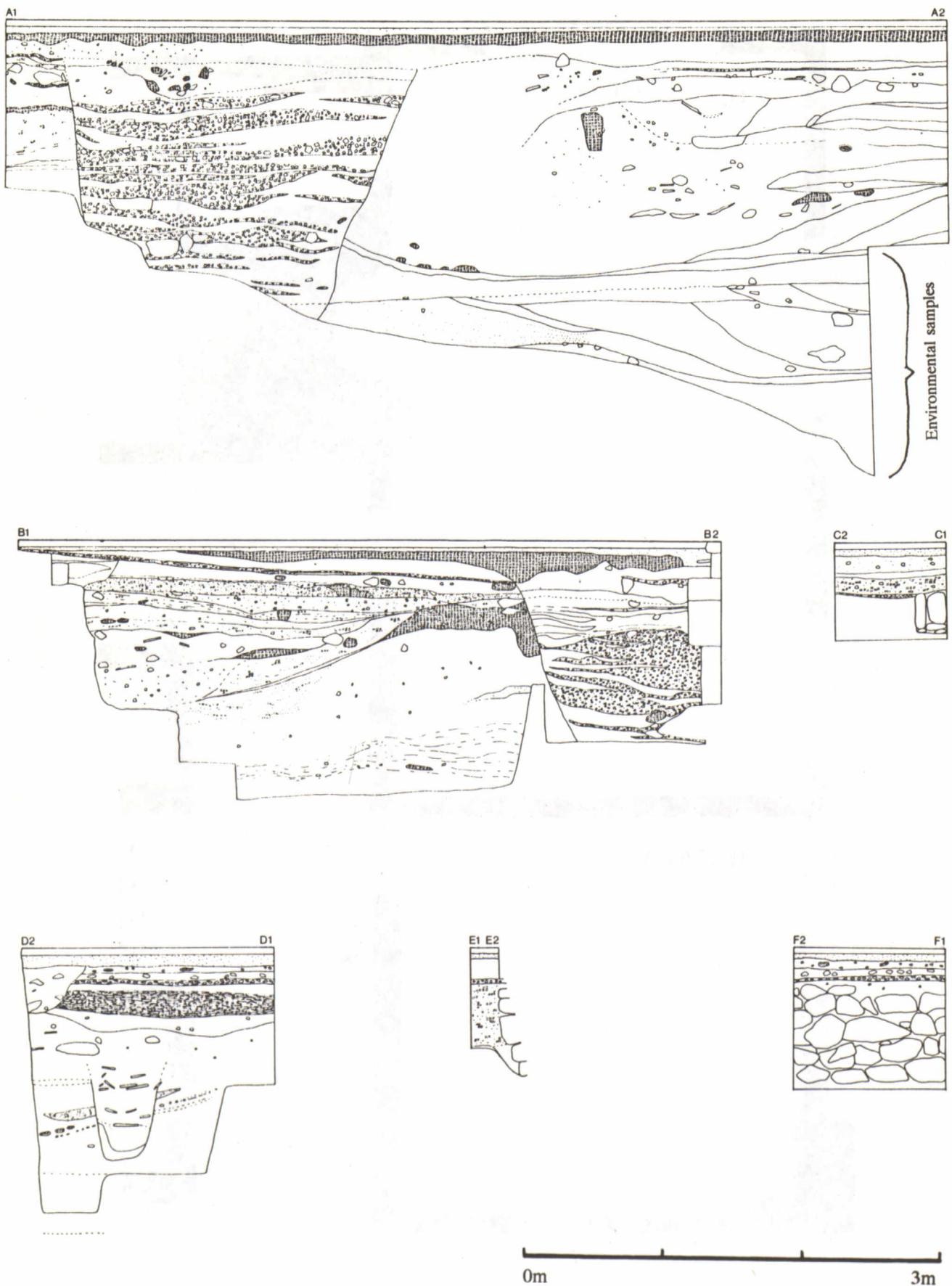


Figure 3: Section drawings (see caption opposite).

the present building. (Fig. 3, sections E1/E2 and F1/F2). This wall possibly extends north under the present corridor to join with the sandstone blocks found in the northern trench (Fig. 3, section C1/C2). This earlier building may have been roofed with sandstone slabs since a tip of these had also been disturbed by the 1550 construction. Beneath it were found traces of another building which had had a slate roof. A trench ran E-W across the Corridor and probably represents a robbed out wall (Fig. 3, section D1/D2). The fill contained many roof slates which were usually between 90 and 140mm wide. Although slate seems an unusual roofing material at this date there are references to Welsh slate being quarried from the medieval period, and slate from the Ogwen valley near Bangor was used c. 1358-60 for the great stable at Chester Castle. (Roberts, *in litt.*, 11.3.82) Domestic debris continued below this building in soft sandy layers with peaty streaks although no earlier structures were found. It seems that occupation at this time may have been to the south (see below). Rubbish may have been dumped to level up, or consolidate the ground which was damp and subject to flooding. Despite its small size this Corridor area was one of the most important examined, showing that at least two substantial building phases underlie the west range, and that these are not the earliest occupation of the site.

The largest area examined was the Billiard Room where most of the floor was removed for excavation. This is where structural problems in the 16th century building were most obvious. The doorway into the Billiard Room was rising and falling so that the door alternately jammed or swung free and this was the initial reason for underpinning. The floor itself was of larger slabs (c. 560mm square) than in the Corridor (400mm square). Many of the slabs had a mason's mark underneath consisting of a few straight lines forming a star. A strip across the south of the room had been lifted to insert one of the drains for the courtyard in either 1869 or 1872. In the rest of the room the slabs were again bedded on a sand layer which had been raked flat

before they were laid. The rake marks survived underneath the big hearth slab showing that its prongs were c. 30mm apart.

The sand layer contained numerous fragments of carpenters' waste and building debris associated with the refitting work. The most interesting finds were 13 fragments of orange glass strips, 31-34mm wide with traces of leading along the edges (Fig. 9, nos. 65 and 66). One of these has an angled end which also shows signs of leading. As no orange glass was found in the other excavated areas the Billiard Room may have had decorative window panels which were removed in 1867.

Inside the door and along the east side of the Billiard Room were two layers of clay which had been used to level the floor and on top of which was a scatter of ash from a small hearth. This was crudely constructed of sandstone and brick mortared onto a slate slab base, and was full of coke and coal fragments. It lay under, but not central to, the present fireplace, the surround of which was inserted in 1867. It does not seem large enough for a kitchen fire. It may have been the ash pit for a small intermediate fire of late 18th or 19th century date.

An odd find, presumably dating from the period of abandonment during the early 19th century, was a dog burial. The remains, only 250mm under the present floor level, must have been buried since all the bones were in position and undisturbed by rodents. The body had been buried with the front legs and head missing - one of the legs was found similarly undisturbed some 4m away. The reason for this shallow, dismembered inhumation within a building remains a mystery.

No clear floor levels were found within the room, suggesting perhaps a raised wooden or earlier stone floor, which had been totally replaced in 1867. The soils under the floor were sandy and well mixed with masons' waste and were probably tipped across this area to make up the surface prior to the building of the west

Figure 3: Section drawings from the Billiard Room:

Sections A and B:

These show the two clay layers (shown as one band) lying directly beneath the sand bedding of the present floor. It is not certain whether these were intended as floor surfaces or merely patching to an area by the door since they faded out to the west of the room. The main feature in both sections is the massive construction trench for the chimney stack on the east side of the room. This cuts through deep, sandy layers of made-up ground and has a distinctive fill consisting of soil and red sandstone chippings from dressing the stonework. On the right hand side of section A1/A2 some 1.75m of material, apparently dumped from the south, overlies the silted up water course. The channel was waterlogged from 2m below the floor level resulting in the preservation of a wide range of organic remains. The column examined for environmental remains is indicated at the right hand side of the section. The white sandy lenses, indicative of running water subject to periodic flooding and identified in Table 15, are the layers which taper down to appear as narrow bands at the right hand side of this section.

Corridor, Sections C - F:

At the north end of the corridor a small group of sandstone blocks was found (section C). These possibly form part of the wall revealed in sections E and F. Section D shows a thin band of red sandstone chippings from dressing the wall footings overlying a thicker band of sandstone slabs from an earlier roofing phase. Below these is a trench, possibly the robbed out footings of a wall, the fill of which contains roofing slates.

range. Bands of red sandstone and a light laminar sandstone showed that the builders had dressed the footings on site and used sandstone for the roof of the 16th century phase. Shrinkages as these deposits dried resulted in a loose gap against the west wall, into which some late china and bones had dropped. The sides of this were soot blackened which, together with a charred main post in the north east of the room (exposed during restoration), shows that there had been a fire in this room at some period, probably when it was in use as a kitchen.

The west wall footings were of a rougher construction than the neatly dressed blocks of the east side, but still consisted of large red sandstone blocks dressed on the outside where a wall is necessary due to a drop in ground level to the moat. The wall has no discernible construction trench and there is evidence of shrinkage back from it. This indicates that the wall was built first and the room level was then made up with soil and building waste within. Because it still supports the west range it was not possible to section it to any depth. The main chimney on the east side of the room also had large blocks supporting it in a massive construction trench. The bottom was not fully reached but a hole c. 5m square and 2m deep had been dug for the chimney, and the trench backfilled with layers of masons' waste and soil (Figs 2 and 3; Sections A1/A2 and B1/B2). This fill contained fragments of a Cologne/Frechen jug of c. 1525-50, confirming a mid 16th century date for the construction of this range. All the remaining layers, therefore, predate the mid 16th century building. The reason for the movement of the door and the massive chimney foundation became apparent when an earlier water course was discovered beneath this end of the range. Numerous layers of mixed sand and soil tips with building waste were found making up the level of the ground above it, and pieces of pottery from several of the 'layers' joined, showing them to be contemporaneous tipping from the first half of the 16th century. Below this fill was a water course which ran roughly E-W across the site. It was not possible to get a complete section but at its deepest point there was a total of 3.3m of deposits under the 16th century floor level (Fig. 3, section A1/A2).

The modern water table was encountered at about 2m below the present floor level. The waterlogged fill of the water course below this point was rich in organic remains and has provided much additional information about the environment and lifestyle of the inhabitants of Speke (see specialist reports). The contents also provide a valuable record of the development of the feature itself. The lowest levels produced evidence of aquatic and waterside beetles, caddis fly larvae and sandy lenses consistent with a clean and open waterway with flowing water. The fill became more organic with increasing evidence of human activity, such as fig seeds, while the presence of apparently *in situ* tree roots and numerous pieces of wood suggested that it became overgrown and clogged with vegetation. The pollen record suggests that the channel ran through a mixed

environment of woodland, heath and arable, while the dung beetles suggest grazing animals for which it may have formed a boundary. Towards the top there were extensive spreads of packed organic material containing a lot of domestic waste such as oyster shells and bone. This, together with the apparently buried dung beetles at around 2m below the present floor, suggested that the water course had gone out of use and was being filled up.

This suggestion is supported by the stratigraphy. In Figure 3, section A1/A2, the northern slope of the water course can be seen. It appears to be a wide and rather shallow feature with deposits in it sloping gently to the south. Above the water table the tip lines slope down from the south, suggesting dumping from that direction. It would seem that, having silted up to a point where it was probably no more than a flat marshy area, the ground was reclaimed by large scale dumping from the direction of the existing Great Hall. The water course does not seem to have been particularly important either for defence or drainage as it was allowed to become overgrown and it had domestic waste dumped into it, the artefacts in this waste suggesting that it was being filled during the later 15th and early 16th centuries. An unusual type of evidence to support this date is provided by the presence of sycamore pollen, an alien tree species, not widely planted in this country until the 16th century (Jones 1944). Finally the area was levelled and the Hall complex extended over it c. 1550.

It is by no means certain that the bottom of the water course was reached in the available section. But, from the excavated portion, the channel appears to have been very shallow and wide. The greatest depth excavated was only about 1.25m while the estimated width would have been at least 8.5m. This suggests the channel would have extended well under the Library. It would also have extended underneath the possible robber trench seen in section D1/D2 and it may have extended as far as the wall seen in section F1/F2. If this is the case, these features must have been relatively short lived since they would be sandwiched between the filling of the water course and the construction of the west range in c. 1550.

It is not clear whether the water course was man-made or natural although the wide and shallow profile, lack of any evidence for recutting and the fact that it was allowed to silt up all argue for the latter. Whichever is the case it appears to have started life as an active channel, presumably running to the Mersey. In 1314 there is a reference to a brook called Mykelderyord which ran through the Clough, between the present Hall and the Mersey (Nicholson 1983b, 33). This brook probably ran along the line of the present pools and culverts which lie to the west of the Hall. In 1314 the brook is recorded as having a tributary, perhaps the water course encountered in this excavation. Whether this is the case or not, the excavated channel appears to have formed a northern boundary to the Hall

complex which is likely to have been in the general area now occupied by the Great Hall. The brook would have formed a western boundary and, with the Mersey to the south, the site would have been surrounded on three sides by water.

As well as organic remains, the fill was rich in artefactual and building debris. This included roofing slates and pottery ridge tiles as well as some fine pieces of metalwork and pottery, reflecting the status of both the buildings and their occupants. The borehole survey picked up the probable line of this feature outside the present building. It was clearly an important element in the medieval landscape at Speke and it would be useful to find out more about its origin, course and relationship with the earlier Hall complex.

The wide range of artefactual and environmental material recovered from this channel is particularly useful in that it provides information about the food and lifestyle in the late 15th century to early 16th century Hall which supplements the documentary evidence available (Nicholson 1983a). In addition, the excavations have shown the location of the northern boundary of the earlier buildings and indicated that sandstone footings and slate roofs were used in these phases. The archaeological examination of a relatively small part of this site has demonstrated that a great deal of information can be recovered about both the standing structure and the earlier deposits beneath it. The excavation of these well dated and sealed deposits has made a considerable contribution to the archaeology of the region and demonstrates the importance of properly planned research during any future disturbance of this site.

Acknowledgements

My thanks to the many individuals who have contributed in so many ways to this excavation and without whom this report could not have been finished. The excavation was carried out by a Manpower Services Commission STEP scheme with financial assistance from Merseyside County Museums and facilitated by Tysons, who helped with equipment and accommodation. The architect, Carol Thickins, and structural engineer were most helpful during the excavations. Documentary information was provided by Tony Tibbles, then the curator of Speke Hall, and Susan Nicholson of the Archaeological Survey of Merseyside. Specialist reports were kindly compiled by Clem Fisher and Dr J. Baker for the bones, Dr and Mrs Ian Goodall for the metalwork, Dr J. Innes and Philippa Tomlinson for the environmental material. Mr D. Barker, Dr P.J. Davey, Miss M. Goodby, Mr J.G. Hurst and Mr S. Moorhouse all provided assistance with the identification of the pottery from the site, and Mr D. Roberts of the Welsh Industrial and Maritime Museum provided information about the Welsh slate. Christine Phillips helped with the preparation of the site plan and sections. All the finds illustrations are by the author.

FINDS REPORTS

The pottery

None of the deposits excavated was particularly rich in ceramic finds despite the fact that a large quantity of spoil was excavated from the water course which had clearly been used for dumping domestic waste. The majority of the pottery was recovered from the levelling deposits in the water course or from contexts directly associated with the construction of the west range in c. 1550. This material appears to range from the late 15th century through to the first half of the 16th century in date. Individual vessels appear to have been widely scattered by levelling and building, for example, fragments of a Cistercian ware vessel were recovered from contexts 3, 11, 60 and 119. For this reason the earlier pottery is considered by fabric type rather than context group. A table for each of the main classes has been prepared giving details of the fragments recovered. The layout of the tables is described below.

The pottery tables

A table has been prepared for each of the main classes of pottery. This lists the contexts from which fragments were recovered and gives details of the number and type of fragments found. NA is used where particular information is not available.

The tables give:

- | | |
|----------|--|
| Cxt | The context number from which the fragments were recovered. |
| Joins to | Context numbers of other pieces with which the fragments recovered actually join. Where pieces from more than one context have been re-assembled the total sherd number and weight is given under the lowest context number. |
| Fab. | The fabric texture had been graded by inclusion size on a scale of 1 to 5:- <ol style="list-style-type: none"> 1. Very fine, almost no inclusions visible to the naked eye. 2. Fine sandy, no inclusions larger than 0.25mm. 3. Medium sandy, no inclusions larger than 5mm. 4. Coarse sandy, no inclusions larger than 1mm. 5. Very coarse, with inclusions larger than 1mm. |

Sherd No.	The number of sherds recorded, including those in 'joins to'.	Min. V.	The minimum number of vessels represented by the sherds. This was arrived at by logical arrangement of the pieces into the smallest number of possible vessels.
Sherd Wt	The total weight of the sherds, in grammes.	Fig. no.	The figure number of any illustrated pieces.
S.V.	Context numbers for other fragments which are thought to come from the same vessel. These are counted and weighed under their own context numbers.		
Rim ϕ	The diameter of any rim sherds, in mm.		
Rim%	The percentage of any rim surviving.		
Handle scar	The number of handle stumps or scars present on the sherds.		

In addition, the Cistercian wares were divided into 'kitchen' (K) or 'table' (T) types. The 'kitchen' types are larger, rather cruder vessels with relatively thick walls, such as storage jars, and the 'table' types are smaller vessels with thinner walls, such as cups. This designation does not necessarily imply either their original status or use but offers a means, by modern analogy, of visualising and differentiating the categories of vessel recovered.

Iron-free fabrics (Fig. 4)

Fragments of nine vessels with white or buff coloured fabrics were recovered. Almost all of these sherds were associated with rubbish or levelling deposits in the water course and appear to be of late fifteenth century or early sixteenth century date. The remains of one cooking pot made of a rather coarse buff clay were

recovered (Fig. 4.1). The remainder of the pieces came from rather finer vessels all of which are imports to the area. At least two plain Saintonge jugs are represented (contexts 58, 62, 119 and 156; Figs. 4.2 and 4.3) and four sherds from a Beauvais 'fine green' jug (contexts 80, 152 and 154; Fig 4.4). There is also a bottle which is probably from Cheam in Surrey (Marshall 1924, 86; Fig. 4.7).

Table 1: Iron-free fabrics

Cxt	Joins	S.V.	Fab.	Sherd No.	Sherd wt.	Rim ϕ	Rim %	Handle Scar	Min. V.	Fig. no.
8			2	1	5				1	
25			1	1	11				1	
36			2	1	16				1	
58		?119, 156, ?62	1	2	14				2	
62		?58, ?119, 156	1	1	NA				1	4.3
80		152, 154	1	1	3				1	4.4
119		?62, ?156, ?58	1	1	22				1	
139			2	2	6				1	
151			5	1	168				1	4.1
152		80, 154	1 & 2	1	NA				1	4.4
153			1	c60	NA				1	4.7
154		80, 152	1	1	5				1	4.4
156		62, 58, ?119	1	2	56	100	17	1	1	4.2

Iron-rich fabrics (soft types) (Fig. 4)

Quite a range of fabrics and vessel types are made of iron-rich clay firing pink to orange in colour, sometimes with a reduced core. All these pieces are generally soft and have a 'rugged' fracture. Most are small fragments coming from the mixed late medieval tips used to make up the ground. They represent jugs and storage/

cooking vessels from a number of sources, and do not fall into easily recognisable groups. The only substantially complete piece (from contexts 28 and 32) is the lower part of a jug (Fig. 4.8). It is made of a fine pink fabric, which is probably an import to the area, possibly from continental Europe. Some of the pieces have patches of green or orange glaze.

Table 2: Iron-rich fabrics (soft type)

Cxt	Joins	S.V.	Fab.	Sherd no.	Sherd wt	Rim ϕ	Rim %	Handle scar	Min. v.	Fig. no.
5			2	1	35				1	4.5
24			4	2	20				1	4.6
28	32		1	many	392				1	4.8
32	28									4.8
29			3	1	4				1	
42			3	1	5				1	
45			3	1	10				1	
58		107	2	2	26				1	4.9
70			3	1	19				1	
75			2	1	6				1	
77			3	1	10				1	
79			3	1	15				1	
84			2	1	5				1	
107		58	2	1	8				1	
117			3	1	10				1	
119			3	1	30				1	
143			2	1	5				1	
151			4	1	7				1	

Iron-rich fabrics (hard types) (Fig. 5)

A second group of pots made of clay firing orange to red in colour can be distinguished from the softer types. The fabric is typically well fired, making it much harder with a smooth, angular fracture. There are numerous

sandy grits in the body distinguishing it from typically 17th century fabrics. Most of the sherds from Speke seem to be associated with construction activity c. 1550. Many of them have orange to dark brown glazes, often covering large areas.

Table 3: Iron-rich fabrics (hard types)

Cxt	Joins	S.V.	Fab.	Sherd no.	Sherd wt	Rim ϕ	Rim %	Handle scar	Min. v.	Fig. no.
11			3	1	3				1	
27		140	4	1	39				1	
41		65	4	1	34				1	5.10
58			3	11	300				1	5.12
58	67		3	2	55	85	27		1	5.11
60		62	3	2	58				1	
62		60	3	1	42				1	
65		41	1	1	105	100	20	1	1	5.11
67	58									5.10
73			5	1	11			1		
140		27	4	5	113			1		

Highly fired grey fabrics (Fig. 5)

One of the most distinctive types of pottery consists of highly fired fabrics heavily gritted with white quartz grains. Although the fabric is extremely hard, the dense inclusions tend to give it a 'rugged' rather than a glassy fracture. The colour is almost always an even grey/black, although some pieces have patches of red. The vessel types seem to be large jugs and storage vessels. These are often thin walled in relation to their size resulting

in some sagging of the sides. All the rim sherds have thumb bands applied and two bodies show incised decoration. The pieces often have a good external coating of a translucent green/brown glaze speckled with white patches where the grits show through. Most of these sherds are associated with the rubbish levels over the water course and so probably date from the late 15th century.

Table 4: Highly fired grey fabrics

Cxt	Joins	S.V.	Fab.	Sherd no.	Sherd wt	Rim ϕ	Rim %	Handle scar	Min. v	Fig. no.
5			3	1	74				1	
18			4	1	5				1	
22	25		2	2	71				1	
25	22									
45			3	1	136			1	1	
60			4	1	185	100	30		1	5.13
71			2	1	15				1	
73		76 80 ?153	3	2	24				2	
76	80	156 153	3	2	206				1	5.14
80	76	73	3	1	75				1	
119		?130	3		21				1	5.15
130		?119	3	1	20				1	5.16
132			2	1	26				1	
140			4	1	25				1	
152			4	1	6				1	
153		?73	2	1	32				1	
"		76, 80	3	2	42				2	5.17
"		156								
"		73, 80	4	1	37				1	
156		76, 80	3	5	493				2	
		153								
US			3	3	10				3	

Cistercian-type Ware (Fig. 7)

A considerable number of sherds were of this type (Brears 1967). The majority were associated with deposits immediately prior to and after the 1550 construction. Both 'kitchen' and 'table' types are represented, although most are of the former type. In all cases the fabric is hard and smooth with very few inclusions (Unit ref. collection type 10). The colour varies from a rich purple/brown to a lighter red/brown. The glaze is often thin becoming patchy on the larger vessels while the smaller vessels have a more even coating. Individual glazes vary but generally are either a dense finely streaked brown/black or a more transparent metallic brown with iron specks. These effects are probably the result of two different glaze types. The larger vessels were made and fired with the smaller ones as is shown by a 5cm diameter scar on the base of a larger jar (Fig. 7.29). This has clearly been fired

upside-down with a smaller vessel, probably a cup, standing on its base. Another larger vessel may have covered this, acting as a form of sagger. The 'kitchen' types represented (e.g. Figs. 7.29 and 7.32) are upright jar forms and may have had handles (Fig. 7.35). The smaller vessels are mainly drinking vessels of two forms, very similar to the mid 16th century groups from Norton Priory (Greene and Noake 1988, 59). One type has a narrow base (Fig. 7.23) leading to a conical body with a wide mouth (Figs. 7.20 and 7.21) and seems to be slightly less common than the second type. This has a much more globular body (Figs. 7.22, 7.24, 7.26, 7.27, 7.28 and 7.30) with the neck about the same diameter as the base which at Speke ranges from 7.5 to 9cms. Both types have distinctive handles (Figs. 7.33 and 7.34) and pronounced bases which seem to be a common feature of 16th century pottery in the North West. The only other recognisable form is part of a bottleneck (Fig. 7.19). All these forms are slightly different from

the Cistercian type series published by Brears (1971, 20). Since similar 16th century drinking vessels have been found not only at Norton but at Warrington

(Davey and Morgan 1977, 114), Twiss Green and Prescott, it seems that an extended Cistercian ware form series is needed for the North West.

Table 5: Cistercian-type ware

Cxt	Joins	S.V.	Sherd no.	Sherd wt	K/T	Rim ϕ	Rim %	Handle scar	Min. V.	Fig. no.
3	11(2), 119		7	82	T				2	5.19
11	60, 3	108, 119	5	56	T				3	5.20
18			1	15	T	24	100		1	5.21
23			6	8	T	70	20		1	5.22
25		30, 34	1	63	K	180	16		1	5.23
30	34	25	2	133	K				1	5.23
34	30	25	1	53	T	90		1	1	5.24
36			1	12	T				1	5.35
51			1	4	T				1	
55			71	96	5K				2	5.27
				2T						
58			6	46	T			2	2	5.25
60	11		6	41	T				2	5.26
61			5	43	T				2	5.28
65			1	1	T				1	
108	11		3	8	T			1	2	
113			4	20	T				2	5.29 & 5.30
115			1	4	T				1	
119	3	11	3		T				2	5.31
123			1	29	T			1	1	5.32
128			1	12	T			1	1	
132	136		2	17	T			(handle) 2	1	5.33
136	132		5	80	1K				4	5.34
U/S					3T					
					1?					

Cistercian-type variants (Fig. 7)

Contemporary with the Cistercian types and of similar form and glaze were three sherds, probably all from drinking vessels. Although they also have a fine even fabric it is softer and of brick red colour. This makes the glaze look browner, and more like typical 17th century sherds. But they were found in the tipping prior to the 1550 construction and must represent lower fired variants of Cistercian types.

Table 6: Cistercian-type variants

Cxt	Sherd no.	Wt	K/T	Min. V.
123	1	4	T	1
130	1	7	T	1
U/S	1	6	T	1

Miscellaneous (Fig. 7)

Two joining fragments of a Cologne stoneware jug (Fig. 7.18) were found in the construction trench for the chimney. This is an important find not only because it is a scarce import, but because it confirms the suggested date of c. 1550 for the west range. The form and decoration is closely datable to c. 1525-50 (Reineking-von Bock 1976, 201-204), the fragments being from a small jug. The decoration would have consisted of a spiralling tendril design, perhaps with another decorative emblem or face on the front. A good example of similar date has been found at Norton Priory (Greene 1974, cover illustration).

Later Wares (Fig. 7)

Only a small quantity of later wares were recovered since there was very little disturbance below floor level between the mid 16th century and the refitting of 1867/8. Some of the later wares, for example, those from the later hearth or from a crack against the wall

in the Billiard room, cannot now be found. However, the following pieces are present.

Context B2: the sand bedding for the Billiard Room floor. This produced three sherds from either one or two creamware plates of late 18th or early 19th century date. The rim sherds are decorated with a painted border consisting of two red lines. There are six sherds from a small pearlware jar which dates from c. 1820-30 (Fig. 7.37). This has a diameter of 78mm and very thin walls rising to a total height of only 32mm. There is a groove below the rim, presumably to secure a tied covering. There is one small sherd of pearlware tea-bowl with printed decoration of similar date and two small pieces of a printed willow-pattern plate dating to the 1820s or later. It is interesting that all of the pottery recovered could date from 1820s while the floor can be historically dated to 1867/8. This later date is supported by the presence of a decorated tobacco pipe of a form current from the mid 19th century onwards in the same context. If the pottery was derived from rubbish left within the west range it can be suggested that it was derelict for about 40 years before the 1867/8 refitting.

Context 12: fill of a pipe trench from 1867/8 refitting (very similar material to B2 above). One small rim sherd of a late 18th century or early 19th century porcelain tea-bowl. This is painted internally and externally with an underglaze pattern in blue with additional red and gold decoration applied over the glaze.

Context 103: a layer of sandy earth under the bedding for the Billiard Room floor. An undecorated handle sherd from a tin-glazed vessel (Fig. 7.36).

