

English  Heritage

EXCAVATIONS AT MUCKING

Volume 2: the Anglo-Saxon settlement

Excavations by M U Jones and W T Jones

Helena Hamerow



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Volume 2:
The Anglo-Saxon settlement

to
M L Hamerow
and
T S Hamerow

English Heritage

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**Excavations at Mucking
Volume 2:
The Anglo-Saxon settlement**

by Helena Hamerow

excavations by M U Jones and W T Jones

with contributions by
Geraldine Done, Margaret Gelling, Chris Going, Julian Henderson,
Michael Heyworth, Gerry McDonnell, Carole Morris, Marijke van der
Veen, and Leslie Webster

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Contents

List of illustrations	vii	Glass	60
List of tables	viii	Copper alloy	60
Preface and acknowledgements	ix	Wood	60
Foreword by <i>I H Longworth</i>	xi	Articles of dress	60
Publisher's note	xi	Beads	60
		Brooches	60
1 Introduction	1	The brooch mould by <i>Leslie Webster</i>	62
Arrangement of the volume	1	Pins	63
Background to the excavation of the Anglo-Saxon settlement	1	Pendants	63
Anglo-Saxon Mucking	1	Belt fittings	63
Problems of recovery	1	Coins	64
The topographical context	2	Bone and antler artefacts	64
The inventory of features and finds	4	Personal items	64
Feature plans	4	Knives	64
Dating of features	4	Firesteels or purse mounts	64
Presentation of finds and pottery	4	Miscellaneous	64
The phasing of the Anglo-Saxon settlement	5	Spinning and weaving equipment	64
Dating	5	Spindlewhorls from Anglo-Saxon contexts	64
Stratigraphic relationships	7	Anglo-Saxon spindlewhorls from other contexts	66
Radiocarbon dates	7	Anglo-Saxon fired clay loomweights	66
Notes	7	Unfired loomweights	68
		Structural fittings	68
2 Structural evidence	8	Strip fragments	68
Introduction	8	Sheet fragments	68
Posthole buildings	8	Chainwork and rings	68
Introduction	8	Keys	69
Typology	8	Weapons	69
Metrology	9	Tools by <i>Carole Morris</i>	69
Function	10	Lead rings and perforated discs	70
The <i>Grubenhäuser</i>	10	Roman artefacts from Anglo-Saxon contexts	71
Typology	10	Roman pottery from the <i>Grubenhäuser</i> by <i>Chris Going</i>	71
Metrology	11	Roman coins from Anglo-Saxon contexts by <i>Chris Going</i>	72
Constructional evidence	11	Notes	73
Fired clay and daub from <i>Grubenhäuser</i> fills	13		
Post-occupation processes	13	5 Environmental and technological evidence	74
Reconstructions	14	Animal bone from Anglo-Saxon contexts by <i>Geraldine Done</i>	74
Function	15	Introduction	74
Pits, ditches, and miscellaneous contexts	19	Methods	77
Anglo-Saxon ground surface	19	Farm animals	77
The 'Well 7' complex	19	Other animals	79
The antler ditch	19	Worked bone and antler	79
Pits	20	Butchery and disease	79
Hearths	20	Conclusions	79
Notes	20	Grain impressions in early Anglo-Saxon pottery from Mucking by <i>Marijke van der Veen</i>	80
		Introduction	80
3 The pottery	22	Methods	80
Wheel-turned pottery: Frankish pottery and Ipswich ware	22	Results	80
Handmade pottery	22	Discussion	81
Quantification and recording	22	Analysis of the copper alloy objects from the Anglo-Saxon settlement at Mucking by <i>Michael Heyworth</i>	81
Methods of analysis	23	Introduction	81
The pottery fabrics	27	Analytical methods	81
Surface treatment	31	Results	82
Pottery forms	37	Discussion	82
Decoration	45	Slags and ironworking residues by <i>Gerry McDonnell</i>	82
The interrelationship of pottery attributes	52		
Pottery comparanda	56		
Decline in the quantity of pottery	57		
Notes	57		
4 Small finds	60		
Vessels	60		

Technology of the glass inlays from Mucking <i>by</i> <i>Julian Henderson</i>	84	The topographical context	95
Introduction	84	Nearby Anglo-Saxon settlement	95
Techniques of sampling and analysis	84	The relationship between south-east Essex and Kent	95
Technological considerations	84	Pastoral and woodland resources	95
Archaeological implications	84	The place-name Mucking <i>by Margaret Gelling</i>	96
Notes	85	The - <i>gē</i> place-name element	96
6 The spatial development of Anglo-Saxon Mucking	86	Conclusions	96
The site plan	86	Notes	97
Spatial development and layout of the settlement	86	8 The inventory of features and finds	101
Interpretations of settlement morphology	89	The arrangement of the inventory	101
Questions of demography	90	The posthole buildings	102
Conclusions	91	The <i>Grubenhäuser</i>	108
Notes	91	Ditches, pits, postholes, and unstratified contexts	291
7 The historical and topographical contexts of Mucking reconsidered	93	Summary/Zusammenfassung/Résumé	314
The historical context	93	Bibliography	318
		Index	325

List of illustrations

Fig 1 Mucking: contour plan with major cropmarks	2	Fig 35 Anglo-Saxon pottery stamps	51
Fig 2 Location maps A–C: early Anglo-Saxon occupation in the Mucking region	3	Fig 36 Percentages of decorated sherd groups from <i>Grubenhäuser</i>	52
Fig 3 Distribution of datable finds – fifth, sixth, and seventh centuries	6	Fig 37 Percentage of decorated sherd groups which are stamped	52
Fig 4 Scattergram showing relationship of PHB dimensions to two-square module	9	Fig 38 <i>Grubenhäuser</i> in which over 50% of decorated pottery is stamped	53
Fig 5 Length of posthole buildings	10	Fig 39 Percentage of decorated sherd groups in 12 <i>Grubenhäuser</i> of established date	54
Fig 6 Lengths of <i>Grubenhäuser</i>	11	Fig 40 Distribution of <i>Grubenhäuser</i> containing varying percentages of decorated pottery	55
Fig 7 Distribution of <i>Grubenhäuser</i> over 4.5m (15ft) in length	12	Fig 41 Columnar distribution of grass-tempered, roughened, and decorated sherd-groups in <i>Grubenhäuser</i> of established or predicted date	56
Fig 8 <i>Grubenhäuser</i> : relationship of length to depth	13	Fig 42 Perforation diameter of Type 1 and Type 2 spindlewhorls	65
Fig 9 Distribution of lead and slag in <i>Grubenhäuser</i>	16	Fig 43 Comparison of the weights of Type 1 and Type 2 spindlewhorls	65
Fig 10 Distribution of loomweights and spindlewhorls in <i>Grubenhäuser</i>	18	Fig 44 Fired clay loomweight diameters	66
Fig 11 Number of sherd groups in <i>Grubenhäuser</i>	24	Fig 45 Fired clay loomweight diameters: <i>Grubenhäuser</i> groups	67
Fig 12 Distribution of optimum contexts	25	Fig 46 Fired clay loomweights: distribution of weights	67
Fig 13 Distribution of <i>Grubenhäuser</i> with over 90 or fewer than 10 sherd groups	26	Fig 47 Perforated lead discs and lead rings: weights (g) and diameters (mm)	71
Fig 14 Percentage of grass-tempered pottery in <i>Grubenhäuser</i>	28	Fig 48 Ternary diagram of copper alloys	82
Fig 15 Percentage of grass-tempered pottery in <i>Grubenhäuser</i>	29	Fig 49 Iron slag	83
Fig 16 Highest and lowest percentages of grass-tempered pottery in <i>Grubenhäuser</i>	30	Fig 50 Phased plan of Anglo-Saxon settlement	87
Fig 17 Percentage of grass-tempered sherd groups in 12 <i>Grubenhäuser</i> of established date	31	Fig 51 Prehistoric and Roman features presumed to have been visible in the Anglo-Saxon period	88
Fig 18 Distribution of Fabric 7	32	Fig 52 Mucking and surrounding parishes	91
Fig 19 Distribution of Fabrics 4 and 5	33	Fig 53 Colour symbols for glass	101
Fig 20 Distribution of micaceous fabrics and fabrics containing haematite	34	Figs 54, 55 Plans of posthole buildings	105–6
Fig 21 Surface treatments: coarse slipping, combing, and pinched rustication	35	Fig 56 Plans of posthole buildings; finds from PHB 2, 7, and 16	107
Fig 22 Distribution of pinched rustication and combing	36	Figs 57–71 Plans of <i>Grubenhäuser</i>	169–183
Fig 23 Distribution of <i>Grubenhäuser</i> containing more than one coarse-slipped sherd	38	Figs 72–81 Plans and sections of <i>Grubenhäuser</i>	184–193
Fig 24 Dendrogram of pottery forms	39	Figs 82–178 Finds and pottery from <i>Grubenhäuser</i>	194–290
Fig 25 Columnar distribution of carination angles	40	Fig 179 Anglo-Saxon pits	298
Fig 26 Pottery form parts	41	Figs 180–183 Finds and pottery from the North Enclosure	299–302
Fig 27 Percentages of grass-tempered sherd groups and pottery forms	42	Fig 184 Pottery from the kiln ditches	303
Fig 28 Distribution of faceted carinated bowls and 'comb point' decoration	43	Figs 185–191 Finds and pottery from ditches and pits	304–310
Fig 29 Average rim curvature in <i>Grubenhäuser</i> of varying date	44	Fig 192 Single finds and pottery from pits	311
Fig 30 Distribution of bossed pottery and raised cordons	46	Fig 193 Pottery from pits and postholes	312
Fig 31 Anglo-Saxon pottery stamps	47	Fig 194 Unstratified finds and pottery	313
Fig 32 Anglo-Saxon pottery stamps	48	Fig 195 The Anglo-Saxon settlement	fold out at end of book
Fig 33 Anglo-Saxon pottery stamps	49		
Fig 34 Anglo-Saxon pottery stamps	50		
		Plate 1 PHB 2	99
		Plate 2 PHB 13	99
		Plate 3 GH 188 under excavation	100

List of tables

1	Mucking Anglo-Saxon settlement: diagnostic small finds and pottery	5	11	Bone frequency	77
2	Stratigraphic relationships of <i>Grubenhäuser</i>	7	12	Cattle measurements	78
3	Calibrated radiocarbon dates	7	13	Dental wear in cattle	78
4	Pits containing substantial quantities of Anglo-Saxon pottery	20	14	Sheep measurements	78
5	Mucking: percentage of Anglo-Saxon pottery from nine <i>Grubenhäuser</i> , calculated by number of sherds and weight	23	15	Dental wear in sheep	78
6	Visually identical pottery stamps	45	16	Pig measurements	78
7	Romano-British pottery from <i>Grubenhäuser</i>	72	17	Dental wear in pigs	78
8	Roman coins from Anglo-Saxon contexts	73	18	Horse measurements	79
9	Anglo-Saxon <i>Grubenhäuser</i> : bone fragment distribution	74	19	Antler measurements	79
10	Bone from <i>Grubenhäuser</i> containing over 100 fragments	76	20	Grain impressions in 244 sherds of Anglo-Saxon pottery	80
			21	Copper alloy analysis	82
			22	Anglo-Saxon slag deposits	83
			23	Electron-probe microanalysis of two glass inlays from Mucking	84

Preface and acknowledgements

The Anglo-Saxon settlement at Mucking, Essex, was excavated by Margaret and Tom Jones between 1965 and 1978 as part of the large-scale rescue excavation of the multi-period cropmark site on the 100ft gravel terrace overlooking the Thames estuary. Mucking provided the first opportunity to excavate an early Saxon settlement and associated burials simultaneously, and with two Anglo-Saxon cemeteries, at least 53 posthole buildings, and 203 'sunken huts' (*Grubenhäuser*), Mucking remains the most extensive Anglo-Saxon settlement excavated to date. The significance of the site was further heightened by the discovery of a number of early fifth-century Germanic burials, some with military affinities, leading to the hypothesis that Mucking had originated as a settlement of Germanic mercenaries, *foederati*, set up to guard the Thames estuary.

Several detailed interim statements concerning the Anglo-Saxon settlement have been published by the excavators (eg Jones *et al* 1968; 1969; Jones and Jones 1974b; 1975). Despite the site's international importance and the involvement of a number of scholars, however, the post-excavation resources available to the excavators were insufficient to achieve a full site report. The present writer undertook the analysis of the pottery and spatial development of the Anglo-Saxon settlement, first as a doctoral student and then as a member of the English Heritage-funded Mucking Post-excavation project (MPX). This volume is based on a thesis (Hammerow 1987a) written some ten years after the close of the Mucking excavations, by someone who did not take part in the actual excavation. It is therefore not intended as a 'site report' in the conventional sense nor a comprehensive exposition of the excavation of the Anglo-Saxon settlement. My chief aim has been to provide as full a presentation of the finds and features of the Anglo-Saxon settlement as the constraints of time and resources would allow, and to present a broad outline and interpretation of its development.

It is axiomatic that such a study raises more questions than it answers, and many areas of investigation necessarily receive only cursory treatment here. A number of these would repay more detailed analysis, none more so than the relationship between the settlement and the cemeteries. It has proved impossible for research on both to proceed in tandem, however, and analysis of the cemeteries remains, at the time of writing, insufficiently advanced for a detailed synthesis although some preliminary comparisons are presented in this volume.

The many hands apparent in the illustrations of the finds and pottery reflect the protracted nature of work on Mucking. The drawings of the pottery from *Grubenhäuser* are the author's except where otherwise noted. The remainder of the pottery was drawn by Simon Pressey. Pottery stamps were drawn by Jo Bacon, finds primarily by Diane O'Carroll, and the feature and site plans by Dawn Flower, Ben Hall, Helen Riley, and George Taylor. The main site plan was drawn by George Taylor. Chris Boddington, Tracey Croft and Simon Pressey prepared the diagrams for this volume, and I am grateful to Chris Boddington for undertaking the formidable task of pasting up the figures.

The completion of this volume has been an immense undertaking, and would have been impossible without

the work and assistance of a large number of individuals. It is impossible to name here all those who, over the past twenty years, have contributed to various aspects of the Mucking project. I would, however, like to thank a number of colleagues who have been of particular assistance since my involvement began in 1984.

I am indebted, above all, to Mrs Margaret Jones, whose enthusiastic response to my initial enquiries regarding the Anglo-Saxon settlement at Mucking encouraged me to pursue this study, despite sometimes formidable obstacles. Her achievement in directing the excavations at Mucking remains prodigious. Without her continuing generosity and cooperation, my investigations would quickly have foundered. Mr Martin Biddle and Professor H T Waterbolk have generously provided critical assistance and I am particularly grateful to the former for his guidance and support. Professor Barry Cunliffe and the late Dr J N L Myres provided much-needed advice and encouragement from the earliest stages of my research. I also wish to thank my thesis adviser, Mrs Sonia Hawkes, whose suggestion it was that I undertake the Anglo-Saxon settlement at Mucking as a research topic. I am indebted to Lindsey Badenoch, who worked on the Mucking settlement and cemeteries as a student and research assistant, for discussing her work with me, and for helping me to track down information in an overwhelming archive consisting of some 300 notebooks and thousands of field plans.

For nearly eight years, extensive archival work and analysis of the excavation record and finds were undertaken by MPX, and this work provided the foundation for the current volume. Of the many people involved in that project, I wish to thank in particular Rosemary Arscott, Paul Barford, Rhona Huggins, Peter Huggins, Ailsa Mainman, and Jenny Lee for numerous invaluable discussions, and for making available the results of their extensive research on various aspects of the Mucking finds and buildings.

The members of the later British Museum/English Heritage Mucking project – in particular Dido Clark, Jon Etté, Chris Going, and Sue Hirst – have shared the burden of some of the most difficult stages of the preparation for publication. Ann Clark, director of the project, has been a constant source of support and assistance. Thanks are also due to the specialist contributors who have so generously given of their time and expertise. Val Horsler has undertaken the unenviable task of editing the volume, and I am grateful to her for her patience. Finally, I am indebted to Martin Welch and Leslie Webster for their invaluable comments on the text.

The support of several institutions has made this work possible. The British Museum and English Heritage gave their kind permission for me to work on the Mucking finds and archive for my doctoral thesis. I owe special thanks to Leslie Webster of the Department of Medieval and Later Antiquities at the British Museum for her unstinting support and critical guidance. My doctoral and post-doctoral research was sponsored by the American National Science Foundation, the Keith Murray Award, Lincoln College, Oxford, English Heritage, and the Mary Somerville Research Fellowship, Somerville College, Oxford. I gratefully acknowledge

this support, and wish particularly to thank the trustees of the Keith Murray Award and the Mary Somerville Research Fellowship for their continuing interest and generosity.

To the many friends and colleagues whose discussions and encouragement have contributed so much to this

study, and to my parents to whom this volume is dedicated, I owe a special debt of gratitude.

HH
Somerville College, Oxford
July 1990

Foreword

It is now hard to recall that Mucking began as a modest evaluation exercise in advance of gravel extraction nearly 30 years ago. The excavations which unfolded over a period of some 14 years were to become the first attempt to uncover and understand a multi-period landscape stretching over 18 hectares (45 acres). But that was a matter of pragmatic development not of initial conception. In many ways the Mucking excavations epitomise the rescue archaeology of the 1960s and 1970s – pioneering, adaptive, underfunded, and carried out in the face of a constant time constraint. The director of the project was Margaret Jones, with Tom Jones acting both as assistant director and project photographer.

Of the many difficulties the directors had to face not least were the soil conditions, for the site lay on acid gravel whose free-draining characteristics made feature definition never a simple task. Greatest of all was to be the problem of management, for by the end of the campaign over a million artefacts had been recovered while site notebooks alone numbered over 350. Given the size and complexity of the site, and the paucity of funds available to exploit it, it is a lasting tribute to the directors that so much information was so successfully recovered and recorded.

By 1977 the Herculean task of post-excavation processing had begun. Through the generosity of the Thurrock Local History Museum space was made available to store and work upon the finds. Computerisation of the data was embraced with enthusiasm but with too little thought perhaps for the ultimate end product. Specialists were employed to consider the different aspects of the period assemblages recovered, but many found themselves working in isolation with little or no information available as to the context of the material they were studying. The post-excavation process began to lose cohesion. What was needed was a fresh assessment of the computerised processing being employed, more space for sorting both archive and material, and above all a small dedicated team which could devote its energies to the task.

In 1985 the Backlog Working Party of the Directorate of Ancient Monuments and Historic Buildings, HBMC (now English Heritage) took the difficult decision to abandon virtually all of the computerisation which had taken place up to that date and to take over from the directors of the excavations responsibility for writing up the major part of the project. Its recommendation was that a new team, to be funded by English Heritage and assisted by two members of the British Museum staff, should be formed. The British Museum had negotiated acceptance of the entire project archive and arranged its transfer from Grays to their archaeological store at Blythe Road, London W14. The new team was asked to achieve two objectives over a limited period of time: firstly to order the archive to a standard which a museum could accept, and secondly to produce a research design for the publication and get it under way. The primary tasks were to produce a definitive site plan and to assign context numbers to features hitherto referenced only by coordinates. A Management Committee was appointed to oversee the operation, drawn equally from the British Museum and English Heritage.

The post-excavation team under the direction of Ann Clark laboured mightily and to great effect. The site atlas was produced and context numbers were assigned to all features measuring two feet or more across. It was quickly apparent, however, given the constraints of time and money under which the team were asked to work, that as far as publication was concerned an even coverage for all periods could not be achieved. While the Anglo-Saxon settlement and cemeteries and some aspects of the Roman phase could be published in some detail, the prehistoric period could only be treated in more summary fashion. Here the research potential of the site remains still to be tapped.

The project was fortunate in attracting a number of specialists willing to take on the problems inherent in the publication. Inevitably, given the protracted nature of the processing, the archive in its present form is not perfect. A small number of finds originally recorded cannot now be located and a few artefacts suffered before remedial conservation could be applied. The photographic archive of the excavation has only recently been made available and, as far as the first two volumes are concerned, could not be taken fully into consideration. With these and many other constraints the authors have had to contend. It is a mark both of their scholarship and their tenacity that the volumes now appear. To all the authors and above all to Margaret and Tom Jones, who first revealed the landscape to us, we owe a profound debt of gratitude. I very much hope that, as the volumes are published, they will feel that their efforts have been justly rewarded. It must be emphasised, however, that the publications envisaged are but the first stage in unlocking the research potential of the site. Much will remain to be done and the archive is there to be used. I trust that many will take advantage of the opportunities it presents.

I H Longworth MA PhD FSA
Mucking Management Committee

Publisher's note: The first volume in the Mucking publication series, *The site atlas*, by Ann Clark, is also available from English Heritage. Future volumes will comprise reports on the Roman period by Chris Going, on aspects of the prehistoric period by Elizabeth Healey and John Etté, and on the Anglo-Saxon cemeteries by Sue Hirst and Dido Clark.

In addition to these publications, Ann Clark is preparing an introduction to the archive held in the British Museum's stores.

Site atlas references in this volume refer to the 25 sheets of site atlas plans included in volume 1. These plans were printed in summer 1991, since which time work on the phasing has continued; the Mucking archive held in the British Museum's stores in Blythe Road, London W14, should be consulted for details of this later work. As is explained in volume 1, work on the site atlas was subject to many difficulties, with the result that several errors have occurred; those which relate to this volume and were noted before the publication deadline are listed at the beginning of the inventory on p 101.

1 Introduction

Arrangement of the volume

A brief introduction to the Anglo-Saxon settlement at Mucking (chapter 1) includes a discussion of the excavation, setting, and phasing of the site. A consideration of the structural evidence follows (chapter 2). Chapters 3 and 4 discuss the pottery and finds. Chapter 5 comprises a series of specialist reports which present environmental and technological evidence. The spatial and socio-economic arrangement of the settlement at different stages in its development is then examined (chapter 6). Finally (chapter 7), the Mucking settlement is considered in its broader historical and topographical context, emphasising its relationship to the Roman landscape and to other Anglo-Saxon settlement in the region. The inventory of settlement features and finds concludes the volume.

The particular constraints imposed upon the publication of the Mucking excavations have inevitably and, to a degree, adversely affected the presentation of the Anglo-Saxon settlement. The pottery and spatial development of the settlement, which were extensively treated in the author's doctoral thesis, are given a relatively detailed presentation, in contrast to the necessarily limited treatment of the other finds and the buildings, to which a corresponding amount of time and resources could not be allotted.

Background to the excavation of the Anglo-Saxon settlement

Excavations on the 100ft gravel terrace of the River Thames at Mucking in south-east Essex (NGR TQ 673 803; parish of Mucking) began in 1965 under the direction of Mrs M U Jones and Mr W T Jones. Over the next 13 years they recorded a highly complex archaeological landscape, stretching in time from the Neolithic to Anglo-Saxon periods, and in area over some 18 hectares (Clark 1993, fig 6; this is Volume 1 of the Mucking publication series, the site atlas, hereafter referred to as Clark 1993). By 1975, over 10,000 pits and postholes and over four miles of ditches had been excavated.

Area excavation on this scale remains unparalleled in Britain. Mucking not only provided the first opportunity to excavate an Anglo-Saxon settlement and associated burials simultaneously, but with two Anglo-Saxon cemeteries, some 53 posthole buildings, and 203 sunken huts or sunken-featured buildings (referred to henceforth, following the excavator, by their German name, *Grubenhäuser*), Mucking remains the most extensive early Anglo-Saxon settlement excavated to date.

From the opening years of its investigation, Anglo-Saxon Mucking attracted considerable attention, in part because initial hypotheses defined its origins as military in nature (Jones *et al* 1968, 226–7; Evison 1981b, 141–2). It was suggested that a substantial settlement of Germanic mercenaries – *foederati* – had been stationed at Mucking in the late fourth or early fifth century, presumably to guard sub-Roman London against invasion via the Thames estuary. These arguments rested upon

certain historical assumptions and the presumed early date and military affiliations of certain types of late Roman metalwork, quoit brooch style decoration, so-called 'Romano-Saxon' pottery, and other pottery types (eg Jones *et al* 1968; 1969; Evison 1981b). Many of these assumptions have since come under serious criticism and will be examined in greater detail in chapter 7. In the early stages of post-excavation work, it was reasonably suggested that the two clusters of *Grubenhäuser* apparent in the site plan (Fig 195) represented two separate, contemporary settlements, which buried their dead in separate cemeteries (Jones 1974b, 192). Subsequent analyses of features and finds have led to substantially different conclusions.

Anglo-Saxon Mucking

Anglo-Saxon occupation at Mucking is represented by an exceptional range of features, including the largest (both in area and in number of buildings) early Anglo-Saxon settlement excavated in England, as well as the first Anglo-Saxon cemetery to be excavated in its entirety. Cemetery I contained approximately 51–63 burials, all inhumations. As this cemetery was discovered through quarrying its original extent is unknown, although it appears that the majority of graves were recovered. Cemetery II lay approximately 150m to the east, consisted of approximately 468 cremations and 336 inhumations, and was excavated in its entirety. Two hundred and three *Grubenhäuser* were excavated. In addition, some 53 posthole buildings of presumed Anglo-Saxon date and a minimum number of 27 Anglo-Saxon pits have been identified. A small number of posthole settings of indeterminate function may also belong to this period. A few prehistoric and Roman ditches appear to have been open in the Anglo-Saxon period and a small complex of ditches may date to the Anglo-Saxon period (see p 19). An area of preserved Anglo-Saxon ground surface lay in the vicinity of the North Enclosure, where pits and hearths were cut into a turf layer formed during the Roman period (see p 19).

Problems of recovery

The aim of the excavators of the Mucking settlement was nothing less than 'total rescue' of the archaeological landscape as it was revealed by mechanical scrapers prior to quarrying (Jones *et al* 1968, 229; Jones and Jones 1975, 133). As detailed in Clark 1992, the actual excavation fell short of this ambitious goal. The director has noted that 'some areas had to be abandoned to quarrying, and of very few can it confidently be said that no archaeological evidence was lost' (Jones 1974b, 183). She estimates 75% recovery. The site had already suffered from deep ploughing, and the dragline removed both ploughsoil (0.3–0.45m) and subsoil. The southern end of the excavated area suffered in particular from insufficient time and labour for complete excavation. The over-scraped or otherwise incompletely excavated areas have undoubtedly coloured our perception of the over-

all pattern of Anglo-Saxon settlement (Jones in Clark 1993).

In order to speed excavation and clarify the outlines of features in such adverse conditions, excavation was carried out in spits of 3–6in (76–152mm). The *Grubenhäuser* were excavated in quadrants separated by baulks; a small number were salvaged at such speed from quarrying that they could not be adequately planned.

It is essential to make clear the limitations of the evidence at the outset, in order to underscore the dangers of overly sophisticated analysis, statistical or otherwise, of the archaeological record, and hence the necessity of the relatively simple approach which has been adopted here. Despite these limitations, the size of the site and the enormous quantity of material recovered by the excavators are invaluable assets. Patterning over such a large area and within such a huge assemblage is bound to emerge. The recognition and interpre-

tation of this patterning is the chief concern of the present work.