Discussion

The pottery can be related to activity on the site and shows a development from the late medieval to early post-medieval types. The presence of white-wares from Surrey and France and the Cologne stoneware jug shows that throughout this period imports formed a small but important element of the pottery used.

The earliest pottery recovered from the filling of the water course probably dates from the late 15th century. At this time fine imported white wares are found alongside the highly fired grey jugs and jars which were probably produced locally. These are decorated with thumbled strips and incised lines, other examples of which are not uncommon in the North West. The almost vitrified body demonstrates fine control over high temperature kilns and shows that the technology existed for the later switch to Cistercian types.

The water course deposits and the levelling above them also contained a range of soft sandy fabrics. These are typical of the later medieval fabrics found on many sites in the North West. At each site, however, they seem

slightly different which suggests there were numerous local production centres which were making jugs and cooking pots.

In the levels associated with the 16th century construction there were hard gritted red wares and Cistercian types. These represent a fundamental change to more even, uniform types of pottery, with a greater range of vessels and more even glazing. The most important of the new forms are the Cistercian cups, marking the first departure from the widespread use of wood and bone table vessels in the medieval period.

The red fabrics also include new forms, such as the jar (Fig. 5.11) as well as older types such as the jug (Fig. 5.10). The recognition of these mid 16th century hard red fabrics (with brown glazes) and their distinction from the similar 17th century types, is important in the North West, where they mark the start of a period of substantial pottery activity. On many sites with both 16th and 17th century occupation, such early fabrics can be mistakenly assigned to the later period. At Speke this group constitutes a small but important assemblage of forms and fabrics sealed by a mid 16th century structure.

Pottery illustrations (Figs. 4-7)

Iron-free fabrics (Fig. 4)

- Context 151. Base sherd of cooking pot, reduced grey core with buff surfaces. Mainly <1mm sandy inclusions, some larger. Sagging base with at least three finger impressions on base line. No glazed areas.
- Context 156. Rim and base sherds of a plain Saintonge jug. Fine cream fabric with slightly pinkish core, and fine mica 'glitter'. No glaze.
- Context 62. Rim sherd and handle of a plain Saintonge jug; only the handle side survives. Fine pinkish/buff fabric with diameter of c. 90mm. Handle well smoothed onto body, small glittering inclusions in fabric, with two very small spots of light green glaze. Some ?crosses scratched onto handle after firing.
- Contexts 80, 152 and 154. Beauvais 'fine green' jug in fine white fabric (1), no glaze internally, glossy full copper-rich glaze externally, with darker green streaks. Grooved decoration flooded a deep green/black. Handle is of a coarser (2), slightly brown, fabric with small rounded inclusions.
- Context 153. Cheam Bottle - about 60 sherds. Fine highly-fired buff fabric (1) rather uneven shape and rough finish. Base has been chipped all round to make it stand. The top is starting to flare out. Thin splashes of yellow glaze on body - fuller near top and coats all upper portion internally.

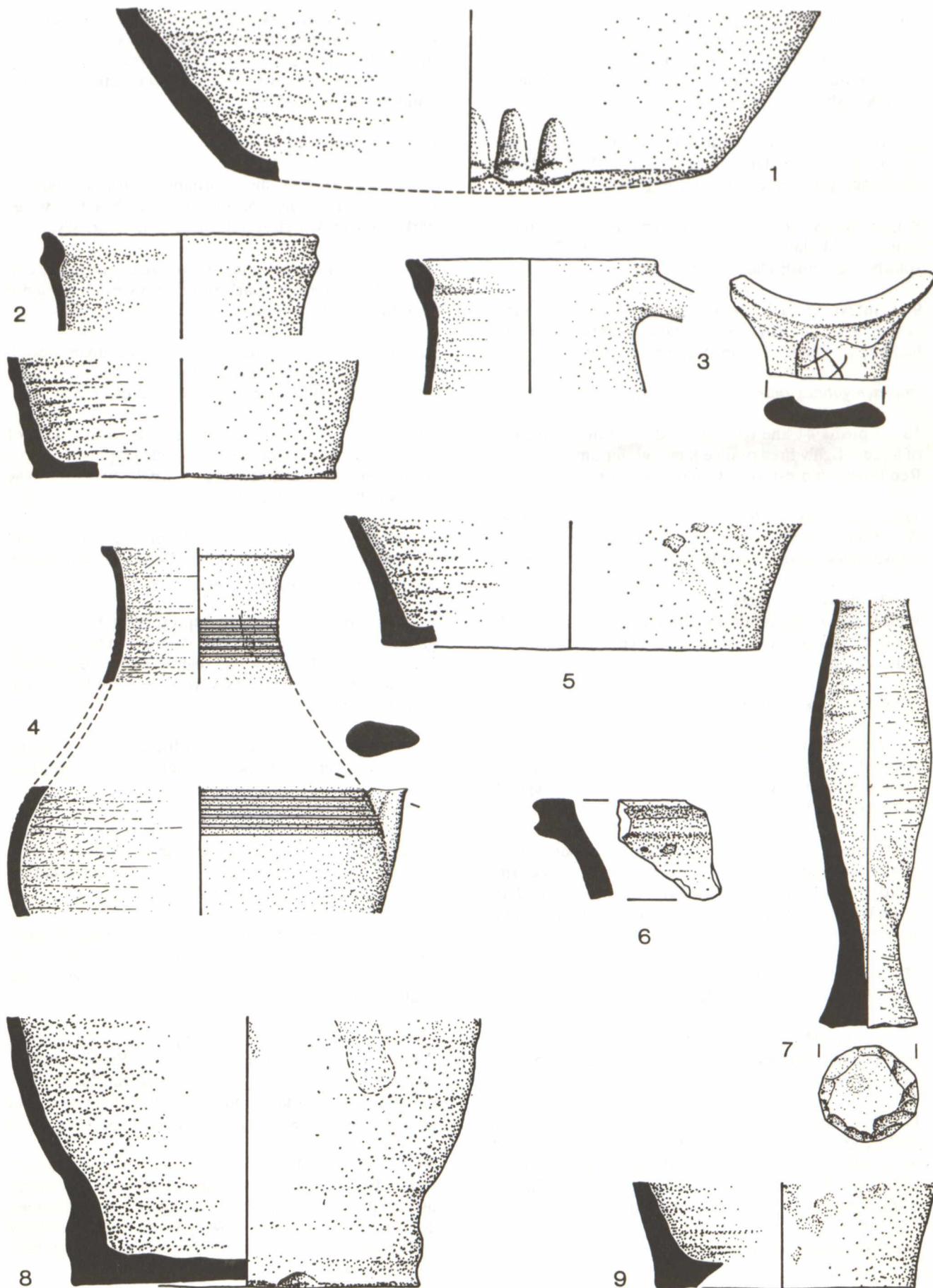


Figure 4: Pottery illustrations, nos. 1 - 9. Scale 1/2.

Iron-rich fabrics (soft types) (Fig. 4)

5. Context 5. Fragment of jug base in fine even sandy fabric; reduced grey interior, reddish exterior. Splashes of yellowish glaze on exterior.

6. Context 24. Two sherds of a large bowl/jar. Soft orange fabric with dense large sand inclusions. Splashes of orange glaze externally and internally.

8. Context 28 and 32. Numerous sherds of a jug in fine salmon pink fabric with slight grey core. Traces of splashed greenish glaze on exterior.

9. Context 58. Two fragments of a jug base; same vessel also in 107. Soft orange fabric with fire inclusions. Patch of orange glaze on exterior.

Iron-rich fabrics (hard types) (Fig. 5)

10. Contexts 41 and 65. Base and rim/handle fragment of a jug. Highly fired orange fabric with numerous grits. Reddish-brown exterior. Orange interior. No glaze.

11. Contexts 58 and 67. Two rim sherds of globular jar. Well-fired orange/red fabric, gritty, with metallic brown/black glaze externally, traces of same internally.

12. Context 58. Eleven sherds of a globular jar. Well-fired orange fabric with numerous grits. Outside a patch orange, very similar to ridge tiles. Traces of same inside.

Highly-fired grey fabrics (Figs. 5 and 6)

13. Context 60. Rim and handle scar of a jug. Highly-fired grey fabric with numerous inclusions. Thumbed strip at handle level. Glossy dark brown/green glaze externally only.

14. Context 119. Body sherd of hard grey fabric with numerous quartz inclusions, may be same vessel as rim sherd from context 130 (33). Externally a dark green/brown glaze with white grits showing and incised decoration.

15. Context 130. Rim sherd with thumbed strip below. Same fabric and glaze as 32.

16. Context 153. Rim sherd with thumbed strip. Hard grey quartz-filled fabric with patchy metallic brown glaze showing white grits.

17. Contexts 76, 80 and 156. Fragments of a large cooking/storage vessel. Highly-fired grey fabric with numerous quartz fragments, and odd inclusions, up to 15mm. Dull purplish-brown surface with splashes of greenish glaze internally and externally.

Imported stoneware (Fig. 7)

18. Context 65. Two fragments of Cologne stoneware

jug. Even grey fabric with small quartz grits. Salt-glazed; externally ranging from greyish brown to brown, internally pale grey. Applied leaves and tendrils externally on body with traces of decoration on neck band above. *c.* 1525-50.

Cistercian-type ware (Fig. 7)

19. Context 18. One sherd forming the top of a pottery bottle. Even, reddish purple fabric with a few voids, dark black/brown glaze internally and externally.

20. Context 113. One rim sherd from a drinking cup with a flared mouth. Dark purple-brown fabric, dense blotchy black/brown glaze internally and externally.

21. Context 23. Six sherds from top of a drinking vessel; finely thrown reddish purple fabric with a few voids, dark black/brown glaze internally and externally.

22. Context 11. Two joining sherds from base of globular drinking cup. Smooth reddish-purple fabric, translucent dark brown glaze internally and externally with small cream specks.

23. Context 61. Four sherds from base of 'conical' drinking cup, even purple fabric, dense metallic brown glaze internally and externally.

24. Context 34. One sherd representing the tip of a globular drinking cup with part of one handle surviving. Even purple fabric. Glossy, slightly translucent brown glaze internally and externally, with frequent blotches of metallic brown.

25. Context 36. One base sherd from base of drinking vessel. Only one small speck of metallic brown glaze on base.

26. Context 119. One sherd from base of a globular drinking vessel. Even purplish fabric with few white specks. Translucent brown glaze internally, darker metallic patches on the outside.

27. Context 123. One sherd of globular drinking vessel with handle scar. Even purple fabric with few white inclusions, translucent dark brown glaze showing the white flecks internally and externally.

28. Contexts 3, 11 and 119. Four joining sherds forming lower part of a globular drinking cup. Smooth purple to reddish fabric with a glossy, slightly translucent dark brown glaze internally and externally; patches of thin glaze on outside. Small cream coloured specks in glaze.

29. Context 55. Five sherds forming base of storage vessel. Even purple fabric, with small white inclusions, usually firing a reddish colour. Translucent dark brown glaze with bare patches, showing white flecks, internally and externally. There is a 50mm diameter scar on base where a smaller vessel stood during firing.

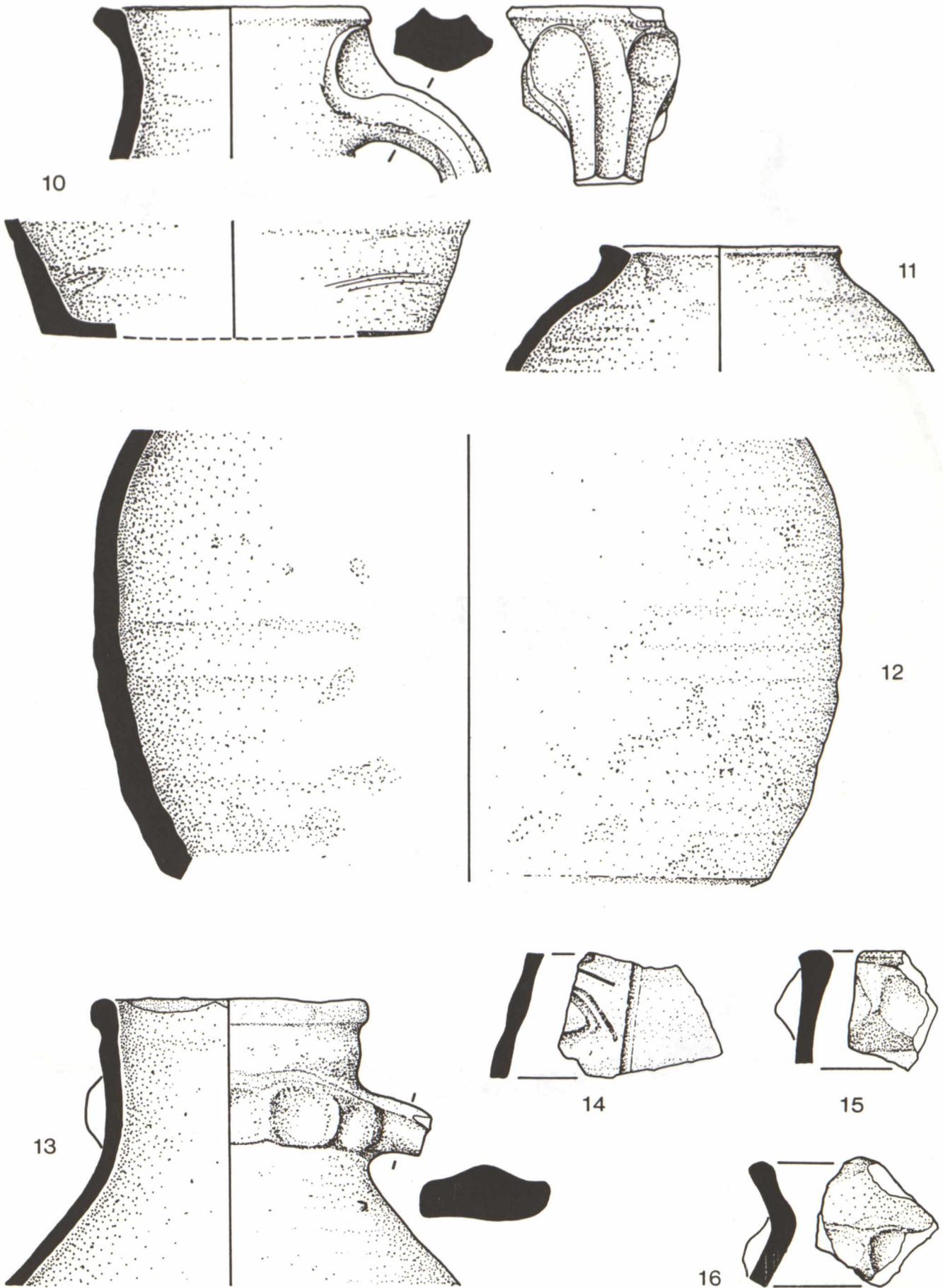


Figure 5: Pottery illustrations, nos. 10-16. Scale 1/2.

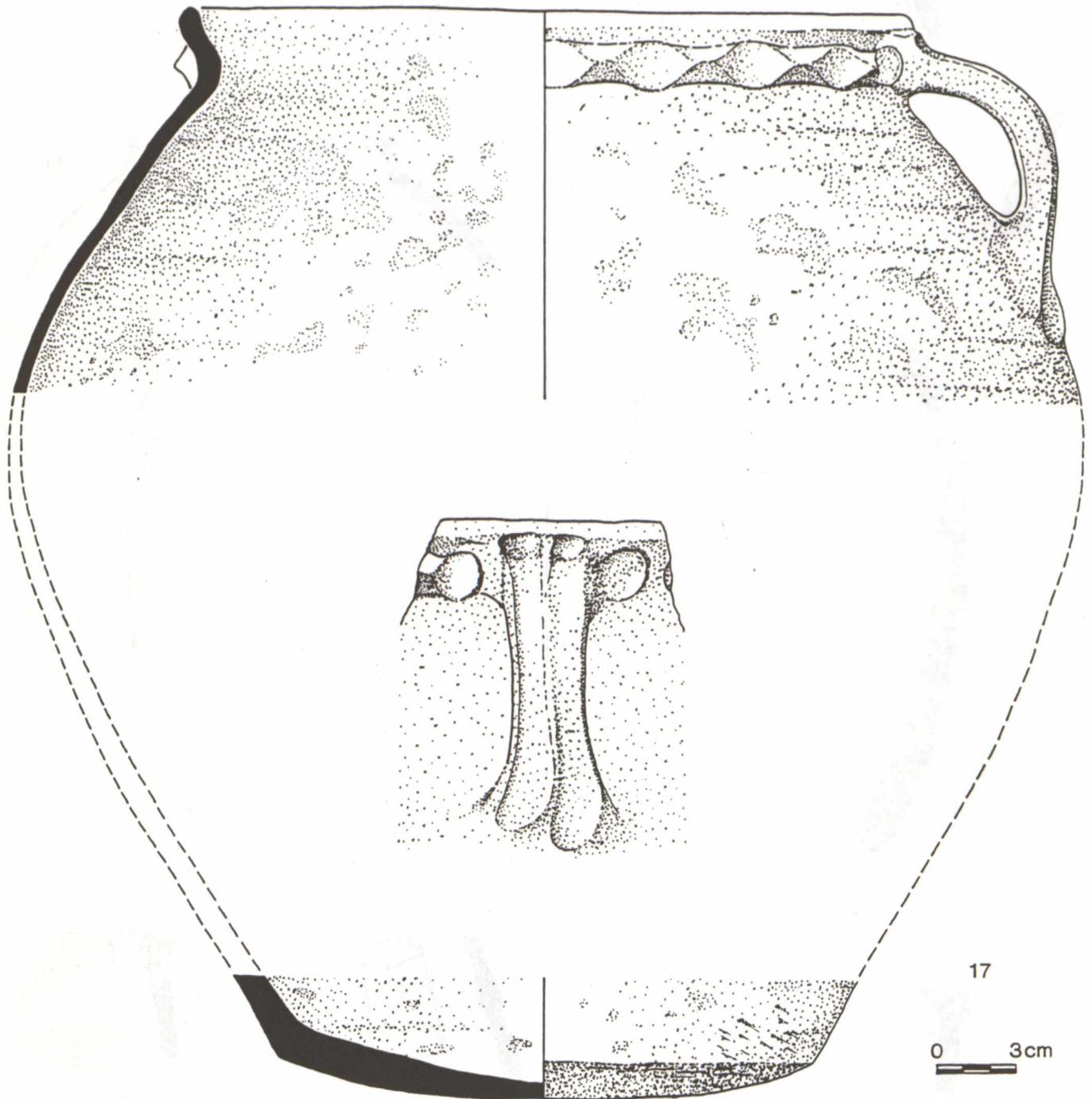


Figure 6: Pottery illustration no. 17. Scale as shown.

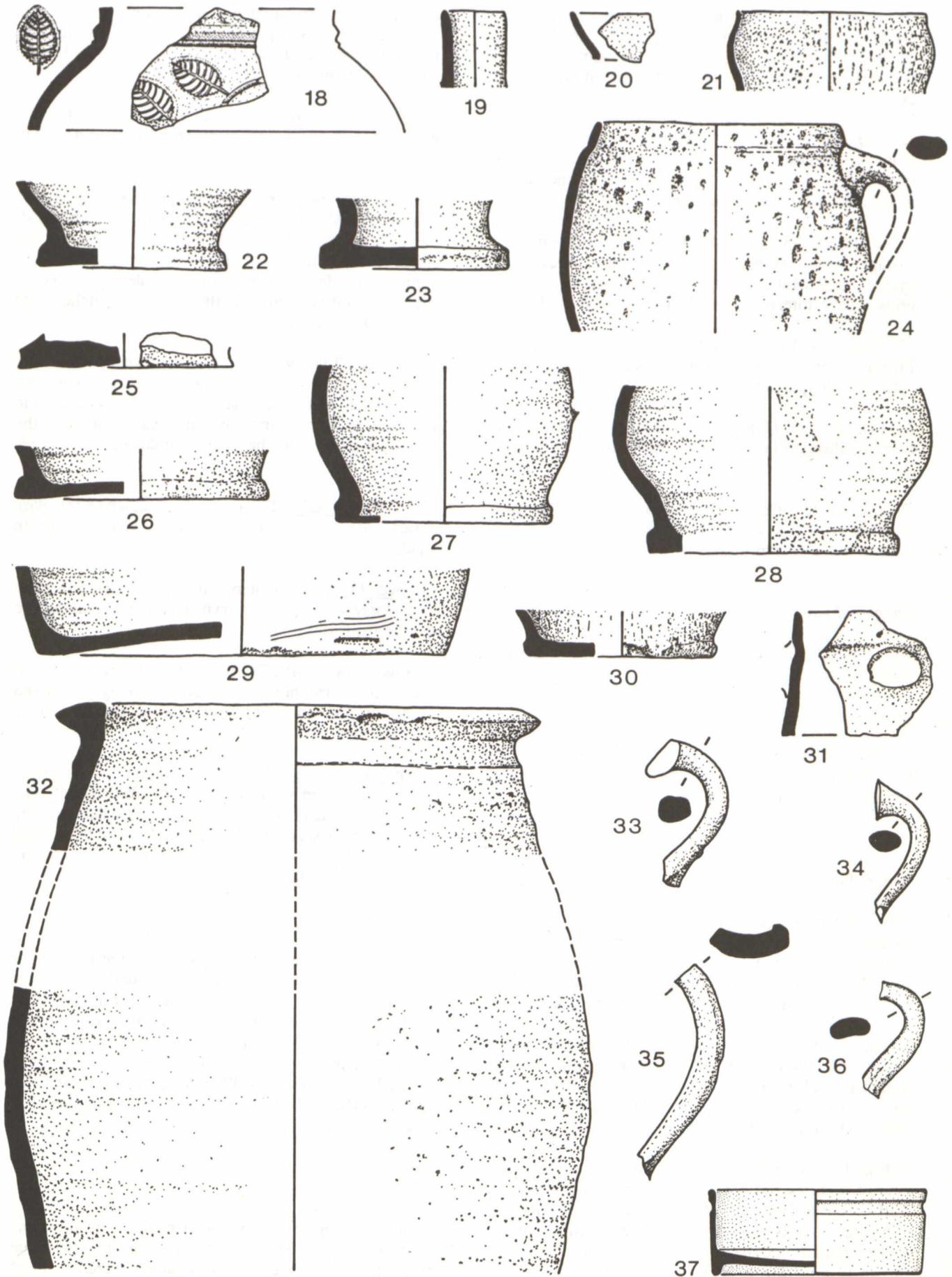


Figure 7: Pottery illustrations, nos. 18-37. Scale 1/2.

30. Context 60. One sherd from base of globular drinking cup, even purple fabric, few small white inclusions and one large piece of c. 4mm diameter. Glossy thick, slightly streaky black glaze internally and externally.

31. Context 58. One sherd with rim and handle scar. Even purple fabric with a few white inclusions. Slightly translucent dark brown glaze showing the white inclusions internally and externally.

32. Contexts 25, 30 and 34. Three sherds from a storage vessel. Highly-fired even purple fabric with sparse small white inclusions, slightly patchy metallic brown glaze internally, streaks of same externally.

33. Contexts 132 and 136. Handle in two sherds. Purplish fabric, locally red with translucent brown glaze with metallic patches.

34. Context 113. Cup handle with purple fabric locally firing reddish, metallic brown glaze with a few blotches on.

35. U/S. Handle sherd, broad storage vessel type. Even purplish-red fabric, locally red under glazed area. Patchy dark metallic brown glaze.

Tin-glazed ware (Fig. 7)

36. Context 103. Undecorated handle sherd from a white tin-glazed vessel.

Pearlware (Fig. 7)

37. Context B2. Six sherds of a small pearlware jar of c. 1820-30. This vessel has very fine walls and a rim-groove for securing a cover.

Ridge Tiles (Fig. 8)

The excavations recovered 124 fragments (5.5kg) of earthenware ridge tiles from 42 contexts (Table 7). These pieces, although exhibiting a considerable range of individual variations, could be grouped into four fabric types (A-D) and five glaze colours (see below).

Fabric A: Forty-one fragments. Slightly soft, sandy fabric with numerous small quartz inclusions. Usually a light pinkish orange with a grey core, which extends to the surface under a glaze. The glaze is almost invariably green and splashed in patches.

Fabric B: Sixty-nine fragments. Well fired fabric of orange to brick red colour, sometimes with streaks of buff or darker red clay. It rarely has a grey core and it has fewer grits than fabric A. The fracture is much more angular and rugged. It usually has an orange brown to dark brown glaze, covering large areas.

Fabric C: Thirteen fragments. Highly fired, semi-vitrified fabric giving a sharp angular fracture. Fabric is a purplish-brown, and glaze is always a glossy dark brown. This is probably a higher fired version of B.

Fabric D: One fragment. Pinkish buff fabric otherwise identical to A and probably just representing a variant of it.

A total of ninety-six of the fragments were glazed (Table 8). All the glazes are presumed to be lead-based, the apparent colour being a combination of the metallic impurities in or added to the glaze and the colour of the fabric underneath. The tiles are glazed on the upper surface only and then often in patches. The colours present are:

Green (G). Twenty-four fragments. Ranges from olive greens to light yellowish greens, the colour sometimes being rather patchy. The glaze almost always results in localised reducing conditions underneath so that the grey core extends to the surface under it. Occurs only on fabric A.

Green/brown (GB). Three fragments in which the glaze varies from pale orange/brown to yellowish green shades.

Orange (O). Five fragments in which the glaze is clear and glossy with sparse brown iron specks, taking the colour from the body.

Orange/brown (OB). Twenty-one fragments. Similar to the orange glaze, but pronounced streaking or speckles of brown, and including much darker glazes. Occurs only on fabric B.

Dark brown (DB). Forty-three fragments. Generally glossy, but often with dull areas of 'flash glaze'. The surface is a dark slightly metallic chocolate brown. Seems to be associated with the higher fired fabrics and may well be a high fired variant of orange/brown. Occurs only on fabrics B and C.

Decoration

The remains of eight spikes decorating the tops of the ridge were recovered. These were modelled on to the soft tile and there were probably several on each ridge. A 17th century example from the Brookhill site at Buckley, north Wales, probably had three groups of small bumps, formed by two depressions in short applied strips, along its 39cm length. One piece (Fig. 8.38) has the slashed base of a more elaborate modelled finial surviving.

Manufacture

All of the fragments have been made using the same basic technique. The slab of clay, usually 10-15mm thick, has been rolled out on a sand-covered surface

Table 7: Ridge Tiles: glaze and fabric types

(Where there is more than one fabric the glaze types are given in the same order.)

Context	No.	Wt.(g)	Fabric	Glaze
5	1	20	A	O
8	2	17	A, B	G, DB
19	1	18	B	OB
22	3	36	2B, 1C	20, 1DB
24	1	62	B	O
25	3	22	3B	1DB, 1OB, 1 no glaze
27	1	13	B	no glaze
33	2	133	A, B	G, 1 no glaze
34	1	52	B	OB
36	1	20	A	G
42	1	16	A	G
50	3	75	3B	3DB
51	1	4	B	OB
55	1	10	A	G (same tile in 58)
58	5	310	2A, 2B, 1C	2G, 1OB, 1 no glaze, 1DB
60	5	89	5B	5DB (includes 1 joining fragment from 113)
61	1	7	B	DB
62	1	15	B	no glaze
65	2	120	2B	DB, OB
72	1	162	B	no glaze
73	5	239	5A	5G
74	2	100	2A	G, O
78	1	45	A	G
82	1	10	B	no glaze
99	1	210	C	DB
103	4	35	4C	4DB
107	3	5	3B	3DB
113	6	135	4B, 2C	2DB, 1OB, 1 no glaze, 2DB
117	3	209	1A, 2B	G, DB, 1 no glaze
119	9	955	9B	2DB, 2 no glaze, 5OB (2 fitting fragments from 128 & U/S)
123	3	304	3B	2OB, 1 no glaze
124	1	159	C	DB
125	3	304	2A, 1B	G, GB, OB
128	6	134	4B, 2C	2DB, 2 no glaze, 2DB
130	15	399	5A, 9B, 1C	1G, 4 no glaze, 5OB, 1DB, 3 no glaze, DB
132	4	74	4B	1OB, 3 no glaze
135	3	142	2B, 1D	2DB, 1 no glaze
136	1	7	B	no glaze
137	2	111	2B	1DB, 1 no glaze
139	3	62	3B	3DB
153	4	300	4A	4G
156	1	147	A	GB
U/S	6	110	3A, 3B	3G, 1GB, 2 no glaze

Table 8: Ridge tiles: glaze and fabric types - totals

Glaze:	G	GB	O	OB	DB	Total
Fabric A	24	2	2	-	-	28
Fabric C	-	-	-	-	13	13
Fabric B	-	1	3	21	30	55
Total	24	3	5	21	43	96

(to prevent adhesion) and knife trimmed around the edges. The sand-covered surface is always the inner one. The slab is arched to form the ridge (probably over a former) which would have been c. 29cm wide at the base (Fig. 8.43). This size is similar to the 17th century examples from Brookhill. The only difference in technique appears to be smoothing lines which occur regularly both inside and out on fabrics B and C but very rarely on fabric A. These differences together with those of fabric, glaze and finial suggest two basic traditions are represented.

The softer sandy fabrics (A,D, Figs. 8.38-8.40) have well fitted, sometimes slashed finials, few smoothing lines and greenish glazes. The harder fabrics (B,C, Figs. 8.41-8.42) generally have conical points with a clear division between point and body, smoothing marks on the tile and a good orange to brown glaze depending on firing conditions. This suggests that at least two major phases of re-roofing the Hall are represented.

Dating

All these types of tile are represented in deposits cut by or earlier than the range of c. 1550. The earliest deposits, stratigraphically, to contain tile were 153 and 156 in the upper fill of the water course, which contained only fabric A. Above this the fabric types were mixed, but this could be the result of either tipping mixed material to make up the ground or the demolition of two earlier phases at one period. Ridge tiles in a soft sandy fabric with thumb and slashed points, and a zoomorphic finial, have been found at Hen Blas, Clwyd (Davey and Morgan 1977, 47), presumed to be from a building abandoned in the later 14th century. Similar slashed points (Davey and Harrison 1977, 99) were produced at the Ewloe kiln for which a 15th century date is suggested. This suggests that the earlier postulated roofing phase at Speke dates to the 14th or early 15th century. Fabrics B and C with their better glazes and higher-fired fabrics are likely to be rather later. The fabrics appears closer to the 17th century earthenware types but must predate 1550. A date of c. 1500-1550 is therefore suggested for these pieces.

Illustrated examples (Fig. 8)

38. Context 156, fabric A. A substantial base, probably for a modelled zoomorphic figure. The main body has flaked off leaving thumb impressions showing that it was applied in stages. Four deep slashes on each side. Most of the surviving surface is covered with a greenish-brown glaze. Faint grey core to the fabric.

39. Context 8, fabric A. Applied point formed by pinching in two directions to give a pyramid shape. Half covered with a green glaze.

40. Context 125, fabric A. Applied point, oval in section with a deep slashed thumb impression on each side. The spike is well smoothed into the body near a

surviving cut end of the tile. Dark brown surface largely covered with a thin, well fired green brown glaze.

41. Context 124, fabric C. Small conical point applied near the cut end of the tile, with a clear junction between point and tile, largely covered with a dark brown glaze, patches of which occur underneath at the cut end.

42. Context 123, fabric B. Slightly chipped, rather roughly applied lump of clay. All over orange brown glaze with a speckled appearance.

43. Typical cross section of a ridge tile, reconstructed from the largest surviving fragment.

Not illustrated. There are three other ridge tile fragments with traces of decoration surviving which have not been illustrated. All are made of fabric B and have an all over orange/brown glaze. There are two conical points of similar form to Fig. 8.41 and one fragment where an applied ornament has broken off.

Roofing stone (Fig. 8)

Many of the contexts excavated contained fragments of roofing stone. Two different types of stone had clearly been used on the site, both of them prior to the mid 16th century construction of the west range. One is a laminar type of sandstone. This is a light golden brown colour and contains a large number of glittering inclusions. It fractures into rather thick slabs, often with an irregular surface where it has split unevenly between different bedding planes. The second is a purplish/grey slate, presumably of Welsh origin. There were no fragments of flat ceramic roof tiles from the excavations although ceramic ridge tiles were frequently found (above). There can be little doubt that at least some of the principal medieval buildings at Speke were roofed with either sandstone or slate and finished with decorative ceramic ridge pieces.

Although most of the fragments recovered were damaged it was possible to obtain dimensions from some of the pieces. Sandstone slabs were recovered measuring in excess of 220mm across the top and 135 to 220mm across the bottom. One piece was 510mm in length. The slates generally appear to have been of smaller size. Their tops ranged from 80-115mm in width and their bottoms from 92-160mm. Complete lengths for the slates ranged from 290-325mm. Both types of roofing had holes near the top edge for supporting pegs. These were presumably of wood since very few nails were found on the site. The holes in the slates were clearly made by striking them hard with a sharp point rather than by drilling. One example from context 128 clearly demonstrates this (Fig. 8.44). It has two holes through it, the lower of which has a number of small indentations near it where unsuccessful attempts were made to make the hole. The slates generally appear to have been roughly rectangular, although with

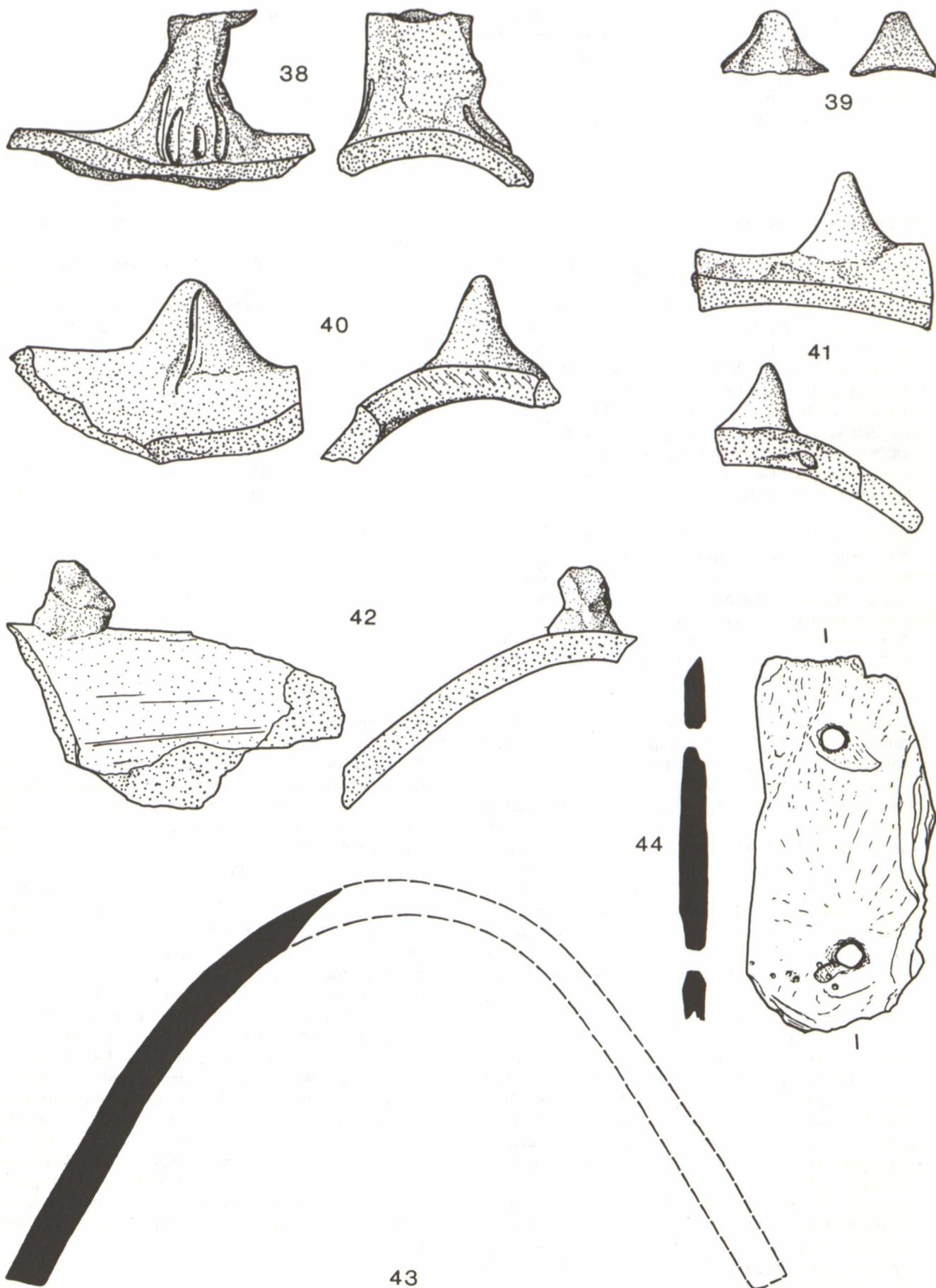


Figure 8: Ceramic ridge tiles, 38-43; roof slate, 44. Scale 1/2.

flaring sides, and suspended from the narrower end. One piece of sandstone, however, may have been hung from a corner so that it would have appeared as a lozenge. Both types of stone are likely to have been graded with the smaller, lighter, pieces near the ridge and the larger, heavier, pieces at the eaves, as on the present roof.

Clay tobacco pipes (Fig. 9)

A total of eleven fragments of pipe (10 stems and 1 crushed bowl) were recovered from five different contexts (Table 9). The small number of pieces recovered does not reflect a lack of activity at the Hall but rather the fact that the excavations took place within a building which has been standing since before the introduction of tobacco. Six of the stems date from the 17th century and are of a typical local fabric with a rather gritty texture. These are probably products of the South Lancashire workshops, centered on Rainford (now in Merseyside) and show that even in a large household pipes were obtained locally.

There is one stem fragment, apparently of 18th century date, which has been ground at both ends (Fig. 9.46). Such pieces have previously been interpreted as wig curlers. However, this piece seemed too short for such a purpose and has been unevenly ground at one end. A reappraisal of stems with ground ends is clearly needed but their use for drawing or simply doodling are obvious candidates.

There are two other stems of 18th or 19th century date, one of which has been impressed with an incuse border (Fig 9.45). Although this is similar in style to the later stem borders of the Chester series (Rutter and Davey 1980), which may have been produced as late as 1790 or 1800, it is not exactly matched by any of the examples from there. The stem was found in context 2, the bedding of the floor for the 1867/8 refit. If it is contemporary with that work, a much later date is suggested for this particular type of decorated stem. There are illustrations of what appear to be similarly decorated stems in the Davidson of Glasgow catalogue of c. 1880 (Gallaher and Price 1987), so this example should, perhaps, be regarded as a late survival of stem stamping from c. 1867/8.

The final piece of note is also associated with the 1867/8 refitting. It is the crushed bowl of a 19th century short stemmed (cutty) pipe, the bowl of which is decorated with beading and hatched loops (Fig. 9.47). It was found in context 102, beneath the floor bedding, but joins with a piece of stem in context 2, the floor bedding itself. Since it is a later 19th century form it is unlikely to pre-date the refitting and was almost certainly dropped by one of the workmen. This provides an unusually exact date for the pipe and an important one since it establishes an early date by which this style must have been in use.

Table 9: Clay tobacco pipes

Context	Numbers		Comments
	Bowl	Stems	
2		2	Two stems which appear earlier than the 1867/8 context in which they occur. One piece has an unusual, faintly impressed 'roll stamp' on the stem (no. 45).
3		3	Three 17th and 18th century stem fragments, one of 18th century form has ground ends (no. 46). The two 17th century fragments are made of 'local' fabrics.
8		2	Two 17th century stem fragments of 'local' fabrics, one of which is burnished.
21		1	One 17th century stem fragment in 'local' fabric, probably burnished.
102	1	2	One crushed bowl (no. 47) and two pieces of stem, one 19th century the other 17th century in a 'local' fabric.

Brick fragments (Fig. 10)

Brick fragments were much less common than ridge tile fragments, with only twenty-two fragments being recovered from a total of twelve contexts (Table 10). Although most of the fragments are small they show quite a range of colour and texture and can be divided into two basic types. One group (A) has a fairly even mix (although including voids and large inclusions) with a colour ranging from orange to purplish/brown. One example (context 58) has a complete depth of 55mm, and three pieces (one in 58 and two in 60), show grass marks on the surface. The second group (B) has a pale buff orange to cream colour and is streaked with buff and orange clay. There are hard red/brown inclusions in the fabric. The fabric is smoother to the touch than the softer sandy A. None of these fragments was measurable. The earliest piece stratigraphically was from context 75, from the late 15th to early 16th century fill of the water course. This piece is possibly, however, burnt daub rather than brick. The other types occur in layers both cut by and in or above the 1550 deposits and show that two types of brick were in limited use on this site by the mid 16th century. The bricks may have been used as hearth linings rather than for wall construction.

Table 10: Brick fragments

Context	Type	Number	Weight
3	B	2	13
5	A	1	17
5	B	2	19
27	A	1	8
27	B	1	5
35	A	1	4
37	A	2	16
51	B	1	12
58	A	1	226
60	A	5	145
75	B	1	35
96	B	1	13
117	A	1	33
117	B	1	30
139	A	1	7

Bone objects (Fig. 9)

Two objects of worked bone were recovered from the excavations. Both of these came from deposits of dumped rubbish which had built up above the water course and are likely to be of late 15th or early 16th century date. From context 153 is one side of a knife handle (Fig. 9.49). The outer surface is smooth and rounded while the inner face is flat and bears tool marks. There are two holes for rivets which would have fixed this piece, and its twin, to a metal knife blade. The second object is a bone counter or gaming piece from context 156 (Fig. 9.48). It has been fairly crudely shaped but has well smoothed edges.

Leather (Fig. 9)

Three fragments of leather were recovered from the domestic waste above the water course and are probably of late 15th to early 16th century date. Two pieces are from shoes. These consist of a thin strip of leather of triangular section from context 84 (Fig. 9.50) and the sole of a child's shoe from context 156 (Fig. 9.52). The third piece is a small sheet of leather with an angled end, a cut most of the way across its body

and a series of stitching holes pierced through it (context 156, Fig. 9.51). The function of this piece is not known.

Worked wood (Fig. 9)

Three pieces of worked wood were recovered from the waterlogged deposits associated with the water course. Two pieces were recovered from the rubbish dumping above the water course and are likely to be of late 15th to early 16th century date. Both were found in context 156. The first is a piece of turned wood of a simple circular section (Fig. 9.54) and the second is the end of peg or stake, the point being formed by a simple series of knife cuts (Fig. 9.55). The third piece comes from the water course itself (context 153) and is likely to be 15th century or earlier in date. It consists of a substantial slab of wood with a rounded corner and has a mortise hole cut through it (Fig. 9.53). The wood does not seem thick enough to have been part of the structure of a building and so this fragment possibly comes from a piece of furniture.

Glass (Fig. 9)

Almost all of the glass came from deposits associated with 19th century activity at the Hall (Table 11). The sand floor bedding (context B2) and drain trench of 1869/72 (contexts 100 and 108) together with the loose crack against the west wall (context 105) produced much of it. The material from the drain fill seems to have included a deposit of rather earlier material since most of the wine bottle necks seem to be of late 18th - early 19th century form. A window pane was found crushed where it had been buried in the corridor (Fig. 9.63) and indicates the size of pane used in the Hall prior to the 19th century refurbishment.

Table 11. Glass (Fig 9)

Context	Description
B2	- Twenty-one fragments of bottle glass (150g) including part of a flat-sided bottle.
	- Six fragments of clear window glass (29g).
	- Thirteen fragments of orange window glass (55g), nos. 64-65.
100	- Thirty-six fragments of bottle glass (650g), e.g. no. 61.
105	- Fifty-nine fragments of bottle glass (550g) including part of a flat sided bottle.
	- Three fragments of clear window glass (2g).
	- One fragment of a drinking tumbler with cut decoration.
108	- Sixty-seven fragments of bottle glass (1851g), e.g. nos. 56-60, 62 and 66.
	- Seven fragments of clear window glass (11g).

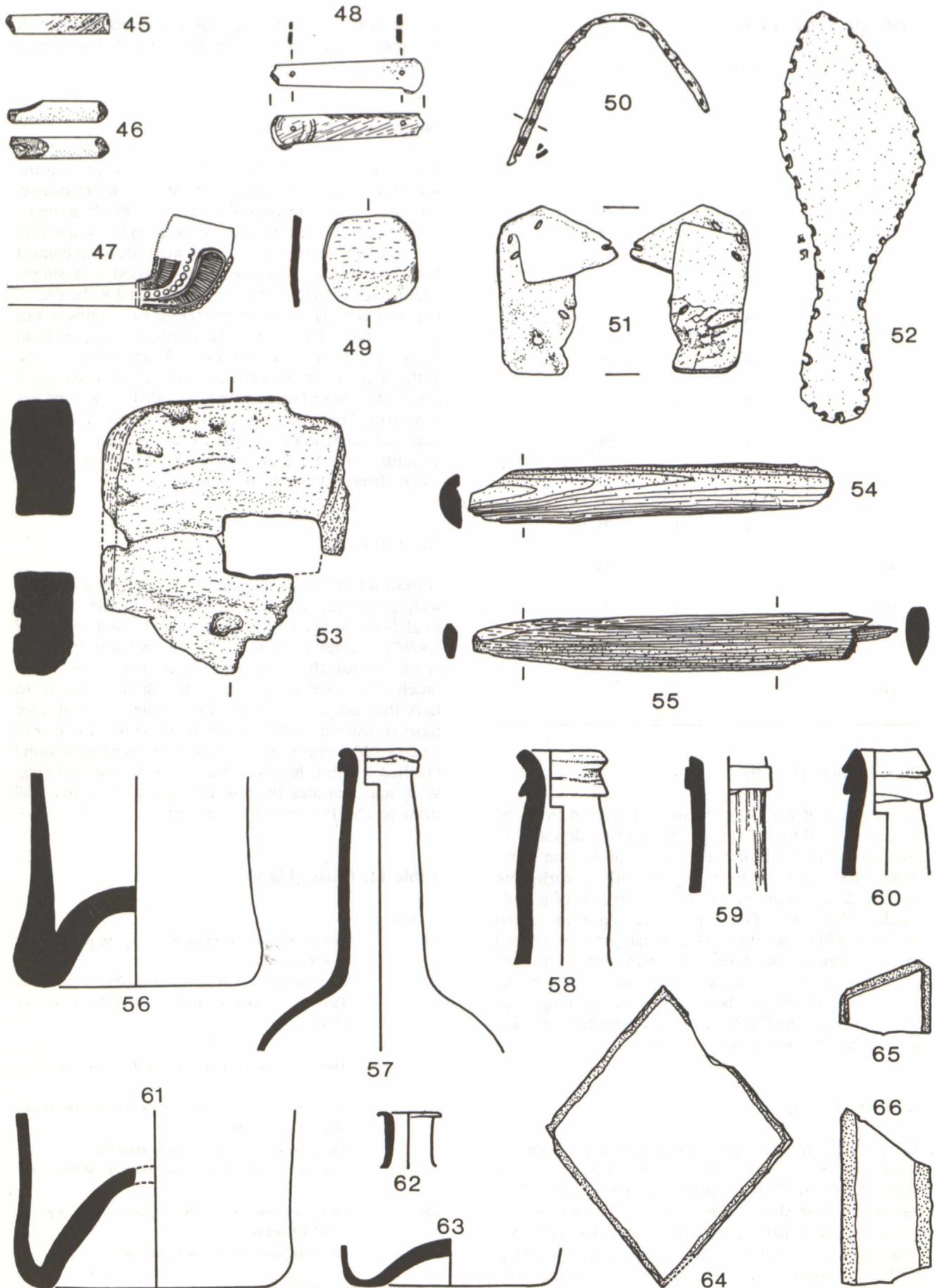


Figure 9: Clay tobacco pipes, 45-47; worked bone, 48-49; leather, 50-52; worked wood, 53-55; glass, 56-66. Scale $\frac{1}{2}$.

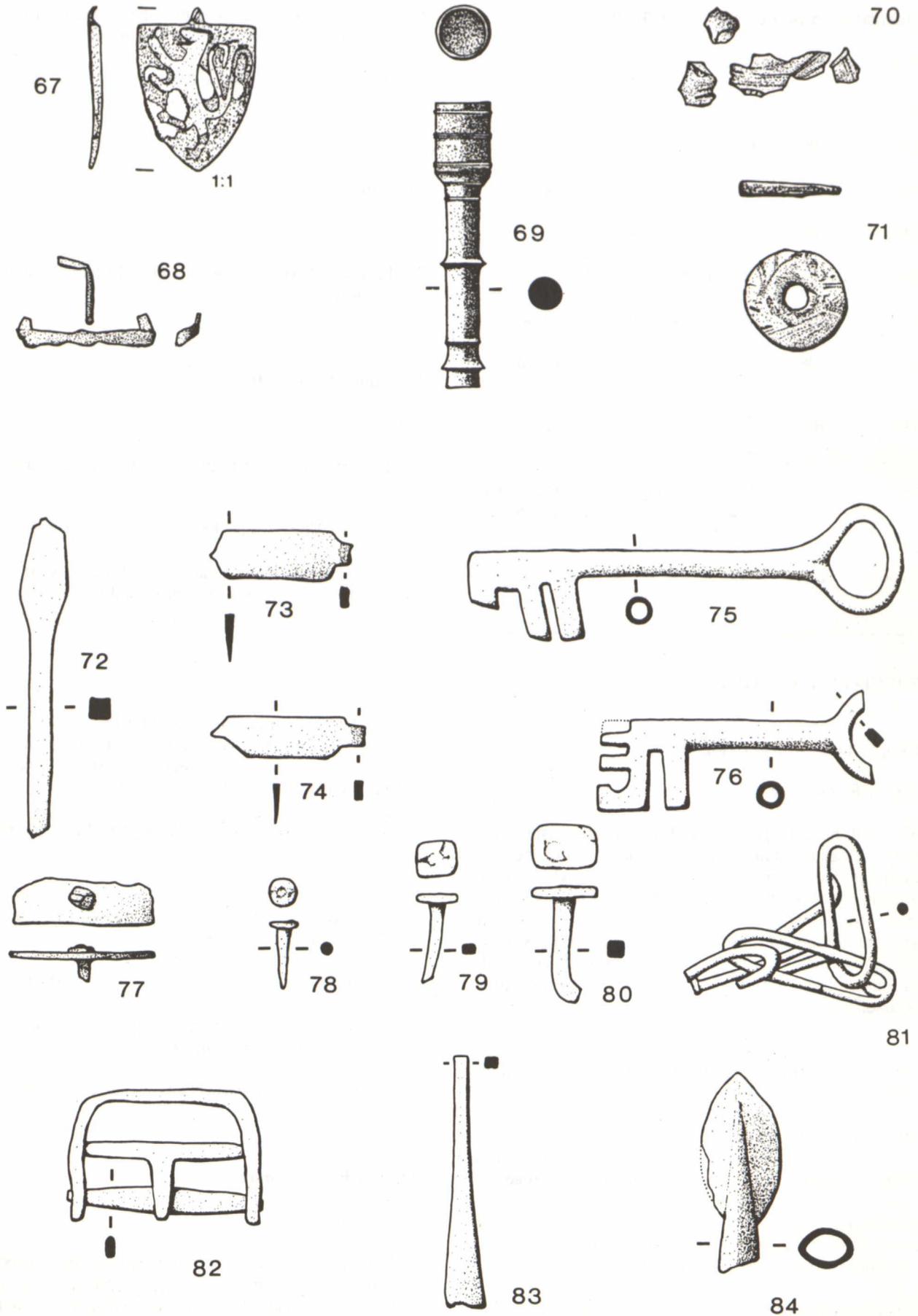


Figure 10: Copper alloy, 67-70; lead, 71; iron, 72-84. Scales: 67 1:1, 68-84 ½.

Illustrated examples of glass (Fig. 9)

Nos	Context	Comment
56	108	Green bottle base
57	108	Pale brownish bottle neck
58	108	Pale brownish bottle neck
59	108	Pale green bottle neck
60	108	Brownish/green bottle neck
61	100	Pale green/brown bottle base
62	108	Clear glass bottle neck, mould made.
63	108	?Decanter base, pale turquoise glass
64		Diamond pane with clipped edge and traces of leading. Slight greenish tint.
65/66	B2	Orange window glass, scored edges, traces of leading.

SPECIALIST REPORTS**Copper-alloy objects (Fig. 10)**

Alison R. Goodall

67. Small heraldic pendant with incomplete suspension loop. Traces of gilding survive on the field and the lion rampant has been inlaid with enamel which now appears as a rusty-brown colour. Heraldic pendants from Netherton, Hants. were dated on historical grounds to the 13th and 14th centuries and a similar date range may be supposed for this example (Goodall in Fairbrother forthcoming). From the fill of the water course.

68. Incomplete buckle frame made from a strip of metal. The decoration is almost lost due to corrosion. Context 76.

69. Candlestick lacking its base. The socket and stem are decorated with shallow grooves and cordons and there is a knob on the stem. The mouldings suggest a date in the 15th or 16th centuries. A complete candlestick of similar type and the socket from another were found in Queen Street (New Inn Court), Oxford (Goodall forthcoming). Context 83.

70. Fragments of a disc or bridle boss with repoussé decoration. Context 114.

Not illustrated. Fragments of two sheet metal bells with the peas made of clay or stone. Contexts 19 and 132.

Not illustrated. Two pieces from the rim and body of a sheet metal vessel. Context 45.

Lead object (Fig. 10)

Alison R. Goodall

71. Perforated weight made from a droplet of molten lead. Context 156.

Iron objects (Fig. 10)

I.H. Goodall

72. Distorted auger bit, the terminal broken and bit lost. Context 58.

73 and 74. Whittle tang knives. Contexts 76 and 28.

75 and 76. Keys, typologically of 13th century or later date. 75 has an oval bow and bit rolled in one with the stem, 76 a broken bow and solid stem. Contexts 152 and 157.

77. Nailed strap.

78 - 80. Nails, (contexts 113, 119 and 119). In all, seven were recovered; three with circular heads (contexts 60, 105, 113) two with square heads (context 119) and two indeterminates (contexts 36 and 117).

Not illustrated, a stud with a flat square head. Context 42.

Not illustrated, three clench bolts, probably from doors. The most complete has a diamond-shaped and circular nail head. All from context 42.

81. Chain of five straight-sided links. Context 70.

82. Harness buckle, the T-shaped pin resting against a revolving baluster bar. Context 152.

83 and 84. Socketed arrowheads. Contexts 45 and 153.

Animal Bone Report

Clem Fisher

Although the six most common species in this bone assemblage are domestic (cow, sheep/goat, dog, pig, chicken and horse) the most interesting aspect is the variety of wild species present (Table 12). Some of

these represent commensals (rat, house mouse, jackdaw) but most were species caught for the table. These include deer, probably obtained from the nearby Toxteth deer park, rabbit, hare and woodcock, the latter a common table bird in medieval times.

The large number of dog remains are unusual, especially as they tend to be found as odd bones in different contexts. Apart from one obvious pet's burial (contexts 104 and 120) the possibility of dog as table meat is strong, especially as knife and tooth marks are found on several bones. The dog burial itself poses a problem; the skull, first three vertebrae and one front leg are missing *en bloc* which suggests that these were removed before the carcass began to rot.

Both the bank vole and house mouse remains appear to be from animals dying *in situ*; the bank vole close to a burrow which it almost certainly made; the house mice in a wall cavity in which they were probably walled up or poisoned. Other rodent remains include those of rats, which would have been responsible for many of the tooth marks present on bones throughout the excavation. Rats do pose uncertainties in excavations as by burrowing they tend to move bones vertically between levels; for instance the chewed woodcock bone in context 55 may well have been carried down from the context above. Without skulls it is not possible to distinguish the bones of black rat (*Rattus rattus*) and brown rat (*Rattus norvegicus*) although the brown rat is more likely to burrow. Hare and rabbit bones are present in great numbers in this excavation; apart from the juvenile hare or rabbit remains in context 3, which are almost complete and probably from a pet, most of the remains bear knife and human tooth marks. Butchery marks are unusual on these bones as, like chicken, they are usually cooked whole and can then be pulled apart by hand.