The topographical context

As Mrs Jones has emphasised, Mucking needs to be viewed within four topographical contexts, four landscapes (Jones and Jones 1974b, 20). First, at its rather inhospitable location on the 100ft, or Boyn Hill, gravel terrace of the Thames estuary, it can be seen in relation to other Saxon settlements and burials in the immediate area: at Orsett Cock, at Orsett Neolithic Enclosure, at Gun Hill, West Tilbury, and at the site of Linford quarry, located just across the modern road from Mucking (Figs 1, 2). These sites are considered in relation to the Mucking settlement in chapter 7. Second, Mucking is situated just north of the chalk downs of Kent, nearly opposite the Darent Valley, and at the interface of the Anglo-

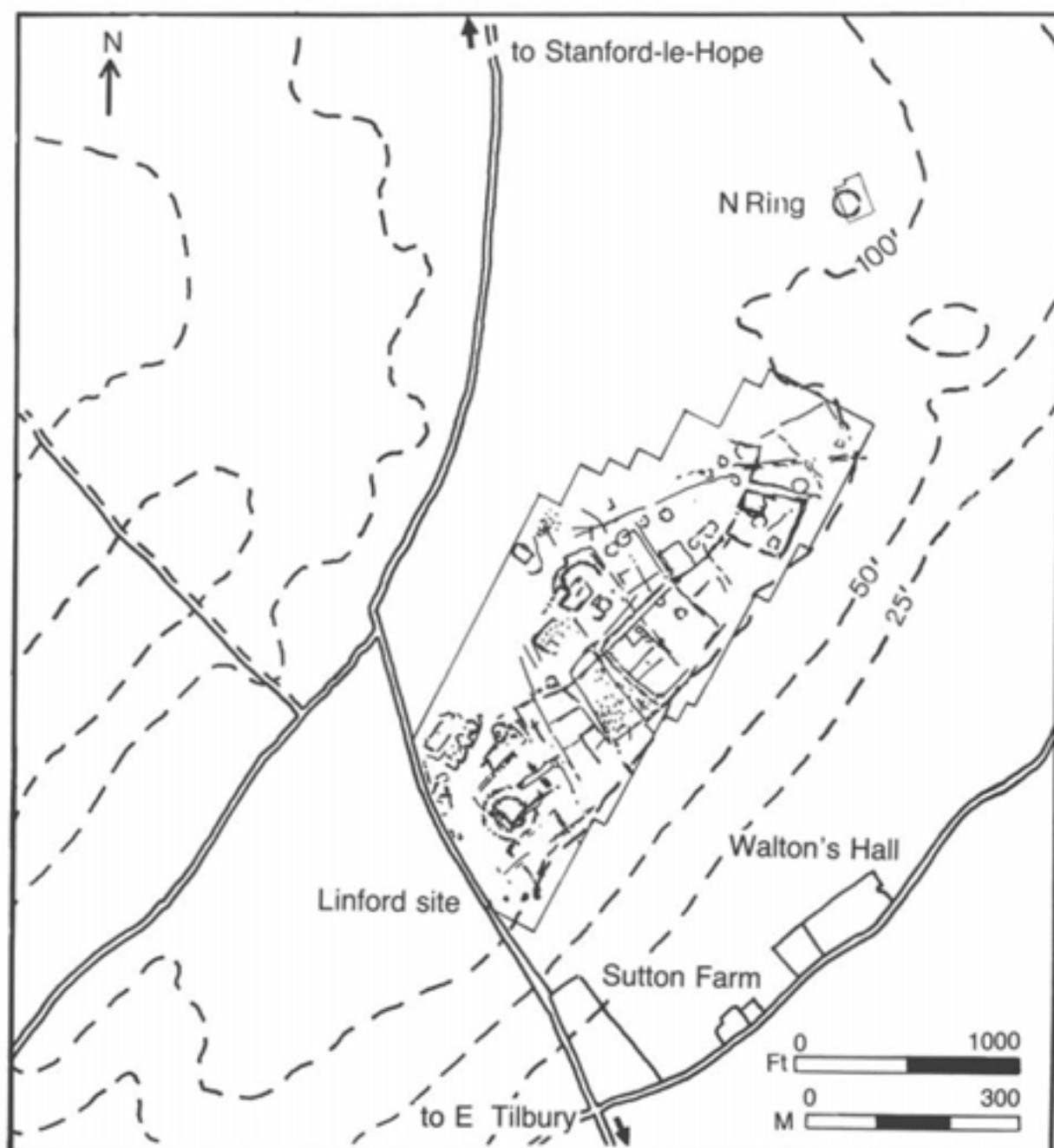


Fig 1 Mucking: contour plan with major cropmarks

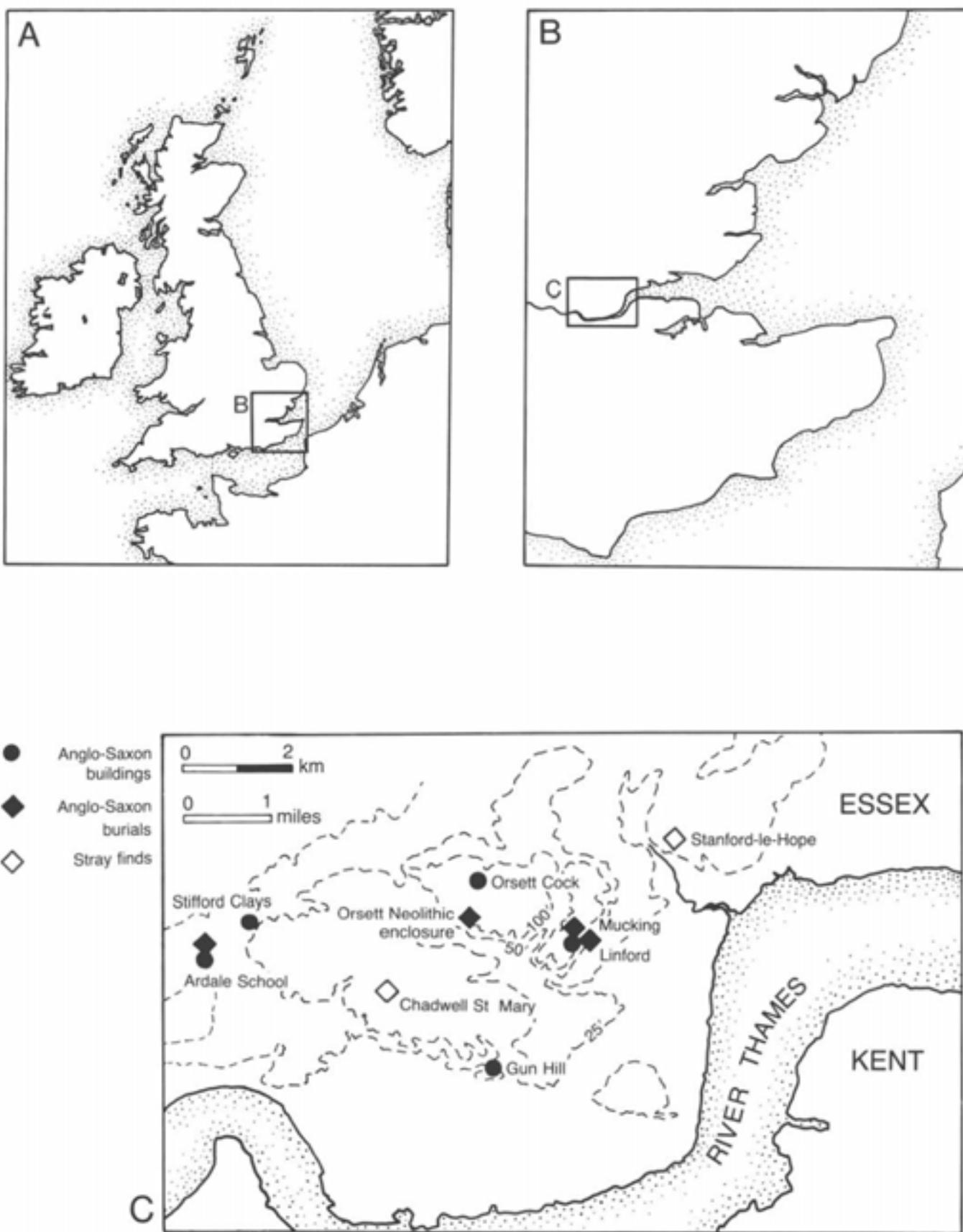


Fig 2 Location maps A-C: early Anglo-Saxon occupation in the Mucking region

Saxon kingdoms of Kent and Essex, a location which hints at complex political and cultural affinities. Seen, third, within the broader context of south-east England, Mucking is located on the north bank of the Thames estuary, at a narrowing and major bend in the river, and would thus have provided its inhabitants with a commanding view over the estuary to the east and Kent to the south. Finally, Mucking occupies a central position within the North Sea littoral as a whole.

The topographical setting of Mucking has a direct bearing on its significance as a settlement site. Its height enables one to see as far as Northfleet to the west and the Isle of Sheppey to the east, and it lies near one of the narrowest crossing points of the lower Thames, at East Tilbury. Mrs Jones has suggested that in the Anglo-Saxon period the river would have been significantly lower than it is today (Jones and Jones 1975, 136–7). During that period, however, there was in fact a eustatic rise in sea level corresponding with a rise in temperature. The clay alluvial flood plains directly south of the site, known as the Tilbury Marshes, were formed as a result of this rise in sea level, which has deposited approximately 8ft (2.44m) of alluvium onto the levels of Roman occupation at Tilbury (Ims 1958, 15). It therefore appears that the water level during the Anglo-Saxon period may actually have been slightly higher at this point than in the modern period (Hill 1984, map 15). It can furthermore be argued that south-east Essex is more closely linked geographically to north Kent than to the rest of Essex, from which it is separated by the Mid-Essex Ridge (Clark 1993, fig 2).

The inventory of features and finds

Feature plans

Plans and sections of all the *Grubenhäuser* have been illustrated at 1:100; 20 of the most informative structures have been selected for more detailed illustration at 1:50. Similarly, only a selection of the posthole buildings and pits (the most complete and/or most informative examples) are illustrated in this volume. All, of course, appear in the site atlas (Clark 1993). The feature plans of individual *Grubenhäuser* and posthole buildings presented here represent a level of interpretation beyond that of the site atlas. Thus, underlying prehistoric and Roman features are not illustrated; nor are unexcavated soilmarks, such as unexcavated 'stakeholes' which may have been animal- or root-disturbance. Only excavated, potentially associated, or later features are illustrated in the building plans. Where possible, the soilmark (that is, the 0in contour line) has been taken as the edge of the feature, but when this was either unrecorded, or an inaccurate reflection of the shape of the hut, 3in (76mm) or, in exceptional cases, 6in (152mm) contours have been used. Contour lines are only drawn in a few cases when, for example, they demarcate an area of trampling on the floor of a hut (eg GH 65 and 105, Figs 74, 77). No detailed photographic record of the excavation is available at present, but it has been possible at a late stage in the preparation of this volume to include three photographs illustrating the excavation of PHB 1 and 3 and GH 113; these plates are to be found on pp 99–100 after chapter 7.

Some huts were subsequently discovered not to be *Grubenhäuser*; the following GH numbers (which are retained in the site atlas) were assigned to these features: GH 14 (pit 13890), an Iron Age pit; GH 94 (pit 6193 (f)), an Anglo-Saxon pit; GH 122 (pit 7888), a pit damaged by quarrying; GH 128 (no cut number), a ?truncated pit cutting the North Enclosure at 1875N 903E; GH 138 (pit 11387 (n)), a shallow pit or hollow; GH 141 (pits 11359 (m) and 11365), two intercutting Anglo-Saxon pits; GH 147 (cut 10606), a series of three pits; GH 183 (ditch 25622), the late fill of a ditch; GH 213 (pit 1002 (aa)), an Anglo-Saxon pit containing metalworking debris.¹

Dating of features

Because of the multi-period nature of settlement at Mucking, it is difficult to define precisely the features which comprised the Anglo-Saxon settlement. The original sorting of finds by period makes it difficult, and in many cases impossible, to bring together all the finds from a single context, and this has greatly complicated the task of dating individual features. Many remain undated. Further complications are introduced by the substantial quantities of Anglo-Saxon pottery and finds deriving from the upper levels of earlier features, and the numerous prehistoric and Roman artefacts which occurred as residual finds in Anglo-Saxon features. The latter have been treated as follows: the small number of prehistoric finds (excluding flints and pottery) from *Grubenhäuser* are listed in the inventory, but are not illustrated (this material will be considered in a forthcoming volume on prehistoric settlement at Mucking); Roman finds (but not pottery) are listed, and those which show signs of reuse, or are exceptionally late, are illustrated. The interpretation of Roman finds and pottery from Anglo-Saxon contexts is discussed in chapter 4.

Presentation of finds and pottery²

Pottery and finds from individual features have been illustrated together as assemblages, most notably from *Grubenhäuser*. Selection of finds for illustration was based on the following criteria. Apart from a few objects of exceptional interest (Fig 194), unstratified material is not illustrated. Similarly, apart from a few exceptional examples, fired-clay loomweights are not illustrated; their diameter, weight, and distribution have been quantified in Figures 44–46. A substantial quantity of worked stone was recovered from the site, some of it from Saxon contexts, but, owing to the limited time and resources available, this material has not yet been catalogued and is not included in the inventory. Three honestones from the Mucking settlement have, however, been published by Evison (1975). Organic traces on settlement finds other than hafted objects such as knives are generally inconclusive owing to the residual nature of their contexts, and are not recorded in the inventory. Organic traces on knives will be considered together with the results from the cemeteries (Hirst and Clark forthcoming).

The finds and pottery from each feature are numbered in a single sequence. They are referred to in the discussion as, eg, 'a globular bowl from GH 71 (Fig

126.4)', which refers to find number 4 from GH 71 illustrated in Fig 126.

It has been necessary to be highly selective in choosing the pottery to be illustrated from each *Grubenhäuser*, for the quantity of pottery from a single hut may be as great as 600 sherds. The following have been drawn from every hut: all decorated sherd groups; at least one example of combed and pinched pottery from each (conventions have not been used to distinguish smoothing from burnishing); a representative range of rims and bases; and finally, all reasonably complete vessels.

A vessel is drawn as complete when at least 25% has been recovered. Otherwise, the sherds have been drawn so that the degree of reconstruction is readily apparent. Furthermore, only some of the sherds in a sherd group may be drawn if the additional fragments provide no further information regarding decoration or profile. Shading has been kept to a minimum, and is used only to emphasise decoration, form, rustication, and, in extreme cases, the crudeness of finish or heavy grass tempering. Sherds are correctly oriented where possible,

indicated by a horizontal line; where this is absent, the orientation of the sherd could not be established. The MPX computer numbers according to which the pottery is stored are provided in the inventory.³

The pottery is described in the inventory as follows: (1) form or form-part represented, with a brief description of decoration when this is not readily apparent from the illustration; remarks about method and quality of manufacture, and comparanda from other *Grubenhäuser* and the cemeteries; (2) predominant sherd colour and surface treatment; (3) fabric type; and (4) MPX computer number.

The phasing of the Anglo-Saxon settlement

Dating

The metalwork and coin evidence suggests uninterrupted Anglo-Saxon occupation at Mucking from the

Table 1 Mucking Anglo-Saxon settlement: diagnostic small finds and pottery

Feature (level) Fig no	Description and approximate date/ of manufacture	Feature (level) Fig no	Description and approximate date/ of manufacture
GH16 (2' above floor) Fig 91.1	Copper alloy button brooch with seven running scrolls; early sixth century	GH203 (3) Fig 177.1	Amethyst bead; seventh century
GH12/21 (on floor) Fig 89.2	Copper alloy disc belt attachment; late fourth/early fifth century	276N 304E (surface) Fig 185.1 (RBI)	Copper alloy Luton type supporting-arm brooch; early fifth century
GH22 (2) Fig 95.1	Copper alloy disc belt attachment; late fourth/early fifth century	1611N 1004E (N Enc) Fig 180.4	Ornament (? pendant) with red glass inlay; first half sixth century
GH26 (1) Fig 96.2	Copper alloy tubular-sided belt attachment; late fourth/early fifth century	2114N 748E (surface) Fig 185.2 (ditch)	Copper alloy button brooch; first half sixth century
GH27 (?) Fig 96.1	Copper alloy tubular belt fitting; fifth century	1775N 1050E (2) Fig 180.1 (N Enc)	Copper alloy tubular-sided attachment plate, fragments; late fourth/early fifth century
GH27 (near surface) Fig 96.2	Copper alloy saucer brooch with style I ornament; failed casting; first half sixth century	1198N 628E (3) Fig 186.16 (ditch)	Two cross-joining sherds of Ipswich Ware; seventh century
GH42 (3) Fig 105.2	Copper alloy 'safety pin' brooch; seventh century	GH 9 (surface) Fig 86.8	Abraded body sherd, Frankish; seventh century
GH42 (4) Fig 105.1	Copper alloy garnet-headed pin; seventh century	GH 57 Fig 115.40	? Bottle, Frankish; ? sixth century
GH52 (6) Fig 111.1	Blue glass pendant in dog-tooth setting; seventh century	GH 83 Fig 133.4	Pitcher with tubular spout, Frankish; seventh century
GH57 (6) Fig 114.1	Copper alloy disc belt attachment, broken and reused; late fourth/early fifth century	Pit 6193 (f) Fig 188.3	Body sherd, Frankish; seventh century
GH62 (2) Fig 120.1	Copper alloy backplate of applied brooch; fifth century	GH150 Fig 156.5	Bottle, Frankish; seventh century
GH81 (?) Fig 132.1	Copper alloy three-lobed radiate brooch; first half sixth century	GH173 Fig 166.2	Body sherd, Frankish; seventh century
GH109 (2?) Fig 141.1	Clay mould for a square-headed brooch; sixth century	GH188 Fig 173.3	Biconical bowl, Frankish; seventh century
GH113 (3) Fig 143.1	Copper alloy belt-plate fragment; late fourth/early fifth century	GH201 Fig 176.2	Biconical bowl, Frankish; seventh century
GH135 (surface) Fig 151.1	Copper alloy 'Bifrons type' brooch; early sixth century	GH201 Fig 176.3	Globular vessel, Frankish; seventh century
GH166 (surface) Fig 163.1	Gilt copper alloy button brooch; early sixth century	GH205 Fig 177.2	Base, Frankish; seventh century
GH166 (surface) Fig 163.2	Glass claw from claw beaker; sixth century	1842N 877E Fig 183.58 (N Enc)	Biconical bowl, Frankish; seventh century
GH168 (floor) Fig 165.1-3	Three silver coins; type BX <i>scettas</i> ; c AD 680-85	1852N 751E Fig 183.60 (N Enc)	Body sherd, Frankish; seventh century
GH187 (5) Fig 172.2	Gilt copper alloy cast saucer brooch; early to mid sixth century	1872N 784E Fig 183.59 (N Enc)	Jar, Frankish; seventh century
GH190 (3) Fig 173.1	Gilt copper alloy equal-armed brooch; sixth century	Pit 10701 (k)	Body sherd, Frankish; seventh century
GH193 (?) Fig 175.1	Copper alloy disc brooch; second half fifth/first half sixth century	Pit 10420 (j)	Rim, Frankish; seventh century

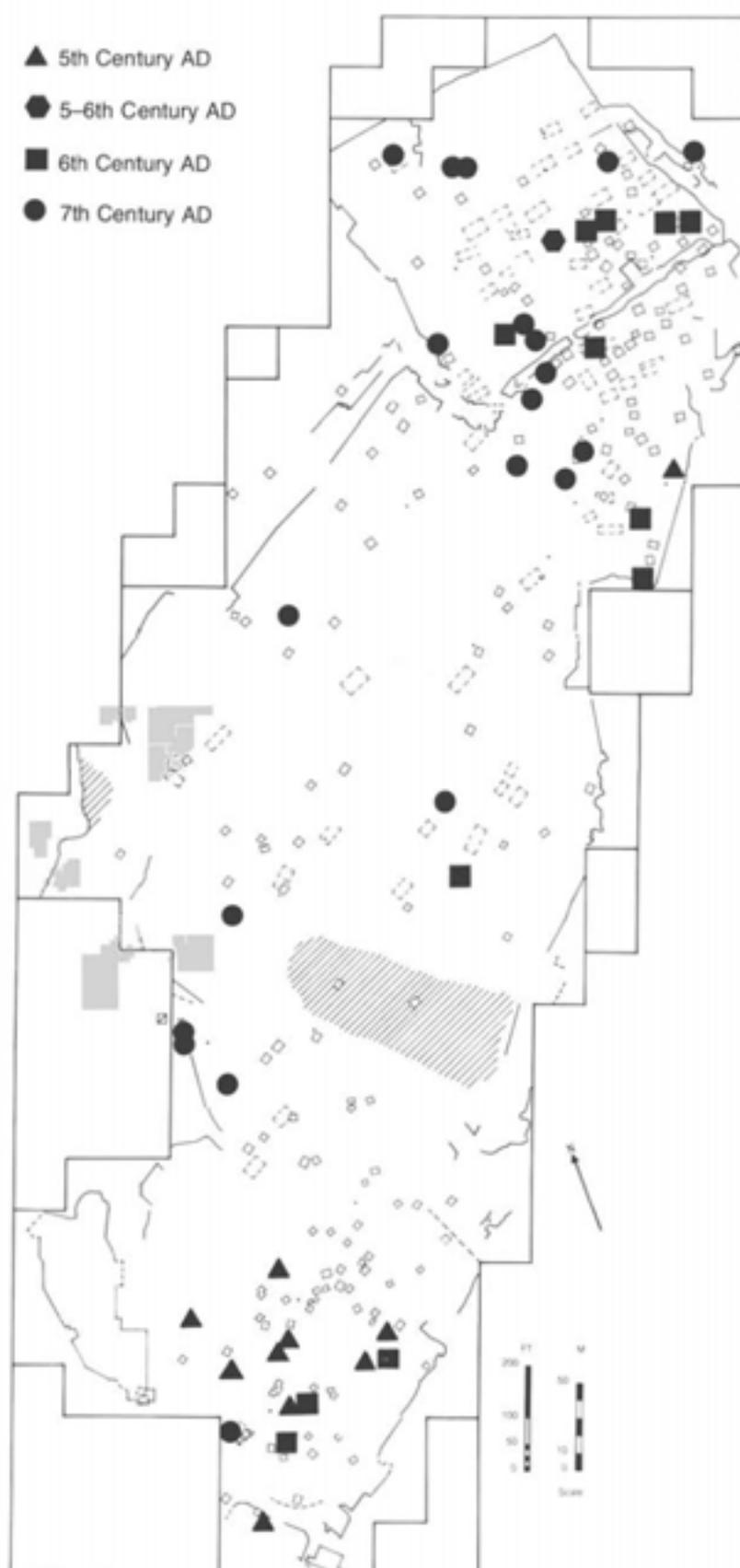


Fig 3 Distribution of datable finds – fifth, sixth, and seventh centuries

first half of the fifth century to the beginning of the eighth century. Shown in Figure 3 is the distribution of late Roman 'military' belt fittings, Frankish pottery, and the most securely dated Anglo-Saxon finds from the settlement (Table 1).

It clearly cannot be assumed that, because a *Grubenhäuser* contained a fifth-century brooch, it and all the pottery it contained date to the fifth century. In most cases, however, finds and pottery from a given hut do reflect the same date range, for example the claw beaker fragment and button brooch from GH 166 or the garnet-headed pin and 'safety-pin' brooch from GH 42. There are a few anomalies, however, most notably GH 57 which could be expected, on the basis of its pottery and location, to date to the fifth century. Indeed, it contained a late fourth- to early fifth-century disc belt attachment in its lower fill, but this was reused and appears to have been part of a collection of 'curated' Roman finds (see p 71), for the lower fill also contained a sherd of Frankish pottery which dates at the earliest to the sixth century (p 22).

Residuality, however, appears not to have distorted the overall picture to any significant degree. It can be seen from Figure 3 that finds from the fifth, sixth, and seventh centuries cluster in relatively discrete sectors: fifth-century objects to the south, sixth-century objects to the north and east, and seventh-century objects along the northern and western edges of the excavated area. Thus Figure 3 indicates the broad date range for areas of settlement, rather than for individual *Grubenhäuser* assemblages.

This preliminary phasing of the Mucking settlement, based upon the distribution of chronologically diagnostic objects, demonstrates that chronological variation can be traced spatially, that is, finds of different date cluster in relatively discrete areas or sectors. This distribution can thus be used as a control against which the distributions of certain pottery types will be compared in chapter 3.

Table 2 Stratigraphic relationships of *Grubenhäuser*

GH	Notes
1/2/3	The sequence of these three structures was not defined during excavation, nor is it apparent from plans or sections. It appears that GH 2 and 3 adjoined, but did not intersect.
12/21	It is probable that GH 12 cut GH 21.
23/24	GH 24 cut GH 23.
47/48/53	The most likely sequence appears to have been: GH 48 cut by GH 53 cut by GH 47.
84	Plans and field notebooks are contradictory regarding the stratigraphic relationship of GH 84 and Grave 566. It appears most likely that Grave 566, which contained a copper alloy ?buckle plate, 15 dark blue glass annular beads and one reticella barrel bead, and an iron ring, is later than GH 84.
108	GH 108 cuts Grave 925, which contained two applied saucer brooches, one with a ?star design. From this it appears that GH 108 was built not earlier than the late fifth century. GH 108 also cut Grave 926, and was ?cut by Crem 927, neither of which contained grave goods.
175/185	Although this feature was assigned two numbers, it appears that 'GH' 185 was an extension, rather than a replacement, of GH 175.

Stratigraphic relationships

Few instances of intercutting *Grubenhäuser* occurred at Mucking, and in only one case was the building sequence defined with any certainty (Table 2). It is, however, of interest with regard to the duration of settlement in different parts of the site to note that these recut huts occur without exception to the south of Anglo-Saxon Cemetery II, the area which produced virtually all the fifth-century finds from the settlement (GH 175/185, which lay well to the north, appears to have been a single *Grubenhäuser* with an 'extension', rather than a recut).

Radiocarbon dates

Two samples from Anglo-Saxon settlement contexts at Mucking were submitted to Harwell Isotope Measurements Laboratories for radiocarbon analysis. The calibrated dates are set out in Table 3.⁴

Notes

- 1 Three *Grubenhäuser* (including GH 209 and 210) came from the area of the North Ring, and do not appear on Figure 44. They are published in Bond 1988, 48–9.
- 2 Finds are not assigned dates in the inventory except when these were provided by specialists (eg Roman coins and glass), or for exceptionally late Roman finds, where the dates may be considered to have relevance for the Anglo-Saxon settlement.
- 3 Each sherd group has a context number and serial number. The digits preceding the decimal point refer to a specific context; ie all sherd groups from the same level of the same quarter of the same *Grubenhäuser* begin with the same context number. Following the decimal point is a unique serial number. For example, 2067.1 is the first sherd group recorded from context 2067, in this case level 1 of the third quarter of GH 70. Thus sherd groups with the same context number were found in close proximity, although as excavation proceeded in spits this information is of limited use.
- 4 The author is grateful to David Haddon-Reece, formerly of the Ancient Monuments Laboratory, for providing the calibrations of the Mucking dates.

Table 3 Calibrated radiocarbon dates

Harwell number	Uncalibrated date bp	Sample	Calibrated date ranges 1 sigma 2 sigma
HAR-2341	1480±70	charred wood from GH 115	AD 535–645 AD 420–665
HAR-2344	1400±80	hearth cutting Roman turfline of ditch 11640 (1751N 768E)	AD 595–675 AD 460–775
combination: 1445±53			AD 560–650 AD 530–670

2 Structural evidence

Introduction

Building types as well as datable finds should, ideally, be brought to bear on the phasing of a settlement. At Mucking, however, the preservation of ground plans and the stratigraphic relationships between buildings were generally poor, hampering attempts to trace the typological development of posthole buildings and *Grubenhäuser*. This has inevitably led to a greater reliance on the distribution of finds and pottery to elucidate the chronological development of the settlement.

Owing to the large number of buildings excavated, and the incomplete recording which many received, only relatively small numbers of posthole buildings and *Grubenhäuser* have been singled out for discussion below. Because of the generally poor quality of the structural evidence, no new interpretation of structural reconstructions has been attempted here.¹

Posthole buildings²

Introduction

Fifty-three of the posthole buildings identified at Mucking are presumed to be Anglo-Saxon in date.³ All are listed in the inventory, and the most complete ground plans are illustrated in detail in Figures 54–56. Not all postholes were sectioned, and in no case was the chronological sequence of intersecting buildings established. The structures are referred to throughout as ‘posthole buildings’ rather than ‘halls’ or ‘houses’, as it may be that some functioned merely as sheds or partly enclosed shelters. The posthole buildings yielded few closely datable artefacts, and many of the finds and pottery recorded from these buildings cannot now be located. With the exception of the finds illustrated in Figure 56, the finds and pottery from these buildings have not been listed, as even a moderately complete inventory could not now be achieved.

During the early years of excavation at Mucking, the prevailing view amongst archaeologists was that the Anglo-Saxon settlers lived in *Grubenhäuser* upon their arrival in Britain, and did not construct ground-level, framed buildings. In the mid 1960s, however, several Anglo-Saxon posthole buildings were recognised at West Stow, Suffolk, and in 1971, PHB 1 (Fig 54), the largest and best preserved of the Mucking buildings, was identified. As excavation at Mucking proceeded roughly northwards and eastwards, such buildings began to be recorded in considerable numbers.⁴ The virtual absence of posthole buildings to the south of Anglo-Saxon Cemetery II is most likely to be due to the exceptionally adverse rescue conditions in this part of the site, though this cannot now be proven (Jones in Clark 1993).⁵

Although the recognition of posthole buildings as a major component of Anglo-Saxon settlements is relatively recent, the evidence so far reveals that these structures shared certain elements which combine to form a distinct building tradition (James *et al* 1985). Because of

the poor quality of their preservation, the posthole buildings from Mucking contribute regrettably little new data to advance the current state of research on such buildings.⁶ In view of these limitations, the aim here is simply to consider some possible typological and metrological patterning.

Typology

Any consistent variations in structural detail which could indicate distinct building ‘types’ are lacking or have been lost. All the Mucking buildings were essentially earth-fast, post-built structures whose walls absorbed the full weight of the roof. Two buildings, PHB 2 and 19, incorporated short stretches of foundation trench. Only the presence or absence of certain structural features suggests some subdivision of this basic type.

External and double posts

The posthole building excavated at Linford is the only example from the Mucking settlement complex with external raking timbers (Barton 1962, fig 9). It is certainly possible that some buildings from the main Mucking site were also constructed in this fashion, and that the shallower external postholes were scraped or ploughed away. James *et al* (1985, 194) have argued convincingly that the angle of such timbers was too steep to act as effective buttressing for the walls, and that they were instead designed to ‘counter the torsion motion in the wall plate’. It has recently been suggested by Dutch scholars that double posts such as those in Mucking PHB 2 and 10 performed the same function, that is to stabilise the wall plate against the outward thrust of the rafters (Huijts 1986).

Subdivisions/partition walls

The eastern ends of at least nine buildings were divided off to form a narrow compartment (eg PHB 1–4, Figs 54, 55). These compartments appear to have been too small to serve, for example, as sleeping quarters, and are perhaps more likely to have been used for storage or to house small animals such as domestic fowl or goats. It is possible that more buildings had such compartments, but as the posts of the partition walls tended to be shallower than those of the main walls, these may have been eroded.

Entrances

Where entrances could be discerned (indicated by arrows on Figs 54–56), these are opposed and located roughly centrally in the long walls. It is likely that some buildings, for example PHB 1 and 3, had in addition a single entrance in the eastern gable wall.

Metrology

It has been suggested that a 'Northern System' of building measurement based upon a rod of 15 Northern feet (5.03m; also known as the 'Yeavinger Unit') and an alternative system based upon a 4.65m scale (the 'Thetford System') were current in the early Anglo-Saxon period at Mucking and elsewhere (Huggins *et al* 1982; Huggins 1983; 1991). Connor has recently noted, furthermore (1987, 40), that the word *gyrd*, meaning 'rod', 'appears frequently in Saxon charters from the eighth century', and has demonstrated that 'the length of the Saxon *gyrd* is that of the rod of the twentieth century' (*ibid*, 42).

Nevertheless, the great majority of the Mucking ground plans are irregular and incomplete; width may vary substantially within the same building, and the 'end points' of many buildings are largely arbitrary. These ambiguities call into question the validity of detailed metrological analyses (Millett 1982; 1984, 115). The use of standardised modules and units of measurement in early- and middle-Saxon buildings in England and on the continent is beyond question, and not only on 'high status' settlements (Ferne 1985; Huggins *et al* 1982; Millett 1984; Schmid and Zimmermann 1976, 34). Zimmermann (1988) has shown, for example, that the internal subdivision of continental longhouses occurs in modules of roughly equivalent lengths across a broad chronological span and over a wide geographical region. His figures 6 and 7 show that correlations may even be drawn between these continental modules and the 'Chalton type' house of Anglo-Saxon England. Yet, as Connor has noted (1987), these modules, based on measurements of hands and feet, must have varied from community to community, and irregularities in the timber used in house construction would further compli-

cate the recognition of a fixed system of measurement. To attempt to define such a system at Mucking would, in all but a few cases, exceed the limitations of the archaeological record.