The bird remains are probably from table birds, except for the single jackdaw bone which may have been from a scavenger (although young birds of the crow family are supposed to be fair eating in stews and pies). Both the mallard and goose bones are likely to be from domestic stock, although wild mallard are still common on the Mersey and the teal remains are most probably from a duck caught on this river. Moorhen is a common water bird, still found on the pools across the runway at Oglet and apparently has a strong but good flavour. The pigeon bones would have come from rock doves, from which our town pigeon is descended. Rock doves were once widely distributed but are now confined to Scotland, Ireland and parts of Lincolnshire.

Of the four most common species found in this excavation, three would have been used primarily for food. The cow teeth show that most of the stock was killed at between 1½ and 2½ years old, an age when they reach maximum size. Although there is some bias in comparing numbers of cow bones against those of calf, sheep and pig which disintegrate more quickly and are therefore more difficult to identify, the general ratio

of food preference seems to be cow 4: sheep/goat 2: pig 1. Chicken bones are also very common but some of these will be from individuals kept for egg laying rather than the pot. Horse bones appear frequently but although most fragments show butchery marks they are all from ageing individuals, which is logical when one considers the previous importance of the horse for agriculture and transport. They would only have been eaten when too old for work. It is notable that horse remains are totally absent after 1550, although this may be due to the different types of deposit found after this date.

A few bone fragments were also recovered from the samples examined for plant remains. These are listed at the end of Table 14.

Pathological examination of animal bones

J. R. Baker

Context 3 (Corridor). Cow first phalanx, two Baker Type 1 defects on proximal articular surface (Baker and Brothwell 1980).

Context 22 (Corridor north). Pig first incisor, enamel hypoplasia.

Context 58 (Billiard room). Bovine first phalanx. There is a ridge of new bone running between the proximal and distal articular surfaces on the medio-ventral aspect. The cause of this is not known.

Context 58 (Billiard room). Dog humerus. There is slight new bone formation around the bicipital groove, possibly associated with a tearing of the sheath due to a severe strain.

Context 115 (Billiard room). Cow first phalanx, very minor Baker Type 1 defect on distal articular surface.

Context 152 (Billiard room). Equine posterior metatarsal with a well developed spavin.

Context 152 (Billiard room). Bovine first phalanx. Irregular new bone formation is present over a large proportion of the bone, together with eburnation of part of the proximal articular surface, which also shows a degree of expansion. This is a case of osteoarthritis, probably secondary to periostitis following infection.

Context 153 (Billiard room). Dog lumbar vertebra with new bone on the anteroventro lateral aspect of the centrum. Grade 3 spondylosis.

Context 156 (Billiard room). Pig fragment of mandible showing severe periodontal disease associated with the posterior molar. There is extensive alveolar recession and a possible abscess cavity.

Context 156 (Billiard room). Bovine first phalanx with

Table 12: Animal bone - species list.

SPECIES	MINIMUM NUMBERS (total)	FRAGMENTS (total)
Domestic cow	77	232 (+ ?4)
Domestic sheep/goat	33	56 (+ ?2)
Domestic dog	25	182 (+ ?1)
Domestic pig	17	34 (+ ?1)
Domestic chicken	13	21 (+ ?1)
Domestic horse	11	26
Rabbit	11	56
Brown hare	8	29 (+ ?1)
House mouse	5	100
Fallow deer	5	6
Rat species	4	6
Woodcock	4	6
Bird, unidentified species	4	5
Domestic cat	3	3 (+ ?1)
Red deer	2	2
Mallard ?domestic	2	2
Pigeon	2	2
Bank vole	1	6
Lagomorph juvenile, hare/rabbit	1	22
Domestic greylag goose	1	4
Teal	1	2
Jackdaw	1	1
Moorhen	1	1
Fish	1	2
Total: (22 species)	233	817

Table 13: Animal bones - minimum numbers of species in each period.

	Water course siling	Late 15thC	c. 1550	c. 1550-1867	1867/87 to present
Cow	2	20	37	12	2
Dog		3	11	7	
Sheep/goat	1	10	13	6	
Horse	1	7	3		
Pig	1	7	4	3	1
Rat sp.			1	1	1
Goose					1
House mouse			5		
Rabbit			4	1	4
Brown hare		1	3	1	3
Fallow deer	1	2	2		
Chicken	1	3	2	2	1
Red deer			1		
Cat		2	1		
Mallard				1	1
Woodcock		1		2	
Pigeon		1			
Indet. bird				2	
Juvenile Hare/rabbit				1	
Teal				1	
Bank vole				1	
Jackdaw			1		
Fish			1		

large congenital cleft in proximal articular surface (Baker's Type 1).

Context 104/120 (Billiard room). This skeleton is from a fairly small, long limbed dog of border collie type.

ENVIRONMENTAL ANALYSIS

H. K. Kenward and P. R. Tomlinson

Introduction and methods

A column sample was taken in monolith tins through the fill of the water course by the excavators, for pollen and other environmental analyses. The sequence of deposits was thought to represent the fills of a ditch or moat and appeared in the field, to have waterlogged organic preservation. The base of the column was at 3.20m below floor level and the top 1.40m below floor level (the site datum). The lithology was noted from the material in the tins (see table 15). A series of 22 subsamples for pollen analysis were taken at intervals of 5cm (see below). The remainder of the sample block was divided into 10cm intervals. Samples of approximately 1kg were taken from each interval. No samples were taken above 1.80m because the material was very sandy and chalky with visibly poor organic preservation (1.80-1.90 contained no seeds). The 1kg samples were washed through a bank of sieves (mesh sizes 2.00mm, 1.00mm, and 500 microns) after soaking in hot water with a solution of sodium pyrophosphate to disaggregate the clay particles when necessary (Kenward et al. 1980). The entire wet residue was sorted, primarily for plant material. Insect, bone and other organic fragments were also picked out. Nomenclature for plants follows Clapham *et al.* (1962) and for beetles Kloet and Hincks (1977).

Plant remains

Table 14 shows the complete list of plant taxa from the fourteen 1kg samples. Each species has been placed in one of five ecological groups:

- B - taxa which cannot be placed in any one ecological group, or which cannot be identified to specific level.
- D - species of disturbed ground, including both arable weeds and plants of waste places.
- H - species which can only have been introduced by humans for food
- T - woodland species
- W - species of wet or damp habitats

The end column on the table gives the total number of occurrences of each taxon in the fourteen samples. Table 15 shows how the numbers of taxa in each of the ecological groups vary through the samples, together with a generalised lithology. There appears to be a relationship between the lithology and the numbers of individual 'seeds'. As the samples were of similar weight the number of 'seeds' can be taken as an indication of their concentration. The darker, siltier and more organic layers between 1.90m-2.65 and 2.80-3.15m contain a higher concentration of 'seeds' than the sandy and chalky layer at the top of the section and the very sandy layer between 2.65-2.80m, which have very few or no plant remains. This may be caused by either poor preservation or the more or faster rate of deposition in the sandier parts or possibly reduced seed input.

In Table 15 the samples have been divided into four units, W, X, Y and Z, taking into account the concentrations of plant remains and the nature of the lithology. It now becomes clear that there are some differences in the ecological groups occurring in the two main units W and Y. In W there are a few woodland species but there are none in Y. Y contains the only plant which suggests the presence of human activity (*Ficus carica*) and a higher proportion of disturbed habitat types (around 40%) than in W. Both W and Y contain high proportions of the broad group (B), between 30 and 60%. W contains a higher percentage of wetland species, particularly at the base (3.10 - 3.20m). In group B there are few taxa which might be specific to arable or pasture. However, the pollen data (see Innes below) give evidence of the cultivation of cereal crops in the region of the site. This highlights the fact that while pollen evidence can provide information from the area around the site, the macrofossil assemblage is likely to be, in the main, from close vicinity to the point of deposition.

The botanical evidence suggests the presence of damp to wet conditions during the deposition of W, followed by inorganic deposition (X), and then a longer period of organic deposition when species from disturbed habitats (most likely caused by human activity) were deposited. A gradual decrease in the wetness of the site continued up to 1.90m. Above 1.90m the deposition of waterlogged organic material ceased. The hypothesis that this sequence of deposits represents a ditch or moat seems to be supported by this evidence.

Other material found tends to support this hypothesis. The animal, fish and bird bones all occur at the top of Y (between 2.20 and 1.90m), suggesting the disposal of refuse in the infilling ditch. The caddis fly larvae occurred only at the base of the column in W and X. They suggest open and relatively clean water. These caddis fly larvae were represented by their cases but also by the small round opercula with which they shut their cases when they pupate. One other interesting find was of the stem of Hydroid (Coelenterata), a tiny marine organism (sea-fir).

Table 14. Complete list of plant taxa, showing their ecological groups and the total number of individuals in all fourteen samples. All plants are represented by their seeds unless otherwise stated.

Plant species	Ecological group code	Number of 'seeds'	Plant species	Ecological group code	Number of 'seeds'
<i>Aethusa cynapium</i> L. (fool's parsley)	D	19	<i>Potentilla palustris</i> (L.) Scop.		
<i>Alisma</i> sp. (water plantain)	W	2	(marsh cinquefoil)	W	1
<i>Alnus glutinosa</i> (L.) Gaert (alder)	W	4	<i>Potentilla</i> sp. (cinquefoils)	B	13
<i>Anagallis arvensis</i> L. (scarlet pimpernel)	D	6	<i>Prunella vulgaris</i> L. (selfheal)	B	1
<i>Anthemis cotula</i> L. (stinking mayweed)	D	2	<i>Prunus spinosa</i> L. fruitstone (sloe)	B	1
<i>Aphanes microcarpa</i> (Boiss. Rent) Rothm.			<i>Quercus</i> sp. budscales (oak)	B	12
(parsley piert)	D	1	<i>Ranunculus flammula</i> L. (lesser spearwort)	W	2
<i>Arctium</i> sp. (burdock)	B	4	<i>Ranunculus</i> Subgenus <i>Batrachium</i>		
<i>Atriplex</i> sp(p). (oraches)	D	13	(DCA.Gray.) (crowfoots)	W	5
<i>Brassica</i> sp(p). (wild cabbage types)	D	252	<i>Ranunculus</i> Section <i>Ranunculus</i>		
<i>Capsella bursa-pastoris</i> (L.) Medic.			(buttercups)	B	14
(shepherd's purse)	D	1	<i>Ranunculus sardous</i> Crantz		
<i>Carex</i> spp. (sedges)	W	354	(hairy buttercup)	B	14
<i>Chenopodium album</i> L. (fathen)	D	252	<i>Ranunculus sceleratus</i> L.		
<i>Chenopodium</i> sp. (goosefoot)	D	2	(celery-leaved crowfoot)	W	3
<i>Cirsium/Carduus</i> sp. (thistles)	B	11	<i>Rhinanthus minor</i> L. sensu lato		
<i>Conium maculatum</i> L. (hemlock)	B	77	(yellow rattle)	B	2
<i>Corylus avellana</i> L. nutshells frags. (hazel)	B	4	<i>Rubus idaeus</i> L. (raspberry) and		
<i>Daucus carota</i> L. (wild carrot)	B	5	<i>R. fruticosus</i> agg. (bramble)	B	141
<i>Dipsacus</i> sp. (teasel)	B	1	<i>Rumex acetosella</i> agg. (sheep's sorrel)	B	6
<i>Eleocharis palustris</i> (L.) Roem. Schult.			<i>Rumex</i> spp. (docks)	D	410
(spikerush)	W	74	<i>Salix</i> sp. wood fragments (willow)	B	3
<i>Euphorbia exigua</i> L. (dwarf spurge)	D	1	<i>Sambucus nigra</i> L. (elder)	B	269
<i>Euphorbia helioscopia</i> L. (sun spurge)	D	4	<i>Silene</i> sp. (campion)	B	1
<i>Ficus carica</i> L. (fig)	H	4	<i>Sinapis</i> sp. (wild mustard)	D	10
<i>Galeopsis tetrahit</i> L., sensu lato			<i>Solanum nigrum</i> L. (black nightshade)	D	17
(hemp nettle)	D	1	<i>Sonchus asper</i> (L.) Hill (prickly sowthistle)	D	2
Gramineae (grasses)	B	51	<i>Stachys</i> sp. (woundwort)	B	3
<i>Hyoscyamus niger</i> L. (henbane)	B	39	<i>Stellaria cf. alsine</i> Grimm (stitchwort)	W	9
<i>Ilex aquifolium</i> L. leaf fragments (holly)	B	2	<i>Stellaria media</i> (L.) Vill. (chickweed)	B	77
<i>Isolepis setacea</i> (L.) R.Br. (bristle scirpus)	W	3	<i>Thuidium</i> sp. (moss)	B	1
<i>Juncus</i> spp. (rushes)	W	3	cf. <i>Torilis japonica</i> (Houtt.) DC.		
<i>Juncus squarrosus</i> L. (heath rush)	B	1	(upright hedge parsley)	B	1
<i>Labiatae</i> sp. (Labiatae family)	B	2	Umbelliferae indet. (umbellifer family)	B	5
<i>Lapsana communis</i> L. (nipplewort)	B	8	<i>Urtica dioica</i> L. (stinging nettle)	D	190
<i>Lychnis flos-cuculi</i> L. (ragged robin)	W	2	<i>Viola</i> sp. (violet)	B	32
<i>Lycopus europaeus</i> L. (gypsywort)	W	2			
<i>Moehringia trinervia</i> (L.) Clairv.			Other remains:		
(three nerved sandwort)	S	6	leather fragment		1
<i>Montia fontana</i> L. (water blinks)	W	2	<i>Felis</i> sp. 1st phalange (domestic cat)		1
<i>Myosotis</i> sp. (forget-me-not)	B	1	<i>Sus</i> sp. incisor (domestic pig)		1
<i>Odontites/Euphrasia</i> sp.			animal bone indet. fragments		2
(red rattle or eyebright)	B	5	<i>Gallus</i> sp. vertebrae (domestic fowl)		1
<i>Oxalis acetosella</i> L. (wood sorrel)	T	6	<i>Clupea harengus</i> L. vertebrae (herring)		1
<i>Papaver rhoeas</i> L. (field poppy)	D	6	<i>Scophthalmus</i> sp. vertebrae (turbot?/brill?)		1
<i>Polygonum aviculare</i> agg. (knotgrass)	D	23	fish vertebrae fragment indet.		1
<i>Polygonum convolvulus</i> L. (black bindweed)	D	6	cf. Gadidae atlas bone (cod family)		1
<i>Polygonum hydropiper</i> L. (water-pepper)	W	9	<i>Trichoptera</i> sp. larval cases (caddis fly)		many
<i>Polygonum lapathifolium</i> L. (pale persicaria)	B	11	<i>Cenococcum</i> sp. sclerotia (soil fungi)		many
<i>Polygonum persicaria</i> L. (persicaria)	B	42	Hydroid (Coelenterata) 'stem'		1
<i>Polygonum</i> sp. (persicaria species)	B	7	<i>Oligochaeta</i> egg cases (earthworms)		many
<i>Potamogeton</i> sp. (pondweed)	W	1			

Table 15: Habitat table showing the number of plant taxa in each of the ecological groups given as a percentage of the total number of taxa in each sample. Other materials and a simplified lithology are also shown. The sample numbers represent the depth in metres below the site datum (Billiard Room floor).

SAMPLE NOS:	BOTTOM	3.10- 3.20	3.00- 3.10	2.90- 3.00	2.80- 2.90	2.70- 2.80	2.60- 2.70	2.50- 2.60	2.40- 2.50	2.30- 2.40	2.20- 2.30	2.10- 2.20	2.00- 2.10	1.90- 2.00	1.80- 1.90	TOP
TOTAL NO. OF ITEMS:		103	77	142	42	0	6	117	376	330	257	544	417	198	0	
TOTAL NO. PLANT TAXA:		26	11	12	4	0	4	18	21	22	24	36	37	23	0	
% TAXA IN EACH INDICATOR GROUP:																
T Woodland		12	18	0	0	0	0	0	0	0	0	0	0	0	0	
B Broad		35	55	50	75	0	100	56	43	32	54	42	41	44	0	
D Disturbed		19	18	17	0	0	0	33	43	50	29	39	46	39	0	
W Wet or damp		34	9	33	35	0	0	11	14	18	17	17	11	13	0	
H Human		0	0	0	0	0	0	0	0	0	0	2	2	4	0	
ANIMAL AND BIRD BONES:													+	+		
FISH BONES:														+	+	
LEATHER:												+				
CADDIS CASES:		+	+	+	+	+										
SIMPLIFIED LITHOLOGY:		VERY SANDY AT BASE AND STONES	ORGANIC AND DARK			SANDIER		FAIRLY DARK & SILTY			SANDY		DARK AND SILTY		V. SANDY & CHALKY CHARCOAL FRAGMENTS	
DIVISIONS:		W				X			Y					Z		

Insect remains

None of the beetle assemblages is very large (minimum number of individuals 1 - 20 or so). This is not surprising since they were taken from the samples used for the seed analysis so that smaller (and generally more abundant) species may have passed through the 500 micron mesh sieve, 300 microns normally being employed.

In the lower levels, at least, the preservation was good and it is unfortunate that fuller analyses were not possible. There is, however, a distinct trend visible through the material, and some general observations may be made.

The lower samples (3.20m up to 3.00m) had a large proportion of aquatic and waterside beetles, indicating permanent open water with damp mud at its edges (*Anacaena ?globulus* (Paykull), *Chaetarthria seminulum* (Herbst), *Limnebius truncatellus* (Thunberg) or *papposus* Mulsant, *Agabus* sp., *Coelostoma orbiculare* (Fabricius), *Hydroporinae*, two *Helophorus* species, *Agonum obscurum* (Herbst) and *Lesteva heeri* Fauvel). By contrast, the upper levels, above 3.0m, gave only two aquatic or waterside individuals (from 2.80m-2.90m and 2.60m-2.70m). Open water habitats may therefore have disappeared by 3.00m.

A terrestrial component was present in most samples. The following taxa are recorded: Homoptera - Auchenorrhyncha, *Dyschirius globosus* (Herbst), *Bemdidion properans* Stephens, *Pterostichus melanarius* (Illiger), *Abax parallelepipedus* (Piller and Mitterpacher), *Cerycon analis* (Paykull), *Megasternum obscurum* (Marsham), *Cryptopleurum minutum* (Fabricius), *Silpha atrata* Linnaeus, *Acidota crenata* (Fabricius), *Anthobium* sp., *Olophrum piceum* (Gyllenhal), *Carpelimus* sp., *Anotylus rugosus* (Fabricius), *Lathrobium* sp., *Neobisnius* sp., *Gyrohypnus ?fracticornis* (Muller), *Xantholinus linearis* (Olivier), *Ontholestes murinus* (Linnaeus), *Tachyporus* sp., *Tachinus* sp?p., *Geotrupes* sp., *Aphodius* spp., *Onthophagus* sp., *Athous haemorrhoidalis* (Fabricius), *Anobium ?punctatum* (Degeer), *Grynobius planus* (Fabricius), *Chaetocnema concinna* (Marsham), *Strophosomus* sp., *Barynotus obscurus* (Fabricius), *Cidnorhinus quadrimaculatus* (Linnaeus) and *Leperisinus varius* (Fabricius).

The surroundings of the ditch thus seem to have provided a variety of semi-natural terrestrial habitats; possibly an area of tussocky grass and mixed herbage with some dead wood, dung and perhaps other decaying matter. The range becomes restricted in the assemblages from the upper samples, where the influence of man may have become more significant.

Dung beetles are present as a large proportion of all the assemblages. Most are *Aphodius* species, with a single *Onthophagus* in 3.10-3.20m, and a few fragments of *Geotrupes*. There are proportionally and absolutely many more *Aphodius* in the uppermost samples.

1.90-2.00m contained many, mostly apparently not fully hardened, suggesting a substantial environmental change which killed newly emerged adults in their pupal chambers - perhaps burial by dumped material, or just drowning when the ground became waterlogged. The ditch may, therefore, have been grazed after its terrestrialization.

Acknowledgments

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POLLEN ANALYSIS

J. B. Innes

Methods

Pollen analysis was undertaken at Speke Hall to supplement the archaeological excavations by providing evidence of the local and extra-local vegetation existing while the accumulation of sediments took place in the water course. Twenty-two sub-samples were taken for pollen analysis from the monolith tins from the lower two metres of the profile, above which the sediment appeared to be too dry and sandy to warrant attention. Samples were prepared at 10cm intervals, except for the basal half metre which appeared to be more organic and was sampled every 5cm.

Preparation of the samples for analysis was according to the standard methods as outlined in Moore and Webb (1978). Pollen extraction and concentration was achieved by alkali digestion followed by acetylation treatment. The high silt content of the sediment also made necessary the use of hot hydrofluoric acid. Despite the silty nature of the deposit pollen preservation was generally good, although some corrosion of grains was noted in the uppermost, sandier samples.

Counting the pollen continued until a total of 500 land pollen grains had been identified at each sampled level. Fern and moss spores, and aquatic pollen, although counted were not included within the pollen sum. The results are presented in two pollen diagrams. In Figures 11 and 12 each taxon's pollen frequency is expressed as a percentage of total tree pollen plus that taxon's ecological group. Thus trees are shown as percentages of total trees, while shrubs such as *Corylus/Myrica* (hazel or bog myrtle) are shown as percentages of total trees plus total shrubs, and so on. In Figure 13, frequencies are expressed as percentages of total land pollen, and some taxa are combined in broader categories on the grounds of their similar ecological affinities. Stratigraphic symbols on these diagrams follow the system proposed by Troels-Smith (1955). Plant

nomenclature follows Clapham *et al.* (1962).

The pollen record

Four local pollen assemblage zones have been recognised and are used to subdivide the pollen diagrams.

SHa 315-240cm. The assemblage is dominated by *Alnus* (alder) which contributes over 50% of total pollen. *Quercus* (oak), *Corylus/Myrica* and *Calluna* (heather) are consistently present in low frequencies, while a range of other tree and shrub taxa is also recorded (Fig. 12). Herbaceous indicators of clearance or cultivation are well represented, with *Cerealia* (cereals), *Taraxacum* - type (dandelion), *Rumex* (dock) and *Plantago lanceolata* (ribwort plantain) consistently recorded. *Pteridium* (bracken) is a major contributor to the fern spore record, while Filicales spores (undifferentiated ferns) are also significant early in the zone. Wetland herbs including Cyperaceae (sedges) and *Ranunculus* (buttercup) are prominent, as are Rosaceae (undifferentiated rose family).

SHb 240-220cm. The lower boundary of this zone is defined by a rise in *Calluna* pollen frequencies, which continues to a pronounced peak. *Alnus* exhibits a slight decline but still dominates the assemblage. *Quercus* and *Corylus/Myrica* are relatively unchanged. Dryland herb pollen frequencies rise and *Taraxacum*, *Plantago lanceolata* and *Senecio* (ragwort) - type reach their peak frequencies. Cyperaceae values also increase.

SHc 220-190cm. The lower boundary of this zone is defined by a sharp increase in *Betula* (birch) pollen frequencies and by a decline in *Calluna* and *Alnus*. *Quercus*, *Corylus/Myrica* and Gramineae frequencies are maintained at their previous levels. Open ground indicators are less in evidence, with *Pteridium* and *Taraxacum* showing major reductions. *Ranunculus*, *Senecio*-type and *Plantago lanceolata* are still consistently present, however. *Sphagnum* (bog moss) spores become recorded in higher values.

SHd 190-145cm. The upper part of the pollen diagram is described by this zone, in which *Alnus* resumes dominance of the assemblage, with *Betula* reduced to low frequencies. *Corylus/Myrica* shows an initial slight reduction in frequency, but in general, like *Quercus*, its values do not alter significantly. Similarly *Calluna* and Gramineae frequencies are almost unchanged throughout the zone. Herbaceous indicators of open conditions, including *Cerealia*, still occur, while frequencies of wetland herbs remain low but consistent.

Discussion

The application of pollen analysis to deposits having an archaeological context offers opportunities for the reconstruction of environmental conditions and the

recognition of land-use patterns which may be directly related to particular human activities. It is therefore potentially a most productive palaeoecological tool in these situations. In the interpretation of fossil pollen assemblages recovered from entirely natural sediments such as from bogs or lakes, direct cultural/environmental correlations should not be assumed (Edwards 1979), even with a comprehensive understanding of each taxon's ecological preferences (e.g. Behre 1981). The incorporation of pollen into deposits associated with settlement sites may not be a consistent process, and the preservation and stratification of pollen in these circumstances is very variable. Dumbleby (1976) has reviewed some of the problems involved in the pollen analysis of archaeological deposits.

As long as the limitations of the method are recognised, however, pollen evidence may be of particular benefit to the archaeologist (Dumbleby 1975) since pollen data from the archaeological deposits are likely to have been strongly influenced by cultural activity, either reflecting a culturally manufactured landscape in the vicinity of the settlement, or including pollen directly derived from human action, such as the transport of cereals, hay and other materials from nearby fields to the site. Pollen-bearing deposits of this kind include artificial excavations, such as moats, wells, ditches (Tinsley and Smith, 1974) and ponds (Innes and Tomlinson 1978).

The deposits analysed from the Speke Hall water course clearly are of the moat or ditch type, relatively few of which have been analysed for pollen up to the present time. Greig (1982, 1986) has reviewed much of the published pollen work from urban and semi-urban settlements and has considered the significance of most deposits for botanical study. Medieval ditches at Cowick, Humberside (Greig 1982; 1986) and Birmingham Smithfield (Greig 1982 and Ancient Monuments Laboratory Report 2919), are similar in showing very substantial tree pollen frequencies and significant but very low values for 'cultural' indicators such as cereals and weeds. After initial ditch construction, these may have functioned as 'semi-natural' sites although sediment may have been removed at intervals if the moat were re-cut. They could thus be interpreted as partly reflecting the state of the surrounding landscape. However, both tree pollen and 'cultivation type' pollen may be introduced with dumped plant material and thus the moat sediments may be contaminated by an artificial human-derived component, such as must account for cereal frequencies of 23% of total pollen recorded in the medieval ditch at Nantwich, Cheshire (Colledge 1980). The interpretations and conclusions which follow reflect the uncertain origin of moat sediments. The homogenous nature of the deposit and the low variability of the pollen curves must be due in some degree to the mixing which will inevitably occur in a ditch fill, with the probable slumping of material from the sides of the ditch into the sediment. Although changes in the pollen record may be recognised which allow its division into assemblage zones, it is probable that parts at least of the deposit accumulated quite

SPEKE HALL

MERSEYSIDE
%trees+group

LOCAL P.A.Z.

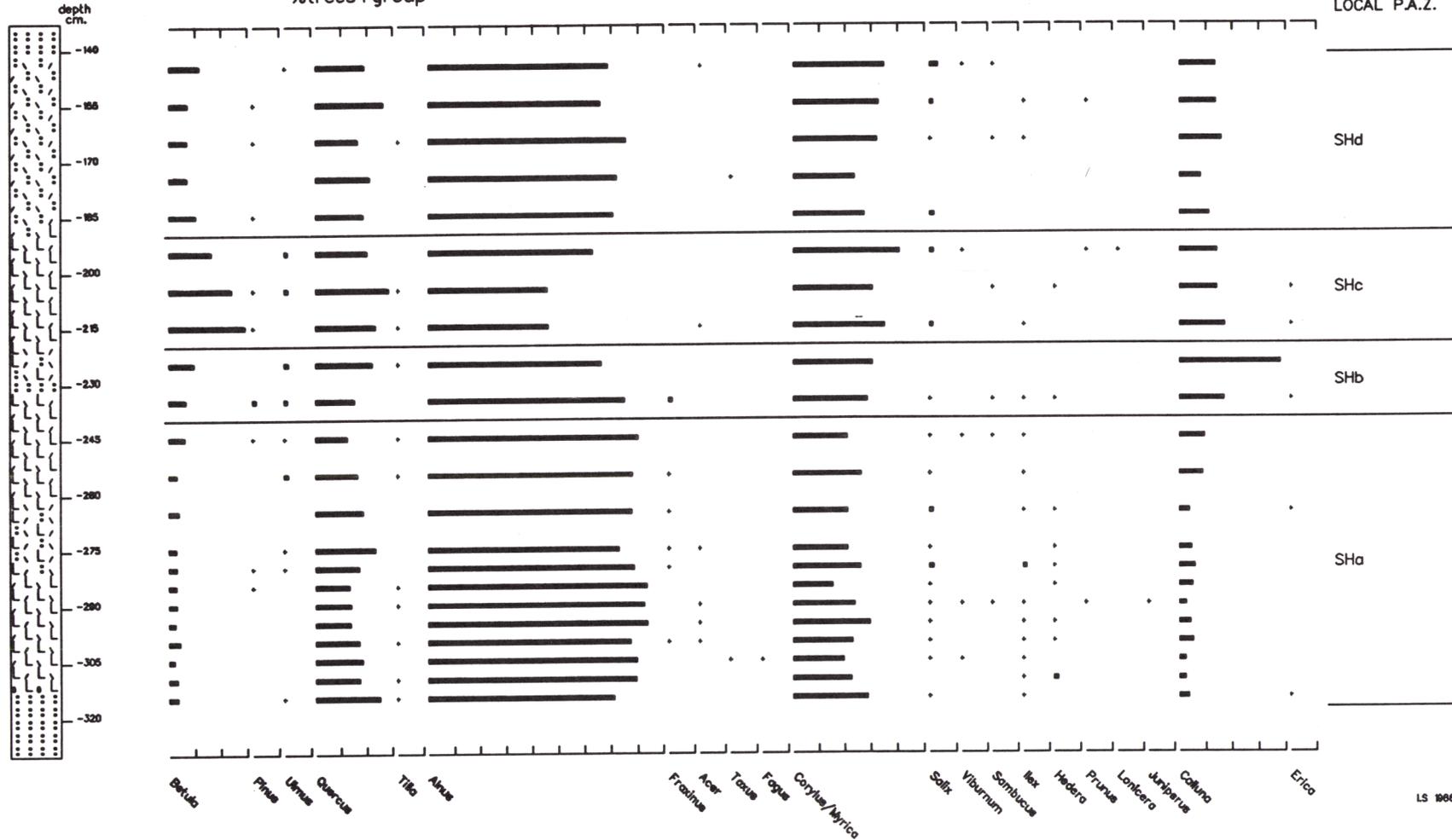


Figure 11: Pollen diagram with pollen frequencies calculated as percentages of tree pollen plus ecological group.

SPEKE HALL

MERSEYSIDE
%trees+group

LOCAL P.A.Z.

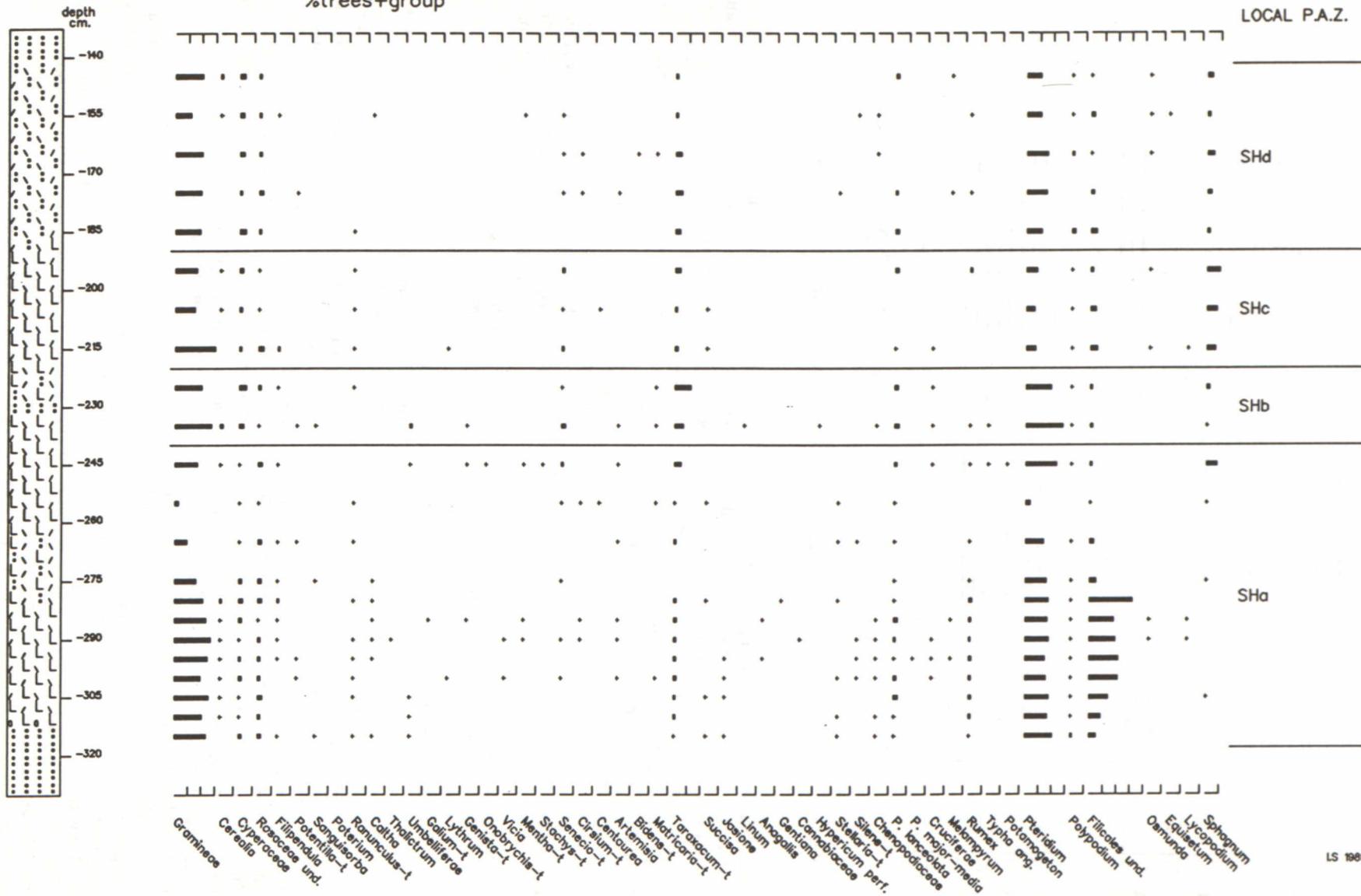


Figure 12: Pollen diagram with pollen frequencies calculated as percentages of total land pollen.

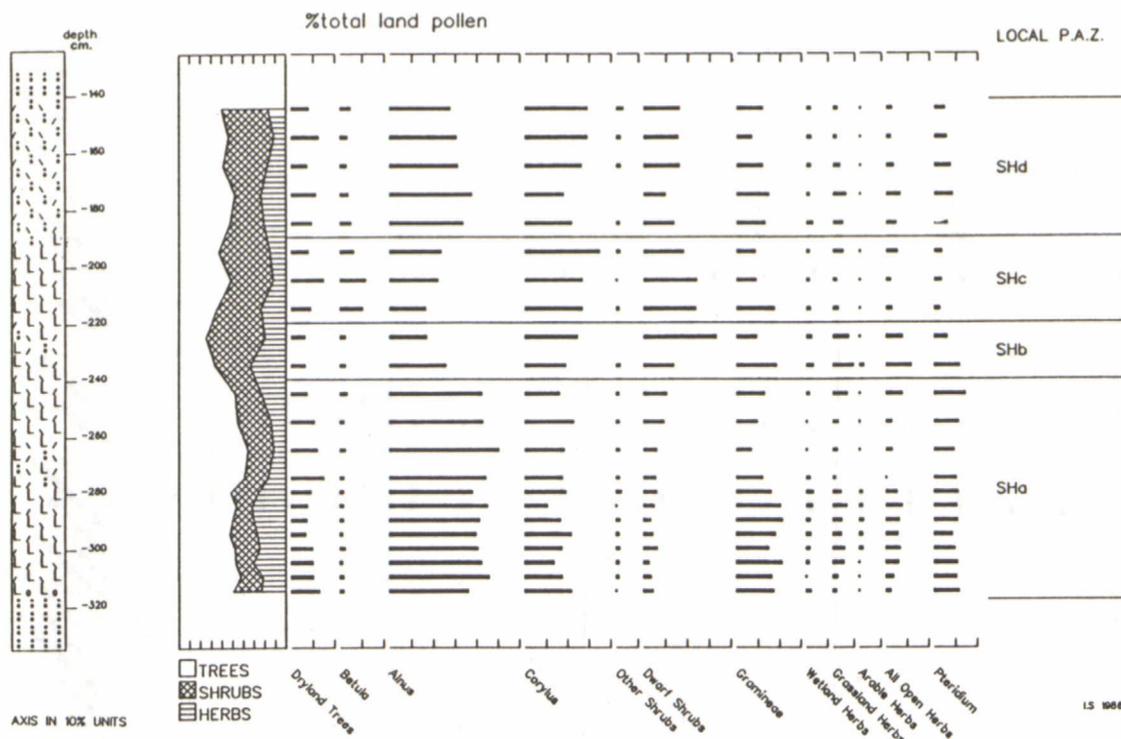


Figure 13: Summary pollen diagram showing ecological groupings (percentages of total land pollen).

quickly and that it would be wrong to assign any temporal scale to the vegetation history. Indeed the pollen changes which define the zone boundaries are relatively slight, and it may therefore be prudent to consider the pollen record, at least within zones, as comprising a single body of evidence, rather than as a progressive record of events.

Interpretation

Five main vegetation communities are represented in the pollen record, although individual taxa may be placed within more than one, especially where identification is only to generic or family level.

Woodland communities are well represented on the Speke diagram, with tree pollen between 30% and 50% of total land pollen (Fig. 13), with dryland trees *Quercus*, *Ulmus* (elm), *Tilia* (lime) and *Fraxinus* (ash) above 10%. Some mature woodland apparently existed nearby, and contained some *Fagus* (beech) and *Taxus* (yew), but whether managed or semi-natural is impossible to say. A wide variety of shrubs are recorded in low percentages but are usually under-represented in the pollen record and were likely to have been locally important. *Ilex* (holly), *Prunus* (cherry), *Acer* (maple), *Viburnum* (guelder rose) and particularly *Corylus/Myrica* are likely to have been widespread either as understorey or scrub. They could also have existed as hedgerow shrubs. Two woody taxa are of particular significance. Firstly the records of *Sambucus* (elder) are noteworthy, as this shrub typically grows around settlement sites and

its pollen is often found in associated ditch deposits. Secondly, some of the *Acer* records are attributable to *Acer pseudoplatanus* (sycamore) which was introduced to Britain in the 15th or 16th century (Clapham *et al.* 1962), which provides a temporal context for the sediments.

Wetland communities are represented throughout the profile. The ditch was probably fringed by *Alnus*, with some *Salix* (willow), causing locally abundant alder pollen deposition. The Cyperaceae records probably originate from ditch-side communities also, as would some of the grasses and wetland herbs such as *Typha angustifolia* (reedmace), *Lythrum* (loosestrife), *Potentilla* type (cinquefoil) and *Mentha* (mint). Perhaps surprisingly, aquatic pollen records are very few, so that perhaps the ditch was kept clear of aquatic plants, then quickly filled in after disuse. That the ditch contained a reasonable depth of water is shown by the detrital nature of the sediment, and also by the presence of diatoms (algae) within it. Freshwater oligotrophic forms noted from the lower metre of sediment include *Cymbella cyspidata*, *C. aspera*, *C. ehrenbergii*, *Pinnularia pulchra*, *P. nobilis*, *Diploneis ovalis*, *Amphora ovalis* var. *libyca* and *Gomphonema* sp.

Cultivated ground communities are represented in low but consistent amounts, and the cereal pollen records probably point to local growth or dumping of straw or organic waste, as cereal pollen grains are not naturally transported far. Further differentiation was not attempted, although grains resembling *Triticum* (wheat) and *Secale* (rye) were noted. Typical weeds of

cultivation recorded are *Centaurea cyanus* (cornflower) and others like Chenopodiaceae, *Silene* (campion), Cruciferae, *Matricaria* and *Plantago major* (great plantain) which may also occupy other habitats. Another probable crop is Cannabaceae (either *Cannabis*, hemp or *Humulus*, hop). Others like *Vicia* (vetch), Leguminosae and Cruciferae are less likely to be cultivated types. The *Linum* record is of *catharticum* (purging flax) type, not of cultivated flax.

Heathland communities are less well represented, except in the middle of the diagram, when *Betula* and *Calluna* values rise at the expense of *Alnus*. A temporary expansion of heathland possibly took place. With *Sphagnum* becoming recognised for the first time, a spread of more acidic soil conditions at this point seems likely.

Grassland and ruderal communities are well represented throughout. Taxa indicative of damp grassland and possibly pasture include *Plantago lanceolata*, *Sanguisorba officinalis* (great burnet), *Anagallis tenella* (bog pimpernel), *Linum catharticum*, *Hypericum perforatum*-type (St John's wort), *Gentiana* (gentian), *Jasione* (sheep's-bit) and several others. More open, disturbed ground such as footpaths is indicated by *Artemisia* (mugwort), Chenopodiaceae, *Urtica* (nettle) and *Plantago major*. Most of the weeds recorded in the pollen rain will have colonised a range of habitats within the general grassland/waste ground environments, or have been introduced in waste material.

Conclusion

The pollen evidence from Speke Hall suggests that the site was set in a mixed landscape in which mature open and scrub woodland coexisted with cultivated and pasture land. Wetland areas existed locally and there is evidence for waste, bare ground, rough grassland and cultural features such as hedgerows and footpaths. Slight fluctuations in the ratio of open ground herbs and dryland trees may be seen (Fig. 13). Open herbs are more significant in early zone SHa, SHb and early SHd. Dryland trees are at their highest values in late SHa, SHc and late SHd. Some clearance of woodland may be reflected here. If so, the most important clearance occurred in zone SHb, with alder and dryland trees replaced by grasses with bracken, dandelion and other herbs, with some spread of heather and birch heathland. However, the vegetation mosaic seems in general to have been fairly stable, with little significant vegetational change during the period in question.

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BOREHOLE SURVEY

J. B. Innes and I. V. Innes

A number of boreholes were made to investigate the stratigraphy and to find the location of the water course feature in the dry moat area which surrounds Speke Hall (Fig. 1, a1-c2). The following stratigraphic sequences were recorded, depths in centimetres:

a1	0-42	Disturbed material
	42-64	Clayey, organic mud
	64-79	Pink clay, charcoal at 69cm
a2	0-30	Disturbed material
	30-53	Wet clayey mud with charcoal and brick near the base
a3	0-40	Very wet disturbed material
b1	0-15	Disturbed material, unable to penetrate
b2	0-50	Disturbed material
	50-100	Sandy silt
	00-155	Wet sand
	155-200	More organic sand
	200-275	Black organic sandy silt
b3	0-46	Disturbed material
	46-59	Pink clay with pebbles
c1	0-60	Disturbed material
	60-86	Silty sand
	86-98	Clay
	98-100	Wood layer
	100-200	Black organic soil with charcoal
	200-275	Black organic wet silt

While most of the boreholes were shallow and ended in disturbed material or impenetrable clay, bores **b2** and **c1** penetrated much more deeply (to 2.75m). These contained basal organic silt deposits of a type similar to those retrieved from the Billiard Room excavation. That these two bores were of identical depth and contained the same depths of basal organic silt suggests an artificial feature. The line of **b2** and **c1** therefore most probably represents the linear extension of the old water course feature recorded in the Billiard Room. This should be borne in mind in any future developments or excavations at the site.

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SPEKE HALL: EXCAVATIONS IN THE GARDENERS' COMPOUND, 1987

P. J. Davey and J. Speakman

Introduction

In advance of the redevelopment of the gardeners' compound east of the stable block at Speke Hall, an excavation of the proposed vehicle inspection pit was carried out under the auspices of the Field Archaeology Unit of the University of Liverpool.

The excavation

A trench of approximately 1m x 2m was excavated to a depth of 90 cm.

A concrete skimming, of an average depth of 8cm, was removed from the area, revealing one side of a garden path running in a north-south direction along the trench. The path had a brick lining resting upon and butting up against garden soil deposits and retaining a cinder levelling and a gravel/pebble surface. The garden soil was up to 60cm in depth in the disturbed northern section of the trench and 40cm in the south. The variation in depth of this deposit was probably caused by gardening activities on the site and complicated by the existence of a post-hole in the northern end of the trench. Beneath the garden soil there was a layer of pure sand. Resting on the sand in the southern section were a number of triassic sandstone blocks which may have represented an earlier phase of building nearby. The sand was coloured a dark brown in the undisturbed upper surface but was otherwise more leached similar to the Shirdley Hill sand at Rainford, Merseyside and lay on top of natural boulder clay. The clay was yellow and orange in colour with many variations in both tone and consistency and with extensive lenses of grey or white sand contained within it. Near the upper surface of the clay were a considerable number of pebbles and boulders.

The northern third of the trench was heavily disturbed principally by a post-hole which had penetrated into the natural clay and was represented in the eastern section (Fig. 1).

Two further small trenches were excavated within the gardeners' compound area to verify the stratigraphic sequence of the main excavation. Trench 1, which was excavated 8m to the southeast of the site of the inspection pit, produced a more complex stratigraphic sequence, probably due to the disturbance caused by the construction of a garden wall, with gravel and sand mixed with the soil and artefacts to a much greater depth.

Trench 2, 20m to the east of the inspection pit, was again disturbed by the presence of a wall in the northern section but the southern section corresponded well with the sequence observed in the main excavation.

The finds

Inspection pit

The excavation of the vehicle inspection pit revealed a relatively small number of finds associated with the garden soil deposits. The majority are of a late date 19th or 20th century with the notable exception of a very small rim sherd from a combed slipware cup. There were no finds of a date earlier than the seventeenth century.

Trial Trench 1

This trench produced two base sherds from a 17th century drinking vessel along with a number of modern finds.

Trial Trench 2

This trench only produced finds of a late date.

Interpretation

It seems clear that this area of land has not been subject to domestic rubbish disposal, probably due to the close proximity of the Hall itself. It may have been at various times a farmyard, parkland or even permanent pasture which prevented its use for this purpose.

An earlier estate plan suggests that a larger stable block existed (see Addison's 1781 map, reproduced in Nicholson 1983) the line of which should have crossed the excavation. No evidence for this building was found.

Implications

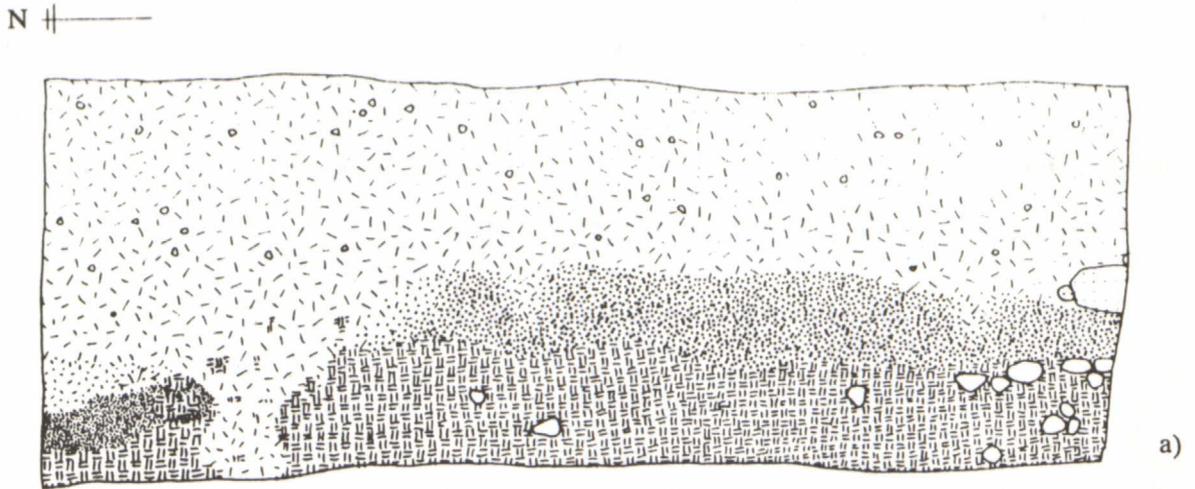
It seemed very unlikely that the construction of the garage complex in the gardeners' compound would do any archaeological damage and therefore it was considered unnecessary to undertake any further excavations in front of the garages when built.

Acknowledgements

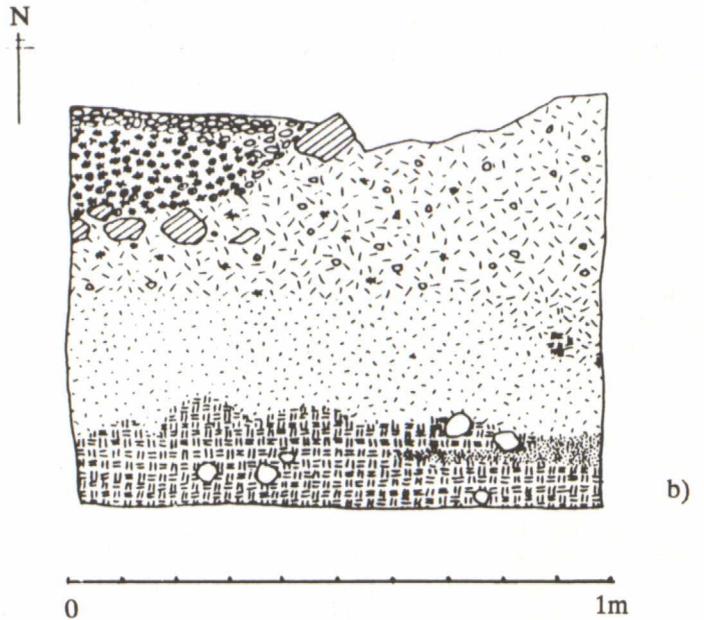
Thanks to Mark Cook and Christine Phillips for their great efforts on the excavation and to the North West Archaeological Trust, in particular Mrs J. Lewis, for its assistance and cooperation. Christine Phillips drew the sections. The photographic record and section drawings are held in the archives of the Field Archaeology Unit.

Reference

Nicholson S. 1983 'Farming on a south Lancashire estate 1066-1795: evidence from Speke Hall' *J Merseyside Archaeol Soc* 3 (for 1979), Fig. 2, page 15.



-  Pebbles
-  Pebbly soil
-  Charcoal & clinker
-  Topsoil with charcoal & stones
-  Fine brown loam
-  Boulder clay
-  Brick
-  Sandstone
-  Light grey sand
-  Red-brown sandy soil



Christine Phillips

Figure 1: Section drawings: a) northern section; b) eastern section (trench 1.95 x 0.96m).

SPEKE HALL: ARCHAEOLOGY OF THE EAST COURTYARD, 1989

Jennifer Lewis

In November 1989, with the final phase of repairs at Speke Hall, came the opportunity to examine the archaeological potential of the courtyard east of the Hall (see Higgins Fig. 1, page 49). This phase of work involved the relaying of services to the Hall across the east bridge and courtyard. At the same time the whole of the cobbled surface of this courtyard was to be re-laid and a service trench through the Tea Room Passage into the south garden was to be relocated for the purpose of replacing a water pipe. It was hoped that features noted during previous repair work would be revealed in plan and that it would be possible to consider their relationship with the present Hall. However, no facility was granted for intrusive archaeological investigation though features visible in the sections of new service trenches were available for recording. Consequently, interpretation of the chronological sequence could be attempted only by reference to the surface relationships of features, occasionally supported by evidence from sections.

The work was funded by the National Trust and facilities for archaeological recording were made possible through the co-operation of Messrs William Tomkinson and Sons and their sub-contractors. Carol Thickins, architect for Donald Insall and Associates, gave much helpful advice and provided plans relating to earlier and current building work. Contractors' work was carried out under archaeological supervision by Jen Lewis and Jeff Speakman for Liverpool University Field Archaeology Unit. The site archive and finds are held by the Unit.

East Courtyard (Fig. 1)

The courtyard is bounded by the east range of Speke Hall and, on the south side, by a range now used as Tea Rooms by the National Trust. It is approached by a stone bridge across the north-east arm of the moat and adjacent to which there are the remains of a sandstone dovecote. The area available for investigation was focused in the centre of the courtyard; there was no opportunity for archaeological investigation in the immediate vicinity of any of the enclosing walls. In 1979, sandstone masonry had been noted during work to lay an electricity cable across the yard and evidence for a sandstone drain had been recorded in 1988 whilst builders were checking the drainage close to the eastern boundary of the yard.

The cobbles and upper levels of bedding material were removed by 'JCB' under archaeological supervision. The lower bedding layers were excavated archaeologically, by hand, to expose the underlying layers. The bedding material consisted of firmly compacted dark brown soil with brick and coal fragments throughout and to a

depth of no more than 400mm below the upper surface of the cobbles. Pottery from the bedding layers ranged in date from the 16th to 19th centuries but it was not possible to relate the pottery with any certainty to the exposed features. In several areas the bedding material lay directly over a soft yellow/brown sand which appears to be similar to the natural sand found generally in the vicinity of Speke Hall.

Structures A and B

The earliest evidence was for at least two structures, though each had been levelled or robbed-out prior to setting the cobbled surface. Structure A included fragments of red sandstone with the occasional yellow sandstone roofing flag. This was interpreted as evidence for a wall (17, 36) set at right angles from the Tea Room, which could be seen for a total length of c. 6m, though it had been cut by a contemporary or later drain trench (11). At its northern limit it seemed to turn west, though another series of trench cuts (23, 32) (the latter relating to the 1979 cable trench) obscured the evidence. A small spread of red sandstone rubble (18) was probably contemporary with the wall and was immediately overlaid with material containing 18th century pottery. Also associated with the wall were more general spreads of grey sand (20) and a thin layer of clayey sand (35), the latter suggesting possible evidence for the remains of a deliberately laid clay surface.

Structure B was also built of red sandstone and lay at the northern end of the yard. It consisted of a line of red sandstone rubble with occasional complete blocks of masonry at least two courses high (48), which ran westwards from and at right angles to a second sandstone wall (50). Each had been extensively robbed out. A third wall (51) was implied by another spread of sandstone rubble. Both 50 and 51 were clearly associated with an area of red sandstone flagstones (49). Small spreads of yellow sandstone roof flags and grey slates (53) lay below a layer of sandy rubble adjacent to walls 48 and 50. At least two courses of sandstone masonry (42) were recorded in the sections of a modern service trench (41) a little to the east of wall 51, with which they may have been associated.

Although highly likely, the association of structure A with a cruck-framed building (JT1, JT2) recorded in the Tea Room range (Lewis, 1988) cannot be confirmed due to the insertion of a service trench alongside the north wall of the Tea Room range. Other service trenches have effectively destroyed any possible relationship between the two structures, A and B, though in plan it appears that they might have formed a continuous line of sandstone walling across the yard.

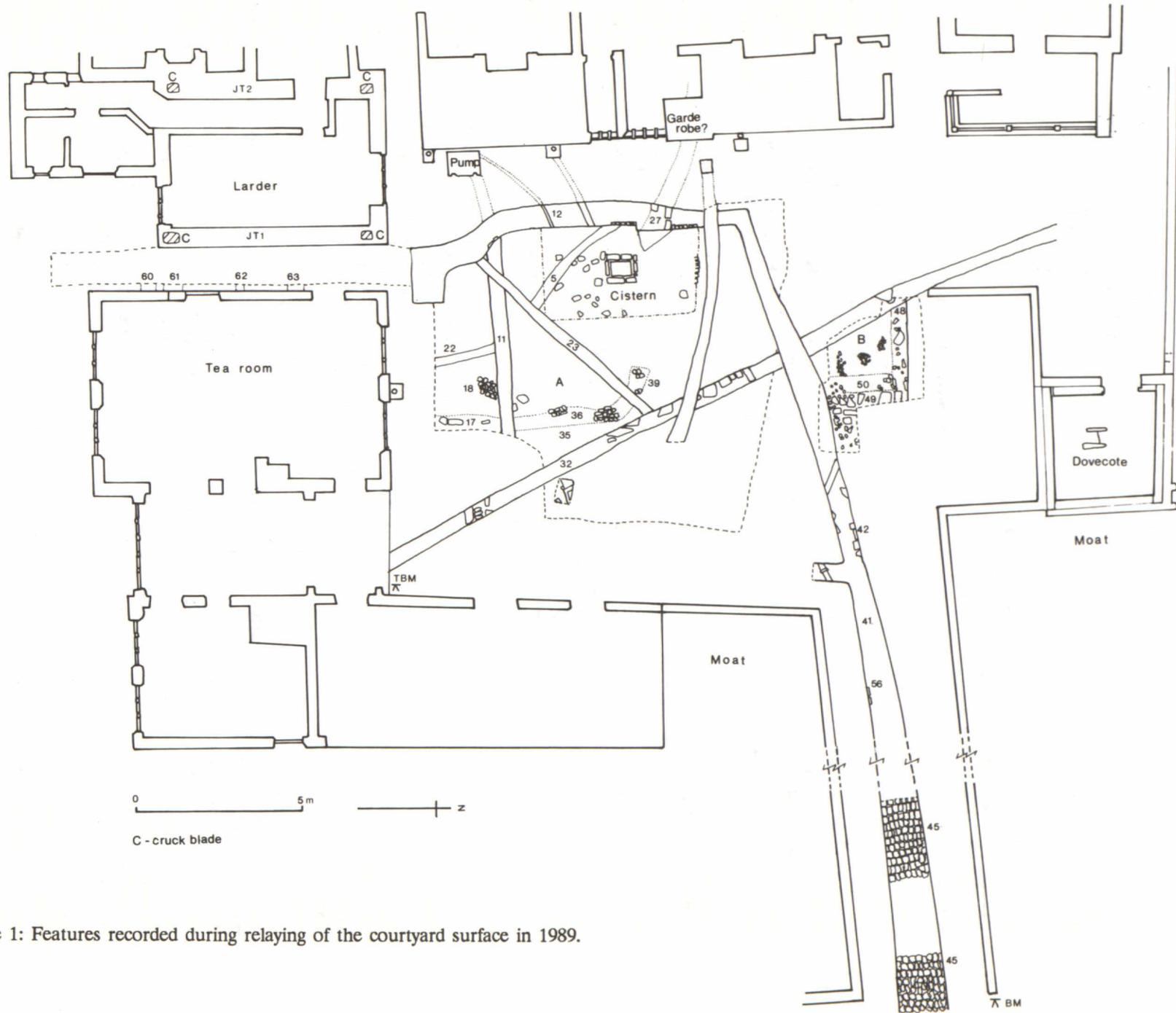


Figure 1: Features recorded during relaying of the courtyard surface in 1989.