Only ten ground plans yield relatively unambiguous dimensions (PHB 1-4, 15-17, 21, 28, 34). Of these, five (below) appear to relate to the rod of 5.03m, and subdivisions of $\frac{1}{3}$ and $\frac{1}{6}$ of a rod. The use of a 4.65m rod can also, it has been argued, be identified (Huggins 1983; 1991 10-11).⁷

- PHB 4: c 1 rod \times 2 rods
- PHB 17: $\frac{2}{3}$ rod \times 1 $\frac{1}{3}$ rods
- PHB 21: c 1 rod \times c 2 rods
- PHB 18: c 1 rod \times 2 rods
- PHB 34: 1 rod \times 1 $\frac{2}{3}$ rods

The dimensions of the Mucking posthole buildings as given in the inventory are calculated to the nearest 100mm, and were measured along the centre lines of the postholes, which should provide the closest approximation to the original building design (Huggins *et al* 1982, 27). All that can be said generally of the layout of the Mucking buildings is that the four best-preserved ground plans (PHB 1-4, Figs 54-56), and probably most of the other buildings, were laid out according to the 'two-square module' as defined by James *et al* (1985, 187). That is, the areas to either side of the central doors consist of two approximately equal quadrangles.

The use of the two-square module is reflected in Figure 4, which shows that the proportion of length to width ranges from 1.8:1 to 2.3:1 but averages around 2:1. The relative distribution of the lengths of the Mucking posthole buildings (most of which are necessarily approximations) does not suggest discrete size groups, although a division around 9m is indicated (Fig 5).

As a group, the Mucking posthole buildings fall decidedly into what James *et al* (1985) have called

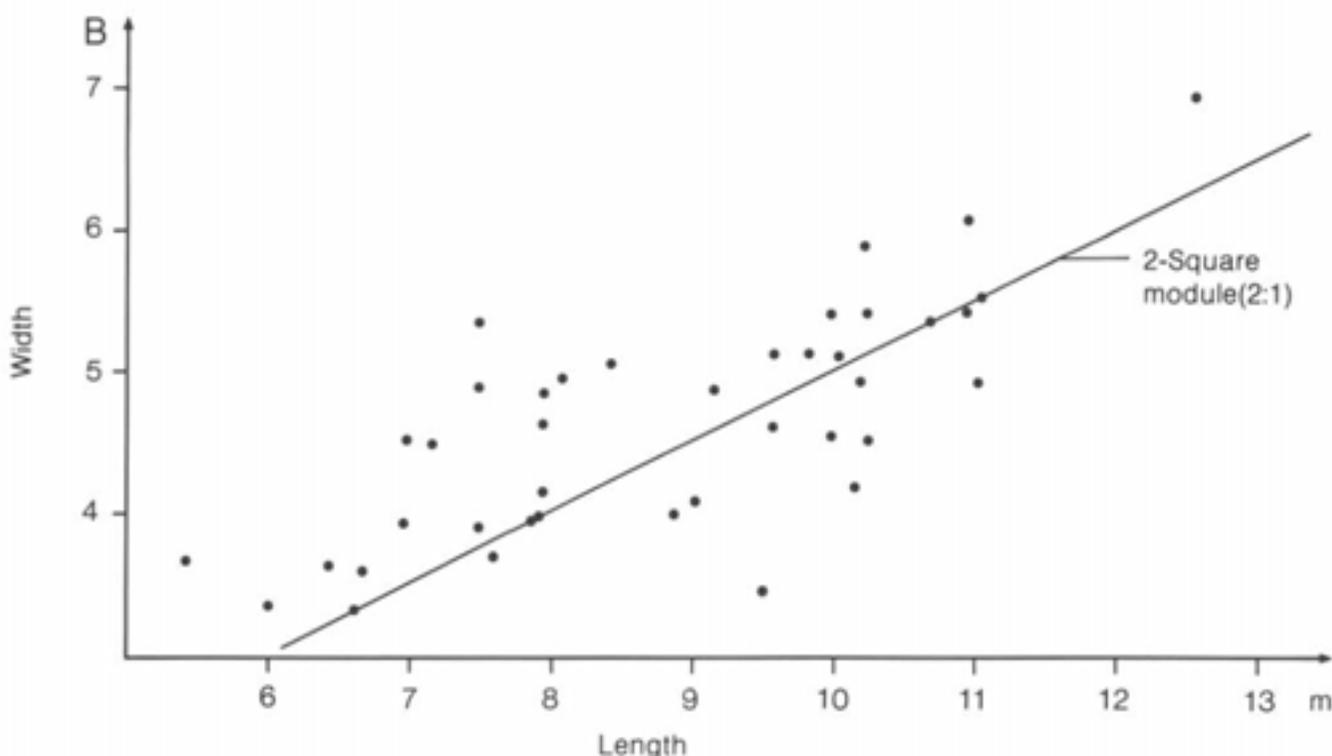


Fig 4 Scattergram showing relationship of PHB dimensions to two-square module

'Group 1' settlements – those without the exceptionally large, 'high status' buildings found at Sprouston, Roxburghshire, Yeavinger, Northumberland, Cowdery's Down, Hants, and Foxley, Wilts (ibid, fig 5). Even the largest building (PHB 1) had a floor area well under 100 sq m. Recent statistical work undertaken by Marshall and Marshall (1991) on the 'shapes' of Anglo-Saxon buildings shows that the Mucking buildings, with an average length (for the ten most complete plans) of 10m and average floor area of approximately 50 sq m, fall into the same category of size and shape as those from Bishopstone, Chalton, and Portchester. Their work also reveals remarkably little variation between sites in the width of such buildings.

Function

Given their poor state of preservation and the imperfect conditions under which they were excavated, it is not surprising that the Mucking posthole buildings yield no clear evidence of functional variation, either between buildings or within the same structure. It is often assumed, on the basis of both written and archaeological evidence, that different buildings were reserved for different functions, such as working, storage, or sleeping. But recent archaeological evidence from north-west Germany indicates that in longhouses, at least, several functions could be combined under one roof. Future excavators of Anglo-Saxon buildings, even from badly damaged settlements, might benefit from the use of phosphate analysis as demonstrated by Zimmermann at the site of Flögel-Eekhöltjen in Lower Saxony (Zimmermann 1986b, 74, Abb 2, Taf 1, Haus 440). Here, varying phosphate levels were used to distinguish byres from 'living rooms' within the same longhouse, and also suggest that some stalls stood empty. A central room, sometimes containing a hearth, produced higher phosphate values than the outer rooms, which, the excavator

suggests, might have been used for sleeping or storage (ibid, 57, 84).

The *Grubenhäuser*

Typology

The great diversity of *Grubenhäuser* makes their classification problematic. They are most commonly grouped according to number of postholes, following von Guyan (1952, 180): two-post, four-post, and six-post huts. Ahrens' alternative classification (1966, 207–29) is based on the position of the posts: the 'gable-post' house (*Giebelpostenhaus*) has one post in the middle of each short end; the 'corner-post' house (*Eckpfostenhaus*) has a post in each corner; and the 'wall-post' house (*Wandpfostenhaus*) has posts ringing the entire structure. Several variations on these classifications have been formulated, but the typology devised by Stanley West best accommodates the structural diversity of *Grubenhäuser*, while making no assumptions about their function or design. He groups them simply as 'two-post', 'two-post derivative', 'four-post', 'four-post derivative', 'six-post', and 'six-post derivative', and observes that 'those outside the main divisions of two- or six-post types may simply be structural modifications for convenience or repair rather than reflecting any basic significant difference from the main types' (West 1985, 113–14). A satisfactory chronological sequence for these types has yet to be defined.

Over 90% of the Mucking *Grubenhäuser* are two-post or two-post derivative, the predominant types throughout England and the continent. Up to 15 huts could be classed as six-post or six-post derivative (eg GH 22, 110, 201). These huts are distributed across all phases of the site, although nine are above average length. This group is too small and ill-defined, however, to allow the sort of statistical comparisons with two-post huts under-

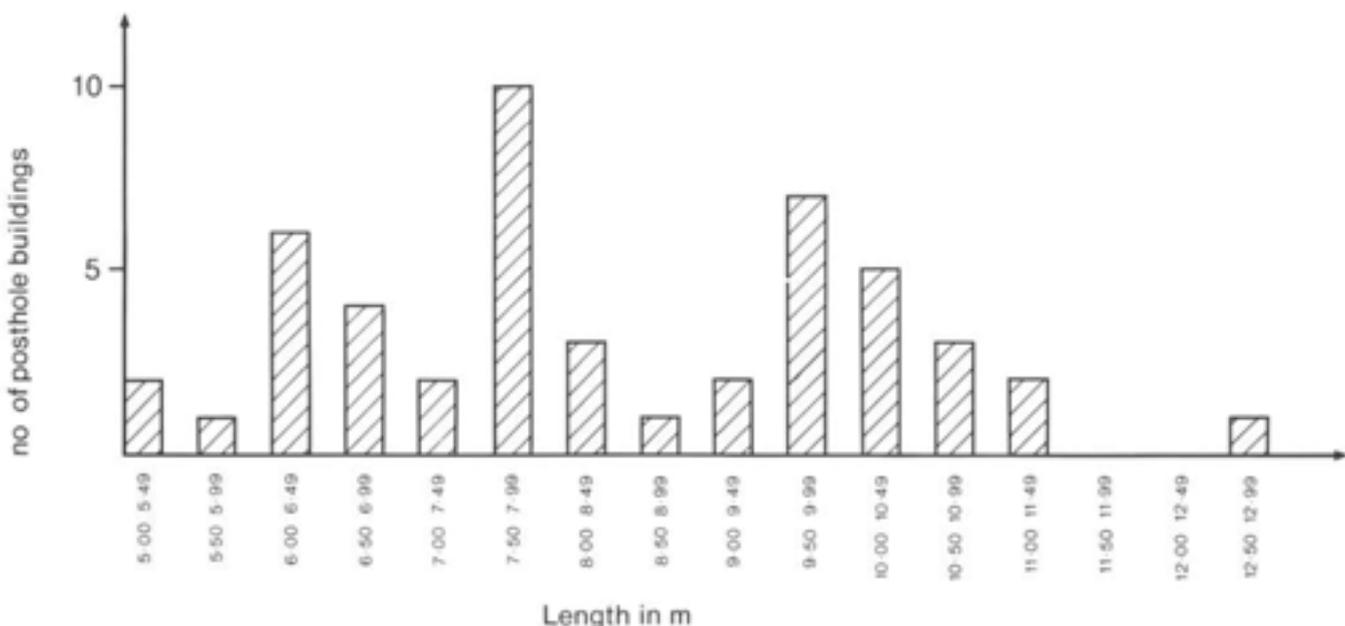


Fig 5 Length of posthole buildings

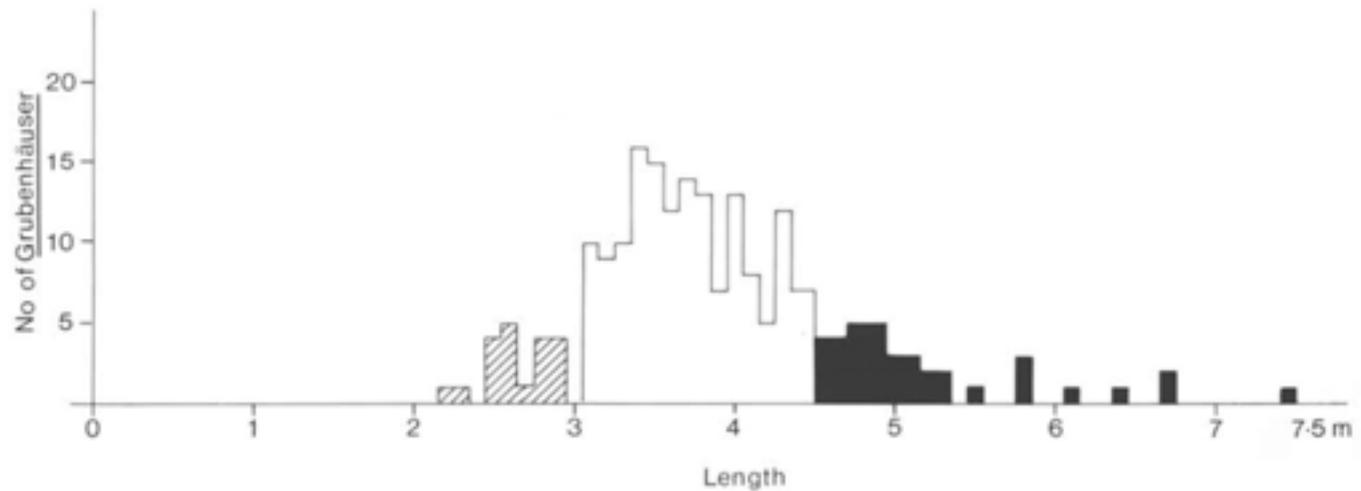


Fig 6 Lengths of Grubenhäuser

taken for the West Stow huts (West 1985, 115ff). Four-post huts are entirely absent.

Metrology

Length (Fig 6)

On the assumption that the size of the sunken area is a true reflection of the size of the building (see p 14), then the great majority of the Mucking Grubenhäuser were 4m (13ft 1in) or less in length with an average floor area of 12.85 sq m. Mrs Jones has published a histogram comparing the length and breadth of the huts, as well as the distance between the gable posts (Jones 1979, fig 1). Figure 7 shows how the largest huts, that is those over 4.5m (15ft) in length, lie primarily in the seventh-century sectors of the site. Indeed, it appears to be true throughout the country that the largest huts date to the seventh century or later, for example at Chalton, Hants (9m x 5.6m), Upton, Northants (10m x 6m), and Puddlehill, Beds, Hut 4 (9.2m x 4.3m) (Rahtz 1981). The late sixth- and seventh-century Grubenhäuser at Walton, Bucks, were generally larger than the earlier buildings (Farley 1976, 178–81). This also appears to have been the case at West Stow, according to the phasing proposed by the excavator (West 1985, fig 300).

Depth

The depths of the Mucking Grubenhäuser range from 5in (127mm) to 3ft 3in (0.99m), yet a scattergram of length against depth shows that the relationship between them is far from linear (Fig 8). It is likely that the recorded depths were affected by the amount of soil stripped off by the dragline, which averaged about 1ft (c 0.30m), but varied considerably over the site.

Constructional evidence

The Mucking Grubenhäuser were excavated under rescue conditions uncondusive to the recovery of subtle structural detail. In the great majority of cases, only the sunken area and postholes were recorded; traces of the huts' superstructure were rarely discerned. The follow-

ing is a summary of the constructional evidence yielded by the Grubenhäuser.

Postholes and stakeholes

A number of huts had postholes which had been recut, presumably to secure loosened posts (eg GH 37, 39, 64, 72, 131), while others had double gable posts (ie GH 26, 28, 41, 76, 105, 149, 152) and/or had additional supporting posts set within the floor area (ie GH 26, 34, 62, 63, 107, 110, 113, 134). A few huts with apparently 'external' postholes (eg GH 25, 114) were clearly overscraped, leaving the truncated postholes outside the remnant hollow. Two huts, GH 9 and 84, had postholes packed with large pebbles or flints.

Stakeholes lining one or more of the interior edges of the hollow are a relatively common feature and are found in several of the Mucking huts (GH 9, 65, 76, 108, 120). They are the remains of revetments designed to prevent the erosion and collapse of the sides of the hollow. In GH 76, for example, more stakeholes were found along the southern edge of the hut, where the subsoil was particularly soft and sandy.

Floors

An earthen ledge extending along one or more sides of the sunken area was found in a number of huts, indicated, for example in GH 65, by the 12in contour (Fig 74), while in others (eg GH 197, 201, Figs 79, 80) distinct 'collars', visible in the section, formed around the postholes as the central floor area was trampled down (Jones 1974b, 198). In GH 42 and 105 (Figs 73, 77), the worn central area was defined by the 12in and 18in (0.30m and 0.45m) contour lines respectively, which in turn demarcated the spread of debris on the floors of these huts. A trampled clay floor is recorded for GH 72, and an untrampled ledge around the edges of the hut is visible in the section (Fig 75). Such trampled floors and ledges have also been recorded at a number of other sites, for example at Pennyland, Bucks (Williams 1980, 9).

Walls

Mrs Jones has suggested that the upcast gravel from the hollow was often used to form a low bank or wall

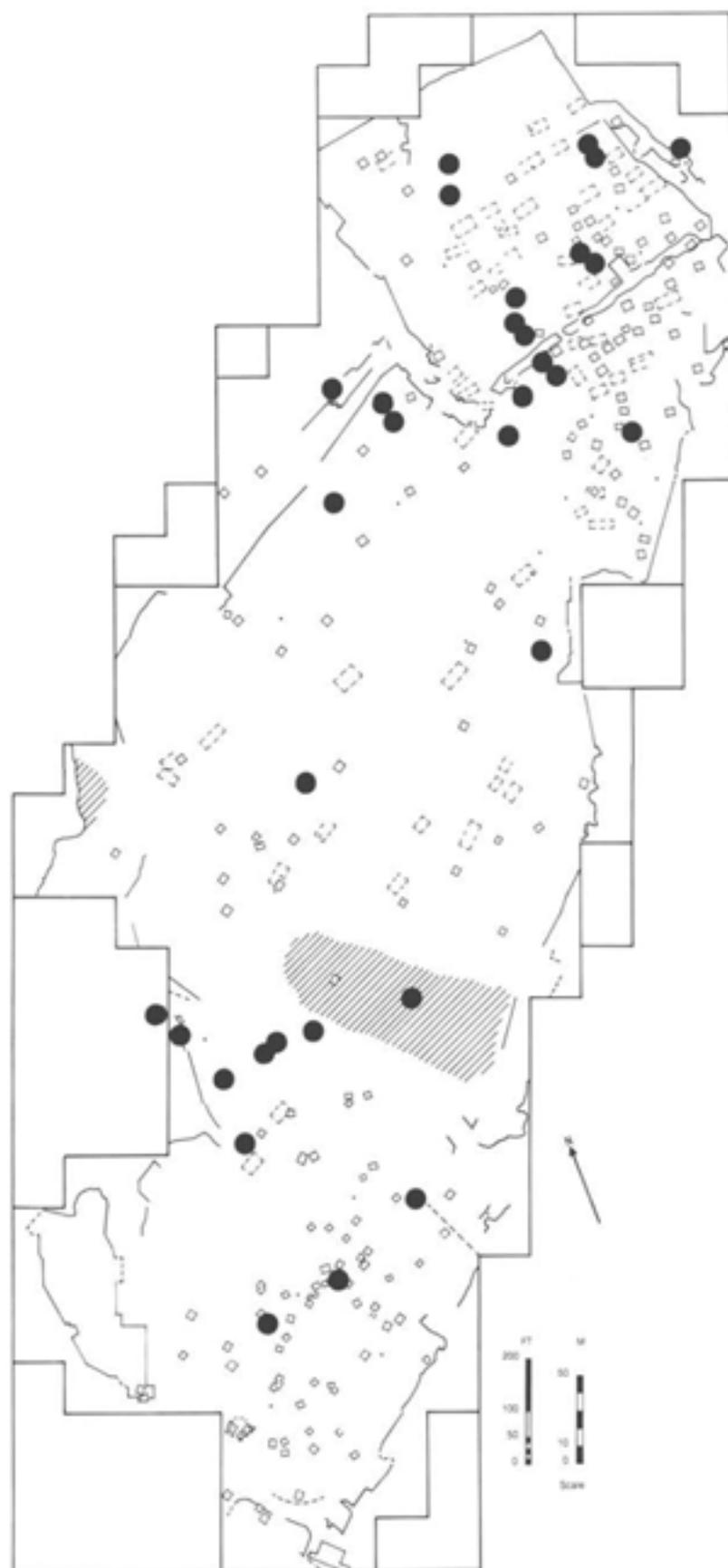


Fig 7 Distribution of Grubenhäuser over 4.5m (15ft) in length

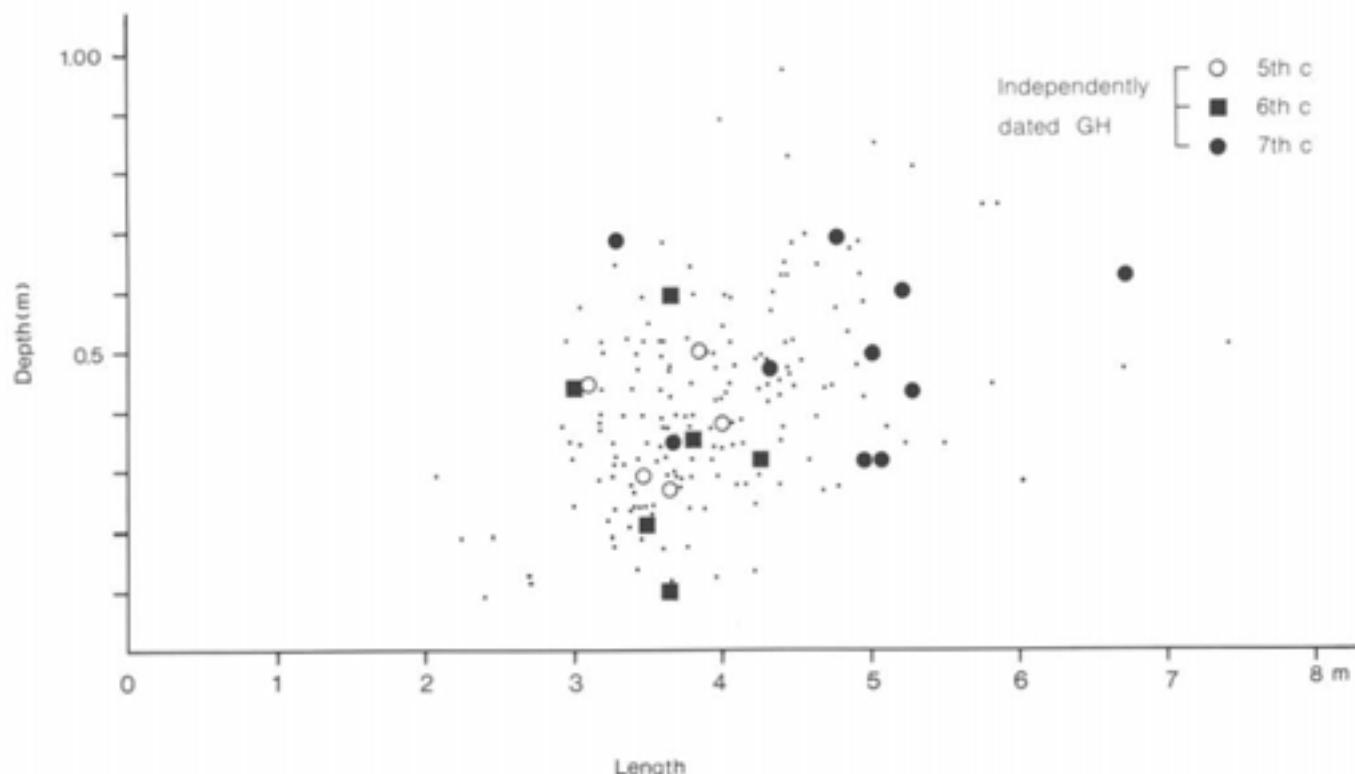


Fig 8 *Grubenhäuser*: relationship of length to depth

around the huts. This hypothesis is particularly plausible given the paucity of daub recovered from hut fills (Jones and Jones 1974b, 24). There is, furthermore, little evidence of planking. Traces of timber siding were noted for GH 108, although these are not apparent in the field plans. GH 110 and 205 (Figs 64, 71) had exceptionally straight sides, which led the excavators to suggest that the latter, at least, had been lined with timber planks. GH 110 also had sharp corners and a short slot along one edge, as had GH 168. These slots might represent the foundations of plank (or turf) revetments (cf West Stow SFB 12, West 1985, fig 59).

Entrances

Interruptions in the stakeholes and postholes lining the edges of GH 65 and 76 (Fig 61) provide the only indications of entrances into the huts.

?Drainage gully

A curved gully, 7 in (180 mm) deep at its northern end, becoming shallower towards its southern end, lay at the western end of GH 176 (Fig 69). It may have acted as a drainage ditch or been formed by rainwater dripping off the roof; cf Puddlehill, Hut 1 (Hawkes and Matthews 1985).

Fired clay and daub from *Grubenhäuser* fills⁸

Over 80 kg of undatable, fragmentary fired clay was recovered from the Mucking *Grubenhäuser*.⁹ Nearly all of this material consisted of small, highly abraded fragments, mostly from the upper fills of the huts. While many of the *Grubenhäuser* containing fired clay were situated in areas of abundant prehistoric and/or Roman

activity (indeed some huts contained recognisably earlier material, for example briquetage and perforated slabs from GH 11 and 35 and firebar fragments from GH 42, 56, and 57), the *Grubenhäuser* which contained the largest quantities (2 kg or more) of fired clay (GH 47, 51, 61, 74, 78, 100, 113, 154, 213) generally lay some distance from earlier features. The only recognisably Anglo-Saxon fired clay artefacts from Mucking consist of the spinning and weaving equipment and mould fragments discussed on pp 64–8.

Neither the *Grubenhäuser* nor the posthole buildings produced significant quantities of daub likely to derive from the superstructure of the buildings; this is in marked contrast to the quantities of daub from prehistoric and Roman features (C Going and J Etté, pers comm). Indeed, few early to middle Anglo-Saxon settlements have produced substantial quantities of daub. Philip Rahtz, in his gazetteer of Anglo-Saxon settlement sites (1981), lists only seven: Bidford-on-Avon, Warwicks, Burgh Castle, Suffolk, Congham, Norfolk, Peterborough, Northants, Upton, Northants, Waterbeach, Cambs, and Witton, Norfolk. At least 14 late Saxon sites, however, have produced substantial quantities of daub, suggesting either that wattle and daub construction became more common in the late Saxon period or that conditions favourable to its preservation became more prevalent.

Post-occupation processes

The majority of Anglo-Saxon artefacts from Mucking derive from *Grubenhäuser* fills, as these are virtually the only features in which substantial quantities of soil could collect. An understanding of the processes by which the huts were abandoned and the hollows filled up is therefore crucial to the interpretation of their date,

contained finds, and function. Stratified hut fills are rare, however, and very few of the Mucking huts contained what could be described as an 'occupation layer'. To confuse matters further, abandoned *Grubenhäuser* were frequently used as rubbish pits, as appears to have been the case with GH 10: a largely complete pig skull lay on the floor, and a dog skeleton had slipped into the eastern posthole. The charcoal, pottery, and hearth debris scattered across the floor of GH 42 is also suggestive of refuse disposal, as is the charcoally, greasy fill which lay near the bottom of GH 58 and contained large pieces of animal bone and pottery. The raw clay and large, fresh pot sherds concentrated in a corner and along the edges of GH 86, on the other hand, rested on a slight ledge as though they had been swept off the central, trampled floor area.

The majority of finds and workshop debris from the Mucking *Grubenhäuser* came from the upper fills and were in a relatively fragmented condition. At best, they may reflect activity which took place in the vicinity of the hut. A few, semi-complete vessels lying on the floor of a hut, on the other hand, represent, if not an 'occupation' layer, at least a single deposit occurring soon after abandonment of the building, as in GH 42 and 105 (Figs 73, 77). The survival of fragile, unfired loomweights also indicates a relatively undisturbed context, as in GH 84 and 105 (Figs 76, 77). A large quern fragment positioned vertically in the fill of GH 168 also suggests that the abandoned hollow was rapidly back-filled.

A number of huts filled up in three recognisable stages. The floors of GH 197, 205, and 206, for example, were covered by a sticky dark layer (in GH 206 this layer also contained charcoal; Figs 79–81). While often recorded as 'occupation layers', these are perhaps more likely to represent collapsed roof material, ie turves or decayed/burnt thatch. Only when it could be demonstrated that a layer built up around the postholes might such an accumulation represent an occupation deposit. Over this dark, often humic fill, lay a gravelly layer, presumably representing either deliberate backfill (when the sides of the sunken area have remained vertical, cf GH 206, Fig 81) or weathering of the hollow (when the sides slope, eg GH 197, Fig 79). The final silting up of the remaining hollow merged with the subsoil and was often scraped away by the dragline. Occasionally, indications of deliberate dismantling were noted, for example when the widened profile of postholes at floor level was suggestive of the rocking back and forth of the posts prior to pulling them out (eg GH 9, 10, Fig 57).

Reconstructions

Several structural reconstructions of *Grubenhäuser* have recently been discussed in some detail (West 1985; Farnoux 1987), and only a summary is presented here. The conventional reconstruction of the two-post *Grubenhäuser* is extremely simple, with a thatched roof descending from a ridgepole supported by two gable posts with or without internal revetments. The effect is tent-like and obviously offers restricted headroom. It is admittedly difficult to imagine the large two-post *Grubenhäuser* such as those at Chalton and Upton, which

were clearly centres of considerable activity, displaying this kind of construction. As noted earlier, it seems more likely that wattle and daub, planks, or the turf and gravel upcast from digging the sunken floor were used to create low walls.

An alternative model has been suggested by West, based primarily upon evidence from some of the 69 *Grubenhäuser* excavated at West Stow. Of especial significance is SFB (sunken-featured building) 15, a two-post hut with a sunken area measuring 19 × 16ft (5.8 × 4.9m), and cut 1ft 3in (0.38m) into the subsoil. It was destroyed by fire leaving 'considerable quantities of charcoal... [indicating] the positions of planks running across the width of the SFB' (West 1985, 23). Two layers of these burnt timbers were separated by roughly 100 loomweights. This indicates not only that SFB 15 had walls, at least partly of timber (as opposed to a thatched roof reaching to the ground), but also that it possessed a planked floor. West has suggested that many *Grubenhäuser* were constructed with such a floor, and that the floor was actually suspended over the hollow. This would imply not only that the total floor area of a hut could be substantially greater than that of the sunken area, but also, in West's view, that finds from the lower levels of the huts filtered through the floorboards during occupation of the hut, and may therefore indicate its function.

Some of the evidence from West Stow supporting this reconstruction is quite convincing (West 1969, 48), yet much of it remains unique. West's reconstruction, above all, leaves unanswered the question of the function of the sunken area. There is, to the writer's knowledge, no archaeological evidence that the hollows were used as cellars or for underfloor heating (West Stow Environmental Archaeology Group 1974, 83). By contrast, there is clear evidence from a number of settlements, including Mucking, that the floor of the hollow did serve as the occupation surface (eg Puddlehill, Beds, Hawkes and Matthews 1985, 60–1). Most significant is the marked wear on some of the sunken floors described above (p 11). Furthermore, while the function of the stakes driven into the central floor area of many huts (eg GH 25, 113, 192) remains enigmatic, it seems most unlikely that they were pounded through, or alternatively supported, a suspended planked floor. The most plausible explanation for the construction of a sunken floor (which may of course have had planks laid over it) remains that it provided a maximum amount of headroom for a minimum amount of effort and raw materials.

Before consideration of the function of the Mucking *Grubenhäuser*, the structural evidence can be summarised as follows: first, no typological sequence could be detected apart from the late date of the largest buildings; second, there is clear evidence that the sunken hollow was in most, if not all cases, the effective floor level; third, there is very little evidence for plank construction or wattle and daub; finally, few if any *Grubenhäuser* contained true 'occupation layers', although a number of relatively undisturbed, primary deposits can be identified. This said, it must be remembered that the recording of structural features took place in extremely adverse conditions and in some cases considerable structural detail may have been lost.

Function

While none of the *Grubenhäuser* finds assemblages is suggestive of a specific function for a particular hut (with the exception of the spinning and weaving equipment discussed below, pp 64–8), a range of other evidence does provide some indication of the diverse activities taking place in and around the huts.

Hearths and related features

No ovens, such as were found at Puddlehill, Beds (Hawkes and Matthews 1985, 69) and Dorchester-on-Thames (Frere 1962, figs 8–10), were found at Mucking, although a number of hearths were excavated within the huts. The majority of these were stratified well above the floors of the huts, however; that is they were dug into the partly filled hollows of abandoned huts. For example, an area of charcoal and burning, interpreted by the excavator as a hearth, lay some 10in above the floor of GH 31 (the 'cooking plate' (Fig 98.5) is recorded as coming from this burnt area). Only GH 9, 126, and possibly 45 and 49 contained hearths which were contemporary with the buildings' use. On the floor of GH 9 a succession of four bowl-shaped hearths containing substantial quantities of animal bone were found (Fig 72). Hearth 4, believed by the excavators to be the latest, appeared as a circular spread of charcoal, broken on one side, overlying reddened soil and sand (Kinnes 1968, 106–7). The earlier hearths, 1, 2, and 3, seemed to be a continuous series of which no 2 was the latest. This was another bowl-shaped hearth and partially overlay hearth 3, which was of a similar shape but contained less charcoal. Hearth 1, presumed to be the earliest, was not bowl-shaped like the others, but consisted of a roughly circular spread of charcoal an inch or more thick. The pit in the north-west corner of the hut may have been contemporary with it, and contained a clean, yellow-brown fill. Overlying the hearths was a grey, ashy layer.

GH 45, located at the quarry edge, was incompletely excavated and recorded. A thick concentration of charcoal lay on the floor of the hut, although it is unclear whether there was burning on the floor of the hut itself. A large (20.29kg) dump of slag (primarily smelting) was recovered from this hut, although the relationship between it and the charcoal deposit is uncertain. The field plan of GH 49 shows a substantial layer of burnt clay overlying and mixed with a charcoally deposit. The sections and notebook description, however, clearly indicate that a thick spread of charcoal overlay a mound of 'very clayey dark soil...with lenses of yellow sand on top' and 'no traces of burning', and that partly fired clay fragments occurred only in the upper fill of the hut. This presumably represents a hearth of some sort, although it is difficult to explain why the clay platform is not recorded as showing signs of firing. Substantial quantities of molten lead were recovered from the fill of this hut, and a lead 'puddle' (1.76kg) had collected on the floor. GH 126 contained a central hearth pit, 15in (380mm) deep. The gravel on the sides and bottom of the pit was reddened and the fill contained substantial quantities of charcoal. A concentration of grass-tempered sherds, possibly from a single pot, was also recovered from the pit.

Disturbed hearths were found in GH 68 and 70. In GH 68 a relatively thin layer of charcoal and calcined bone was scattered across the floor. Some reddening of the gravel floor of the hut suggests that this was the remains of a hearth rather than a disturbed cremation. The spread of charcoal on the floor of GH 70 was presumably dumped from a nearby hearth as there was no burning apparent on the floor of the hut. Several other huts contained substantial quantities of charcoal in their lower fills, which may derive from external hearths.

Pits

Several *Grubenhäuser* contained potentially contemporary pits of indeterminate function: a roughly circular pit in the floor of GH 80; two oval pits containing an unspecified quantity of charcoal and several grass-tempered sherds aligned along the southern edge of GH 121; two possibly contemporary irregular pits in the floor of GH 189.

Workshop debris

Bone/antler

Because of the generally poor preservation of bone and antler at Mucking, significant quantities of bone/antler working debris would be unlikely to survive. The best evidence comes from GH 23, on the floor of which lay a red deer antler with a sawn offcut next to it, with additional antler and animal bone coming from the fill of the hut (Kinnes 1968, 126–7). Kinnes also notes red deer antler with cut marks on the floor of GH 17 (*ibid*, 119–20).

Lead (Fig 9)

The clearest evidence for lead casting came from GH 17, on the floor of which lay large lumps of molten lead with additional lumps found throughout the fill of the hut, totalling approximately 3.6kg. In addition, four complete and one incomplete cast lead rings were found on or near the floor of GH 17 (Figs 91, 92). A charcoal layer is recorded as covering the floor of the hut, which appears subsequently to have been used as a rubbish tip; the fill also contained an exceptional quantity of charcoal and animal bone, and the front part of a dog skeleton lay on the hut floor. The six lead discs which lay c 50mm above the floor of GH 77 were covered by an ashy fill but no other lead waste (Figs 129, 130). Substantial quantities of molten lead also came from GH 49, in association with a possible hearth.

Clay deposits

Deposits of raw clay were found in several huts. At least some of the raw clay fragments on the floors of GH 68 and 86 were recognisable as loomweights, and it is possible that much or all of the clay in these huts represents weathered loomweights. Raw clay lumps also covered half the floor of GH 65 (only the largest could be shown on Fig 74), while in GH 136 raw clay was distributed throughout the fill, with some lumps lying on the floor of the hut. Large puddles of raw clay and a few raw clay loomweights lay on the northern half of the floor of GH 142 (Fig 78). Two different clays were

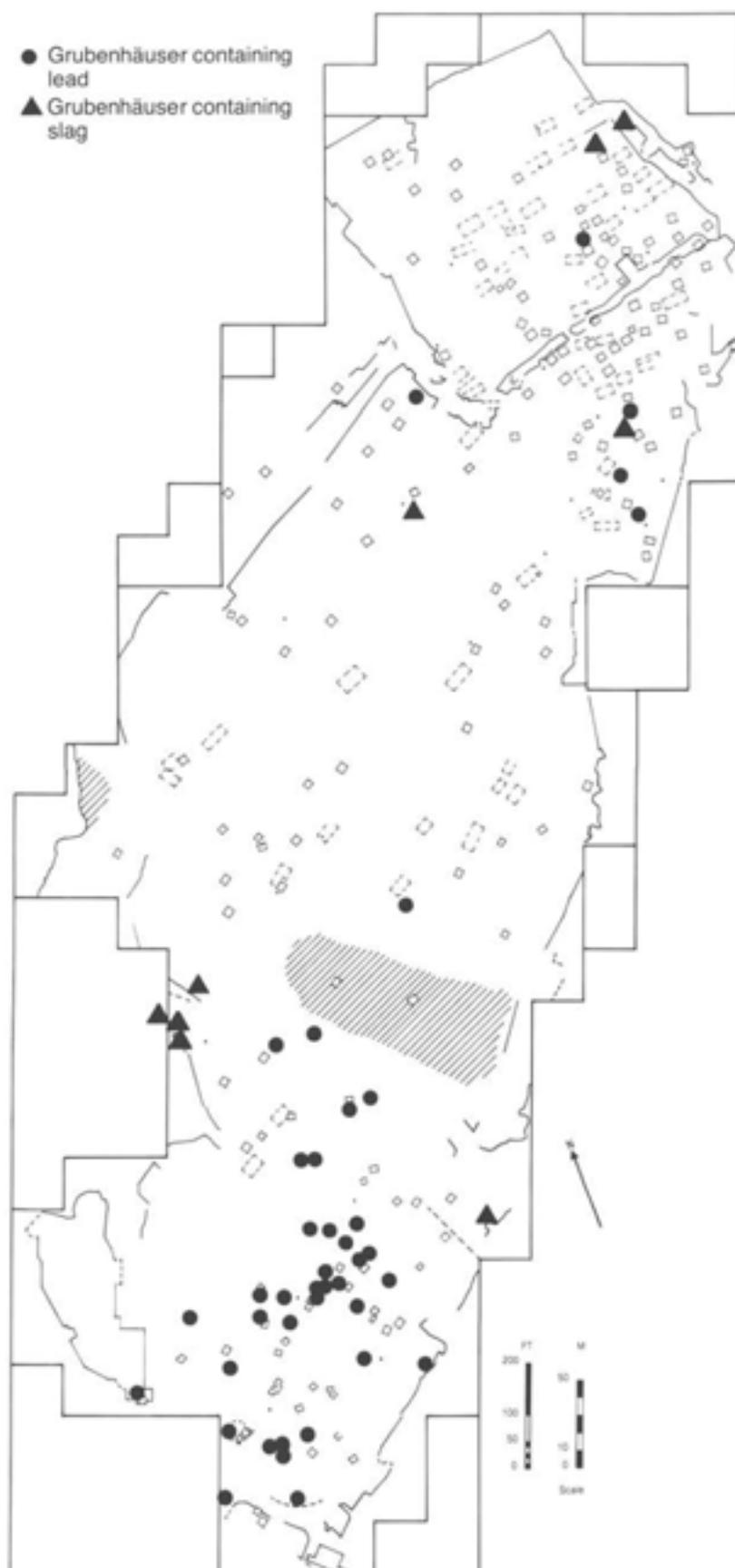


Fig 9 Distribution of lead and slag in Grubenhäuser

noted, an orange-brown brickearth and a green-grey, sandy clay.

Ferrous metalworking (Fig 9)

Several huts and pits produced evidence for ferrous metalworking dating to the Anglo-Saxon period (see McDonnell, pp 82–3 and Table 22). Most notable are the five hearth bottoms from GH 42 which, interestingly, produced no other slags, a large dump of predominantly smelting slag recovered from GH 45, and a small quantity of smithing slag from GH 44, a short distance to the west of GH 145. Regrettably, these huts were rescued from the quarry edge, and therefore little can be said regarding the archaeological context of the slag deposits. A further small dump of smithing debris was spread throughout the fill of GH 129 while mixed assemblages of smelting and smithing slags were recovered from GH 196 and 202. Dumps of smelting slag came from several other huts, notably GH 173 and 179, but these probably derived from earlier features.

None of these deposits is suggestive of *in situ* ironworking, although it seems reasonable to assume that at least some of these huts were adjacent to, and perhaps associated with, ironworking sites. It is notable that none of the huts containing substantial slag deposits is likely to date to the fifth century, and that most are probably late sixth or seventh century in date. The distribution of the huts and pits containing Anglo-Saxon ironworking debris is, furthermore, largely peripheral to the main focus of settlement.

Weaving (Fig 10)

A number of Anglo-Saxon settlements have produced evidence to suggest that a common role of the *Grubenhäuser* was as a weaving shed. One of the largest and best known of these structures was excavated at Upton, Northants. The excavator suggests that two posts set 2.5ft (0.76m) apart near the centre of the building, behind a 5in (125mm) deep depression, formed the emplacement for a warp-weighted loom, with an H-shaped planked structure forming part of the weaver's bench. On the floor were found over 60 loomweights arranged in two main groups, one of which lay in four parallel rows (Jackson *et al* 1969, fig 4). Such lines of loomweights have been found at a number of other settlements and are believed to have formed when the weights dropped off the loom (Rahtz 1981, fig 2.12, pl 15; Zimmermann 1982). While this may have been the case in huts which burned down (ie at Chalton, Upton, and Dalem), it seems unlikely that a loom with warp threads still in place would simply be abandoned to rot in position.

No such alignments of weights were found at Mucking, however. Some of the c 140 loomweights found in GH 84 were arranged in rough lines, yet their number would imply the presence of several looms in a building only 14ft 7in × 10ft (4.45 × 3.04m) (Fig 76). Mrs Jones's suggestion (1974b, 198) that these weights fell instead from some sort of storage rack seems more plausible, especially in view of evidence from Upton that the loomweights had been threaded and stored on sticks '...confirmed by the presence of charred wood found through the centre hole of several loomweights' (Jackson *et al* 1969, 210). The position of 23 loomweights on

the floor of a hut excavated at Back Street, St Cross, Winchester, standing on edge up against each other in rows, is also suggestive of storage (Collis 1978, 29, pl IA).

A smaller group of loomweights came from Mucking GH 105, where some 30 raw clay loomweights and several freshly broken pots rested on the trampled floor of the hut (Fig 77). A slot, c 1–2in (25–50mm) deep and over 5ft (1.7m) long with a posthole (c 12in (300mm) deep) at either end was found in the floor of GH 56 (Fig 60). No loomweights, however, are recorded from the hut. Zimmermann (1982) has drawn attention to *Grubenhäuser* with similar features from Esbjerg, Dalem, and, most notably, at the Carolingian palace at Tilleda. The evidence from these and other sites suggests that these slots represent the emplacements for upright looms.

Of the 21 *Grubenhäuser* which contained more than two loomweights and/or more than one spindlewhorl (ie potential 'weaving sheds'), 14 are likely to date to the sixth century or later (Fig 10). In those *Grubenhäuser* (ie GH 32, 44, 68, 84, 93, 105, 137, 174, 195, and to a lesser extent GH 33, 35, 118, 158, 187) where substantial quantities of complete or semi-complete loomweights were found in lower fills, these are interpreted either as primary deposits (as in GH 84) or as dumps of material from the immediate vicinity of the hut.

Large *Grubenhäuser* such as GH 105, which appear to have been used as weaving sheds, are presumably related to the *gynaecium*, or women's work quarters, which certain law codes associate specifically with weaving. The *Leges Alamannorum* state, for example: 'If anyone lies with the first [ie head] maid from the textile workshop [*genicium*] against her will, let him compensate with six solidi' (Caput LXXV; Rivers 1977, 94). The law code of the Salian Franks also specifies the penalty for carrying off a girl from behind lock and key, or from a *screona* (Dölling 1958, 12). The *screona* is associated with women's work and has been translated as a hut with a sunken floor.¹⁰

Pliny's *Naturalis Historia* (XIX.9) specifically associates sunken-floored structures with weaving: 'In Germany the women carry on the manufacture [of linen] in pits dug underground'.¹¹ Tacitus, too (*Germania*, 16), describes both the construction and function of *Grubenhäuser* or similar structures in the late first century: '[The Germans] are in the habit also of opening pits in the earth and piling dung in quantities on the roof, as a refuge from the winter or a crop-store, because such places mitigate the rigour of frost...'.¹²

As late as the eighteenth century, texts from Champagne and Burgundy refer to the *genicium* and Gallicised forms of *screona* (*écraigne*, *escriene*, etc) in connection with spinning and weaving (Chapelot and Fossier 1985, 119), with *écraigne* apparently referring specifically to a dug-out place used by women for weaving (Farnoux 1987, 33; Chapelot and Fossier 1985, 119). The Utrecht Psalter (MS.32, folio 84 recto) depicts women weaving in a shelter, apparently with a sunken floor (Chapelot and Fossier 1985, fig 39). The fact that these huts were generally covered with a sod or dung roof is usually explained by the warming effect of such cover. It is also possible that the high humidity facilitated weaving (Ahrens 1966, 224–5).

It would of course be simplistic to conclude on the basis of the evidence cited above that most *Grubenhäuser*, even those containing equipment associ-

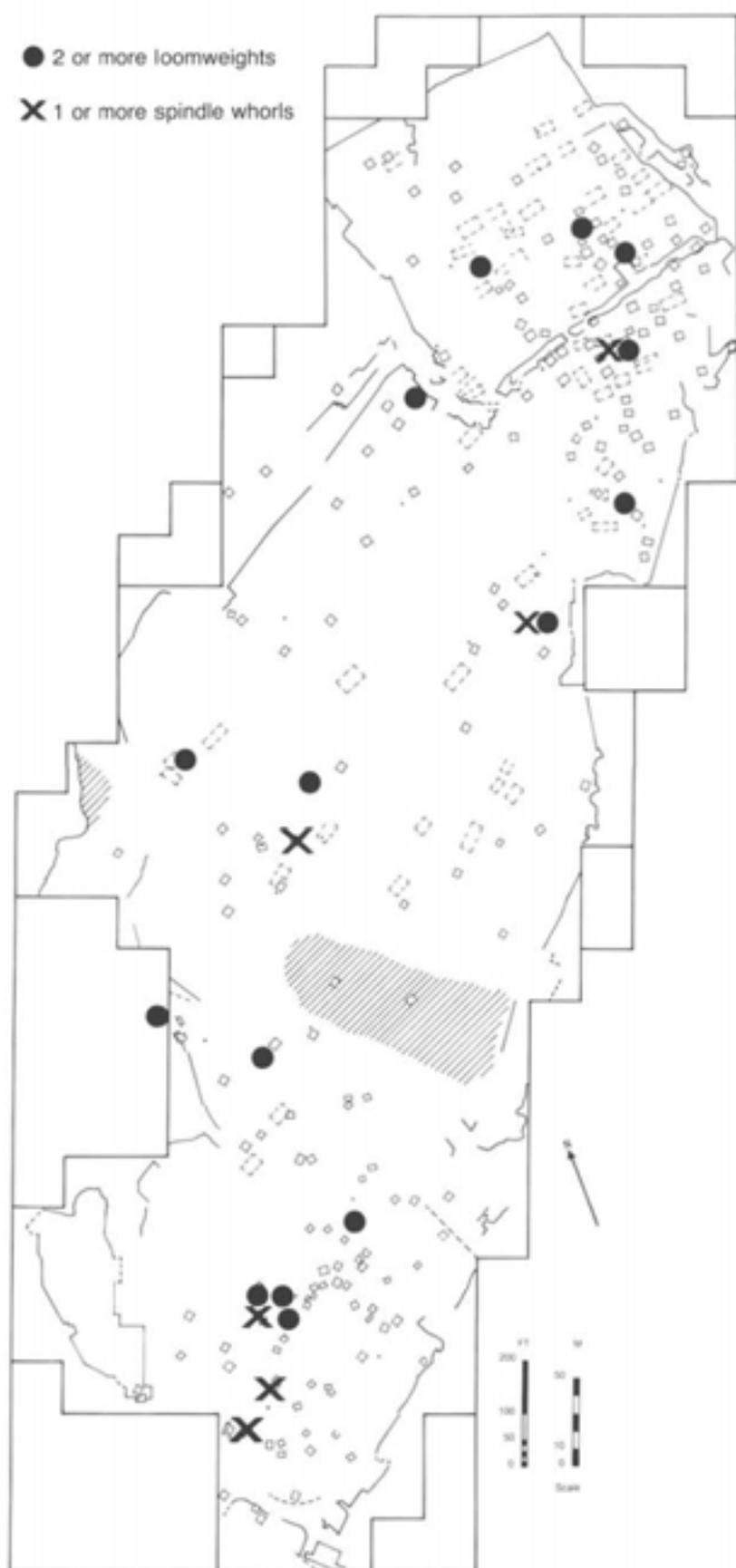


Fig 10 Distribution of loomweights and spindlewhorls in Grubenhäuser

ated with textile production, functioned as weaving sheds. While clearly this was a common use, spinning and weaving also leave behind traces which are easily recognisable and archaeologically recoverable. Examples of sunken-floored buildings from the nineteenth and early twentieth centuries demonstrate the potential diversity of their function: sunken-floored sheep pens and shepherds' cottages were recorded from the Luneburg Heath in northern Germany in the early twentieth century, and a settlement of the same period near Lentförden, Kr Segeberg, consisted of 14 irregularly grouped *Grubenhäuser* housing individual quarry workers (Ahrens 1966). The structures were of the two-post variety, consisting of roughly joined, earth-fast wattle frames leaning against a ridge piece. They were covered by sod roofs and the gable walls consisted of layered turves (ibid, 209). A nineteenth-century version of a *Grubenhäuser* which was used for generations as a woodturners' workshop in Berkshire was recently published by Myres and Dixon (1988). Archaeological evidence demonstrates that in antiquity too *Grubenhäuser* served diverse purposes, including use for pottery-making (as the quantities of raw clay from GH 142 (Fig 78) and the clay storage pit from Sutton Courtenay, Berks, might suggest; Leeds 1947, 81–3), for storage, for grinding corn, or, less commonly, for baking (Rahtz 1981).

It is of interest to note that in the Slavic regions of central Europe, *Grubenhäuser* appear to have functioned primarily as dwellings; they almost inevitably contained ovens or hearths, and many settlements appear to have been comprised solely of *Grubenhäuser* (Chapelot and Fossier 1985, 118, fig 38). But during the Migration Period in north-west Europe, as in Anglo-Saxon England, they seem instead to have functioned primarily as workshops or for storage, and rarely contained hearths. This interpretation seems to find confirmation in the sharp decrease in the number of granaries and the corresponding increase in the number of *Grubenhäuser* in the late fourth- and early fifth-century phases of a number of settlements, most notably at Flögeln (Schmid and Zimmermann 1976, 36), Vorbasse (Hvass 1978), and Wijster (van Es 1967, 377).

Despite the large number of *Grubenhäuser* excavated at Mucking, the evidence with regard to their function is disappointingly meagre. It is to be hoped that future excavation objectives and recording techniques, and perhaps the use of chemical (ie phosphate) analysis, may assist in the recovery of greater structural and functional detail.

Pits, ditches, and miscellaneous contexts

Mucking produced no major Anglo-Saxon pit assemblages, and most of the Anglo-Saxon finds and pottery from ditches derives from the late fills of prehistoric and Roman ditches, in particular the kiln ditches, the Double-ditched Enclosure, and the North Enclosure (see Figs 180–186). An Anglo-Saxon ditch was excavated at Linford (Barton 1962, 61–2) and the so-called 'antler ditch' appears to have been an Anglo-Saxon recut of a Roman ditch (see below). Very recently, work by Chris Going has revealed a small complex of post-Roman

ditches which share some alignments with the medieval/post-medieval field system. These have produced no concrete dating evidence, but the absence of any Saxo-Norman material suggests a pre-Conquest date (C Going, pers comm, 1992).

The following Anglo-Saxon pottery from pits and ditches is illustrated in Figures 180–193:

- a Pottery of diagnostic value, regardless of context (for example, all faceted carinated bowls and all stamped sherd groups)
- b Pit groups, ie when several pots come from a single pit, as for *Grubenhäuser* (see p 5)
- c Complete or semi-complete forms

Anglo-Saxon ground surface

A number of pits and hearths were recorded from the area of the North Enclosure (approx 1875N 900E), cut into a turf layer formed during the Roman period (eg pit 11365 and hearth 11367, site atlas plan 21). Plans could not be found for many of these features. They seem to have been associated with a remnant Anglo-Saxon ground surface which apparently survived in this area, recorded as follows (notebook 287, 25): 'the late loam to the east of GH 128 is completely made up of Saxon rubbish, grass-tempered sherds, animal bone, and burnt flints, in a 16in concentration.' The North Enclosure ditch itself dates to the Iron Age, but contained substantial quantities of Anglo-Saxon pottery in its upper fill, including sherds of probable fifth- or early sixth-century date (Figs 180–183). In contrast, the huts in this area contained almost exclusively sixth- and seventh-century material. It thus appears that the area of the North Enclosure was in use, presumably for agricultural purposes, prior to the construction of buildings.

The 'Well 7' complex

(cuts 2079, 2076, 2072, 2089, 2091, 2093, site atlas plan 1)

This was in fact a complex of three wells and at least three pits salvaged from a 'test hole' in the southern part of the site. The complex was incompletely recorded, but yielded a substantial quantity of Anglo-Saxon pottery. The precise context of this pottery cannot be determined, but it is likely that one or more of the features involved was Anglo-Saxon in date, as they do not appear to have produced significant quantities of prehistoric or Roman material.

The antler ditch

(cut 3958, c 155N 550E, site atlas plan 4)

On the bottom of a recut of the Roman ditch 3965 lay a substantial cache of antlers, spread out along c 9ft (2.74m). The ditch (part of the so-called 'kiln ditch' complex) was salvaged from the south-eastern margins of the site, and was partly destroyed by quarrying activity. Substantial quantities of Anglo-Saxon pottery were recovered from the fill of this recut (c 18in (c 0.46m) deep), and an Anglo-Saxon date for the antler deposit

Table 4 Pits containing substantial quantities of Anglo-Saxon pottery

cut no		coords (all are N x E)
a	177	120 x 552
b	953	428 x 472
c	3399	10 x 298
d	3596	224 x 354
e	5292	1100 x 270 (cuts GH 104)
f	6193	(formerly GH 94) 1538 x 317
g	7795 & 7791	1000 x 300
h	7811	1491 x 680
i	10218	1765 x 545
j	10420	2056 x 615
k	10701	2027 x 815
l	11174	1917 x 920
m	11365	(formerly GH 141) 1800 x 1053
n	11387	(formerly GH 138) 1720 x 1012
o	11543	1614 x 801
p	11547	1660 x 817
q	12413	1110 x 394
r	12578	1765 x 867
s	13569	723 x 165
t	25288	2400 x 816
u	25316	2471 x 809
v	25456	2220 x 645
w	25568	2232 x 1020
x	25728	2323 x 970
y	25828	2412 x 1121
z	9052	758 x 376 (NB81/15)
aa	1002	(formerly GH 213) 375 x 718

seems likely. The fill of the recut is described as clayey and dark, containing abundant flecks of charcoal.

Pits

Twenty-seven pits contained substantial quantities of Anglo-Saxon pottery at lower levels; these are shown on the Anglo-Saxon phase plan (Fig 195), and their coordinates are given in Table 4. At least 25 others may, on the basis of the finds they contained, be Anglo-Saxon in date. There may be other pits which could on stratigraphic grounds alone be presumed to be Anglo-Saxon, but which contained insufficient datable material to be identified. The pit profiles are highly variable, and only a broad distinction between roughly circular and roughly rectangular pits can be made. A few pits may have been associated with specific buildings, ie: GH 101 and pits 7791 and 7795; GH 119 and pit 7811; GH 163, GH 164, and pit 25568; PHB 51 and pit 25316; GH 157 and pit 10701; GH 80 and pit 9052; GH 189 and pit 10420; PHB 9 and pit 25456.

It is notable that the Anglo-Saxon pottery assemblage from pits (Figs 187–193) consists primarily of undecorated, grass-tempered vessels, and is thus suggestive of a late sixth- or seventh-century date. Indeed, of the 27 pits here defined as certainly of Anglo-Saxon date, only five come from the earliest phase of the settlement.

Neither the excavation record nor the finds suggest any specific functions or special features for the great majority of the pits. A few pits do merit special attention,

however, and these (with the exception of Pit aa, for which no detailed plan could be found) are illustrated in Figure 186.

Pit aa (cut 1002, formerly GH 213) contained a substantial dump of smithing debris (Table 22) and abundant signs of burning. A small hearth or burnt area (cut 12887), filled with charcoal, burnt sand, and clay, was located centrally within the larger pit. Pit i (10218) contained a slag block, c 8 x 9 x 7in (203 x 230 x 178mm) (Table 22; Tylecote 1973). Pit q (cut 12413, formerly Cremation 866) contained two largely complete grass-tempered bowls, and a layer of charcoal containing burnt bone covered the bottom of the pit. Pit t (cut 25288) was distinctly rectangular in shape and contained half a sarsen quern stone in its upper fill. Traces of wood planking were recorded at a depth of 15in (180mm).

Hearths

In addition to the few hearths found within *Grubenhäuser* (see p 15), at least six external hearths date to the Anglo-Saxon period. All appear to have been simple, bowl-shaped hearths, and none was clay lined: cut 1005, near pit aa; 1716N 878E (no cut number); cut 11129, near GH 129; cut 13142, near GH 84; cut 12578 (Fig 179). Cut 10892 (Fig 179) lay adjacent to PHB 25.

Notes

- 1 A number of reconstructions of *Grubenhäuser* and posthole buildings have, however, recently been proposed on the basis of better quality data taken from a wide range of settlement sites (viz James *et al* 1985; West 1985; Farnoux 1987).
- 2 The author is grateful to Ann Marshall for her comments on the discussion of the Mucking posthole buildings and to Peter Huggins for his generous assistance in the early stages of this work.
- 3 Approximately ten further configurations of post-holes were identified, but are excluded from discussion here, either because of their non-Saxon date, or because they were deemed insufficiently complete or coherent to merit the title of 'building'. It is possible that some of these alignments formed parts of fenced enclosures.
- 4 An Anglo-Saxon posthole building excavated just across the road from Mucking at Linford was published by Barton in 1962. Nevertheless, as late as 1975, the excavator was unwilling to assign more than 2–4 of the Mucking posthole buildings to the Anglo-Saxon period (Jones and Jones 1975, 187). The two posthole buildings from the southern sector of the site (PHB 21 and 34) were recognised as Anglo-Saxon in the course of post-excavation work (Jones 1974b, 187).
- 5 The conditions under which the South Rings were excavated were such that posthole buildings were unlikely to be recognised. The excavator writes: 'Although most of the ditch fills were excavated, the relationship of features within the Central Circle was not wholly resolved, and not all the space within the earthwork could be investigated' (Bond 1988, 473).
- 6 Table 2 in James *et al* 1985, entitled 'General characteristics of building plans', lists 13 excavated settle-

ments for which 11 characteristics are recorded as either present, absent, or indeterminate owing to 'erosion'. Regrettably, Mucking possesses a greater number of characteristics falling into the last category than any other site listed.

- 7 Huggins (1983) writes that 'at least 66' PHB were excavated at Mucking, and that '40 were set out using a rod of about 4.65m, and 25 using the 5.03m rod.' As noted above, a maximum of 53 posthole structures are considered by the present writer as probable Anglo-Saxon posthole buildings. The great majority of the ground plans are incomplete and the 'secondary data' yielded by placing a grid over these and extrapolating 'design sizes' are unreliable (see Millett 1984). This is not to say that no standardised units of measurement were in use at Mucking, simply that the deficiencies in the primary data are such that the potential of metrological analyses is severely restricted.
- 8 The unpublished archive report, *Fired clay from Saxon contexts*, by P M Barford, contains a fuller discussion of fired clay and daub. The following discussion of this material is in part drawn from this report. The author gratefully acknowledges Paul

Barford for making available the results of his extensive research.