The argument is supported by the sandstone masonry recorded in 1979 when the cable trench (32) was dug across the yard. The spreads of roof material, sandstone floor and possible clay surface together suggest that the walls were associated with roofed structures but it is not possible to determine whether they were major walls or partitions within a structure.

The proximity of structure B to the east bridge over the moat might suggest that it was a porter's lodge or even a gatehouse. It may also have been associated with the sandstone building now known as the dovecote where the north face of the exterior wall is strangely buttressed. Within the dovecote there was evidence for a floor of red sandstone flags on to which the south and west walls were laid (see below).

The spreads of roofing material appeared to be a consequence of natural decay and collapse rather than demolition. Possibly the buildings were only partly dismantled and the walls were robbed out some time after they had fallen out of use. From the evidence of the pottery found over feature 18, and the absence of a building in this part of the east courtyard on a survey plan of 1781 (see Addison's map in Nicholson 1983, fig 3), it seems likely that they were finally demolished in the 18th century before the yard was cobbled.

Documentary evidence suggests that structures in the east yard might be expected in the 17th and early 18th century (Nicholson 1983, 33-34) when "the chamber next the newe bridge where the gardeners lye" (1624) and "the Servant's Chamber at the Back Bridge" (1700) were recorded. This accommodation is likely to have been in proximity to the kitchen range rather than next to the principal entry over the north bridge. A Porter's Chamber was noted in 1624 (Saxton, 1946, 128) and a room over the back gates was recorded in 1700 (Saxton, 1945, 125) providing further documentary evidence for structures, possibly a back gatehouse, in this location.

Cistern, drains and early service trenches

A large, brick lined cistern was constructed in the post-medieval period - probably in the 18th century after structures A and B had been demolished. Its external dimensions are c. 4.7m x 3m. It has a capping of red sandstone rubble overlaid with sandy clay and it seems likely that the stones around the opening have been reset on at least one occasion. A pipe, set high into the north wall of the cistern may have acted as an overflow, but no evidence for an associated pipe trench was seen on the surface. Fresh water was taken off from the cistern by a lead pipe (12) to the water pump which is still set against the east range wall.

A drain, lined with red sandstone slabs (27), appears to have been associated with a supposed garderobe shaft (Lewis, 1988) immediately next to the north sandstone chimney stack on the east range. It ran into the cistern. Since the cistern obviously functioned as a collecting

point for fresh water, this suggests that the function of the garderobe had been altered. There is, however, a second gully opening at the bottom of the garderobe where it is integral with the kitchen wall. It is possible that rain water from the inner courtyard was channelled beneath the kitchen out to the east yard, originally as a means of sluicing through the garderobe and subsequently as a means of taking water from the inner court into the cistern.

A drain (11), constructed of large slabs of red sandstone, may be contemporary with, or at least have functioned at the same time as, structure A. The drain ran eastwards from the pump at the east range. Part of the drain may have been exposed during building work at the east end of the yard during 1988. If so, its line must have altered to run in a more north-easterly direction. Almost certainly, it functioned as an overflow from the pump by carrying waste across the yard to the moat. From the nature of layers along the line of the drain it seems likely that it had been opened up and backfilled on at least one occasion. It was overlaid by a later trench (23) the function of which was not established though it may have carried off rainwater from the east range.

An unexplained linear feature (22) may have been linked to drain 11, or, it could have been associated with a shallow cut (5) into the upper surface of the cistern capping and linked to feature 23. Fragments of Cistercian-type pottery and of green-glazed roof tile were recovered from the bedding layer for the cobbles in this part of the yard.

Dovecote (Fig. 2)

The dovecote is approximately square in plan and stands at the north-east corner of the yard. On the outer face of the north wall is a pair of shallow buttresses between which is a recessed sandstone wall. Above the recess the wall projects slightly, and shows evidence for a blocked opening. At the base of the buttressed wall is a series of flat flagstones. West of the buttresses, at present ground level, is a drain channel which opens into the moat. Examination of the stone work on the outer face of the north wall appears to indicate that the upper courses including the buttresses, have been rebuilt upwards from the courtyard level. If so, the nesting boxes must be contemporary with or later than this rebuilding. The nesting boxes line the north, east and south walls and consist entirely of sandstone masonry which shows little indication of keying into the walls. The floor of the dovecote has been robbed out but the occasional flag of red sandstone survives beneath the walls and suggests that the south and west walls overlie an earlier feature, possibly structure B already noted above. A layer of soft mortar along the west and north walls indicates that the floor was partly re-laid at a slightly higher level than the earlier surface. A pair of linear sandstone slabs in the centre of the floor area may indicate the lining for a

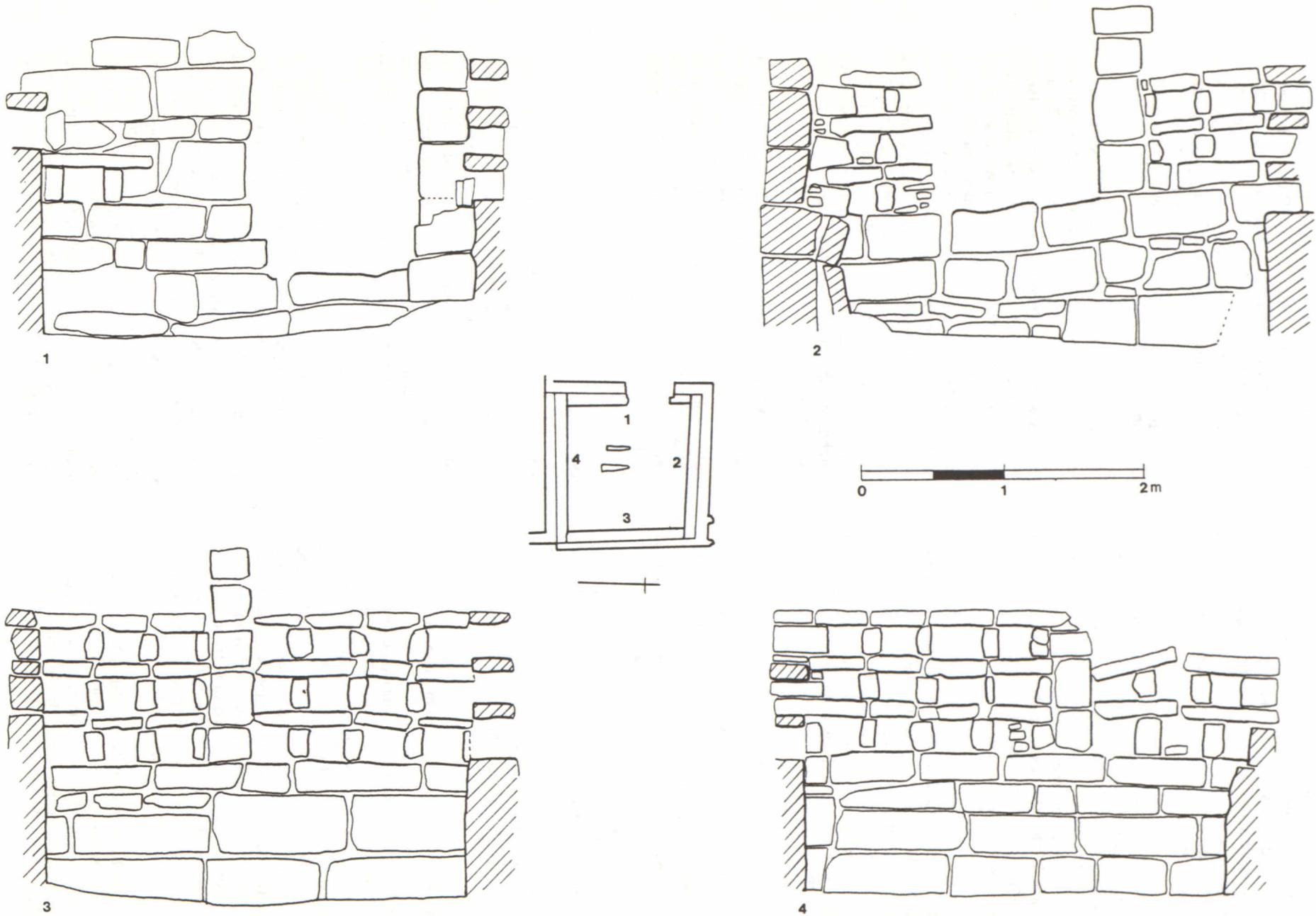


Figure 2: The dovecote: elevations (reproduced by permission of the Archaeological Survey of Merseyside).

sump or support for the roof.

Dating of the dovecote is uncertain. We cannot be sure that it was associated with the dovehouse chamber, which, when recorded in 1624 (Saxton, 1946, 129), contained a bed and bedding and, presumably, stood adjacent to the dovecote. Although the evidence is difficult to interpret, the chamber seems to be listed under a general heading of 'new building' which included a series of work rooms and servants' chambers.

The buttresses seen on the north wall can be compared with a series of sandstone buttresses which still survive on the west range. They are associated with the plinth course upon which the timber-framing on the west range is supported. David Higgins' investigations in the Billiard Room and Library showed that the stonework overlay an earlier ditch which had been infilled by the 15th century (see page 52). With the buttressed walling we see, perhaps, the creation of a new revetment wall in the 16th century along the inner edge of the west and part of the north arms of the moat but it is noticeable that the buttressing is lacking from the north range itself. With such evidence, there is perhaps a hint that the walling into which the dovecote was inserted is contemporary with the west range. If we can find that the present dovecote is that implied by the 1624 inventory we start to see a sequence of events which would allow demolition of the courtyard structures. It may, therefore, be proposed that they were demolished at the time of 'new building' referred to in 1624, a date rather earlier has been suggested above.

East Bridge

Re-excavation of a service trench across the bridge provided evidence for a surface of stone setts (45) apparently set directly on a layer of yellow/brown sand similar to that found in the courtyard. The stone surface seems to have followed the profile of the outer bank of the moat, but evidence for its full extent was not ascertained. The setts were overlaid by a series of levelling layers which also overran an area of sandstone masonry (56), possibly *in situ*, and seen only in the trench section.

The function of the setts is not known. Either they represent a defined access across the moat or they may have been a revetment of the outer bank. If the former, a possible link with the sandstone feature might suggest that it was a structure associated with entry to the courtyard. The relationship of the setts with the present bridge walls was not established. However, it seems likely that its walls are contemporary with the levelling layers and, therefore, a consequence of bridge building to improve or create access between the farm, which lay to the east and outside the moat platform, and the Hall.

Building accounts for the period 1710-1719 included 'pailing the Wood Bridge' (1712), 'paveinge on the

stone bringe (sic)' and 'Filling rubbish at Bridge end' (1713) and 'Setting A Gate att Moat side' (1719) (Nicholson 1983, 34). The wooden bridge might have been that leading to the east yard and rebuilding might be suggested by the rubbish filling of 1713.

Tea Room Passage

The trench through the passage contained a lead water pipe. This trench had been re-opened on at least one occasion when repairs were made with copper piping.

The west wall of the Tea Room Passage preserves one of the cruck frames (JT1). From structural evidence visible within this part of the Hall it was known that the cruck-framed building had originally extended further east (Lewis, 1988), and it was hoped that this trench would supply evidence for the wall lines of this early building. The 1989 section along the west side of the builders' trench showed that the brick wall, which encapsulates the cruck frame and forms the wall of the present larder, had cut through any archaeological layers.

The east section of the trench did, however, produce evidence for a series of cuts and infills (fig 3). Natural material consisted of yellow boulder clay (57) overlain with a yellow/brown sand (58), similar to that seen in the east courtyard. In the Tea Room Passage the sand was, obviously, natural. At the south, undisturbed, end of the section it was overlaid with a layer of brown sand (59) which had been cut by a pair of shallow gulleys or pits. One of these (61) lay directly below the projected wall line of the cruck-framed building and it is suggested that this represents evidence for a sill beam trench aligned on an east-west axis. The other (60) was just to the south but its function could not be determined. Each was filled with very dark brown sand. The chronological sequence suggests that both survived until the south wall of the Tea Room was built. Its construction was represented by a flat-bottomed cut and rubble fill (84). Modern pottery in the fill shows that it was built no earlier than the 19th century.

Two other pits or gulleys (62, 63) were also identified. These cut the natural yellow/brown sand and were overlaid by the same layer of brown sand (70) which sealed the supposed sill beam slot. Their function could not be identified, but they may represent post holes for timber uprights associated with a partition wall or screen. Probably they were removed in the same phase of work which saw the removal of the beam slot and construction of the south wall of the Tea Room.

At the north end of the section there was evidence for rebuilding. This was, almost certainly, associated with the construction of the north wall of the Tea Room and a pipe trench (74) was probably inserted during this phase. This work had effectively destroyed any evidence for wall lines associated with the timber building. Following its construction the area was sealed by a

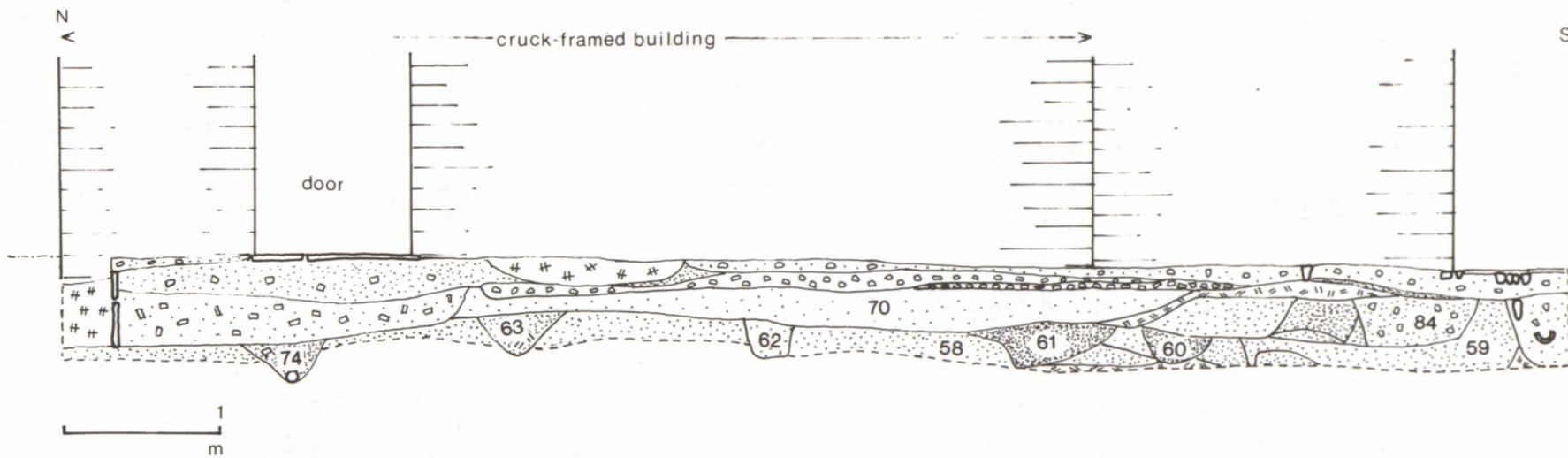


Figure 3: The Tea Room Passage: east section.

series of layers containing brick rubble and cinders. However, the evidence suggests that construction of the north wall of the Tea Room was, perhaps, later than the south wall. Layers of rubble marked the final phase and sandstone flagstones and concrete sealed all deposits.

Finds

Finds recovered included a variety of pottery types, glazed roof tile, clay pipes and bottle glass ranging in date from the 16th to 20th centuries. Since they were derived only from the cobble bedding layer and immediately above the exposed layers and features, they are of little value in dating these levels and can only suggest a *terminus ante quem* for the cobble surface, demolition of the sandstone structures, the construction of the cistern, subsequent repairs to the drains or even to the insertion of modern service trenches. However, the survey of the east range has shown at least three major phases of rebuilding (Lewis, 1988) followed by the construction of the two sandstone chimney stacks. The infill between them, which incorporates a double row of round-headed windows, came later. The finds could relate to any of these building activities.

Discussion

The lack of opportunity to undertake intrusive archaeology in the east courtyard at Speke Hall is regrettable since it has not been possible either to date features or to link them satisfactorily with the standing structure. Despite the fragmentary nature of the archaeological remains it is clear that the east courtyard contained a series of hitherto unknown structures though their function remains unclear. A sequence of demolition and adaptation of walling for the creation of a dovecote seems apparent. At least some of the structures might have been dismantled by 1624; almost certainly all except the dovecote and, perhaps, the east bay or bays of the cruck-framed building at the south of the courtyard had disappeared by the last decades of the 18th century. Although the evidence is slight, interpretation of features seen in section in the Tea Room passage, adds strength to the argument that the cruck-framed building had extended eastwards by at least one bay. It may also have been associated with a building which stood in the east courtyard.

In terms of local archaeological research, the work demonstrated that even though an area is supposed to have been extensively damaged by relatively modern building work, the potential for survival of archaeological features should not be ignored. It would, however, have been quite impossible to judge such potential on the basis of trial trenching; by stripping the courtyard down to a level surface it was possible to see some indication of the plan of earlier structures. It seems highly likely that further excavation would have provided evidence for the sequence of building activities,

despite their proximity to the surface and disturbance by later intrusions.

With the example of Speke Hall, it is clear that the building itself contains not only a series of different structural phases, but also that it was associated with ancillary structures which eventually became obsolete to its needs. Documentary evidence for occupation at Speke Hall indicates that buildings dating from the 13th century, if not earlier, might be expected. Post-medieval probate inventories, whilst presenting the challenge of interpreting the disposition of the rooms within the Hall, offer a greater challenge in the identification of what appear to have been detached structures of some archaeological potential. Work in the east courtyard has succeeded only in begging further questions of the features exposed and has found few answers. Apart from the north west corner of the Hall, where excavations have been undertaken in the billiard room and library (Higgins, this volume pages 47-52), the overall association of the Hall with the moat is still not known. Elsewhere, for the time being the dating of early structures, including the cruck-framed building, must remain speculative.

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POTTERY FROM THE GRIMESCAR KILN SITE, HUDDERSFIELD

The Reverend E. S. Pickup

Foreword by Peter Davey

Edward Stanley Pickup was educated at Keble College, Oxford (BA 1932; MA 1935) and Lincoln Theological College (graduated 1936). He was ordained deacon in 1939 and priest in 1940. He served in the parishes of St Mary the Virgin, Darwen from 1939 to 1942 and St Paul's Blackburn from 1942 to 1943. In 1943 he took an emergency commission as chaplain in the forces where he served until 1946. On returning to Lancashire he became Vicar of Holy Trinity, Darwen until 1950 and of St Annes-on-Sea until 1968. From 1968 till his retirement in 1973 he was Vicar of Garstang.

In addition to these incumbencies, he was the Bishop of Blackburn's examining chaplain for twenty years, from 1952 to 1972 and Rural Dean of Fylde from 1963 to 1968.

In 1973 he joined the Certificate in Practical Archaeology Course in Preston under the auspices of the Institute of Extension Studies of the University of Liverpool. He was a kind, generous man, highly intelligent and full of humour who made a major contribution to the success of this course which was the first of its kind ever to be undertaken in the north of England. Lecturing to him could be daunting: as a new tutor I felt sympathy for the many young curates who had felt the power of his gaze and the acuteness of his observation. Nothing muddled, ambiguous or inaccurate was allowed to pass muster. On the other hand he was ever ready to offer helpful ideas and remarks and to assist in quelling unrest among his fellow students.

As part of the course, he prepared an 'artifact study' of a small pottery kiln group from Grimescar near Huddersfield. When the course ended in 1976 and his Certificate had been gained, Edward kindly agreed to edit a number of the studies and surveys which the students has prepared and to help produce a short monograph to publish them. Unfortunately, he died suddenly before this project had been able to progress very far and the various papers have resided in files in the University ever since. It is a great pleasure to record this note of appreciation and to thank the Merseyside Archaeological Society for agreeing to publish this brief, but very useful paper, as a tribute to its author.

INTRODUCTION

This is an examination of six small boxes of sherds recovered from the kiln site at Grimescar, Huddersfield, West Yorkshire, in 1955. All are coarse Roman pottery and are derived from 115 different vessels. Many more similar sherds exist, lodged in the Tolson Memorial

Museum at Huddersfield; a few of these have been published. It is suggested that Grimescar was a tiliary serving the neighbouring fort of Slack and to a lesser degree Castleshaw, and that the presence of the local clay and of the kiln prompted the manufacture of a limited number of types of coarse pottery for use at Slack. In the Tolson Museum are many examples of pottery types covering the whole range of vessels likely to be found on such a site as Slack; a few of these have been published.

The complete absence of certain types of pottery from excavation at Grimescar seem to indicate that there was no habitation there, but that it was simply a work place served locally. It is also suggested that the pottery made here went exclusively to Slack and consequently that this particular fabric is unique, to be found only at Grimescar and Slack; and that resemblances may be sought and comparisons made, with pottery from other sites only on grounds of style.

The Sites

The Grimescar kiln site (SE 121191) is situated at a height of some 160m OD nearly five kilometres east of the fort at Slack (SE 0817) and 1.5km south of the road running eastward from Slack. The fort, which is now overlaid by the M62 motorway, was planted by Agricola on the road from Chester to York, replacing a track crossing the Pennines further south. This road in turn was later replaced by another running further north.

The history of Slack, and therefore, of its dependent kiln site, depends on the use of these roads. It can be reliably dated. The first fort was built about AD 80 by Agricola to guard the new lateral road; it was for a quingenary cohort, with defences of timber and earth, and buildings of timber and thatch. In about AD 100 some buildings, including the bath house, were re-erected in stone with tile roofs. It was occupied by the fourth cohort of Breuci, originating in Pannonia. Tiles stamped COHIIIBRE are common at Slack and Grimescar, and one has been found at Castleshaw (SD 9909), a smaller fort some 11km south west of Slack on the road to Chester. In about AD 125 the garrison was reduced to about 100 men and a stone barrack block and cookhouses were built. About AD 140 the garrison was withdrawn and the fort abandoned (Richmond 1925). Activity at Grimescar may confidently be confined within the limits of AD 80 to 140.

Excavation and Reports

The Grimescar kiln site was discovered in 1590 AD, and is reported in the Dodsworth MSS in the Bodleian

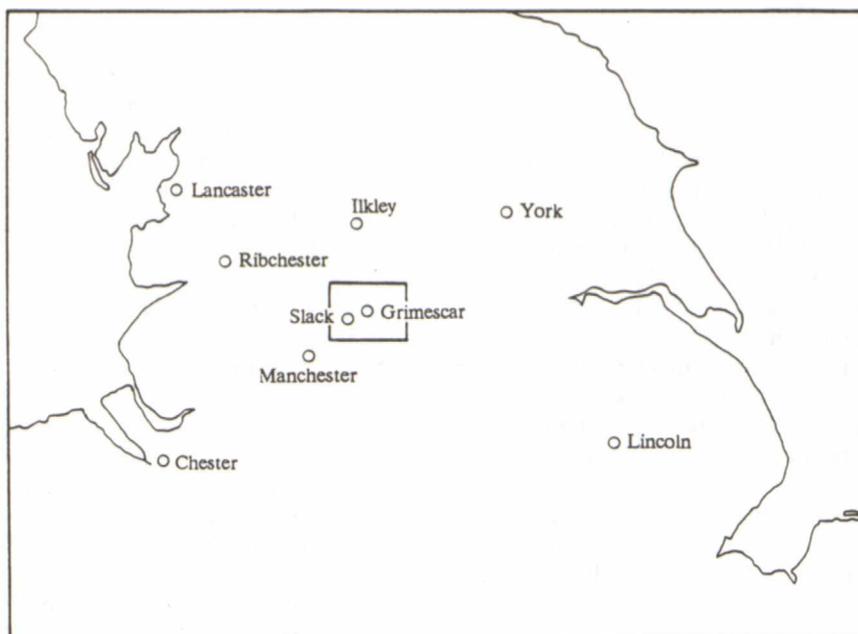


Figure 1: Map showing Roman sites c. AD 100 and the area of Fig. 2.

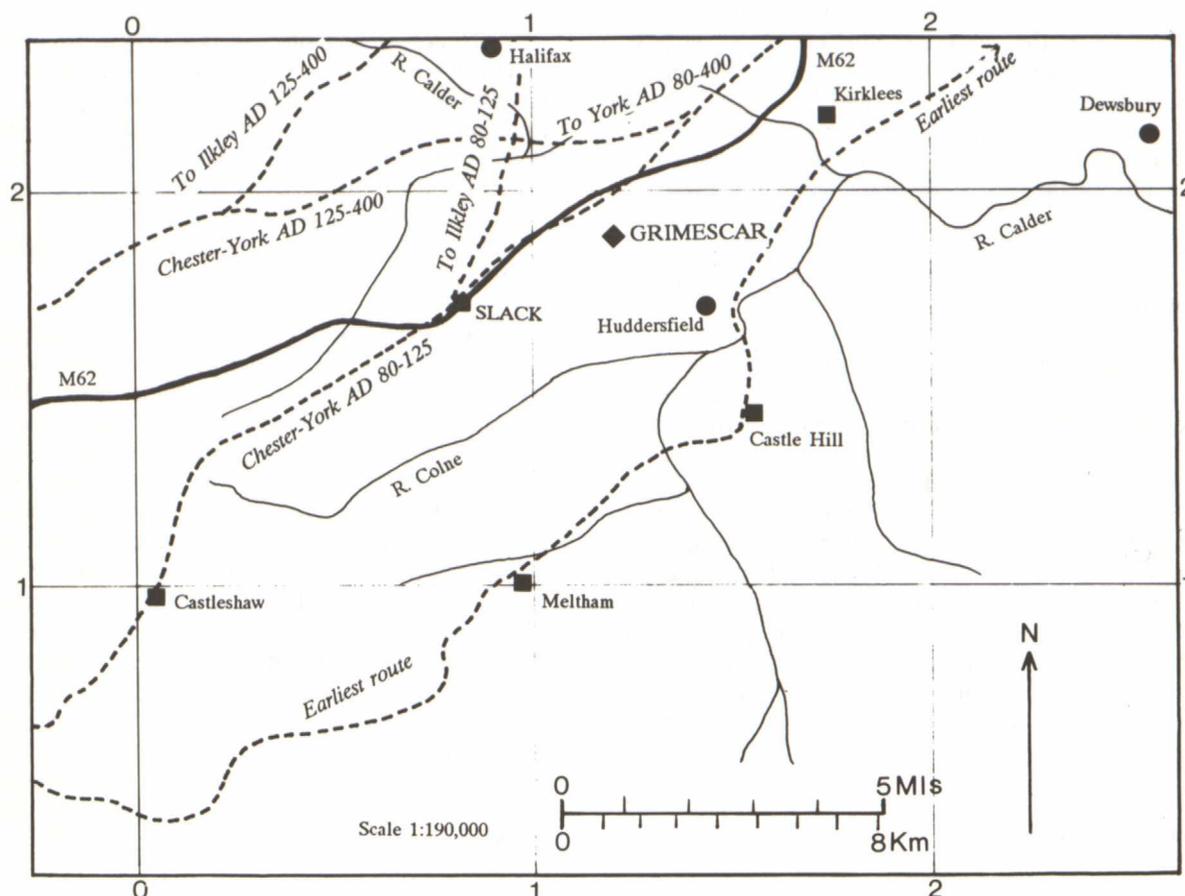


Figure 2: Location map showing ancient and modern trans-Pennine route systems.
Key: ● Modern towns, ■ Sites in Roman times, ◆ Grimescar kiln site --- Ancient trans-Pennine routes.