- 9 Much of the fired clay from the *Grubenhäuser* was separated out in the field. It has not been possible similarly to isolate and quantify the fired clay from pits, postholes, and ditches.
- 10 '*Si quis screona sine clavem effrigerit, DC dinarios qui faciunt solidos XV culpabilis iudicetur. Si quis screona qui clavem habet effrigerit, MDCCC dinarios qui faciunt solidos XLV culpabilis iudicetur*' (*Lex Salica*, Ch XXVII, 21). It remains unclear, however, to what extent this translation of *screona* rests upon a sound etymological basis, or stems instead from the translator's acquaintance with the archaeological evidence (Dölling 1958, 12).
- 11 '*in Germania autem defossae atque sub terra id opus aquunt*' (Pliny, *Nat Hist*, XIX.9).
- 12 '*Solent et subterraneos specus aperire eosque multo in super fimo onerant, suffugium hiemis et receptaculum frugibus, quia reigorem frigorum eius modi loci muliunt...*' (Tacitus, *Germania*, 16). The editor translates '*receptaculum frugibus*' as 'root-house'. As *frugibus* relates to 'fruits' more generally, 'crop-store' has been substituted here.

3 The pottery¹

Wheel-turned pottery: Frankish pottery and Ipswich Ware

Two cross-joining sherds of stamped Ipswich Ware with a burnished lattice pattern were recovered from a ditch at the north end of the Mucking settlement (Fig 186.16; cf Dunning *et al* 1959, fig 4.1, 3). Given that occupation of the settlement extended at least to the end of the seventh century, and the coastal location of the site, the scarcity of Ipswich Ware at Mucking is somewhat surprising, since it has been found as far south as Canterbury and Dover (Wade *et al* 1975, fig 33). Unless the proposed starting date for the production of Ipswich Ware between AD 625 and 650 is simply too early, this would confirm that its spread was indeed slow and highly restricted as Hurst has suggested (1981, 301–3). Williamson (1988, 160) has noted that Ipswich Ware is unevenly distributed in Essex and may be restricted to 'special' sites; for example, while substantial quantities were recovered at Wicken Bonhunt, none was found 13km to the north-east at Hadstock.

Sherds from 15 wheel-thrown Frankish vessels were recovered from the Mucking settlement, ten of them from *Grubenhäuser* (see Table 1). They include three probable bottles, one spouted pitcher, one jug, and three biconical bowls. They are plotted on Figure 3 as seventh-century finds (with the exception of the sherd from GH 57, as noted below), although it is possible that some arrived in the course of the late sixth century. The Frankish pottery was concentrated in the northern and inland sectors of the site with two exceptions: the sherd from GH 9, which is an abraded surface find, and a large, fresh sherd with a raised, rouletted cordon from GH 57 (Fig 115.40), for which no parallels from this country are known to the author. Dr P Demolon of the Musée de Douai has suggested that the sherd is related to products of the Artois region dating from the middle to the end of the sixth century. Yet none of these vessels, for example from the cemeteries of Grenay, Wierre-Effroy, and Wissant, has a raised cordon which is also rouletted (Roger 1979, pl 1, 2; Seillier and Leclercq 1972; Bellanger and Seillier 1982, pl XIV). A biconical bowl which does have such a raised rouletted cordon comes from Grave 212 at Krefeld-Gellep. While stylistically rather different from the Mucking example, this appears to be its closest parallel. Pirling (1966, Taf 19, 133) dates this type to the sixth century, and the sherd from GH 57 is therefore plotted on Figure 3 as a sixth-century find.

Petrological examination of ten Frankish sherds from the Mucking settlement by David Williams of Southampton University revealed that they 'contained little else except such common minerals as quartz and mica' thus providing few clues as to their geological origin. Williams has suggested, however (1980), that variations in the texture of the fabrics may indicate a variety of clay sources.

As Evison (1979, 21–3) has noted, most cemeteries which have produced Frankish pottery contain only one or two pots as accessory vessels in inhumations. The Mucking cemeteries produced only one Frankish vessel, a shouldered jar, used as a cremation urn (*ibid*, fig 18.e). Very few Anglo-Saxon settlement sites have produced

Frankish pottery and none, to this writer's knowledge, has produced as great a quantity as Mucking. If, however, the settlements belonging to the Kentish cemeteries at St Peter's or Sarre, which produced respectively 26 and 17 Frankish vessels (*ibid*, 21), were to be excavated, it seems likely that they too would yield considerable quantities of Frankish pottery. At Mucking, certainly, the vessels seem to have been deemed more suitable for domestic use than as funerary vessels.

It need not be assumed that this Frankish pottery reached Mucking via Kent, whence the vast majority of Frankish pottery found in this country derives. It may equally have reached the settlement directly, brought by ships serving Kentish ports travelling up the Thames, en route, perhaps, to London (*ibid*, 57).

Handmade pottery

Pottery is the key archaeological resource for the Anglo-Saxon settlement at Mucking; its sheer quantity and distribution throughout a wide range of contexts enable a detailed picture of the spatial development of the settlement to be constructed, building upon the preliminary phasing suggested by the distribution of chronologically diagnostic metalwork, glass, and imported pottery (Fig 3). Most of the Anglo-Saxon pottery derives from the *Grubenhäuser*. Therefore the pottery – its recording, analysis, intra-site distribution, and chronological development – will receive detailed treatment.

Quantification and recording

The Anglo-Saxon pottery assemblage from the Mucking settlement consists of approximately 32,000 sherds, and thus fulfils the main prerequisite for meaningful statistical analysis – that the sample be of adequate size. Indeed, with an assemblage of this size, only statistical evaluation could bring meaningful results. The descriptive and analytical statistics used to evaluate the assemblage are therefore of fundamental importance. One of the first steps in the process of statistical evaluation is to determine the most appropriate measure of the overall quantity of pottery from the site, and of different types of pottery within the same context and from different contexts (Orton 1975).

The strengths and weaknesses of various methods of quantifying pottery have been extensively treated by Orton (1982) and Russel (1984, 44–52). Summarised below are the four most commonly used methods which are practicable with an assemblage of this size, given the limited time and resources available.

1 Sherd count, and 2 sherd weight

The absolute number of sherds alone is usually an adequate measure of quantity for irregular, handmade pottery, though subject to certain biases. For example, one cannot assume that the number of sherds is directly proportional to the number of complete vessels. There may also be differing numbers of sherds per 100g for

Table 5 Mucking: Percentage of Anglo-Saxon pottery from nine *Grubenhäuser* calculated by number of sherds and weight

GH	ranked by count	count	ranked by weight	weight	sherds per 100g
10	7	(130) 8.2%	6	(1.65kg) 8.2%	7.9
16	8	(115) 7.3%	8	(1.14kg) 5.6%	10.1
17	1	(300) 19.0%	1	(4.49kg) 22.3%	6.7
18	9	(40) 2.5%	9	(0.63kg) 3.1%	6.3
19	4	(190) 12.0%	3	(2.78kg) 13.8%	6.8
20	3	(194) 12.3%	4	(2.18kg) 10.8%	8.9
22	6	(152) 9.6%	5	(2.04kg) 10.1%	7.5
26	5	(179) 11.3%	7	(1.31kg) 6.5%	13.7
33	2	(279) 17.7%	2	(3.93kg) 19.5%	7.3
Totals		1579		20.15kg	

different fabrics and vessel types, depending upon hardness, form, thickness, and possibly method of manufacture; ie sherd count favours friable vessels. To reduce this bias, sherd weight may also be calculated in order to detect any consistent variation between the numbers and weight of, for example, a certain fabric type. A comparison of the count, weight, and degree of fragmentation (calculated by dividing sherd count by weight and thus calculating the average number of sherds per 100g) of the pottery from nine of the Mucking *Grubenhäuser* (Table 5) suggests, first, that the mean variation in the percentage calculated by count and that calculated by weight is a mere 1.6% and, second, that the degree of fragmentation is similar for most huts. Thus, while sherd count may be biased within a context (as sherd weight may be), the bias is minimal when comparing different contexts.

3 Equivalent number of vessels

This method entails calculating the number of complete rims and bases represented in the assemblage, adding them together, and dividing by two. While Orton has demonstrated that in many cases this method produces the least biased estimate of the total quantity of pottery (Orton 1975), it is not well suited to early Anglo-Saxon pottery owing to the latter's irregularity and friability which often make accurate calculation of rim and base diameter impossible.

4 Sherd group

A sherd group refers to one or more sherds which, based on their form, fabric, colour, and so on, are considered by the analyst as likely to come from the same vessel (Russel 1984, 51).

Any method of quantification which depends upon the measurement of a single attribute (such as rim length) is impractical when dealing with variable, hand-made pottery. The sherd group is therefore particularly suitable as a means of quantifying such pottery, because it utilises a range of like attributes which together suggest the number of vessels represented.

The sherd group thus appears to be the most satisfactory unit for quantifying a large amount of early Anglo-Saxon settlement pottery, and is the method used in this study. The number of sherds in each sherd group has

also been recorded in the computerised database,² providing a comparative set of quantified data.

With quantification complete, the Anglo-Saxon pottery from the settlement was grouped into approximately 11,000 sherd groups, 9,441 of them from *Grubenhäuser*. Figure 11 suggests that the *Grubenhäuser* may be broken down into four size groups according to the number of sherd groups they contained: 74% contained 60 or fewer sherd groups; 17% contained between 61 and 90; 5% between 91 and 130; 3% contained over 130 sherd groups. The greatest quantity of pottery came from GH 35, which contained 225 sherd groups.

Methods of analysis

Circumstances of excavation will inevitably affect the analysis of pottery data. As detailed in Clark 1993, the excavations at Mucking were hampered by rescue conditions and a labour force which continually changed during the 13 years of excavation. These difficulties led to some variability in the quality and level of detail of recording and recovery, which in turn has prevented a uniformly detailed analysis of the entire pottery assemblage. For this reason only the simplest descriptive and analytical statistics have been used. The use of trend surfaces, seriation, or regression analysis in the interpretation of the intra-site distribution of artefacts and features was rejected as potentially misleading, given the unevenness of collection and recording, the lack of good stratigraphic sequences and occupation levels, and the paucity of diagnostic early Saxon pottery types. The generally unambiguous nature of the distributions in any case makes more sophisticated statistical analysis superfluous.

Sampling strategy

The constraints imposed by the circumstances of the excavation and by the size of the ceramic assemblage demanded the adoption of a hierarchical sampling strategy consisting of three levels of investigation (Löbert 1982, 28). All the Anglo-Saxon pottery from every hut was first recorded at a very general level on computer by MPX. These data included the number of sherds in each sherd group; whether these were sandy or grass-tempered; their thickness; the form-parts and forms represented; rim and base diameters; and a general codified description of decoration and surface treatment. Next, two smaller samples were subjected to more detailed recording by the present writer. The first of these samples consisted of the illustrated sherd groups. This sample, comprising over 1550 sherd groups, is strongly biased in favour of decorated pottery, all of which was drawn, and rim sherds, approximately 75% of which were drawn. Therefore, a second group was examined, namely all the pottery from 20 *Grubenhäuser* (approximately 10% of the hut assemblage) which either contained primary refuse and thus potential ceramic 'household inventories', or which were well dated by metal finds, glass, or imported pottery; these comprise the 'optimum' contexts, shown in Figure 12. In this way, once all the pottery had been recorded at a general level, some pottery from all *Grubenhäuser* and all pottery from some *Grubenhäuser* was examined in greater detail in

order to record finer subdivisions, particularly of fabric and form.

The primary aim of the pottery analysis was to reveal spatial patterning rather than methods of pottery production and mechanisms of distribution and use. The sampling and recording methods were therefore chosen with a view to producing distributions of pottery types across the site and comparing assemblages from different contexts. Hence there is an emphasis in the following discussion on intra-site, typological problems, rather than on questions of provenance, manufacture, and function.

Grubenhäuser assemblages, distribution maps, and the ceramic sequence

Because of the uneven and generally poor preservation of the Mucking buildings, it has been necessary to rely heavily upon artefact distributions to suggest the spatial development of the site. Thus distribution maps, particularly of individual ceramic types and of varying proportions of those types within different contexts, provide the framework for the recognition of spatial patterning. It is important to consider two factors affecting these distributions however, even if the biases they

introduce cannot be accurately quantified or fully resolved.

First, some *Grubenhäuser*, particularly those along the inland edge of the excavated area, contained little or no pottery, while those containing the greatest numbers of sherd groups lay to the south and along the terrace edge (Fig 13). This bias, however, affects the distribution of individual ceramic types (eg faceted carinated bowls) equally, and it is only proportional variation, such as decorated to undecorated pottery or stamping to other types of decoration, which may be distorted.

Residuality introduces a second complication with regard to distributions. Virtually all the material from *Grubenhäuser* is in some sense 'residual'; that is, it is not derived from the use of the structure. Moreover, as features were excavated in 3-6in spits, a single spit may have contained sherds from several archaeological layers, as did every two-dimensional coordinate. Excavation method has thus placed further constraints on the analysis, which must rely upon horizontal distributions and a few 'optimum contexts', rather than on vertical stratigraphy. Distributions of pottery are therefore plotted without consideration of stratigraphic position.

Mrs Jones's description (Jones *et al* 1969, 147) of the excavation of GH 26 illustrates some of the difficulties encountered in evaluating finds from the *Grubenhäuser*:

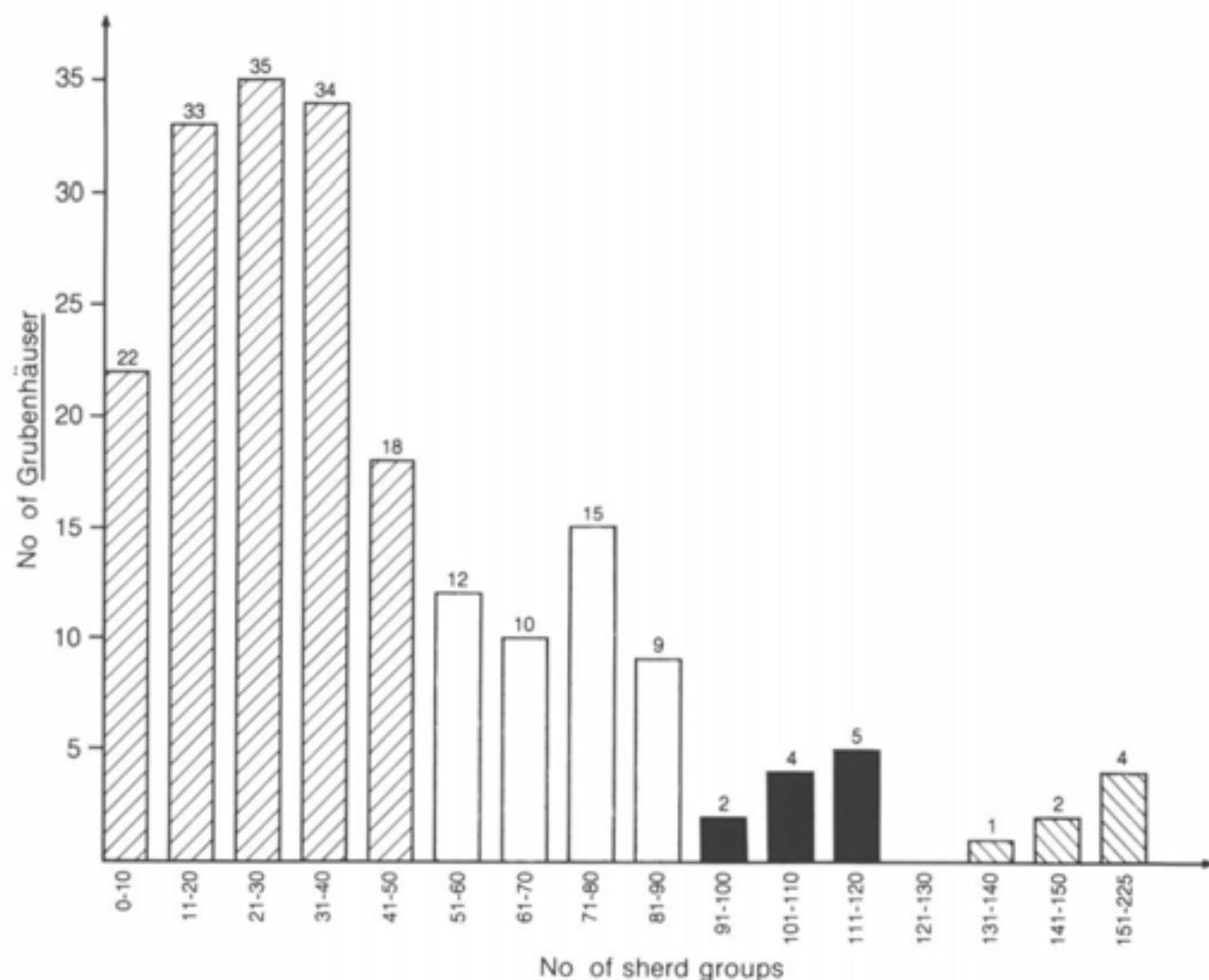


Fig 11 Number of sherd groups in *Grubenhäuser*

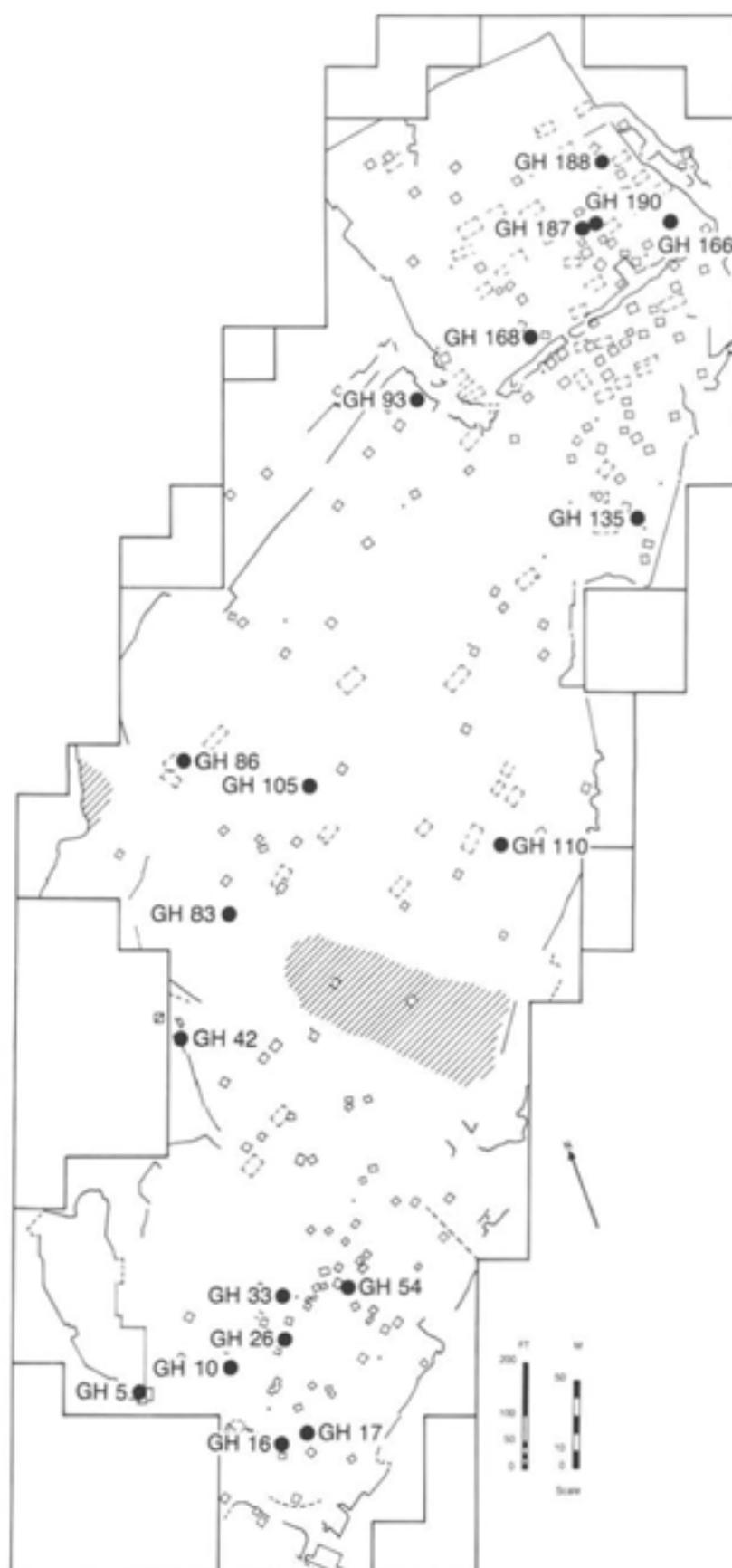


Fig 12 Distribution of optimum contexts

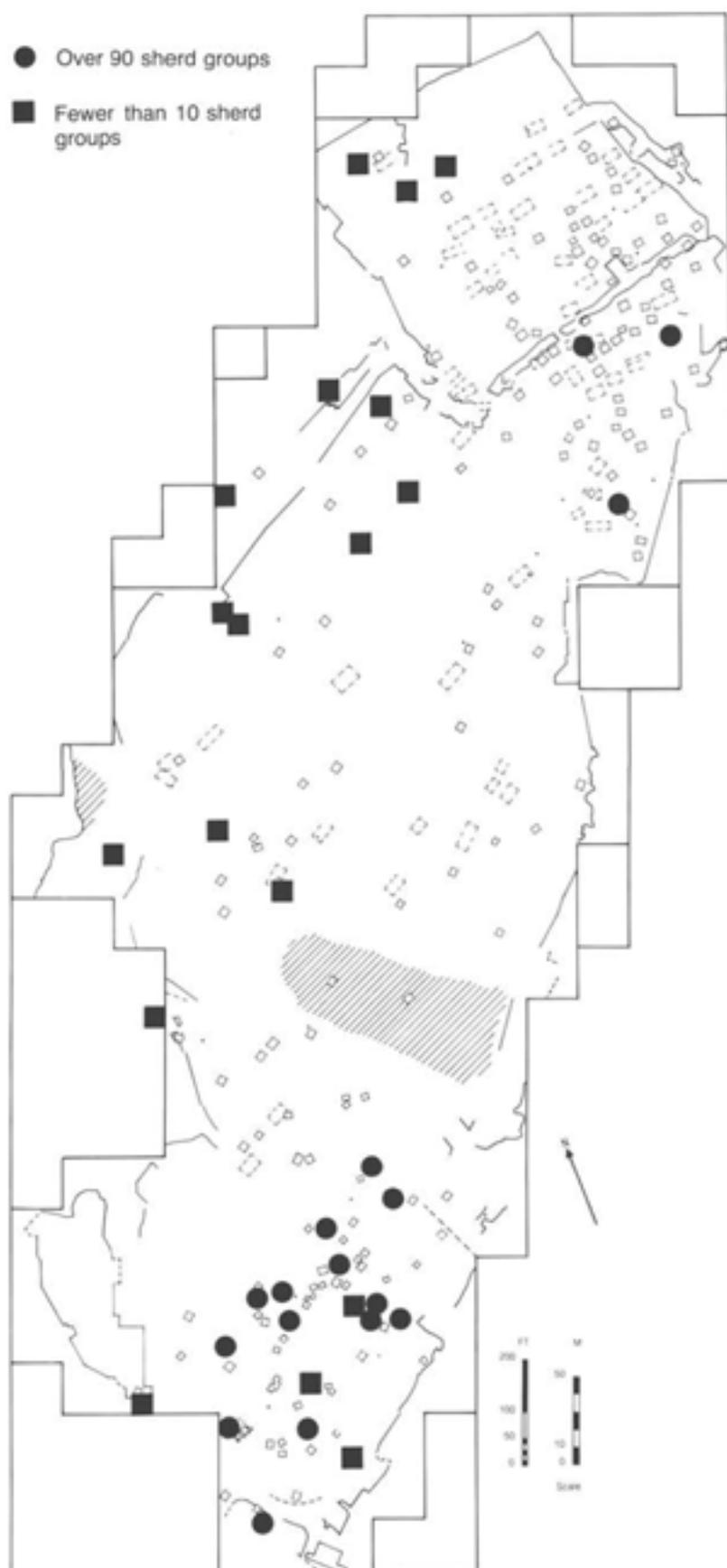


Fig 13 Distribution of Grubenhäuser with more than 90 or fewer than 10 sherd groups

Finds had a random distribution throughout the fill, which was excavated in two levels.... The poorly defined stratification of most huts, together with the lack of evidence for the floor material and superstructure, leaves room for doubt as to the complete reliability of the finds from hut fills being contemporary groups.

The fact, however, that the majority of the *Grubenhäuser* retained relatively steep sides, despite being dug into loose, uncemented gravel, suggests that in most cases they were rapidly and deliberately backfilled, presumably with earth from around the structure, and not left to silt up naturally. Most of the Anglo-Saxon pottery contained within them probably dates, therefore, to within half a century of the buildings' use, and this is sufficient for the purposes of phasing. The relatively discrete distribution of most distinctive pottery types is a further indication of a low level of residuality (Lambrick 1982, 175). Although biases introduced by post-depositional processes, such as varying rates of survival and recovery, must be recognised, these are difficult if not impossible to quantify, and have not seriously obscured patterning.

The size of the assemblage, its distribution over a large area with few intercutting Saxon features, and the relative abundance of datable pottery and finds from the settlement reduce the impact of these biases upon the simple statistical analyses which are attempted below.

The pottery fabrics

In an article published in 1969, Mrs Jones divided the Anglo-Saxon pottery from Mucking into (a) coarse wares and (b) decorated and fine wares (Jones *et al* 1969, 147). She further identified three main fabric groups: a hard, sandy, burnished fabric; a grass-tempered fabric with varying organic content; and an intermediate fabric containing both grass temper and sand. While these generalisations somewhat over-simplified a more complex situation, they were made prior to the extensive programme of petrological analysis of local clays and pottery fabrics to which Mrs Jones alluded (Jones *et al* 1969, 147n), and before work undertaken by this writer (see below) to establish the relationship between form, fabric, and surface treatment.

Methods of analysis

Over 120 thin-sections were made of the pottery from the Anglo-Saxon settlement at Mucking. All 20 accessory vessels from the inhumations and 118 (approximately 30%) of the cremation urns were also thin-sectioned.³ The thin-sectioning programme was hampered, however, by inconsistencies in classification resulting from an undistinctive mineralogical composition: quartz, quartzite, feldspars, micas, and some iron ores were found in nearly all fabrics. Indeed, these inconsistencies were such that a number of sherds which were assigned to different fabric groups were subsequently found to cross-join. Problems in subdividing fabrics which, owing to their detrital origins, contain essentially the same inclusions and exhibit textural variation even within the same vessel meant that fabric groupings had to be based primarily upon qualitative

differences in matrix and inclusions which were readily identifiable under 10× magnification and could be confirmed by thin-section.

Such grouping is inevitably to a degree subjective; at one extreme of subdivision, each sherd could be placed into its own fabric group based upon some characteristic peculiar to it; at the other extreme, fabrics could be classed simply as either sandy or grass-tempered. Indeed, much of the overall fabric classification has had to be restricted to this distinction. For the material illustrated in the inventory, however, a more detailed classification was devised to allow for reasonably consistent, efficient identification under 10× magnification. Certain distinctions which are clear in thin-section, however, are difficult or impossible to distinguish macroscopically. Such subtle differences may be of some significance. However, given that the same vessel may have a finer, and thus 'different' fabric near the rim, where the clay is better worked, than on the body, it was decided to base the fabric groups upon clear, qualitative differences in the inclusions. These, after all, are the qualities most likely to have been considered significant by the potter.

Virtually all the Anglo-Saxon pottery has reduced cores and inner surfaces, as oxidising gases rarely reached the inside of the vessels. The factors involved in determining sherd colour are numerous and highly variable (length and temperature of firing, position within the clamp kiln or bonfire, chemical composition of the clay and temper, porosity, use of the vessel, and post-depositional change). There was therefore little value in recording colour for the entire assemblage, or in using a Munsell Soil Chart to achieve more precise descriptions of colour (van Diest 1985). Only a general description of predominant surface and core colour has been recorded.

In 1979, a faceted carinated bowl, two rusticated sherds, and one coarse-slipped sherd from the Mucking settlement were submitted to Drs M J Jansma, University of Amsterdam, to be examined for diatoms which might indicate the conditions in which the clay was deposited. The sherds contained very few diatoms, although the absence of marine diatoms led Drs Jansma to suggest deposition in fresh water (M J Jansma, pers comm, 1979; Mannion 1987). Examination of local clays for diatoms might have determined if the clay source could at least have been local.

Petrological analyses other than thin-sectioning, such as heavy mineral analysis or X-ray diffraction, were deemed too costly and time-consuming for an assemblage of this size, and so chemical analysis of the pottery fabrics, in particular Atomic Absorption Spectrometry, was considered as a means of identifying intrusive clays.⁴ This, however, proved impracticable because of the difficulties in obtaining a representative sample from such coarse, poorly levigated fabrics, a problem which also diminishes the usefulness of thin-sectioning. These difficulties can be overcome to some extent by taking large samples, or several samples from each vessel, but the results yield a range of chemical elements so broad as to be virtually useless, and if a large chunk of a particular mineral is included in the sample, the results are entirely invalidated. The pottery from Mucking was, furthermore, buried in a highly acidic subsoil and had undergone considerable post-depositional chemical change. For example, most calcareous inclusions had

been leached out, and what remained did not react to acid, making the original inclusions virtually impossible to identify with any certainty. Thus any apparent differentiation among the samples need not indicate different clay sources, merely different burial conditions. Finally, the areas of Lower Saxony and along the Frisian coast, from which it was hoped intrusive clays might be identified, are themselves covered in glacial tills. The concentration ranges for each element would therefore be very similar in the clays of both regions, and too broad to be of much use.⁵

The fabric groups⁶

Eight fabric groups have been established for the Anglo-Saxon pottery from Mucking, based upon the macroscopic and thin-section analysis just described.⁷ Variations within these broad fabric types are noted in the inventory when, for example, an ordinarily sandy fabric, eg Fabric 3, contains sparse quantities of grass temper, or when a grass-tempered fabric, eg Fabric 2, contains an exceptionally abundant quantity of quartz sand, or when a fabric is exceptionally hard or friable. It must be remembered, however, that a certain degree of overlap between fabric groups remains.

Fabric 1a Appears in thin-section as a dense scatter of well-sorted, small quartz sand grains, both angular and sub-rounded, as well as varying quantities of muscovite, occasional small grains of felspar (usually plagioclase, less frequently microcline), and occasionally flint. Macroscopically, the fabric appears dense and fine, with a soapy texture.

Fabric 1b Fabric 1a matrix containing varying quantities of grass temper, and occasionally a moderate quantity of quartz sand.

Fabric 1c Fabric 1a matrix containing varying quantities of unsorted quartz sand, felspar, and occasionally flint. Whether these were added as tempering agents or were naturally present in the clay could not be determined.

Fabric 2 A miscellany of grass-tempered fabrics containing varying quantities of quartz sand, flint, and felspar.

Fabric 3 An assortment of sandy fabrics in a matrix coarser than that of fabrics 1a-1c, whose principal component is varying quantities of unsorted quartz sand showing a gradation from coarse to fine, frequently with small quantities of flint and felspar, and flecks of mica.

Fabric 4 Appears in thin-section as a clean, evenly aligned clay matrix containing common to abundant well-sorted quartz sand. Macroscopically the fabric is usually dense, grey, and hard.

Fabric 5 A 1a matrix containing common to abundant calcareous inclusions (probably chalk) which have been leached out, leaving voids which create the characteristic vesicular surfaces.

Fabric 7 A fine matrix, similar to 1a, containing sparse to common crushed shell or ?fossiliferous chalk.

In addition to these eight fabric groups are a number of 'unclassified' fabrics which, because they occur only rarely in the assemblage, are described in the inventory for the relevant sherd groups.

Provenance

Clays from the region of the East Anglian glacial drift do not lend themselves readily to provenance studies, but several local clay sources are indicated for Mucking. The first is brickearth, patches of which were exposed

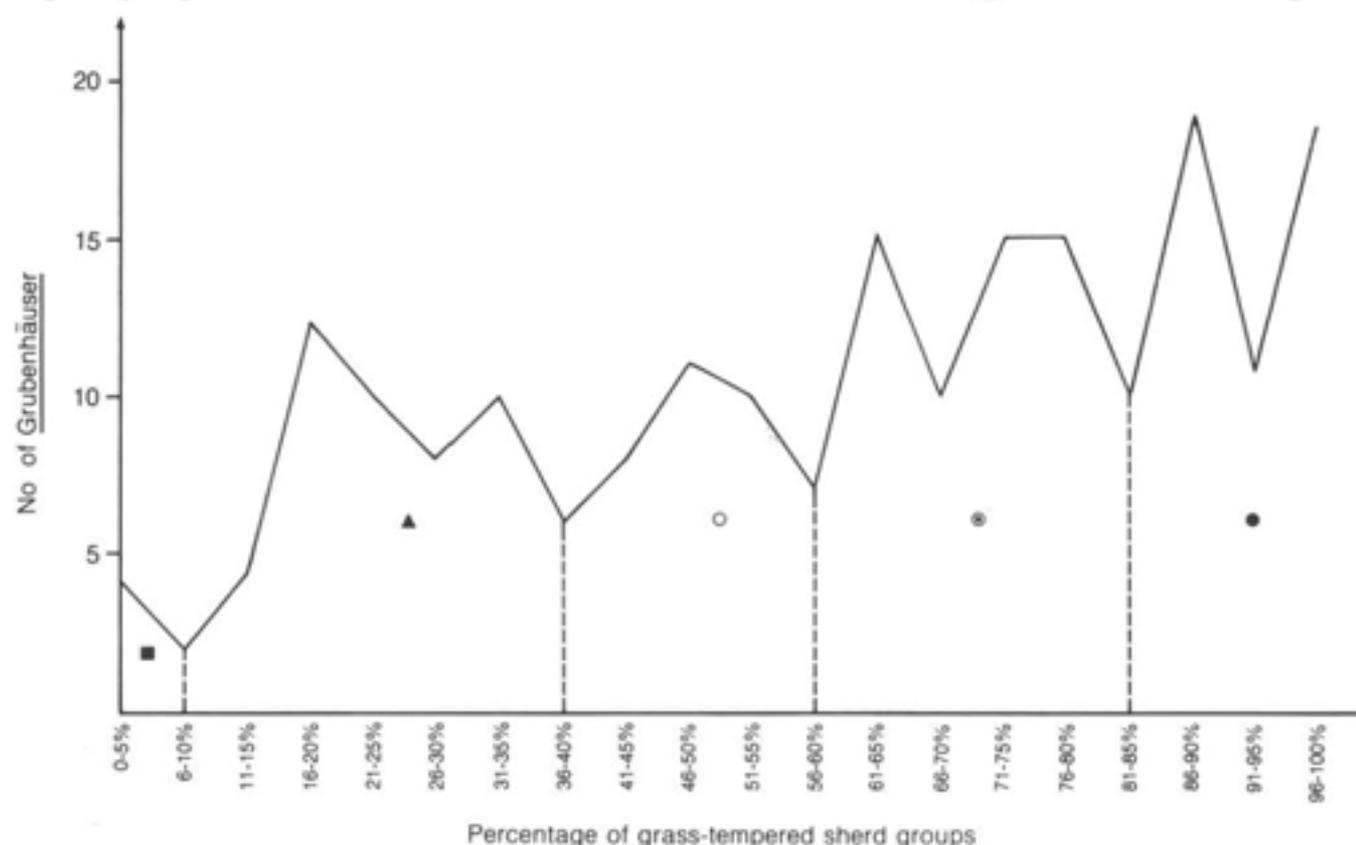


Fig 14 Percentage of grass-tempered pottery in Grubenhäuser (for key to symbols see Fig 15)

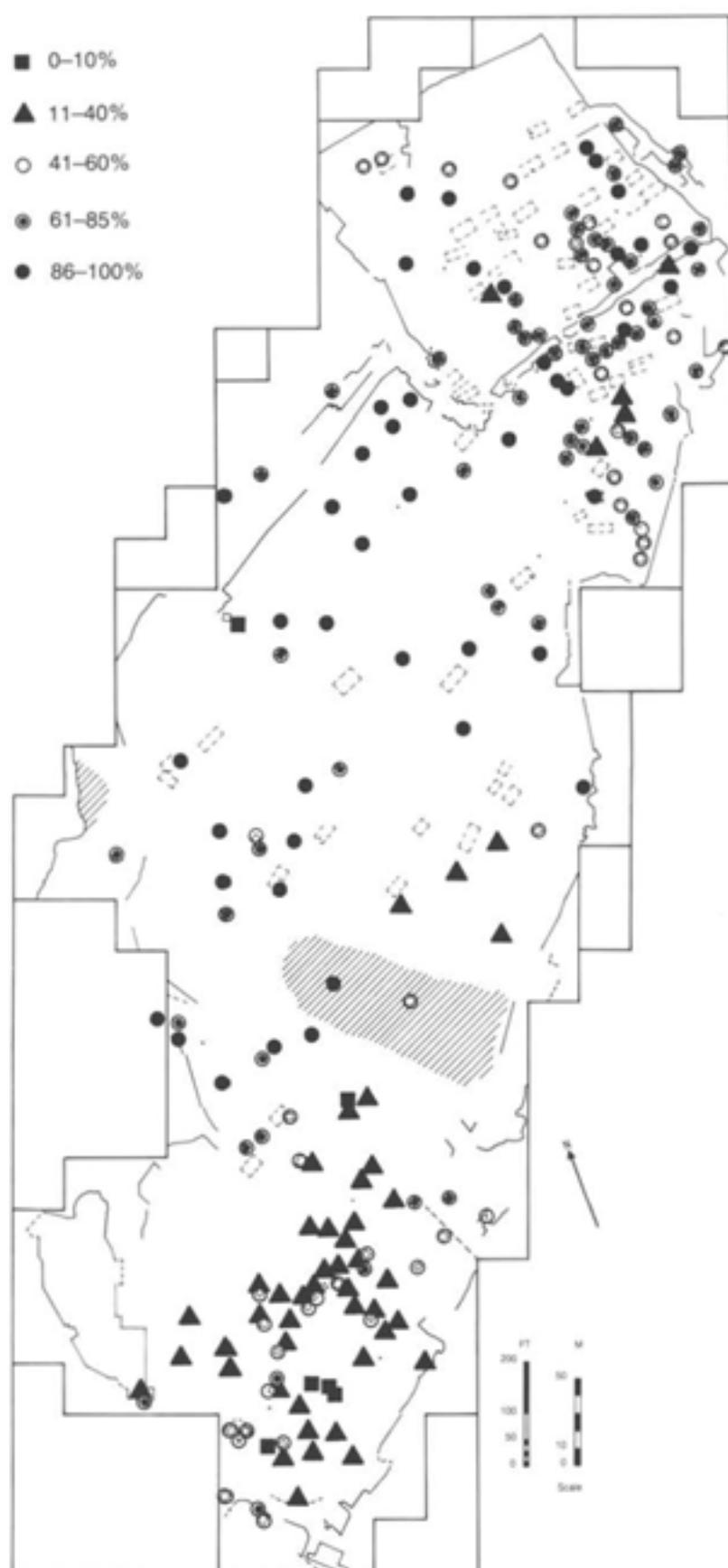


Fig 15 Percentage of grass-tempered pottery in Grubenhäuser

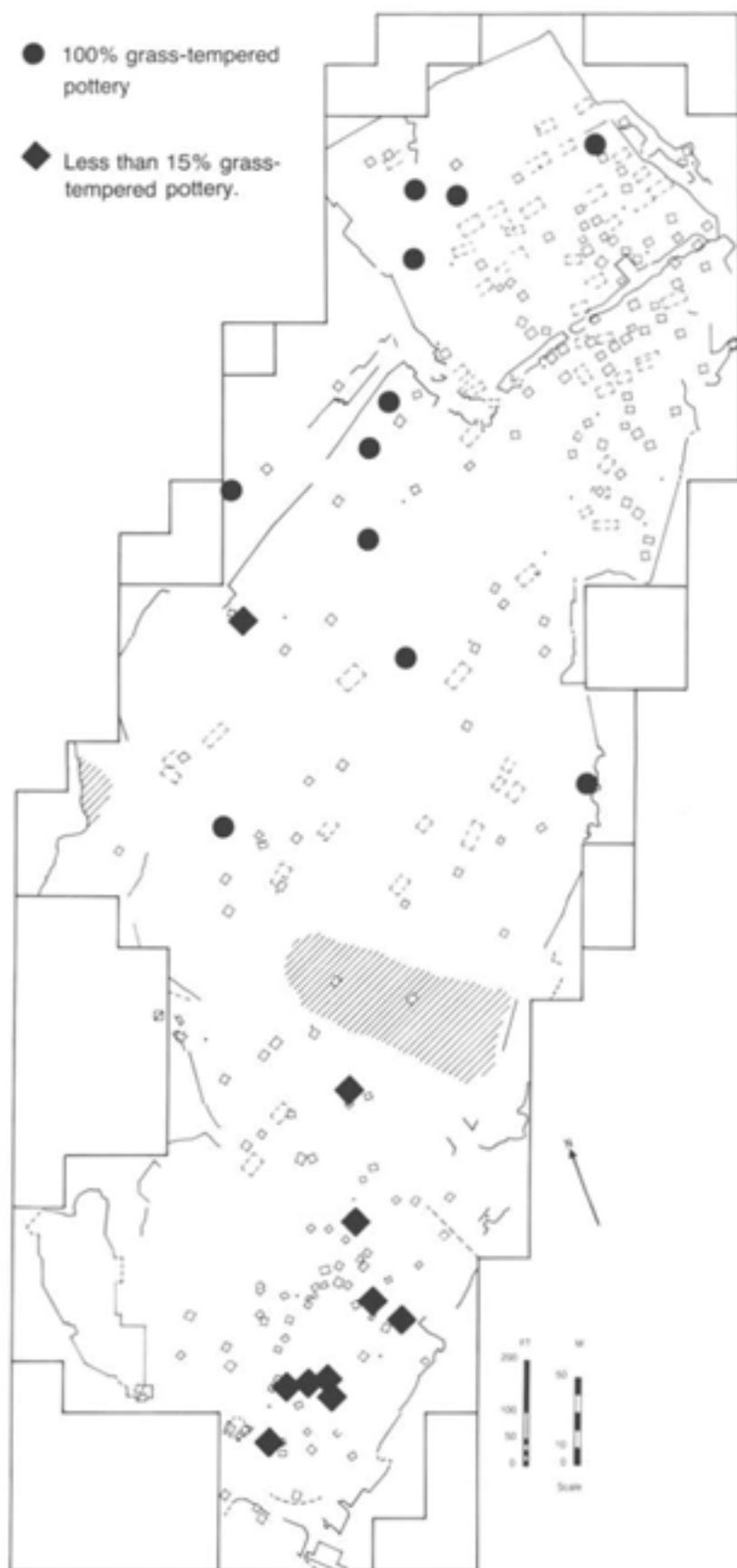


Fig 16 Highest and lowest percentages of grass-tempered pottery in Grubenhäuser

where the drift deposits covering the site had eroded, particularly on the terrace slope. Thin-sections of samples taken from a number of these outcrops suggest that, while they display some textural and petrological variation, these brickearths almost certainly formed the basis for the characteristic fine, 'soapy' matrix of fabrics 1a, 1b, and 1c. An experiment in building and firing vessels from brickearths collected from the site showed that, while a sample taken from the extreme north-east of the site (2850N 1000E/MU OS5580) was too silty and short to hold together well, another sample from the area of the North Ring, 300m to the north of the main site, was of exceptionally high quality.⁵

The well-sorted quartz grains which characterise Fabric 4 could be derived from the Thanet Sands, which include beds of clayey sands which are finer and better sorted than the sands of the Blackheath or Woolwich Beds (Russel 1984, 72; Ims 1958, 12).

The coarser, sandier fabrics (Fabric 3 and variants) compare well with samples of estuarine alluvial clays collected from the inland and coastal edges of the alluvial plain at East Tilbury, approximately 2km south-east of Mucking, and with London Clay, of which the nearest outcrop lies less than 1km from the site. These range from a relatively coarse, sandy clay containing common flint to one with a much finer groundmass of quartz sand and moderate quantities of shell and iron oxides. It must be noted, however, that these alluvial clays are essentially 'reworked', as are the glacial tills. Different outcrops may therefore vary considerably, a situation almost certainly complicated further by the potter him/herself mixing clays gathered from different sources.

Simply stated, there appears to be a primary distinction between brickearths and alluvial clays. Further subdivision of fabrics is based on the presence or absence of grass temper, calcareous inclusions, and iron ores, and, to a lesser extent, on the degree of apparent sorting of the inclusions. The precise provenance of these fabrics is more difficult to demonstrate, however, and the pattern of clay use may well have been more complex than outlined here.

Results

Examination of the pottery fabrics from Mucking shows a marked increase in the proportion of grass-tempered to sandy fabrics in *Grubenhäuser* assemblages to the north and west of the site (Figs 14–16). When this distribution is compared to that of datable finds shown in Figure 3, and when the proportion of grass-tempered pottery in twelve *Grubenhäuser* of known date is calculated (Fig 17), it becomes clear that there is a marked increase in the use of grass tempering in the sixth and seventh centuries. It is interesting to note that the overall percentage of grass-tempered pottery from the settlement (49%) does not differ significantly from Cemetery II (56%), and it appears, furthermore, that the range of fabrics from settlement and cemeteries is essentially identical (A Mainman, pers comm).

Another significant pattern has emerged in the distribution across the site of Fabric 7, comprising approximately 35 sherd groups, five cremation urns, and one spindlewhorl containing either fossiliferous chalk or a combination of chalk and shell. Eight of these sherd

groups are decorated, but only one is stamped. Fabric 7 is restricted to the southern half of the settlement, thereby corresponding to its earlier phases (Fig 18). The high percentage of decorated vessels, the paucity of stamping, and the forms of the cremation urns manufactured in this fabric also support a fifth- to early sixth-century date.

It has not been possible to determine if the shell or chalk present in Fabric 7 was deliberately added as a tempering agent or if it was naturally present in the clay. The calcareous inclusions are generally rather fine and well-sorted in what appears to be a 1a matrix, suggesting that it may have been added, although some of the alluvial clays sampled did contain shell naturally. As noted above (p 28), Fabric 5 also contains calcareous inclusions, usually more abundant than those in Fabric 7, but the precise petrological distinction between the two fabrics is not clear. Both are distributed over roughly the same area, but while the unidentified calcareous inclusions in Fabric 5 have leached away leaving a vesicular matrix, those in Fabric 7 remain, though chemically changed to the extent that they no longer react to acid. A group of exceptionally micaceous fabrics, and others which contain moderate to common amounts of haematite, share this predominantly southerly distribution, as do Fabrics 4 and 5 (Figs 19, 20). These distributions create a striking impression of a greater diversity of pottery fabrics in the fifth and early sixth centuries, compared to the later phases of settlement.

Surface treatment

The range of surface treatments present in the ceramic assemblage from Mucking can be divided into two broad categories: smoothing or burnishing of either or both surfaces of a vessel, and deliberate roughening or rustication of the outer surface, either by combing, finger-nail impression, pinching, or the application of a coarse slip (the German *Schlickung*) (Fig 21). These various methods of treating the surfaces of pottery vessels have a long history and wide distribution in Germanic regions on the continent, beginning in the late La Tène and early Roman Iron Age (von Uslar 1938, 34). Long-

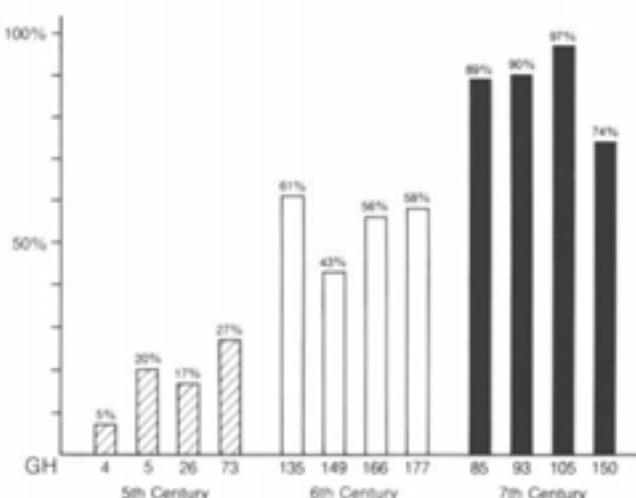


Fig 17. Percentage of grass-tempered sherd groups in 12 *Grubenhäuser* of established date

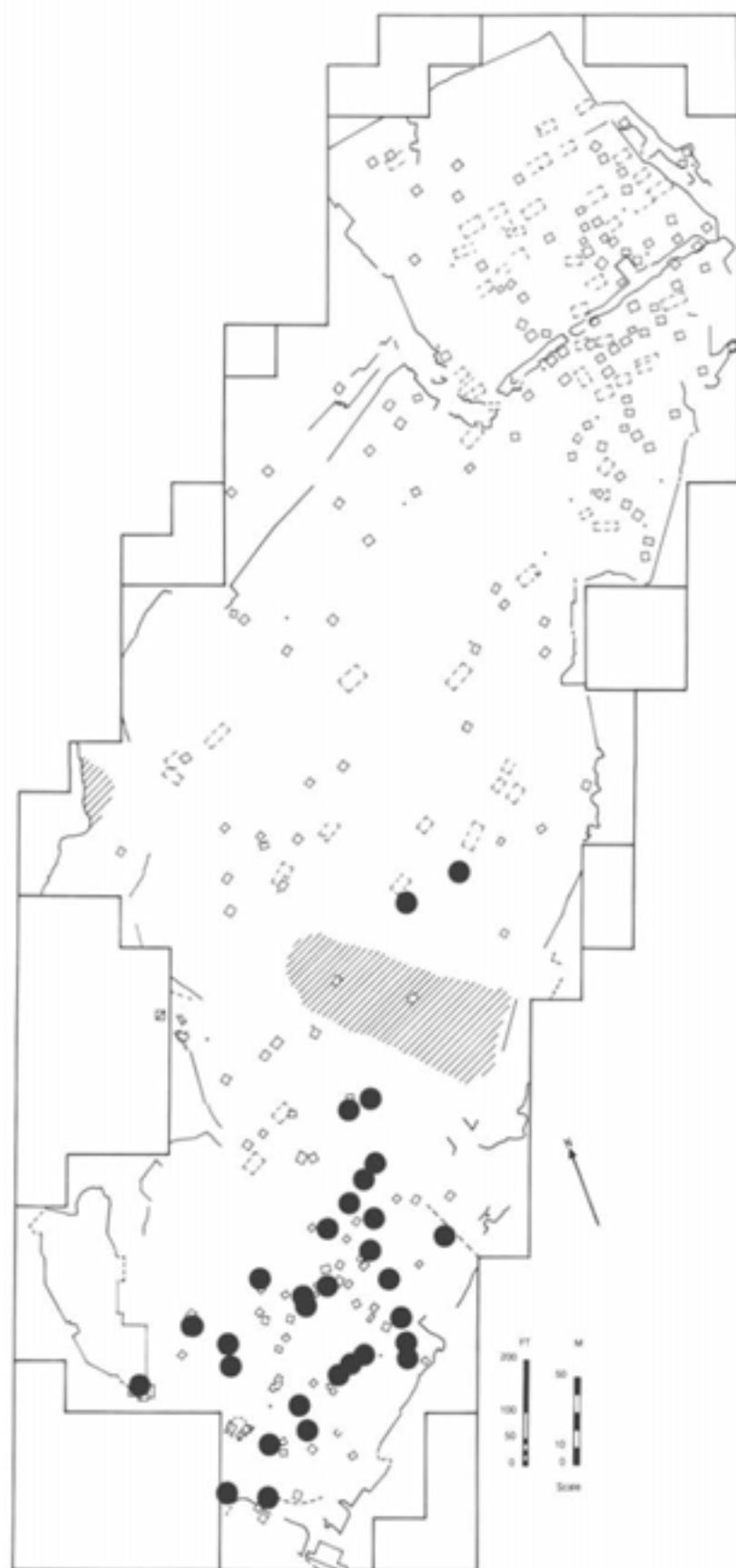


Fig 18 *Distribution of Fabric 7*

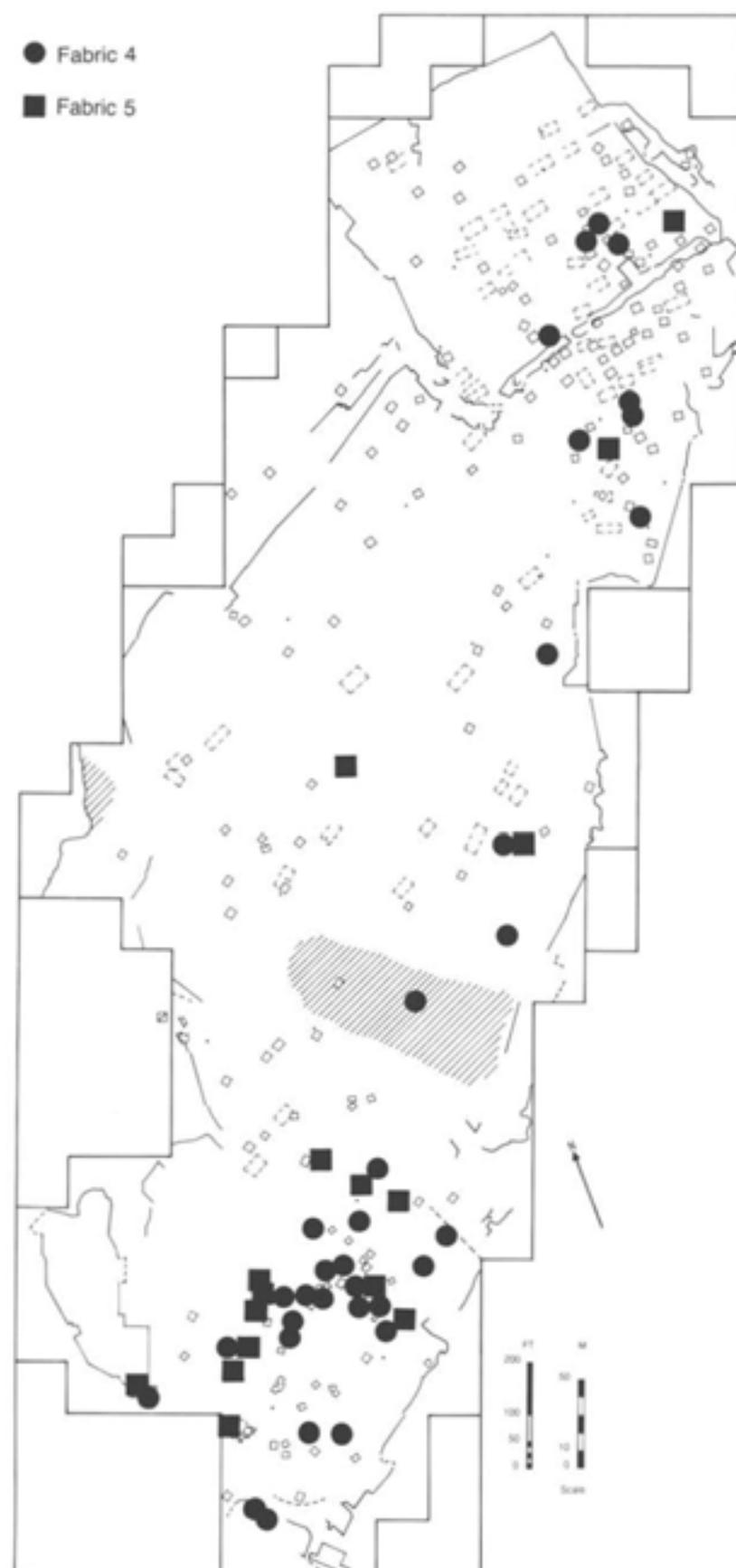


Fig 19 Distribution of Fabrics 4 and 5

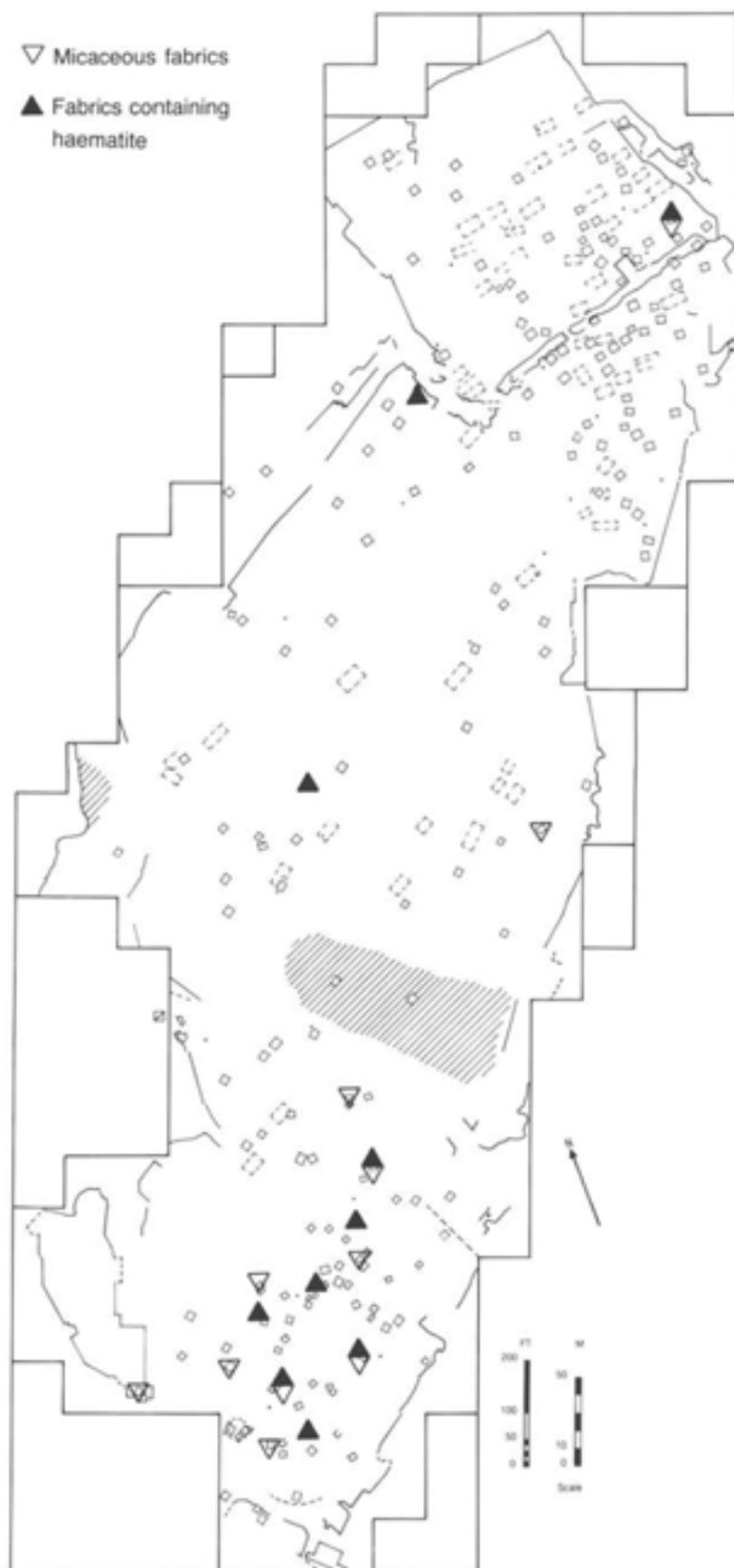


Fig 20 Distribution of micaceous fabrics and fabrics containing haematite



Fig 21 Surface treatments: pinched rustication, combing, and coarse-slipping (photo: H Hamerow)

lived, essentially functional features such as burnishing, pinched rustication, and combing might be expected to have only the broadest chronological significance. Yet patterns in the distribution of some of these surface treatments suggest important trends.