Library at Oxford (Richmond 1925, 57). Purdy (1973), reporting on excavations in 1964, refers to previous work in 1954 and 1955, attributing the work in 1955 to Miss A. M. Maltby (Mrs Hallam), and making reference to Hallam (1965). This last report has not been seen, but it is likely that the pottery reviewed in this paper is derived from the excavations in 1955. Purdy (1973) goes on to confirm that tile making at Grimescar coincides with the building periods at Slack; its information on pottery made there will be included in the Discussion section of this paper. Illustrations of forty-six items of coarse Roman pottery are included.

Richmond (1925, 109), gives references to early excavations at Slack, including Leland's Itineraries and Camden, and mentioning work in 1866 and 1869-70. A report on excavations at Slack in 1913-15 (Dodds and Woodward 1922) has not been seen by the author but some of its findings are mentioned in Purdy (1973). The latest work is reported in Hunter (1970); forty-five items of coarse Roman pottery are illustrated. Richmond (1925) illustrates forty-four such items.

Descriptions of Objects and Comparisons (Figures 1-5)

Some of the objects can confidently be assigned to one type of vessel, but others are doubtful; with a rim only, it is impossible to distinguish between dishes and bowls, for instance. It has been thought best to retain the classification used in the original of the sherds in six boxes; two boxes containing sherds in the same category. The five categories then are:

- A. Flat rims with straight walls
- B. Flat rims with curved walls
- C. Everted rims
- D. Bases
- E. Lids

The objects, however, are not numbered within these categories, but consecutively from 1 to 115. All the drawings (Figs. 3-6) have been reduced to one third of life size.

The first entry after each number gives the inked entry on each sherd or group of sherds belonging to the same vessel; presumably it refers to the find spot at Grimescar of the objects. Because of the restricted distribution of Grimescar products, comparisons for fabric and shape can properly be made only with the wasters from Grimescar and the finished product from Slack. Comparisons for shape have been made; occasionally the very common decoration used at Grimescar, by reeding or grooving, has been neglected in making such comparisons. The following abbreviations are used in this section:

- | | |
|--------------------|-----------------|
| R | = Richmond 1923 |
| V (for Vindolanda) | = Hird 1977 |
| N (for Northwich) | = Jones 1972 |

- | | |
|----------------------|-----------------|
| G | = Gillam 1968 |
| Grim | = Purdy 1973 |
| W (for Wilderspool) | = Hartley 1973 |
| P (for Pen Llystyn) | = Hogg 1969 |
| A (for Amphitheatre) | = Thompson 1976 |
| S (for Slack) | = Hunter 1970 |

It is to be noted that all these references apart from Richmond (1925), are later than Gillam 1968. All comparisons are with objects dated between AD 80-140.

A. Flat Rims with straight walls.

- GS B5. Dish in pinkish red fabric; fairly coarse, fairly soft. Crumbs have dropped out from the fabric. R73, no. 83, V no. 71.
- GS B5. Dish/bowl in sandy brown fabric; coarse and soft.
- GS 55. Dish/bowl in light brown fabric. Smooth and soft. R73, no. 82.
- GS 14. Dish/bowl in orange brown fabric. Coarse, badly cracked (over fired?). V no. 373.
- GS D11. Dish/bowl in light brown fabric. Coarse, soft, cracking.
- GS F2. Dish/bowl in sandy brown fabric. Coarse, soft. Marking on outside but no decipherable pattern. V no. 225.
- GS F2. Dish/bowl in sandy brown fabric. Coarse, soft.
- GS 56. Dish bowl in sandy brown fabric. Coarse, hard (overfired?). V no. 81.
- GS 55. Dish/bowl in reddish fabric. Coarse, hard. Cracked (overfired?). R 46 no. 81. V no. 489 and no. 72. N 68, No. 15.
- GS 55. Dish/bowl in light brown fabric. Smooth, hard.
- GS F2. Dish/bowl in pinkish red fabric. Coarse, soft. V no. 89 and no. 489. N 68 no. 15. no. 9 *supra*.
- GS 56. Dish bowl in sandy brown fabric. Coarse, hard. Cracked.
- --. Rim of dish/bowl in light brown fabric. Coarse, soft. V no. 225. no. 6 *supra*.
- GS A3?. Dish/bowl in pinkish red fabric. Fairly coarse, fairly hard, with some fine insertions.
- GS F1. Dish/bowl in orange brown fabric, with darker patches on fractures. This has, exceptionally a beaded rather than a flat rim. G no. 216.
- GS 55. Dish/bowl in reddish brown fabric. Coarse, hard. Cracked (overfired?). S 90, no. 1, no. 303, V no. 163 and no. 223. N 73 and no. 57.

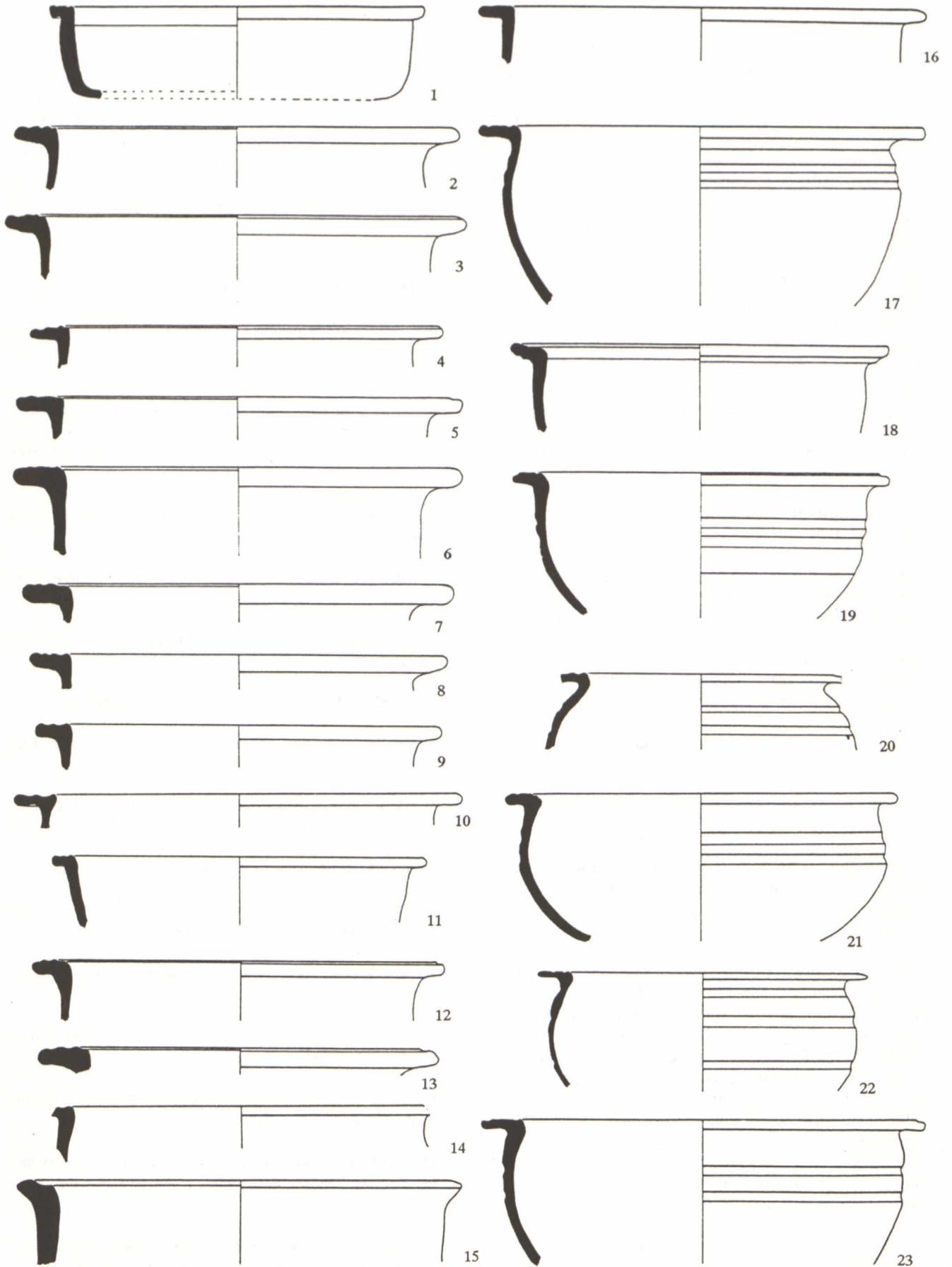


Figure 3: Pottery illustrations: Flat rims with straight walls, nos. 1-16; Flat rims with curved walls, nos. 17-23. Scale $\frac{1}{3}$

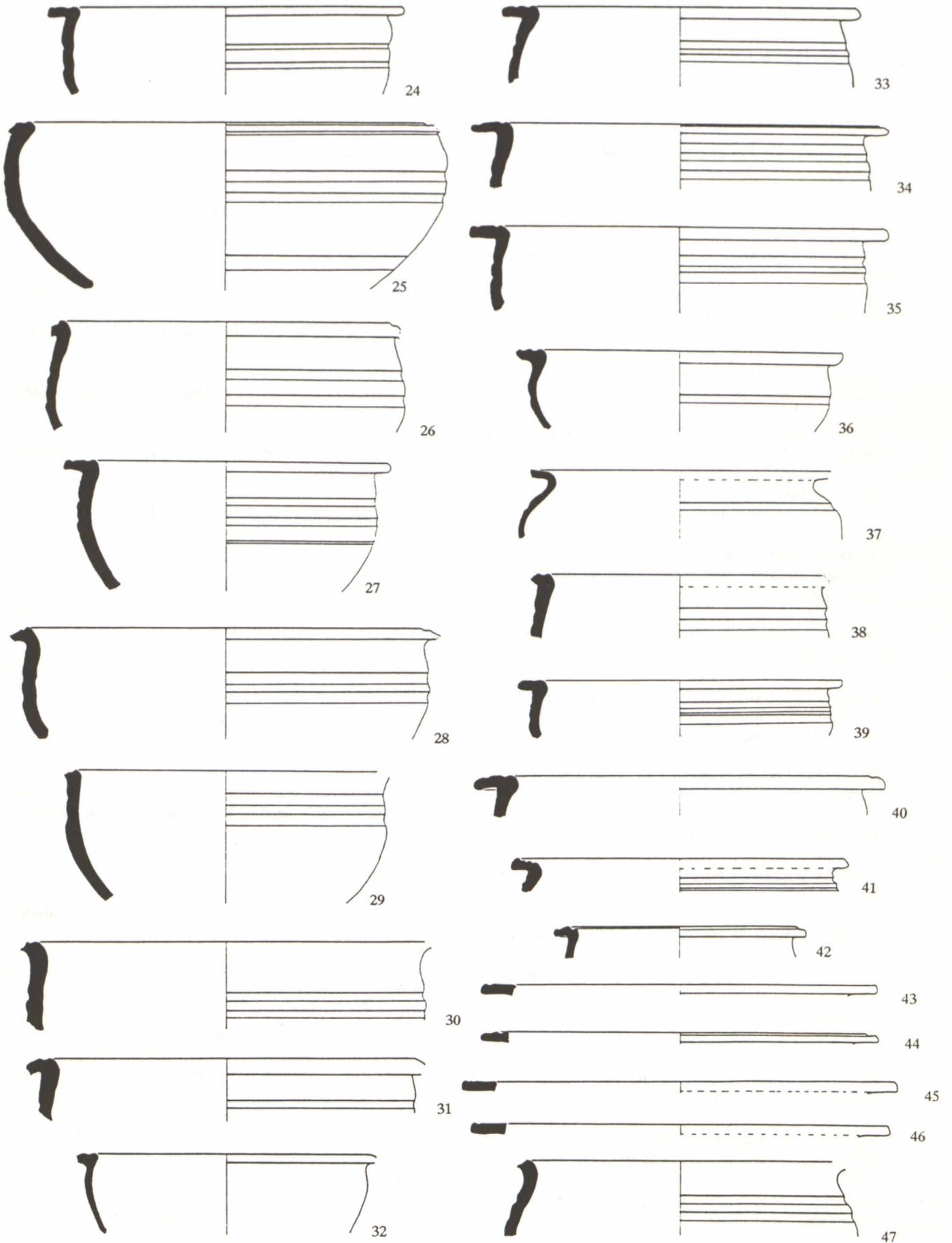


Figure 4: Pottery illustrations: Flat rims with curved walls, nos. 24-47. Scale $\frac{1}{3}$

B. Flat rims with curved walls.

17. GS A8. Bowl in pale red fabric. Fairly smooth, hard. N 68, no. 15.
18. GS --. Bowl in sandy pink fabric. Fairly smooth, soft.
19. GS A8. Carinated bowl in pale pink fabric. Fairly fine, fairly hard. Grim 104. no. 11.
20. GS G9. Bowl in yellowish fabric. Fairly smooth, hard.
21. GS A8. Carinated bowl in buff fabric. Fairly rough, soft. Grim 104, no. 12.
22. GS G4. Bowl in light brown fabric. Rough; flaking (overfired?).
23. GS A8. Bowl in pinkish brown fabric. Fairly hard. Grim 104, no. 11. no. 19 *supra*.
24. GS A5. Bowl/dish in sandy pink fabric. Fairly hard. V no. 224 and no. 165.
25. GS K3. Bowl in light brown fabric with reddish tinges. Fairly hard, edge of rim broken off.
26. GS A6. Bowl in dull red fabric, darkened inside and out. Hard, with inclusions. Was the rim, with its steep downward angle, spoiled in the course of firing?
27. GS A8. Bowl in sandy pink fabric. Fairly hard. Grim 104, no. 9. V no. 224.
28. GS A8. Bowl in dull red fabric, darkened inside and out. Hard with inclusions and pits. Rim mis-shaped so it had to be corrected for drawing. Grim 104, no. 7. W, no. 48. no. 26 *supra*.
29. GS A8. Bowl in reddish brown fabric. Hard, with some inclusions.
30. GS A8. Bowl/dish in reddish brown fabric. Soft.
31. GS A8. Bowl/dish in brownish red fabric. Hard, rough. G no. 215.
32. GS 21. Dish/bowl in light fabric. Rough, flaking (overfired?).
33. GS A8. Bowl in light brown fabric. Soft. Grim 104, no. 11.
34. GS A8. Bowl in pink fabric. Fine, very hard. Grim 104, no. 8.
35. GS D14. Bowl in dull brownish red fabric. Rough and hard, with inclusions. Grim 104, no. 9. no. 27 *supra*.
36. GS G4. Dish in greyish brown fabric, grey black on surface. Soft. Bits of clay dropped on rim before firing. V no. 165.
37. GS G9. Bowl with edge of rim broken, in pale brown fabric. Fairly hard.
38. GS A8. Bowl with rim broken off in pale brown fabric. Fairly hard.
39. GS A8. Bowl/dish in pinky brown fabric. Soft.
40. GS G6. Bowl/dish in light brown fabric. Soft.
41. GS G12. Bowl in pinky brown fabric. Fairly hard. Rim slopes inward.
42. GS A8. Bowl in pinkish red fabric. Fairly smooth, fairly hard.
43. GS A8. Flat rim only in pale red fabric. Smooth, fairly hard.
44. GS A8. Flat rim only in pale red fabric. Smooth, fairly hard.
45. GS A8. Flat rim only in dull reddish brown fabric. Rough, hard.
46. GS A8. Flat rim only in pinkish buff fabric. Soft. Diameter doubtful.
47. GS A8. Wall and vestigial rim of bowl in reddish pink fabric. Soft, badly worn.
48. GS A9. Wall and vestigial rim of bowl in pinky brown fabric. Soft.
49. GS A8. Wall of dish/bowl in pale brown fabric. Soft.
50. GS A8. Wall and vestigial foot of wide vessel in red fabric, darkened on outside only. Hard.
51. GS A8. Wall sherd of wide vessel in darkish buff fabric. Rough, soft.
52. -- --. Wall sherd of wide vessel in sandy pink fabric. Rough, soft.
53. GS G14. Wall sherd in pinkish brown fabric, sandy brown on outside. Very soft, cracking badly. Diameter not measurable.

C. Everted rims.

54. GS A1. Jar in brownish red fabric, darkened on outside. Hard. R 74, no. 60.
55. GS GL4. Jar in sandy brown fabric. Fairly soft. R 74, no. 56. V no. 290.
56. GS GL3. Jar in sandy brown fabric. Fairly soft.
57. GS B11. Jar in light brown fabric. Fairly hard. R 74, no. 44.
58. GS B8. Jar in pale brown fabric. Hard.
59. GS B8. Jar in orange brown fabric. Very soft. R 74, no. 15 (in rustic ware) for shape.
60. GS 55. Jar in pinkish brown fabric. Very soft.

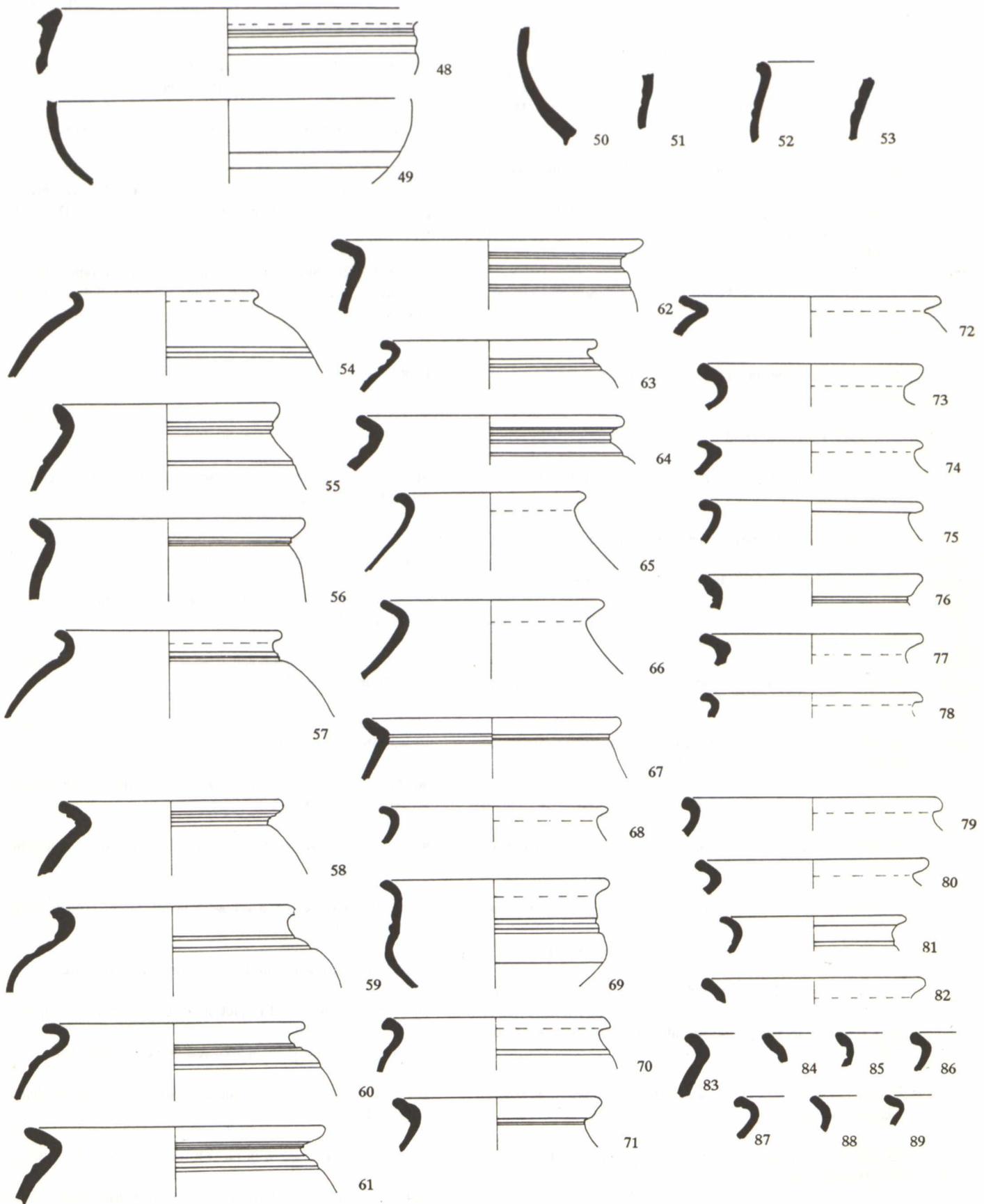


Figure 5: Pottery illustrations: Flat rims with curved walls, nos. 48-53; Everted rims, nos. 54-89. Scale 1/3

61. GS 55. Jar in red fabric. Fairly hard. P 174, no. 27.
62. GS 55. Jar in dull red fabric. Soft.
63. GS G9. Jar in pale brown fabric. Fairly hard. Adhesion of clay crumb forms blemish on rim. G no. 102. R 74, no. 44. no. 57, *supra*.
64. GS A8. Jar in reddish pink fabric. Soft, very badly worn.
65. GS G1. Jar in dark sandy brown fabric. Very soft, abraded. Some darker inclusions and some pits. R 73, no. 3 and R 74, no. 61.
66. GS B-. Jar in reddish brown fabric. Hard. Some inclusions.
67. GS GL3. Jar in sandy brown fabric. Fairly soft.
68. GS A8. Jar/bowl in sandy brown fabric (*cf.* no. 55 *supra*). Fairly soft.
69. GS A8. Carinated bowl in sandy brown fabric. Fairly soft.
70. GS A2. Jar in sandy brown fabric. Fairly soft. P 174, no. 18. A 208, no. 6.
71. GS GL4. Jar in sandy brown fabric. Fairly soft.
72. GS M1. Jar in reddish brown fabric. Hard, some inclusions.
73. GS G14. Jar in light brown fabric. Soft, crumbling; cracks and lines. P 174, no. 28. A 208, no. 7.
74. GS G14. Jar in light brown fabric. Soft, crumbling; bad cracks and lines.
75. GS A5. Jar in reddish brown fabric. Hard, some inclusions. R 74, no. 29.
76. GS GL3. Jar in light brown fabric. Fairly soft.
77. GS F2. Jar in light brown fabric (*cf.* no. 73 *supra*). Soft, badly worn.
78. GS A8. Jar in reddish brown fabric. Hard, some inclusions.
79. GS A8. Jar in pinkish brown fabric (*cf.* no. 60 *supra*). Soft.
80. GS G6. Jar in pinkish brown fabric (*cf.* no. 60 *supra*). Soft.
81. GS 55. Jar in pinkish brown fabric (*cf.* no. 60). Soft. G no. 110.
82. GS L4. Rim only of jar in sandy brown fabric. Fairly soft. Diameter doubtful.
83. GS GL3. Rim and neck of jar in light brown fabric. Fairly soft. Diameter unknown.
84. GS 55. Rim of jar in pinkish brown fabric, brown grey outside, brown buff inside. Soft. Diameter unknown.
85. GS 55. Rim and neck of jar in dull red fabric. Soft; edge of rim abraded. Diameter unknown.
86. GS A5. Rim and neck of jar in bright pink fabric. Very soft crumbling. Diameter unknown. P 174, no. 23.
87. GS A8. Rim and neck of jar in reddish pink fabric. Soft, badly worn. Diameter unknown.
88. GS G4. Rim and neck of jar in pinkish red fabric, brown grey outside, brown buff inside (*cf.* no. 84 *supra*). Soft. Diameter unknown.
89. GS 55. Rim and neck of jar in pinkish brown fabric, brown grey inside, brown buff outside (*cf.* no. 84 *supra*). Soft. Diameter unknown
- D. Bases.**
90. GS D10. Flat-bottomed base in pinkish brown fabric. Fairly rough; soft. G no. 110 (from Slack).
91. GS D10. Flat-bottomed base, with omphalos, in pinkish brown fabric. Rough, hard.
92. GS A8. Hollow-bottomed base in sandy-brown fabric. Coarse, hard. Very narrow foot-ring. G. no. 109.
93. --. 10 Hollow-bottomed base, with omphalos in sandy brown fabric. Smooth, hard. V no. 324.
94. GS A8. Hollow-bottomed base in dull red fabric. Smooth, hard. Grim 104, no. 3.
95. GS D11. Hollow-bottomed base, with omphalos, in reddish brown fabric. Coarse, soft.
96. GS F2. Hollow-bottomed base, with omphalos, in pinkish brown fabric. Fairly smooth, very soft.
97. GS A5. Hollow-bottomed base with omphalos, in bright pink fabric. Very soft. V no. 205.
98. GS A8. Base sherd in yellowish brown fabric. Rough; fairly hard. V no. 152.
99. GS A8. Base sherd in dull red fabric. Smooth, hard.
100. GS A8. Base sherd in pinkish yellow fabric. Rough, hard.
101. GS B13. Base sherd in dull red fabric. Smooth, hard.
102. GS B8. Base sherd in pinkish brown fabric. Smooth, hard. Grim 104, no. 3.
103. GS A1-. Base sherd in pinkish red fabric. Rough; soft.
104. GS A8. Base sherd in yellowish brown fabric. Rough, fairly hard.
105. GS A8. Base in dull red fabric. Smooth, hard. V no. 12.

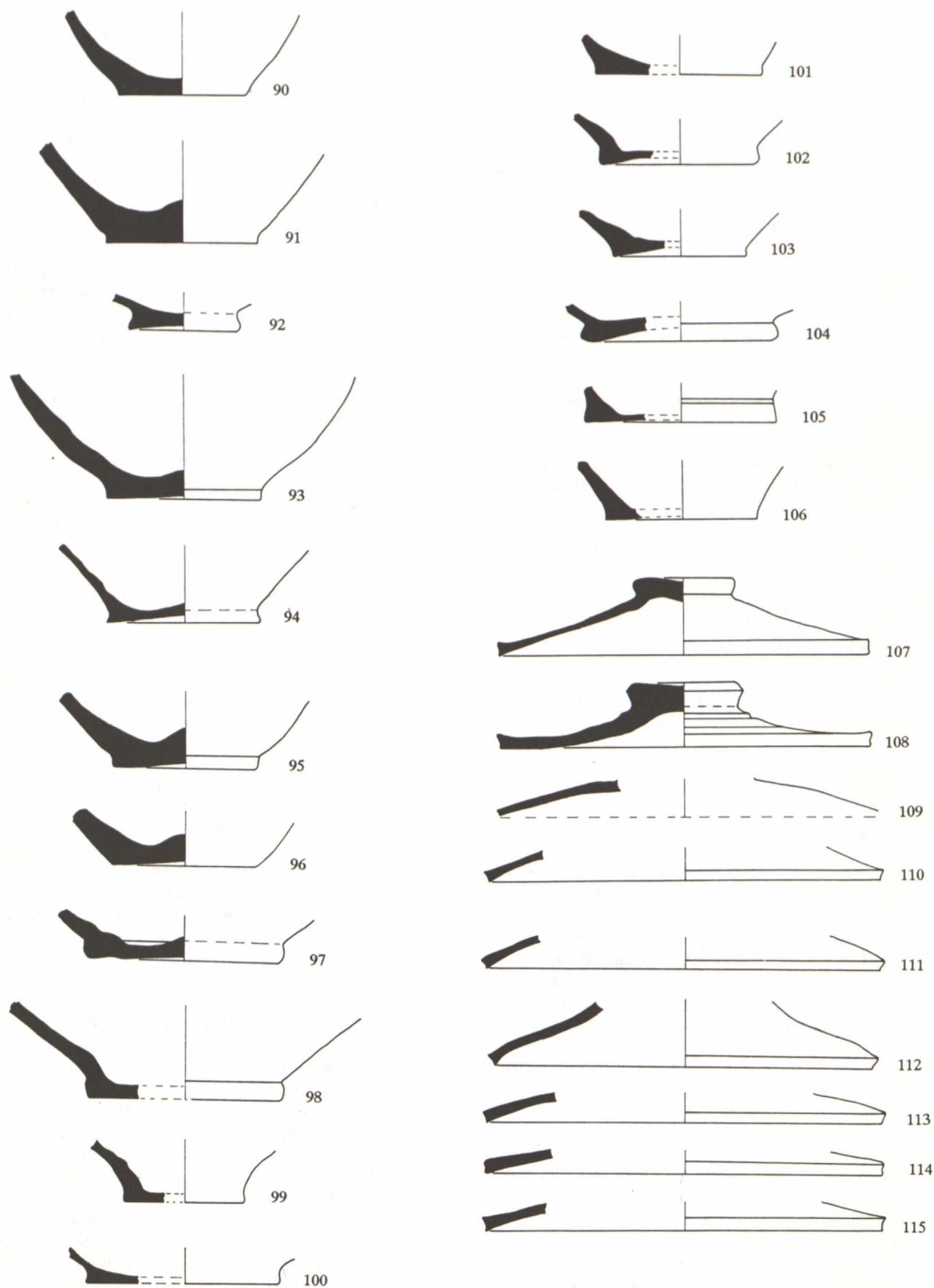


Figure 6: Pottery illustrations: Bases, nos. 90-106; Lids, nos. 107-115. Scale $\frac{1}{3}$

106. GS -4. Base sherd in pinkish red fabric. Smooth, hard. Cracks.

E. Lids

107. GS B-. Lid in reddish brown fabric. Fairly hard. Badly warped, accurate drawing is difficult. R 68, figure 42 (photograph). Grim 105, no. 32. V no. 256.