Combing, rustication, and coarse-slipping

Fine and coarse 'combed' lines occur in both random and ordered form and not, as far as can be determined, in combination with other designs or surface treatments. Rustication includes not only pinching, but also finger-tip and finger-nail impressions, as well as pinched clay strips (Fig 100.9). A clay surface could also be roughened by rubbing a wet hand or cloth over it, to raise the grits present in the clay to the surface. A relatively fine to very coarse slip (*Schlickung*) was sometimes applied to the exterior surface. The 'sponged on' effect produced on a globular bowl from GH 71 (Fig 126.4) and the ridges on a bowl from GH 74 (Fig 128.3) are forms of such rustication.

Von Uslar (1938, 24) considered these surface treatments not as diagnostic in themselves, but rather defined by the forms on which they are found. Although van Es suggests that coarse-slipping is a decorative device, he also notes that, at Wijster, it is 'restricted

principally to the larger and coarser models' and always to the body of the vessel, below the shoulder. He suggests, furthermore, that its use is too general to have any chronological significance (van Es 1967, 273). At Mucking too, rustication, combing, and *Schlickung* are largely restricted to the lower halves of relatively large vessels which are generally well made, and often carefully burnished on the interior and down to the shoulder on the exterior. This pattern supports the argument that deliberate roughening was primarily to facilitate the handling of slippery containers or large storage vessels. It is worth noting, however, that small or thin-walled vessels do not lend themselves to combing or pinched rustication, simply because they are easily pushed out of shape by such treatment.

Smoothing and burnishing

Occasionally, traces of the smoothing process are visible, as when a surface has been wiped with a coarse fibre or cloth, carelessly smoothed with the fingers, scraped, or trimmed with a knife. While an attempt has been made in the inventory to distinguish pots with smoothed surfaces (ie finished while still in a relatively plastic state), as opposed to those which have been burnished (ie rubbed with a smooth, hard object such as

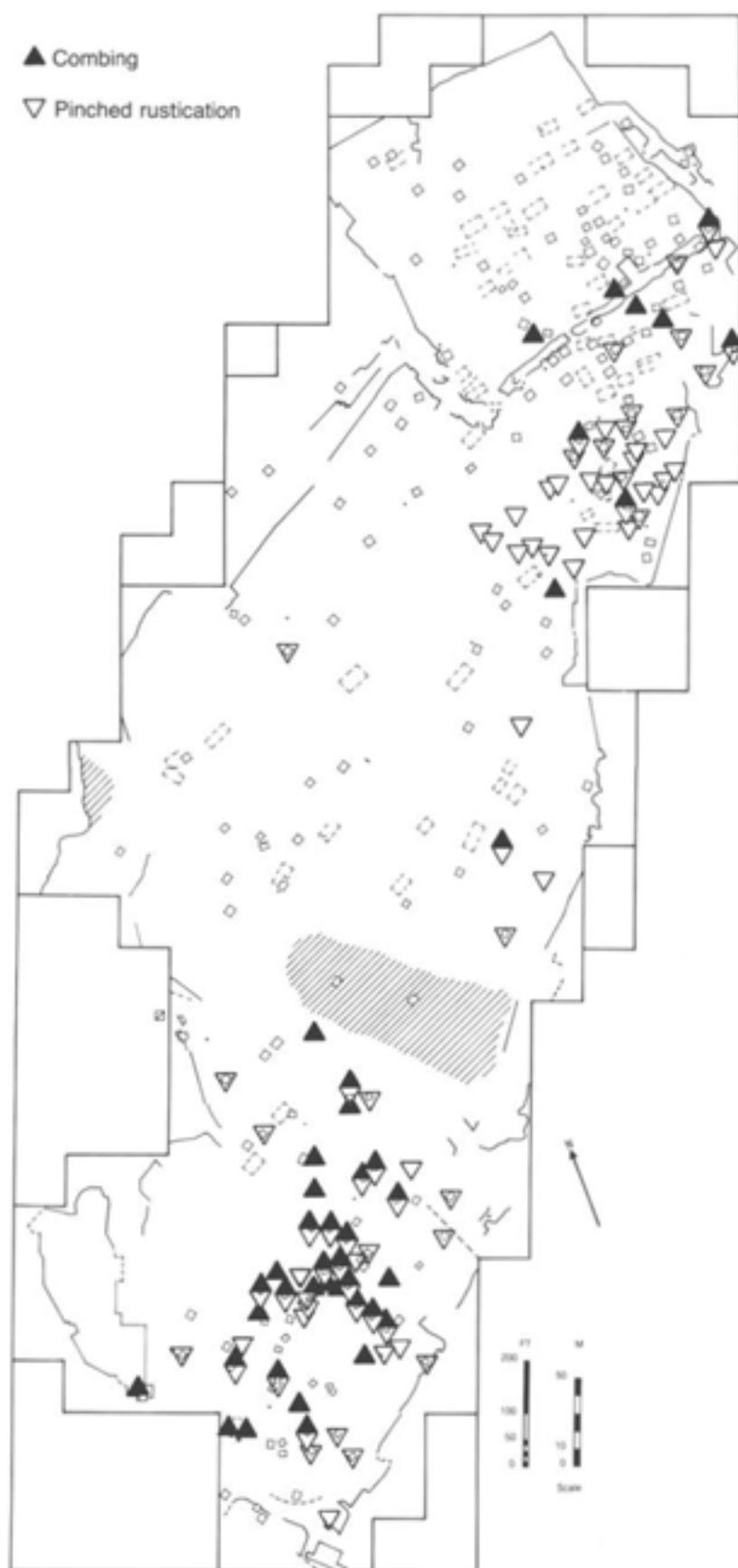


Fig 22 Distribution of pinched rustication and combing

a pebble when leather-hard, which compacts and imparts a lustre to the surface), it must be remembered that an originally burnished surface may be abraded or weathered, and so be recorded simply as smoothed. It is therefore difficult to assess how these most common types of surface treatment relate to form and fabric. It is clear, however, that some carefully made, decorated vessels were never burnished, and that, conversely, some plain, heavily grass-tempered, and rather carelessly made vessels were burnished.

Burnishing should thus not be taken as a primary indicator of 'fine' wares, as it serves the purely functional purpose of strengthening and compacting the vessel, as well as creating a visually pleasing effect. Numerous examples of vessels where only the rims have been burnished can be found; it is often the rim which cracks most easily during manufacture, and burnishing is an effective remedy for this problem. There is thus a danger in assessing the proportion of 'fine', ie burnished, pots in an assemblage on the basis of rims alone (van Es 1979, 208). That certain fabrics lend themselves more readily to burnishing and that both the type of clay and the temper affect the end result are also clear. Heavily grass-tempered and coarse sandy fabrics, for example, contain fibres and grains which tend to scratch the surface during burnishing, although there are successfully burnished examples of such fabrics.

Trends

Despite these ambiguities, certain developments in surface treatment at Mucking are clearly indicated by their distribution across the site. Figure 22 shows how combing and pinched rustication occur less frequently in the sixth- and seventh-century hut assemblages in the northern and western sectors of the site, and that the use of combing in particular appears to die out in the course of those centuries. Several vessels with pinched rustication were, however, retrieved from the southern ditch of the North Enclosure (Fig 182). Fragments of several faceted carinated bowls and an early fifth-century belt fitting were also recovered from the North Enclosure ditch (Figs 180.1, 181.12, 13, 15, 16, 21). The huts, however, contained assemblages which were uniformly sixth- and seventh-century in date. Possible explanations for this 'early' material in an otherwise 'late' sector are considered above (p 19).

Shown in Figure 23 is the distribution of *Grubenhäuser* containing more than one sherd of coarse-slipped pottery.⁹ The concentration of coarse-slipped pottery in the south, that is the area of fifth- to early sixth-century occupation, is striking, and constitutes the clearest indication so far from this country of a predominantly fifth-century date for this type of surface treatment.

Pottery forms

The reliability of a classification depends on distinctiveness of features, size and state of preservation of the sherd, the classifier's success in completing description of such major features as shape and decoration by comparison with those of entire vessels, and also on the attitude of the classifier. (Shepard 1956, xv)

As Shepard points out, the success of a classification of pottery forms rests upon the fulfilment of certain conditions which, in the case of the handmade, fragmentary pottery from Anglo-Saxon settlements, can rarely be met. An account of some of the problems encountered in formulating the type series for the Mucking pottery forms illustrates why, as yet, no fully adequate typological or chronological sequence has been established for early Anglo-Saxon pottery forms. First, a scheme which is based solely on the shape of rims or bases precludes the classification of fragments of carinations, which may also define forms; second, a scheme which relies solely upon proportions such as the ratio of height to maximum diameter (Lund Hansen 1976, 106-16) is also unsatisfactory for settlement pottery as one rarely has all, or even most, of the required measurements for a single pot. A further complication arises when one realises that the majority of early Anglo-Saxon pottery forms are essentially identical, but for differing rim orientations. Thus the rims and shoulders of a straight-sided ovoid, globular jar, and shouldered jar could all be mistaken for the same form, were the rims to be incorrectly orientated. Finally, no matter what scheme is adopted, it is inevitable that some forms (eg carinated bowls) may be over-represented as a result of their being easily recognisable from even very small sherds, whereas others (eg shouldered vessels) require nearly a complete profile to be identified with any certainty.

In order to produce a reasonably consistent classification it is therefore necessary to put aside minor and possibly misleading variation, accept some 'grey areas' of overlap, and adopt a broad, hierarchical scheme. This ranges from the most general form-part which can be assigned to even a very small sherd (eg 'curved body sherd') to a series of specific, yet broadly defined forms (eg 'globular bowl with offset shoulder') which can be assigned to more complete examples. Ideally, an objective, quantitative system with clearly defined categories should be devised along the lines of that used by Steuer (1972) for early medieval pottery from north-west Germany. It should be independent of cemetery pottery and of the analyst; in other words, anyone should be able to use the system with roughly the same results. In this way, every piece of pottery, from a complete vessel to a small body sherd, can be included in the analysis, each described according to the extent of its preservation.

To achieve this, a taxonomic classification was devised for the Mucking pottery using geometric criteria, with characteristics such as the ratio of height to rim diameter, and the profile at and location of the maximum girth, arranged hierarchically according to the dendrogram shown in Figure 24. At the top of the dendrogram a large number of vessels are linked by a few characteristics. Moving further down, the number of members in each sub-group decreases, while the number of characteristics they share, that is their similarity, grows (Löbert 1982, 24).

The type series

A principal components analysis of 482 cremation urns from Spong Hill and 80 cremation urns from Mucking carried out by Julian Richards (1982, 36) suggests which characteristics and proportions are most relevant to a typology for early Anglo-Saxon pottery forms. Richards

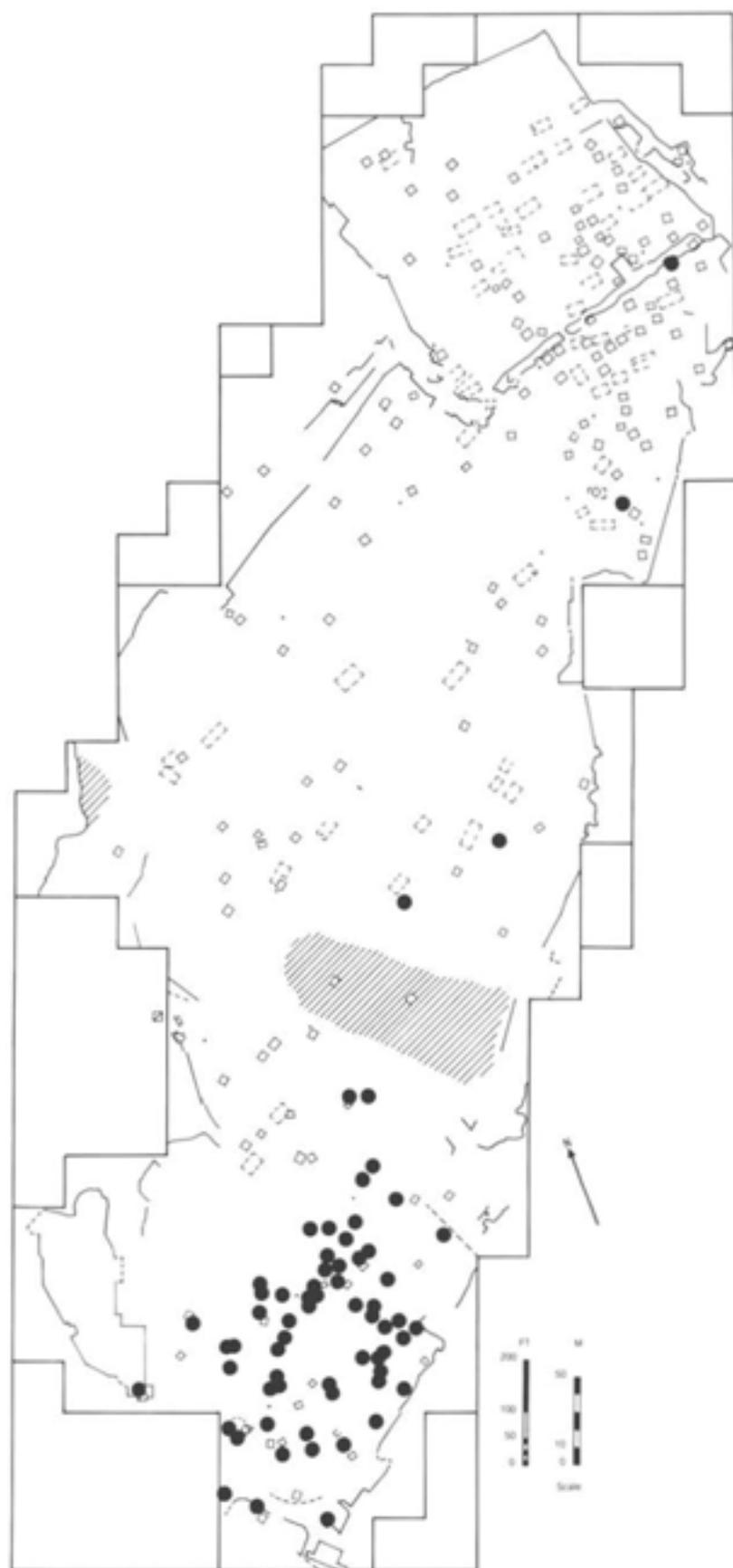


Fig 23 Distribution of Grubenhäuser containing more than one coarse-slipped sherd

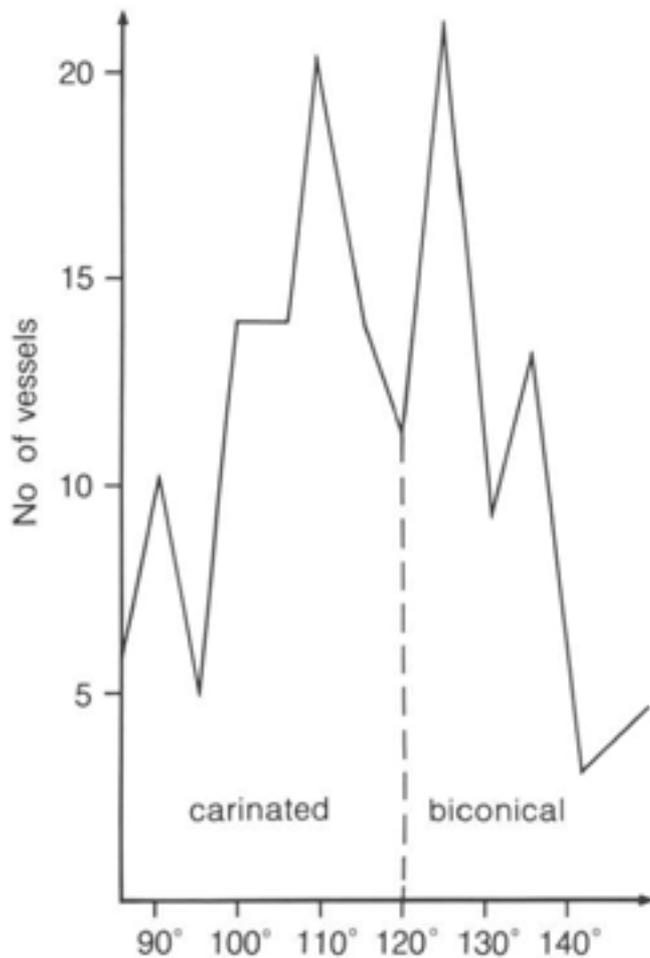


Fig 25 Columnar distribution of carination angles

The type series which follows could undoubtedly have been more finely subdivided and more rigorously defined. It is hoped, nevertheless, that this series is more readily and accurately useable than the largely intuitive and often imprecise typologies currently in use. Nominal rather than numeric types are used (eg 'straight-sided bowls', rather than 'Type 4c'), as the latter lend a spurious precision inappropriate to early Anglo-Saxon pottery. The names used for the Mucking pottery forms are based on those devised by Dr Myres and Mrs R Huggins.

Pottery forms: a glossary

- restricted** diameter of orifice < maximum diameter
unrestricted diameter of orifice > maximum diameter
profile the contour of the vessel
point of inflection where the curvature of the profile changes from concave to convex, or *vice versa*
simple profile a profile lacking inflection or corner points, apart from the end points of the rim and base
complex profile a profile having two or more corner and/or inflection points
offset shoulder the shoulder is defined by a 'step' in the vessel profile
corner point an angular point of inflection

Pottery forms: the type series¹⁰

All measurements are in millimetres.

Bowls Rim diam > height

- Hemispherical bowl* (eg GH 59, Fig 117.8) Unrestricted, simple, roughly hemispherical or ellipsoid profile, sometimes with a slight inflection near the rim; convex body; depth: max diam < 0.5; rim diam: min 60, max 219, average 114
- Globular bowl* (eg GH 73, Fig 127.6) Restricted, necked, globular profile; may have offset shoulders; rim diam: min 75, max 297, average 155
- Straight-sided bowl* (eg GH 28, Fig 97.5) Unrestricted, simple profile with parallel sides; this form displays the greatest size range; rim diam: min 54, max 423, average 135
- Splay-sided bowl* (eg GH 42, Fig 106.17) Unrestricted, simple profile with straight, divergent sides; rim diam: min 57, max 234, average 138
- Carinated bowl* (eg GH 110, Fig 141.8) Restricted complex profile, with a corner point < 120°; this form displays the greatest uniformity in size; rim diam: min 87, max 186, average 130
- Biconical bowl* (eg GH 149, Fig 155.6) Restricted complex profile, with a corner point > 120°; rim diam: min 63, max 198, average 142
- Inturned-rim vessels* (eg GH 41, Fig 104.9) Simple profile with a restricted orifice; total height > max diam; rim diam: min 63, max 204, average 142
- Dishes* (eg GH 37, Fig 102.3) Rim diameter: height > 4.0; rim diam: min 126, max 228, average 128

Plates (eg GH 38, Fig 103.13); diam: min 183, max 216, average 208

While the surface treatment of these plates varies, their size is remarkably uniform, and relatively small. The average dimensions of the series of sandstone griddles from Vallhagar, Sweden (Stenberger 1955, 843), are similar, with an average diameter of 250–300mm and a thickness ranging from 10–20mm.

Jars Rim diam < total height

- Straight-sided ovoid* (eg GH 86, Fig 134.3) Unrestricted to slightly restricted orifice; usually a complex profile; base or rim diameter: max girth > 0.75; rim diam: min 60, max 240, average 137
- Biconical jar* (eg GH 185, Fig 172.1) Restricted, complex profile, with a corner point > 120°; rim diam: min 84, max 162, average 99
- Shouldered jar* (eg GH 152, Fig 157.6) Restricted, complex profile; max girth lies above the centre point; rim diam: min 63, max 225, average 162
- Globular jar* (eg GH 42, Fig 105.10) Restricted, usually necked, complex profile; max girth lies roughly at the centre point; rim diam: min 57, max 360, average 151
- Low bulbous jar* (eg GH 150, Fig 156.1) Restricted, complex profile; max girth lies below the centre point; rim diam: min 75, max 174 (only two examples)

Form parts (Fig 26)¹¹

As the great majority of sherds are too incomplete to be assigned a specific form, a series of general standardised 'form parts' was defined, as given below.

- Rim* Ninety-three different rim types were originally defined by MPX, according to thickness and essentially intuitive groupings. It soon became apparent, however, that the irregularity of rim form even on the same pot rendered such attention to

minor variations inappropriate. The rim forms have therefore been grouped into four main types, based upon the direction of the rim in relation to the contour of the body of the vessel. The curvature and length of the rim and shape of lip can lead to further typological ordering, as Steuer (1972) has demonstrated for the seventh- to ninth-century pottery from the *Wurt* Elisenhof near the mouth of the Eider. Most rims, however, are too irregular to be broken down into these components.

- 2 *Shoulder* The portion of the vessel from the 'belly' to the next inflection, or, where this is absent, to the rim lip.
- 3 *Neck* The vessel has a neck if the shoulder of the vessel ends in an inflection, and consists of the portion from that inflection to the rim lip.
- 4 *Carination*
- 5 *Body sherd*

6 *Base* Most bases are essentially flat, but irregular and with rounded edges, making their identification problematic. Nearly all pedestal bases from the settlement come from the southern part of the site, confirming a fifth- to early sixth-century date. One of these bases is mounted onto a hemispherical bowl (GH 5, Fig 84.20) but the association of the remainder is uncertain. Neither splayed bases nor foot-ring bases display any clear patterns of distribution.

7 *Lugs* The few lugged vessels whose form is discernible are virtually all bowls. It is noteworthy, furthermore, that all vessels with applied lugs which retained their base, including the three from Cemetery II (Myres 1977a, *Corpus* nos 3758, 3802, 3816) have a foot-ring or splayed base (eg Pit 7811, Fig 188.2). These bowls were designed not only for suspension (although the lugs are not always functional) but also for stability. Only the distribution of

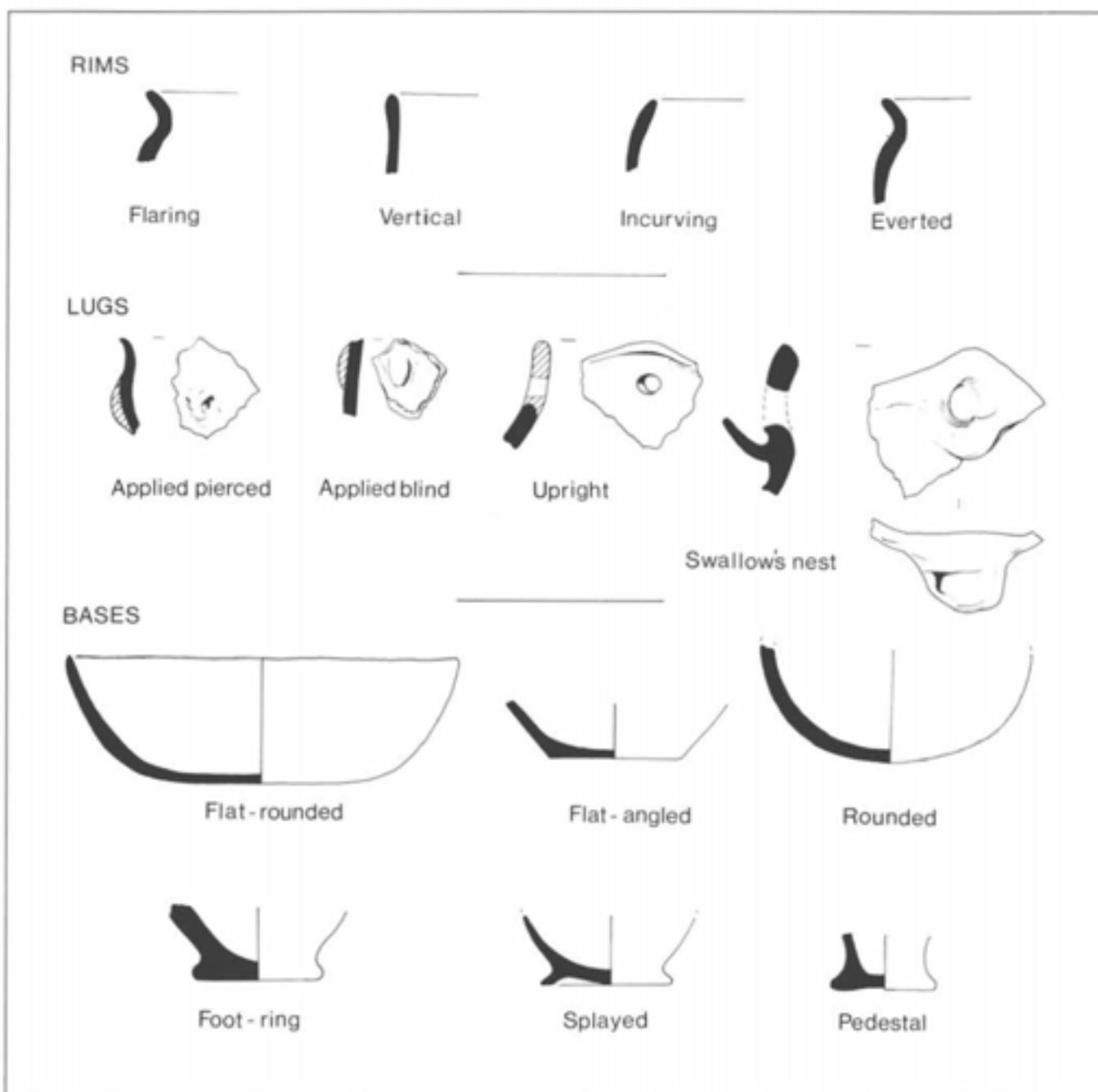


Fig 26 Pottery form parts

'swallow's nest' lugs shows any clear patterning, indicating a sixth- or seventh-century date.

General developments in pottery form

Despite the fragmentation and irregularity of the Anglo-Saxon pottery from the Mucking settlement, certain trends in pottery forms are discernible. A chart (Fig 27) of the pottery forms in 20 *Grubenhäuser* (nine containing datable finds, the remainder broadly datable by their topographical position) reflects some of these.¹²

The highest proportions of carinated and biconical forms occur in the southernmost, fifth-century, part of the site, suggesting that the production of these forms had dropped off sharply by the seventh century. Faceted carinated bowls are considered to be amongst the most diagnostic pottery types of the early Anglo-Saxon period, and are conventionally dated to the first half of the fifth century, on the basis largely of the work of Myres (Jones *et al* 1968, 225ff) and Schmid (1969, 138). Over 40 such bowls were recovered from the Mucking settlement, but only one (well dated by associated grave goods to the early fifth century) came from the cemeteries (Evison 1981b, figs 4, 5).

This striking contrast suggests that these bowls were not generally considered suitable for funerary purposes, at least at Mucking. Indeed, they display the opposite pattern to that of bossed vessels, which are largely confined to the cemeteries, as noted below (p 45). Both the southerly distribution of faceted carinated bowls within the settlement and the composition of the assemblages in which they occur confirm a predominantly fifth-century date (Fig 28). Fragments of up to eight such bowls (one of which is largely complete, Fig 181.4) come from the central and north-eastern areas of the settlement. Only one of these outliers comes from a *Grubenhäuser*, however (GH 166, Fig 163.4), which also contained a fragment of a claw beaker and a button brooch, dating the structure firmly to the sixth century (Fig 163.1, 2). The remaining sherds (four of which could derive from the same vessel) are from the late fill of the North Enclosure. The *Grubenhäuser* from this area, how-

ever, have produced almost exclusively sixth- and seventh-century finds, which suggests that faceted carinated bowls may have continued in use, although not necessarily in production and certainly in greatly diminished numbers, beyond the fifth century (see, however, the discussion of the North Enclosure above, p 19).

There is growing evidence, particularly from the continent, in support of a revised dating for faceted carinated bowls, summarised by Jan Lanting in his report on the Dutch settlement at Eursinge, Prov Drenthe. Eursinge produced a faceted carinated bowl with two horizontal grooves on the shoulder, essentially identical to the type found at Mucking and elsewhere in England (Lanting 1977, fig 13.19). It was found in an 'oven pit' which yielded a calibrated radiocarbon date of AD 430–550. The date range of the house with which the pit is associated, again based upon calibrated dates, is AD 445–640 (J Lanting, pers comm, 1986). Based both upon these results and upon the house types from the site, a date for these features and their contents before the mid fifth century is unlikely. Excavations at the settlement of Odoorn (Prov Drenthe) in 1977 produced a biconical bowl with faceted carination and stamped decoration (BAI Groningen, Odoorn 1977, no 33 WP11). Radiocarbon samples from the earliest settlement phase at Odoorn yielded a date range of AD 540–600, which is further supported by the house-types present (J Lanting, pers comm, 1986).¹³

Late examples of faceted carinated bowls are also known from England. A female inhumation from the cemetery at Guildown, Surrey, contained a stamped, faceted carinated bowl decorated with swags below the carination, associated with two sixth-century square-headed brooches (Lowther 1931, pl XVII.7; Myres 1977a, *Corpus* no 154). A further late example came from Grave 4758 from the cemetery at Springfield Lyons, near Chelmsford, which contained a simple faceted carinated bowl associated with, amongst other items, a pair of small-long brooches, each with a 'horned' head plate and lozenge-shaped foot, which Welch dates to the late fifth or early sixth century (Welch 1983, 68–9; Tyler 1987, 18, figs 13.4, 15.5–6).