108. GS F2. Lid in pale brown fabric. Hard.

109. GS D11. Wall and vestigial handle of lid in reddish brown fabric. Fairly hard. V no. 471.

110. GS D11. Wall and rim of lid in reddish brown fabric. Fairly hard.

111. GS D11. Wall and rim of lid in reddish brown fabric. Fairly hard.

112. GS A8. Wall and rim of lid in reddish brown fabric (*cf.* no. 107 *supra*). S 91 no. 19. Fairly hard. One of the three sherds is discoloured.

113. GS K3. Wall and rim of lid in dull pink fabric. Fairly hard. V no. 155.

114. GS A8. Wall and rim of lid in pinkish brown fabric. Fairly hard.

115. GS A8. Wall and rim of lid in light brown fabric, with purple tinge on outside. Hard. Rim badly mis-shaped, difficult to estimate.

DISCUSSION

Date and Range of Pottery

Activity at Grimescar is firmly dated by the association of its products with the established dates of the fort at Slack. Coins, samian ware, coarse pottery and dates of reconstruction all correspond with military activities and road construction in Northern England date the fort at Slack closely to between 80 and 140 AD (Richmond 1925). Later coarse pottery found at Slack is connected only with civilian occupation of the site, and none of it is from Grimescar. Apart from the association with finds at Slack the only indication of dates is a statement in Purdy (1973) that the kiln had lasted long enough to have its roof repaired.

Probably the reason for the kiln's existence was the need for building material such as tiles and hypocaust elements, which make up the bulk of the finds (Purdy 1973). Obviously in a place so remote from other known ceramic activity, and so far from the sea, it was desirable that a local source be found for the manufacture of these heavy articles. Even at Ravenglass it was thought expedient to establish a tiliary at Muncaster; here, however, there was no pottery made

at any of the three kilns (Bellhouse 1960; 1961). But at Grimescar certain types of pottery were made. These types were for use exclusively at Slack, and they included only the coarser and less elegant types. There was obviously no possibility of establishing an export market from so remote a place and for such types. Indeed, Slack itself, by no means patronised Grimescar with any enthusiasm. Purdy (1973) states that the pottery in the fabrics produced at Grimescar forms one eighth of the pottery from Slack.

This pottery is in the same ware as that from which the tiles were made -- red and cream fabrics (Purdy, 1973). Other wares are plentiful at Slack, and are either completely absent or very sparsely represented at Grimescar. Figured and plain samian, much 'grey ware' (so labelled in the Tolson Memorial Museum, Huddersfield), black burnished ware and rusticated ware are not at Grimescar. Similarly, the more ambitious or delicate types of vessel are missing, mortaria, amphorae, beakers, and flagons. Purdy (1975) among forty-six illustrations of pottery from Slack has nine reeded rimmed bowls, seven cooking pots, seven flagon sherds, two beakers, five lids, two jars untypical of Grimescar, perhaps a mortarium rim, two shouldered jars, six sherds of dark grey or rusticated ware, and a 'kiln prop'. But these show the whole range of pottery and do not represent the proportions of its constituent types; and it is clear from examining the Grimescar pottery in the Tolson Museum that the types catalogued in his paper make up the staple products of Grimescar. The others were either carried into Grimescar by workmen or soldiers, or represent an abortive attempt at something at something other than coarse bowls, dishes, jars and lids.

These products are far from attractive even when they were well enough made to be transported to Slack. They are even less attractive when collected together as finds from Grimescar; for apart from accidental breakage, the pottery catalogued and drawn here consists of 'wasters' or failures, defective in fabric and shape, spoilt by poor mixing, building or firing. It is interesting to ask about each piece, and sometimes easy to answer, the question, 'Why was this rejected?' But it is not always certain what was the intention of the potter; sometimes perhaps he has produced a shape like no other type, and broken it as a failure.

Comparisons present difficulty. The Grimescar fabric is coarse, and is probably used for pottery because nothing else is available; and incompetent firing gives a wide variety of fabric and colour. As for shapes, it is not very profitable to find parallels between Grimescar and one-eighth of the pottery from Slack, because identity is already established. It is useless to look for Grimescar products elsewhere. All that is possible is to try and see how far Grimescar types correspond with the general development of pottery in a military establishment between AD 80 and 140, or are affected by the shape of types imported into Slack from other sources. There must, of course, be many resemblances which are

coincidental or are inherent in the type of vessel being made.

In one thing Grimescar pottery is outstanding. The only decoration favoured by the potter, or the only one he was competent to attempt, was the groove or reed. Given a flat rim, he reeds it; a wall or curve is grooved. This makes exact correspondences more difficult to find. Resemblances outside Slack, then, are elusive, first because the range is limited to bowls, dishes, jars and lids; secondly, because of Grimescar's over-indulgence in grooves; and finally because imitation is one-way only. Grimescar might learn from the world in general, but outside Slack no one will be able, or indeed have any desire, to learn from Grimescar.

A. Flat rims with straight walls

One vessel is certainly a dish; perhaps most of the others are dishes, but the wall of each sherd is too small to give any certainty. The rim shapes apart from nos. 15 and 16, have a general resemblance to each other. There are no exact parallels in shape and fabric in Gillam (1968) unless the Grimescar grooves are overlooked. The rims are wide, and the number of groovings vary with the width; five rims of width between 29 and 25mm have three grooves; of seven between 23 and 20mm, four have three grooves and three have two; two of between 13 and 11mm have two.

No. 15 is outside this flat rimmed category; it has a beaded rim. What there is of it resembles Gillam (1968) no. 216; but this latter has a carination of which there is no indication in no. 15.

B. Flat rims with curved walls

There is a general resemblance within the group of rims and grooved walls. It is doubtful whether no. 18 has the rim shape for which it was designed; no. 22 looks too fragile in its rim shape; the outward slope of nos. 26, 28 and 31 at the rim could well be a mistake in stacking. No. 21, and, less convincingly, no. 19 might be carinated bowls. If so they might belong to Gillam, 1968, no. 215. Purdy (1973) rather bewilderingly, claims that Gillam's 215 deals with hemispherical bowls. Perhaps for both no. 19 and 21 the 'carinated' ought to be deleted, and 'hemispherical' substituted.

C. Everted rims

In this group most of the vessels are described as jars. It is uncertain whether they are jars or cooking pots. If the Grimescar pieces are all wasters, any cooking pots would be destroyed before coming into contact with a cooking fire and being blackened thereby. The comparisons with Vindolanda vessels are on shape only.

D. Bases

This is difficult; there seems to be no established

typology of bases. These bases have a family resemblance in that they all have a heel, and none has an angle in the inside where the wall curves up from the foot. None has a genuine properly shaped footring. It is strange that the only resemblance to no. 91, which combines a flat bottom with an omphalos is in Collingwood 1976, 283 A; and this in Derbyshire ware, too late for Grimescar; this must be an accident of publication.

E. Lids

Two things are striking about these lids. The first is that the proportion of nine lids (11 sherds) out of 115 pieces seems high when compared with all other sites except Vindolanda, which has an even higher proportion. Did the cooking methods of the Breuci demand more lids or were the lids more difficult to make and had a high proportion of failures or were other materials used for lids? The second is the Grimescar groove showing predominantly even on a lid in no. 108.

FURTHER STUDY

More work on Grimescar might be profitable. There is much unpublished pottery from Grimescar and Slack at the Tolson Memorial Museum in Huddersfield. A statistical analysis of its different types might yield information on the important subject of the relations between a Roman fort and its subsidiary pottery kiln. Holt is not a proper analogy, since it is attached to a legionary fortress, nor is Muncaster, since it is a tilerly only. Something may be learnt if information about Quernmore and its relation to Lancaster is published. Finally, it might be interesting to look for pottery used by the other cohorts of the Breuci in Britain and for that used by the Fourth Cohort on being transferred from Slack to Ebchester. Would lids and grooves again show up prominently?

Acknowledgements

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AN INSCRIPTION AT THURSTASTON

John Evans

Thurstaston Common is situated on the mid Wirral sandstone ridge. The area comprises about one square kilometre of natural woodland, scrub and sandstone outcrops. From the summit plateau at 90m above sea level, the southern boundary is defined by a steep escarpment falling away to meet the A540 road between Heswall and Caldy. It was on these slopes that a member of the Wirral Group noticed an inscription carved into an outcrop (Fig. 1).

The inscription, which is cut into a smooth fault-free section of bedrock, is rectangular in shape and measures 1m x 0.4m. The section slopes at 30°, dipping into the soil along one short side, whilst the longer edges are bounded by a slightly overhanging cliff and a short vertical drop into the soil on the opposite side. Cut some 2mm deep, the marks are in good condition with the exception of one small area where erosion is almost complete.

The inscription appears to be of some antiquity and the survival of the marks in such good condition may be attributed to several factors. Situated in a relatively remote and unfrequented part of the common, the section has escaped the attention of subsequent 'engravers' and vandals, whilst erosion has been minimised by the hardness of the rock. The presence of this hard rock was noted by T.A. Jones (Hon. Sec. Liverpool Geographic Society), who, when referring to the soft Wirral sandstone, said, 'in the Thurstaston area a hard inconstant band is present' (Beazley 1924). Protection from the elements is provided by the previously mentioned overhanging rock and generous tree cover, whilst the inscription is close to ground level and may have been covered periodically by a layer of turf. The turf factor would account for the irregular erosion pattern and may explain why the inscription is not mentioned by any of the noted Wirral antiquarians (Beazley 1924, 201; Brownbill 1928; Picton 1913 *et al.*).

To the writer's knowledge there is no precedent for an inscription of this kind and it was thought that the best approach to a postulated solution would be to select groups of symbols within the inscription which have a similar format and consider them in isolation. If parallels to these could be found from other sources then by association, some context, dating and interpretation might be inferred.

The inscription was therefore divided into three groups, comprising those symbols in the first line, the second and third lines, and those in the fourth line.

The figures in the first line appear to have some common structural characteristics with symbols occasionally appearing in church registers, from earliest entries to the latter half of the 17th century. These

Figure 1: The inscription at Thurstaston.

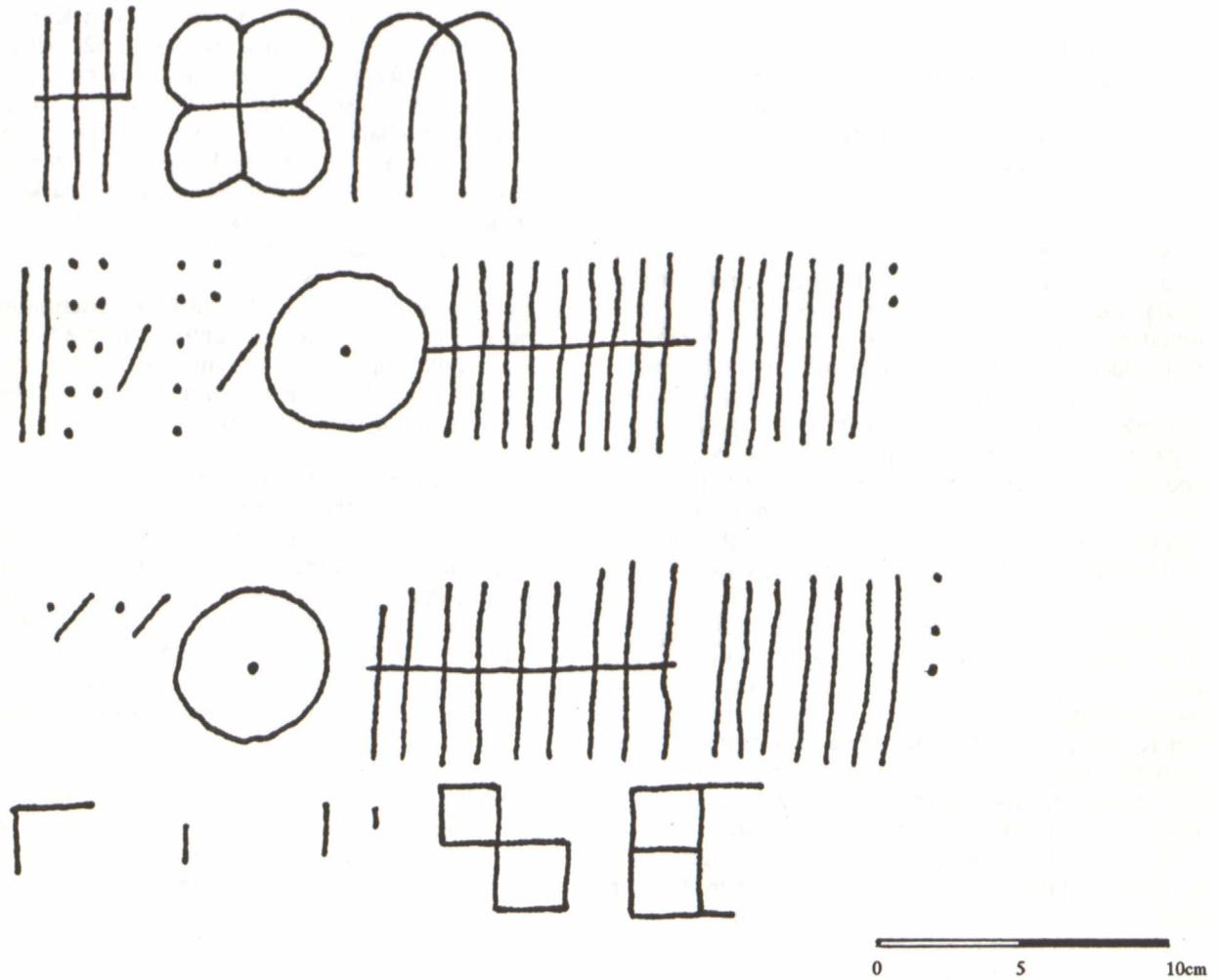


Figure 2: 'Personal' marks from parish church registers in Cheshire and Huntingdonshire.

Wm Roberts		(West Kirby, Cheshire, 1602)
Henry Hunt		(Woodchurch, Cheshire, 1646)
Anne Farrington		(Brereton, Cheshire, 1620)
Wm Roche		(Woodchurch, Cheshire, 1646)
Bart. Martin		(Hamerton, Hunts., 1654)
John Craythorn		(Hamerton, Hunts., 1678)

were signatures or 'personal marks' of people who ere presumably otherwise illiterate and had their full names inscribed alongside by the incumbent of the period. Some examples, both local and otherwise, are shown in Figure 2. At this point, parallels may be seen between the second mark in the top line at Thurstaston and those of Wm Roberts and Bart. Martin in Figure 2. In the same way, the resemblance of the third mark to that of Wm Roche was also noted.

A similar parallel was found by the writer, in an excavation report on Peel Castle, Isle of Man, (Freke 1987), where on a slate tablet (86-53-I-261 BR) was found an incised drawing of a woman, together with marks identical to those of Wm Roberts in Figure 2. The tablet was ascribed to the 14th century on the grounds of dress and context (Freke 1987). It is not suggested that the marks from Thurstaston, Peel Castle and the church registers are in any way related to each other, but they do have features in common and from this the writer concluded that the marks in the top line at Thurstaston are probably 'personal marks'.

The predominance of dots and vertical lines, or bars, in the second and third lines suggests a rudimentary counting and recording system. This system may be based on units of five, or one 'handful'. Thus if each dot represents one digit, then five dots represent one 'handful'. Five is the maximum number of dots in any one group. At the completion of one 'handful', or perhaps when the accumulation of dots became confusing, the groups of five were joined together to form a bar. This is evident on the rock, where the bar lines tend to be irregular with occasional traces of dots on either side. After recording nine 'handfuls', the tenth group of five dots may have been marked on a horizontal axis between the vertical bars and a line drawn through them to complete the sum $10 \times 5 = 50$.

This system can go on producing numbers indefinitely, but it is possible that the dot within the *circle* was used to indicate a round number brought forward from another count, e.g. 100, (could this be the origin of the term 'round' number?).

The two short slanting strokes in each line appear to separate each group and the second and third lines can perhaps be translated as:

19 / 7 / 187

and

1 / 1 / 188

A parallel use of this bar and dot system for recording a 'purely positional system of numeration' was found in the Dresden Codex of Maya, c. 11th to 12th century (Thompson 1960).

The fourth line contains three symbols which are probably mason's marks. The first and second are

separated by three short vertical lines whose meaning is not clear. The first mason's mark can also be found on the walls of the church towers at West Kirby, built 1493, Shotwick, 1500, and Bidston, 1520 (Richards 1947). The second mark appears in a mirror image form on a buttress on the undated Stanley Chapel at Eastham (Richards 1947). No parallel can be found for the third mark, but it seems logical that this is also a mason's mark. Whilst these church marks bear similarities to those at Thurstaston, it would be unsafe to assume any contemporaneity.

Though not immediately obvious in the inscription, the fact that there are three elements, horizontally, in each line, would imply three columns, with each of these columns headed by a 'personal mark', followed by two numbers and a mason's mark.

Interpretation of the inscriptions is a matter for speculation, but the key may well be the presence of mason's marks. These marks would suggest a connection with stoneworking and in the absence of any documentary or physical evidence for building in the vicinity, an association with quarrying appears most likely. Whilst there is no evidence in the area, at present, for stone extraction, the Ordnance Survey map of 1870 (Sheet XII.16.25") does show extensive quarries close by.

It seems possible that the inscription is part of the same industrial scene and record quantities of stone, extracted by the masons recorded and credited to the 'names' in the appropriate columns.

Alternative interpretations, and/or details of similar markings would be most welcome.

Acknowledgement

To Jenny Whalley who noticed the marks and brought them to my attention.

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Appendix: Correspondence of Masons' marks.

A. D'Arcy

This appendix was omitted from the end of D'Arcy's paper 'Considerations relevant to the dating of the Ireland Chapel at Lydiate', *J Merseyside Archaeol Soc* volume 6 and is inserted here with humble apologies from the Editors.

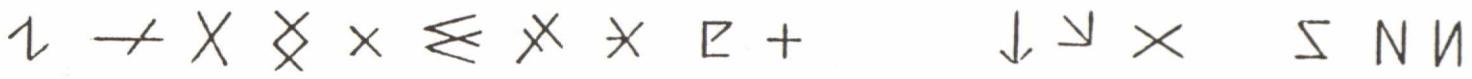
Sefton:
-1528 to c. 1535



Bebington:
c. 1535 to c. 1540



Lydiate:
c. 1540 to c. 1542



Ormskirk:
c. 1542 to -1550

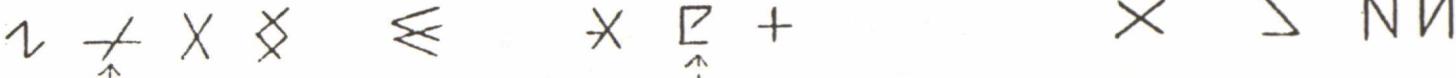


Aughton:
-1550+



Composition of marks at Lydiate:

Lydiate Chapel:



Lydiate Hall:



It is possible that Sefton



which do not appear at Bebington, were retained c. 1535-1540 for work on the chancel and vestry, and became available for the early work at the hall, since they appear at the lower levels of the chimneys.

- Bidston, inscription at 108
 bone objects 69
 bones 51-52, 72-75
 animal 23, 72-75
 bird 73-75
 domestic species 73, 75
 dog 51, 73-75
 fish 23, 74, 75
 wild species 72, 73
 boundaries, field 3
 bridges 89, 91
 stone 6, 87
 wooden 91
 Bristol, clay pipes from 34
 Brookhill, pottery from 66
 buildings 46, 89, 91
 courtyard 6, 47, 51, 87, 89, 91, 93
 cruck-framed 6, 87, 91, 93
 dovecote 87, 89, 91, 93
 farmhouse 6, 23
 gatehouse 6, 13, 23, 41, 89
 half-timbered 47
 hall 13, 16, 22, 23, 52
 kitchen 13, 16, 22, 23, 31, 34, 37-39,
 41, 47, 51, 52, 89
 lodge 89
 manor house 1, 13, 23, 41, 47
 stable block 6, 85
 the Pele 4
 building features
 chimneys 6, 13, 16, 22, 47, 51, 52,
 89, 93
 cistern 89, 93
 datestone 6
 doorways 6, 13, 22, 23, 51
 drains and drainage 6, 16, 38, 47, 51, 87, 89
 fireplaces 6, 13, 16, 23, 41, 51
 floors 16, 22, 41, 47, 51, 52, 58, 89,
 90
 clay and plaster 16
 sandstone flags 47, 89
 hearths 13, 16, 22, 51, 58
 garderobe 89
 ovens 16, 22
 roofs 16, 22, 38-41, 51, 52, 66-68, 87,
 89, 91, 93,
 walls 6, 13, 16, 22, 41, 47, 85, 87,
 89-91 (see building
 materials)
 perimeter 13
 revetment 91
 windows 6, 13, 41
 building materials
 brick 6, 13, 16, 47, 51, 68, 87, 89, 91,
 92
 ceramic roof tiles 39, 53, 64-66, 89,
 93
 cobble 22, 87, 89
 lead 47, 89, 91
 masonry 6, 13, 16, 41, 47, 51, 87, 89,
 91
 mortar 41, 91
 plaster 36, 41
 roof flags 87
 sandstone slabs 51, 52, 66, 89, 93
 slate 22, 38-39, 51-53, 66, 68, 87
 stone setts 91
 timber 6, 13, 15-16, 41, 47-48, 51,
 87-93
 York Stone 'slates' 38
 castles
 Chester castle, great stable at 51
 Peel Castle, Isle of Man, incised drawing 106
 Sandal Castle, pottery from 23
 Castleshaw 95
 fort 95, 104, 105
 causeway 6
 charcoal 83
 Cheam, pottery from 54
 Chester 29, 95, 105
 clay pipes from 34, 68
 stable at 51
 churches 106-108
 clay tobacco pipes 23, 58, 68, 71, 93 (see
 Bristol, Chester, Glasgow,
 Liverpool, London, Norton
 Priory, Rainford)
 flat heeled 34
 spurred 34
 coal 44, 51, 87
 coins 36, 104
 Eastham, inscription at 108
 environmental analysis
 insect remains 52, 78
 plant remains 75, 82
 pollen 78-83
 Ewloe, pottery from 66
 farmsteads 6
 field names
 Bonkerfield 3
 Crosbihowsys 3
 fishponds 6
 forts, Roman
 Castleshaw 95
 Slack 95, 97, 102, 104, 105
 geology
 bedrock 106
 boulder clay 85, 91
 Shirdley Hill Sand 85
 Glasgow, clay tobacco pipes from 68
 glass 69, 95
 vessel 36, 37, 69, 71, 93
 window 51, 69, 71
 Hale 1, 3
 Hale Bank 4
 Hale Hall 1
 Halewood 1, 3, 6
 freeholders 3
 Hen Blas, Clwyd, pottery from 66
 Holand family 3

- inscriptions 106-108
 Ireland family 1, 3, 6, 109
 inventory 41, 46

 leather, shoes 69
 Liverpool 47
 clay pipes from 34, 35
 pottery from 29-31
 London, clay pipes from 34
 Lydiat 109

 masons' marks 51, 109
 metalwork 36, 72
 coin 36
 copper alloy 36, 72
 iron 36, 72
 jetton 36
 knife 36, 72
 lead 72
 moats 1, 3, 4, 6, 13, 16, 22, 23, 31, 39, 44, 47,
 52, 76, 80, 83-85, 87, 89,
 91, 93
 Lovel's Hall 1, 3
 Old Hutt 1, 3, 4, 6, 23, 39, 41
 organic remains from 75-83
 Speke Hall 13, 47-94
 Wright's Moat 1, 4, 44
 Yew Tree House 4
 revetment 91

 Norton Priory, Runcorn,
 clay pipes from 35
 pottery from 56, 57

 Oglet 73
 organic remains 52 (see environmental analysis)
 Ormskirk 109

 Pennines 85, 95
 pits 16, 23, 31, 91, 97, 100
 pollen analysis 52 77-83
 cereal 76, 80, 84
 from Birmingham Smithfield 82
 from Cowick, Humberside 82
 from Nantwich 82
 pottery 23-34, 44, 53-66, 89, 93
 Beauvais 54, 58
 black ware 29-31, 34
 black-glazed 23
 Cheam 54, 58
 china 52
 Cistercian 29, 34, 53, 54, 57-59
 Cistercian-type 29, 57, 59, 60, 89
 Cologne-Frechen 52, 57
 creamware 58
 dark yellow ware 31, 34
 earthenware 29
 grey 25, 29, 57, 60, 104
 iron-free 54
 iron-rich 55, 60
 mortarium 104
 mottled ware 22, 29, 34
 pearlware 58, 64
 porcelain 58
 red ware 29
 Roman 95-105
 roof tile (see building materials)
 Saintonge 54
 samian 104
 slipware 29, 31
 Staffordshire-type slipware 29
 stoneware 23, 57, 60
 Surrey Ware 25
 tin-glazed 29, 30, 58, 64
 transfer-printed 23
 Tudor Green 29
 willow-pattern 58
 pottery manufacture
 Grimescar, Huddersfield 95, 97, 104,
 105
 Prescott, pottery from 29, 57

 Rainford, clay tobacco pipes from 34, 35, 68

 Sefton 109
 shells 23, 52
 Shotwick, inscription at 108
 soils 44, 47, 51
 Speke 13, 47-93
 Domesday evidence 47
 stone objects, mortar 37, 38

 Thurstaston 106-108
 Twiss Green, Culcheth, pottery from 57

 Warrington, pottery from 43, 57, 85
 watercourse 52 (see also moats)
 West Kirby, inscription at 108
 Wilderspool 97, 105
 Woodchurch 107
 wooden artefacts 69
 wooden structures (see buildings and building
 materials)
 bridge 91
 woodland 3, 52, 76, 79, 82, 106

CONTENTS

Articles:

- Excavation and survey at the Old Hutt, Halewood, in 1960 S. Wrathmell 1
- Speke Hall: Excavations in the west range, 1981-82 D. A. Higgins 47
- Speke Hall: Excavations in the gardeners' compound, 1987 P. J. Davey and J. Speakman 85
- Speke Hall: Archaeology of the east courtyard, 1989 J. M. Lewis 87
- Pottery from the Grimescar kiln site, Huddersfield The Reverend E. S. Pickup 95

Shorter Note:

- An Inscription at Thurstaston J. Evans 106
- Correspondence of masons' marks A. D'Arcy 109