Not only did faceted carinated bowls remain in use,

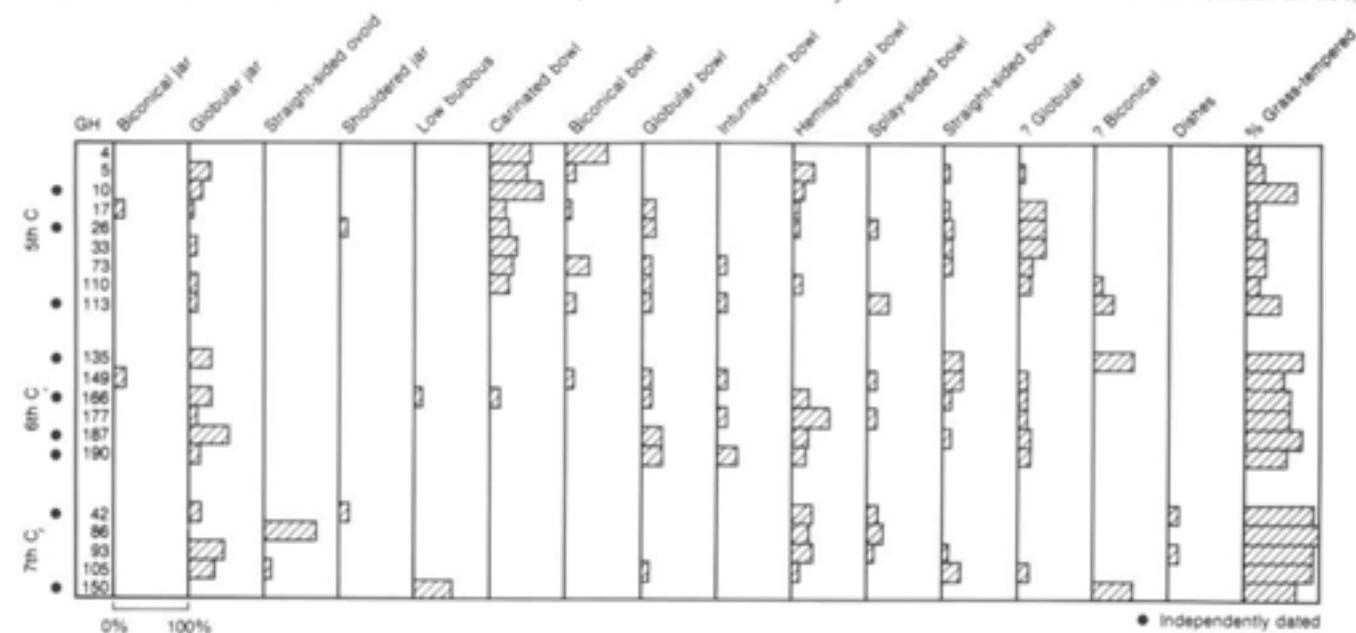


Fig 27 Percentages of grass-tempered sherd groups and pottery forms

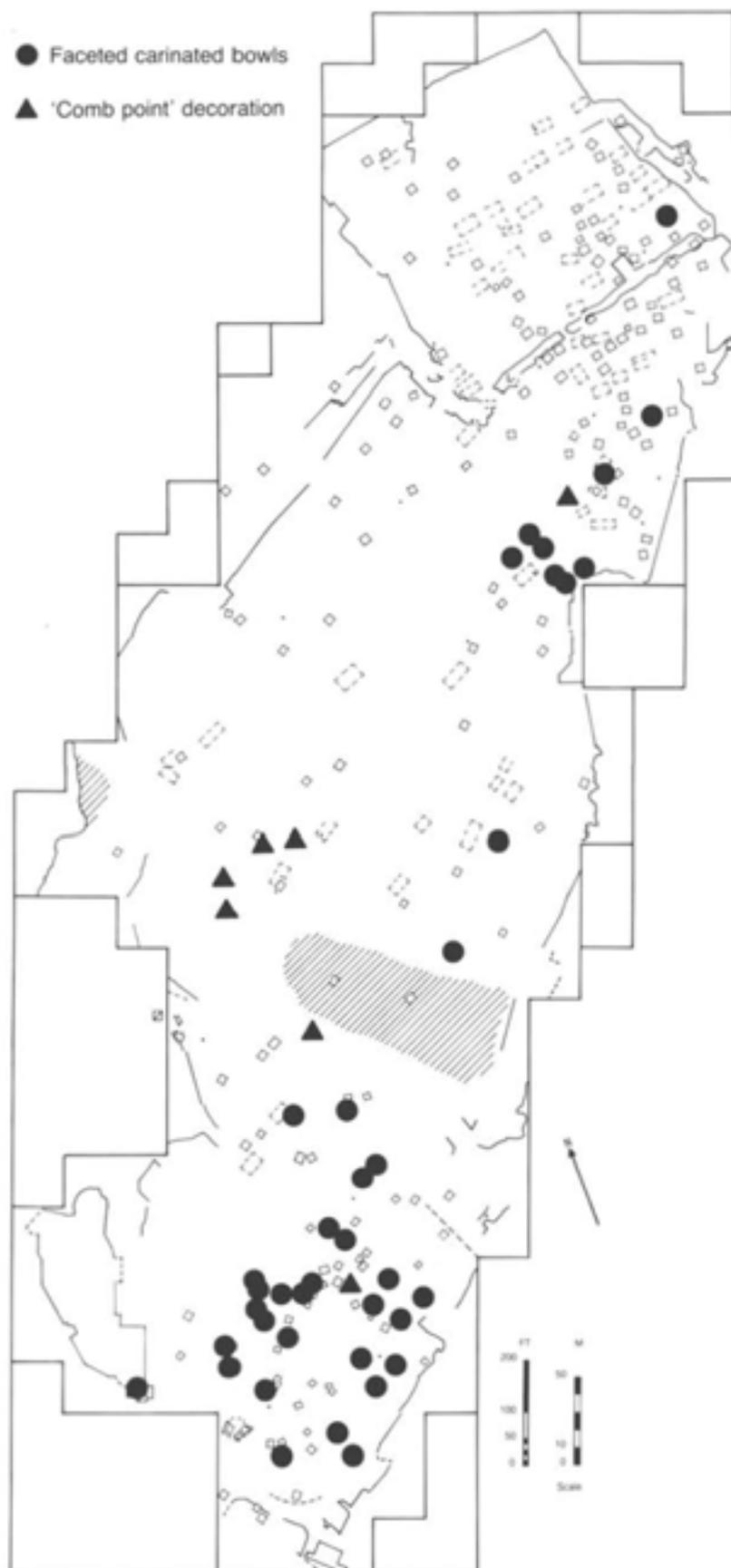


Fig 28 Distribution of faceted carinated bowls and 'comb point' decoration

and probably in production, beyond the first half of the fifth century, but they were geographically more widespread than is generally appreciated. A number are known from the Frisian terps, such as Ferwerd. The fabric of the Frisian bowls is generally distinctive however, being invariably black and highly polished, and there are further differences: the facets are often round rather than oval, and there is frequently additional ornamentation (eg the bowl from Dronrijp, Gem Menaldumadeel, Fries Museum 49A/459). A bowl from the terp at Ezinge, however (Groningen Museum no 1927/241 VII), is essentially indistinguishable in form, fabric, and decoration from the Mucking examples. Indeed, examples of faceted carinated bowls are known from throughout the 'Elbgermanischen Kreis', and occur not only within the *Nordseegruppe*, but in central Germany, Austria, and lower Bavaria (Springer 1985, 237). While these also tend to be dated to the fifth century, the cemetery of Elstertrebnitz, Kr Borna, produced a faceted carinated bowl which is essentially identical to the type found at Eursinge and at Mucking. The grave contained, in addition, a bronze buckle and silver earrings. Mildenerger (1959, 25-6, Abb 11-15) dates these finds, and indeed the whole cemetery, to the first half of the sixth century.

In contrast to the carinated and biconical forms, straight-sided ovoid forms did not come into their own until the seventh century (Fig 27), although a small number derive from earlier contexts. The handmade 'Middle Saxon' pottery assemblage from Maxey, Northants, for example, is made up primarily of straight-sided and oval forms (Addyman 1964). The overall ratios of all other forms at Mucking, and that of jars to bowls, remain roughly the same throughout the fifth to seventh centuries.

Figure 29 shows the average rim curvature in 19 *Grubenhäuser* of established date. As the value of C (curvature), which is calculated by dividing rim length (L) by rim depth (D), increases, the curvature becomes less pronounced (Löbert 1982, 27, Abb 4). The results reflect the tendency of rims to become shorter and more upright through time, and confirm Myres' observation that vessels with a distinctly hollow neck appear most commonly in the fifth and early sixth centuries.

The dispersed distribution of a few distinctive rim-types, such as those which have been deliberately trimmed and flattened, does not suggest chronological significance. The pottery is too fragmentary to allow questions as to whether these rims were restricted to particular forms.

Form and function

No detailed analysis of the relationship between pottery form and function was undertaken. The fragmentation of the assemblage would greatly complicate such a study, and the destruction of floor levels makes the micro-distributional analysis needed to define activity areas impossible. Residue analysis might prove more useful, but is itself subject to numerous complications and limitations. For example, does the residue being examined consist solely of the same food which was repeatedly cooked in the same pot, or is it the end result of a variety of concoctions?

Perforated vessels especially invite examination of

the relationship between form and function. Fragments of at least 50 such vessels were distributed across the settlement. Their rims are either flat-topped or flaring in such a way as to allow the vessels to remain stable when inverted. Apart from this shared characteristic, however, the vessels display a variety of forms, including hemispherical, straight-sided, and globular bowls. They thus may not represent a single type with one specific function, as is often assumed on the basis of the complete example from Sutton Courtenay, Berks, interpreted by Leeds (1926-7, 72, pl VI, figs 2, 10) as a 'brazier'. None of the Mucking examples displays certain signs of secondary firing, which casts doubt on the suggestion that they were used as 'woolcomb warmers' (Jones 1975b). Their function remains problematic. Although numerous examples of perforated vessels are known from this country (Jones 1975a), there are few published examples from the continent: one from the site of Heumarschdamm, near Bremen (Brandt 1965, Abb 7) and several from settlements in Gotland, Sweden, and Bornholm, Denmark where, it has been suggested, they

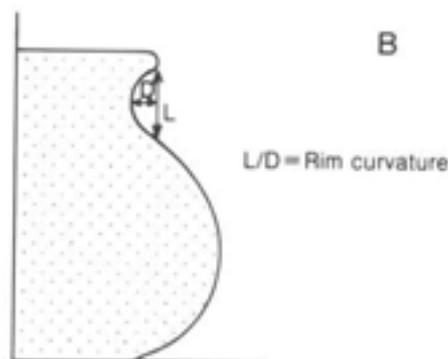
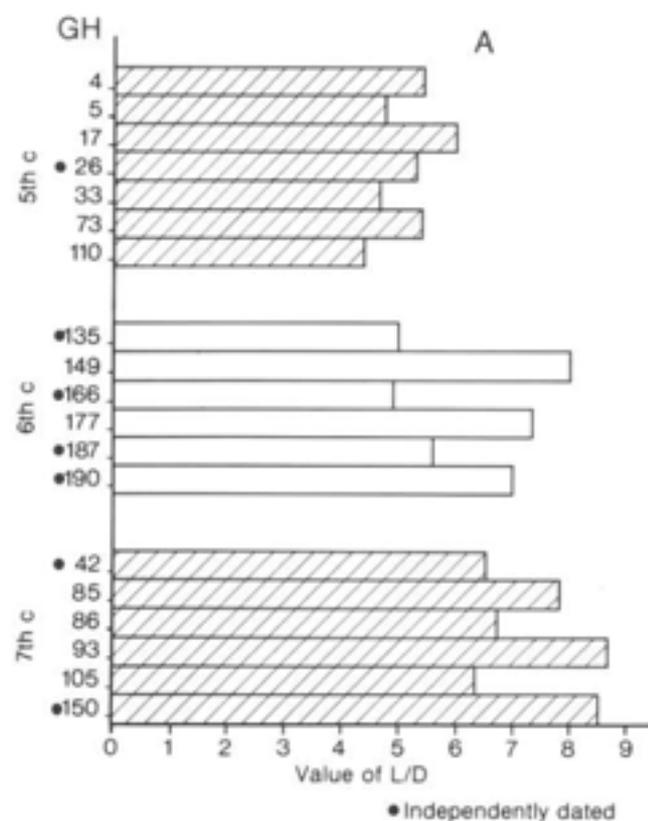


Fig 29 Average rim curvature in *Grubenhäuser* of varying date

were used in cheese production (Stenberger 1955, 1118, fig 47; Klindt-Jensen 1957, fig 111.4).

Decoration

Myres classified the decorative repertoire of the Anglo-Saxon potter according to decorative elements (plastic, linear, and stamped) and decorative schemes (horizontal, biconical, curvilinear, rectangular, vertical, diagonal, and triangular) (Myres 1969; 1977a). Myres himself acknowledged the extensive 'hybridisation' of these schemes, and the difficulty of classifying even complete vessels according to them, owing to the variability and irregularity of early Anglo-Saxon pottery. Even more so then, because of its fragmentation and the consequent paucity of complete decorative schemes, must the analysis of settlement pottery rely on the presence, absence, and distribution of individual plastic, linear, and stamped elements.

The decorated pottery from the settlement is discussed here with few references to the more than 300 vessels from Cemetery II (only two pots were recovered from Cemetery I) which are yet to be analysed. Analysis of the cemetery pottery will almost certainly modify conclusions drawn here regarding the chronological development of certain decorative elements. Few urns contained closely datable finds, however, so that the evidence from the settlement may prove to be more conclusive than what may be inferred from the Cemetery II pottery.

Distributions of decorative elements

The pitfalls of considering a decorative style or motif as chronologically or ethnically diagnostic in the study of Anglo-Saxon pottery are often warned against (Schmid 1982a, 657–8), but rarely circumvented (eg Vierck 1976, 51). In the case of Mucking, the risks are worth taking, for the distribution of decorated pottery across the settlement is highly suggestive of chronological development. The distributions of various decorative elements discussed below include pottery from all settlement contexts, not only from *Grubenhäuser*.

Raised cordons applied to pottery vessels could be faceted (eg GH 30, Fig 97.3), slashed (GH 5, Fig 84.16), or left plain to create a plastic effect (GH 4, Fig 83.4), and their distribution centres on the southern third of the site (Fig 30). The distributions of what Myres has called 'line and groove decoration' (eg GH 40, Fig 104.10), 'line and dot decoration' (eg GH 26, Fig 96.20), and 'corrugation' (eg GH 33, Fig 99.16) are similarly focused on the southern half of the site, confirming his suggestion that these are primarily decorative styles of the fifth century (Myres 1969, 30–1).

Bossed pottery does not display such a clear pattern, since examples are scattered throughout the fifth- and sixth-century sectors of the settlement (Fig 30). Only approximately 3% of the decorated pottery from the settlement is bossed. This contrasts with the cemetery assemblage, where preliminary examination shows that some 35% of the decorated pottery is bossed. The fact that the Mucking settlement produced so few sherds of bossed pottery led Myres and Schmid, writing before excavation was complete, to suggest that occupation of

the settlement was restricted to the first half of the fifth century, before the popularity of *Buckelurnen* peaked in the latter part of that century (Jones *et al* 1968, 222; Schmid 1969, 136, 140). It is now clear that the paucity of bossed pottery from the settlement is due not to the date of such pottery but rather to its function.

Seven sherd-groups decorated with so-called 'comb-point' impressions have been recovered from the Mucking settlement.¹⁴ Their distribution is suggestive of a predominantly seventh-century date for this distinctive style of decoration (see Fig 28). Similarly decorated pots come from Rainham and Stanford-le-Hope, both in Essex (Evison 1955, 170, fig 7.3). Continental examples include an accessory vessel from the cemetery of Berensch, eight miles south-west of Cuxhaven in Lower Saxony, dated to the eighth century by associated grave goods (Waller 1936, 229–30, Taf 1). 'Comb-point' decoration was also found in the eighth-century resettlement phases of the Feddersen Wierde (Schmid 1986). These and other examples all suggest a primarily seventh- to eighth-century date for 'comb-point' decoration (Myres 1977a, 353–4, fig 362).

Pottery stamps¹⁵

At least 160 different pottery stamps have been identified from the Mucking settlement. These are illustrated at a scale of 1:1 in Figs 31–35, arranged according to Briscoe's pottery stamp classification (1983). The most common stamp from the settlement is the A1 motif (simple dots and circles), of which about 40 were recorded.¹⁶ The next most common motifs are 24 A5 motifs (segmented circles and rosettes) and 13 A4 motifs (circles with crosses). Seven examples of the rare H2 (segmented 'S') stamp come from the settlement, in addition to the five from Cemetery II. The Mucking assemblage also contains an unusually large number of G2 (segmented crescent) stamps: eight from the settlement and at least five from Cemetery II. Grid stamps are, somewhat surprisingly, rare.

Despite the size of the settlement assemblage, only one certain and five possible stamp links (different vessels decorated with the same die) have emerged (Table 6). Only three certain stamp links between the pottery from the settlement and Cemetery II have so far been identified. Microscopic examination of stamp impressions might, of course, reveal additional stamp links, particularly amongst the simpler, more common types.

As noted above, the Anglo-Saxon pottery assemblage from Mucking contains an exceptional number of G2 and H2 stamps. While H2 (segmented S-shaped) stamps are rare in continental assemblages, three close parallels

Table 6 Visually identical pottery stamps

Motif	Context
A4	GH 1.7 visually identical to GH 9.15
H2	GH 135.11 (incomplete stamp) visually identical to pit 1002.2
G2	GH 135.11 visually identical to GH 140.5 and pit 11359.6
A2	GH 60.12 visually identical to GH 61.12; may be from the same pot
H2	GH 166.3 visually identical to North Enclosure 61 and GH169.3

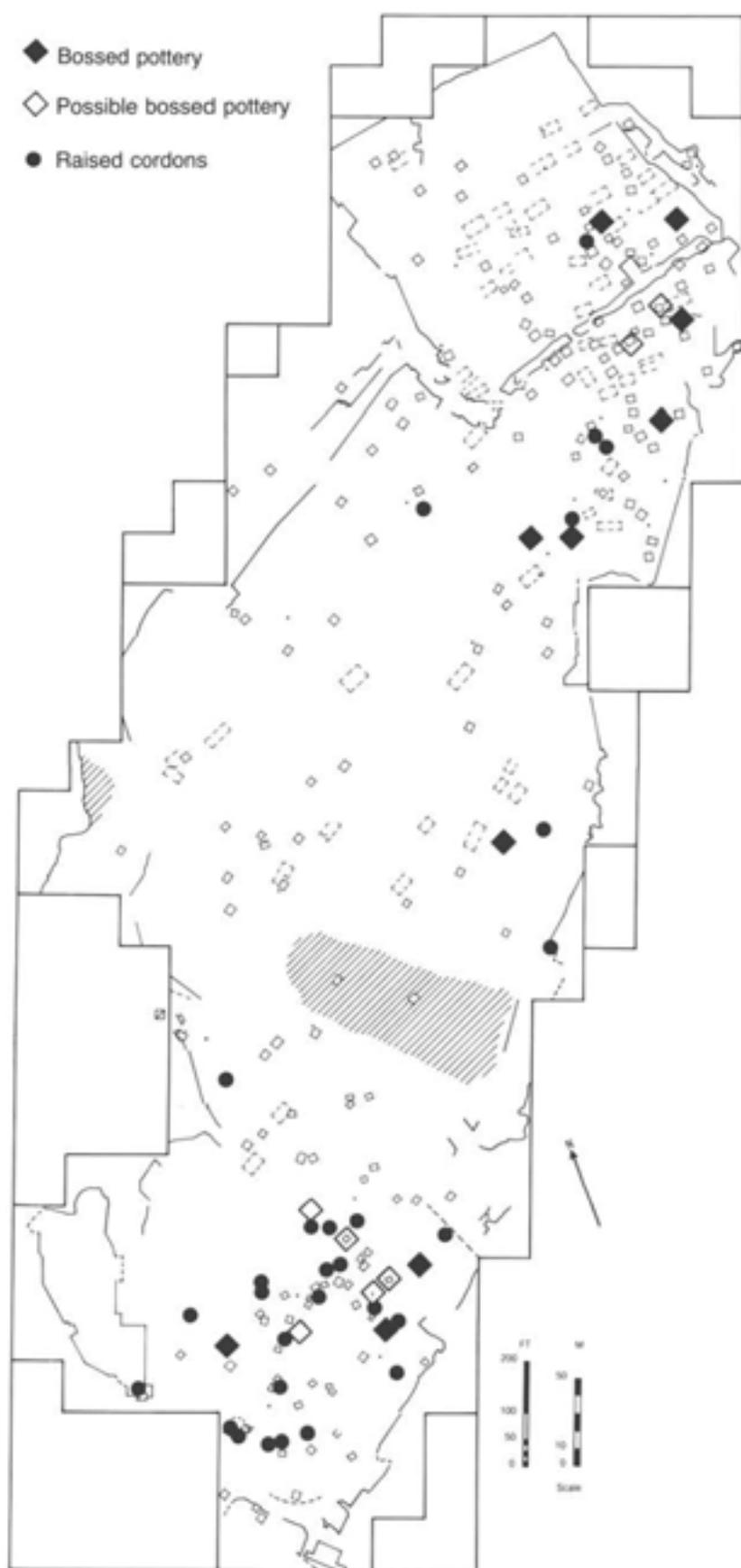


Fig 30 Distribution of bossed pottery and raised cordons

A1 SINGLE CIRCLES



A2 MULTIPLE CIRCLES

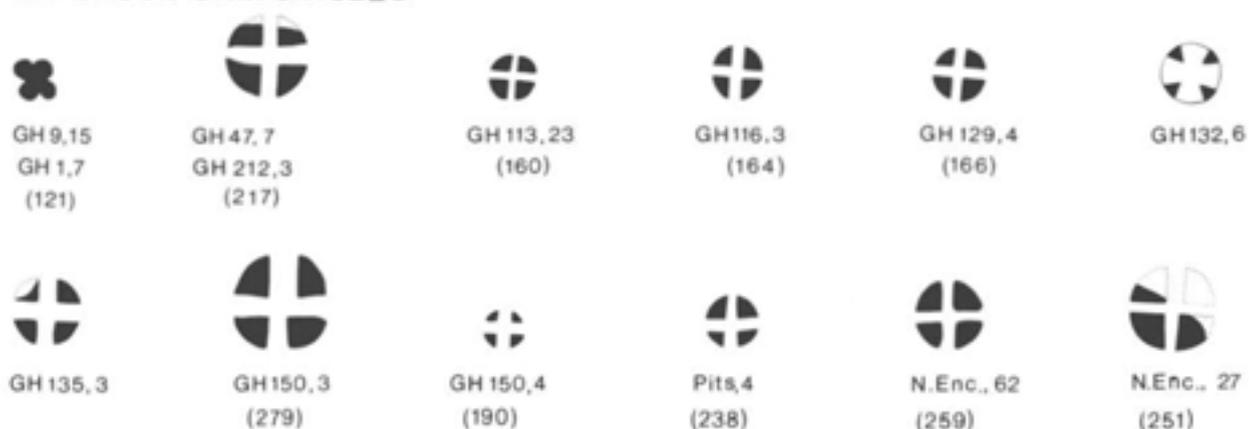


A3 GRID CIRCLES



Fig 31 Anglo-Saxon pottery stamps

A 4 CRUCIFORM CIRCLES



A5 ROSETTE AND SEGMENTED CIRCLES

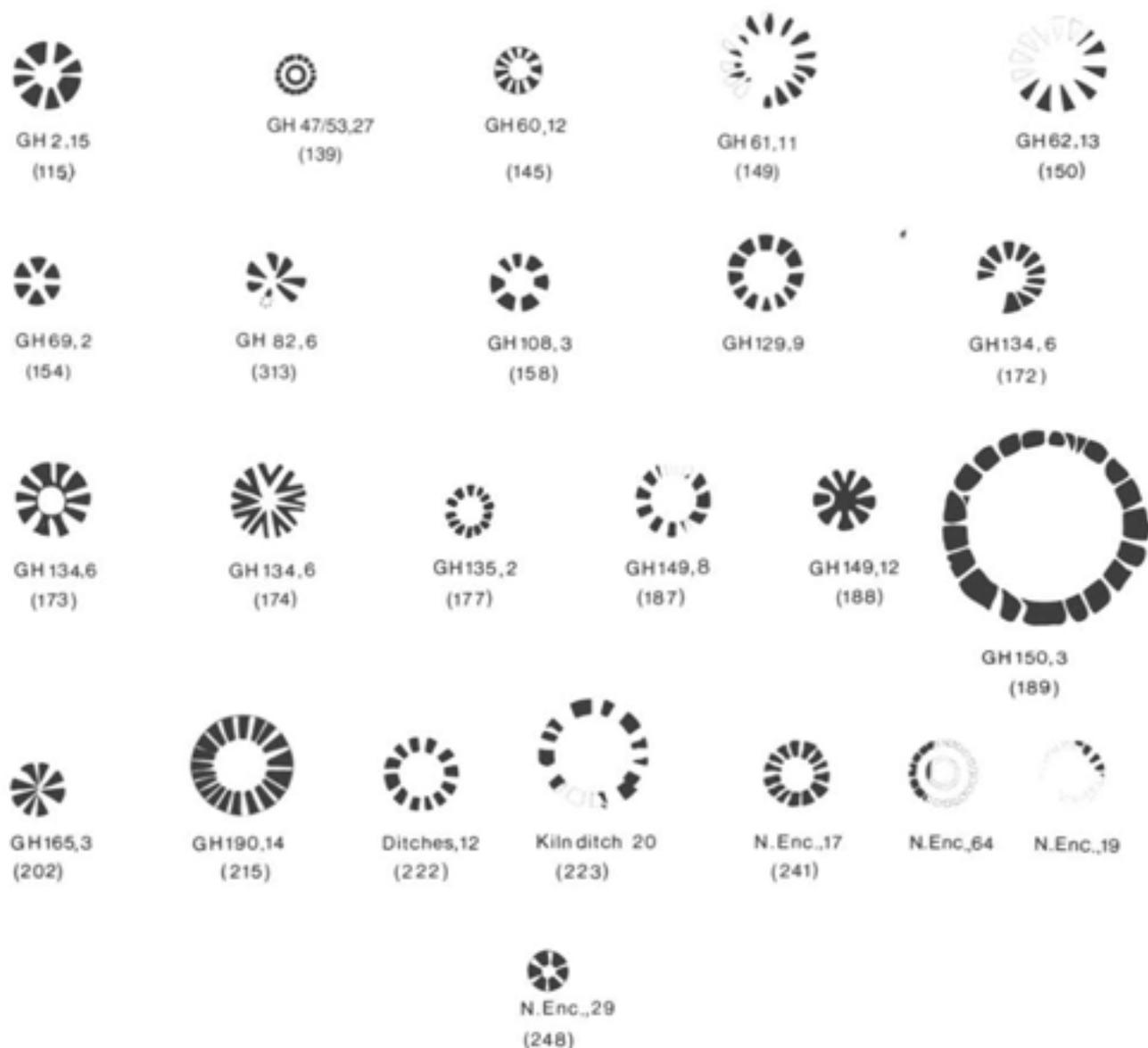


Fig 32 Anglo-Saxon pottery stamps

A7 'FLOWER' MOTIFS

GH93,4
(314)GH168,7
(205)Ditches,6
(267)N Enc., 17
(240)GH149,13
(185)

B2 OUTLINED CROSSES

GH57,22
(143)GH135,8
(178)GH135,14
(180)GH162,2
(199)GH166,3
(280)Unstrat, 3
(269)N Enc., 20
(233)North Enc.,61
(254)B3 SEGMENTED
CROSSES

GH134,6

GH28,4
(304)GH135,3
(181)GH153,2
(316)Kiln ditches 21.
(264)GH108,4
(156)GH190,10
(213)Pits, 5
(216)

C1 PLAIN RECTANGLES

GH28,4
(304)GH135,3
(181)GH153,2
(316)Kiln ditches 21.
(264)GH108,4
(156)GH190,10
(213)Pits, 5
(216)

C2 GRID RECTANGLES

GH108,4
(156)GH190,10
(213)Pits, 5
(216)

C3 CRUCIFORM RECTANGLES

GH10,8
(122)GH172,1
(209)Postholes,2
(256)Unstrat,7
(260)Ditches,12
(221)N Enc.,63
(225)Pits,19
(257)C4 SEGMENTED
RECTANGLESGH32,13
(134)GH55,10
(140)GH62,6
(151)

GH149,6

Pit 1002,2
(219)

D1 PLAIN OVALS

Fig 33 Anglo-Saxon pottery stamps

D2 GRID OVALS

GH 7,10
(119)GH 29,4
(132)GH 134,8
(171)

D4 CRUCIFORM OVAL

GH 20,1
(128)

E1 PLAIN TRIANGLES

GH 129,9
(287)Kiln ditches 17
(262)

E2 SEGMENTED & GRID TRIANGLES

GH 113,27
(163)GH 134,8
(170)

Ditches,10

F2 GRID DIAMONDS



Ditches,8

G2 SEGMENTED CRESENTS

GH 17,6
(126)GH 39,3
(137)

G2(continued)

GH 63,16
(152)GH 108,3
(159)GH 135,11
(179)

GH 140,5

Pit 11359,6
(245)GH 148,3
(184)GH 162,2
(201)

H1 PLAIN & OUTLINED 'S' SHAPES

Pit 11359,6
(244)GH 155,6
(192)

H2 SEGMENTED 'S' SHAPES

GH 135,11
(176)

GH 135,12

GH 162,2
(200)

H2(continued)

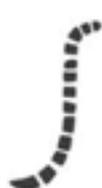
GH 166,3
N. Enc.,61
? Pits,14
(203)GH 169,3
(206)GH 177,17
(210)GH 190,14
(214)Pit 1002,2
PHB 16,3
(218)Postholes, 3
(258)

Fig 34 Anglo-Saxon pottery stamps

come from south-east England, the first from Risely, Kent, the second from Northfleet, and the third from Croydon (Myres 1977a, *Corpus* nos 1051, 347, 336). Type G2 (segmented crescent) stamps are less common in this country, particularly those of the type found in GH 135, 140, and 141 (Briscoe's type G2bii), although similar examples are found on the same pot just cited from Risely, as well as from Northfleet (Maidstone Museum no 15), Newark, Notts, Alfriston, Sussex, and Worthy Park, Hants (Myres 1977a, *Corpus* nos 1208, 12, and 1194). The cemeteries of Wehden and Westerwanna in Lower Saxony have produced at least seven seemingly close parallels for these G2bii stamps, although the quality of the published illustrations casts doubt on the reliability of details such as stamps (Waller 1961, Taf 36.299, 558 and Taf 27.121; Zimmer-Linnfeld *et al* 1960, nos 101, 851, 1375, 1477). The settlement of Bremen-Grambke II also produced a G2 stamp very similar to the Mucking examples (Witte 1991), as have the cemeteries of Bremen-Mahndorf and Bremen-Brinkum (Grohne 1953, Abb 30.B). It may be significant that on the Risely pot, the two urns from Kingsworthy, two pots from Loveden Hill in Lincolnshire (Myres 1977a, *Corpus* nos 1300, 1306), and at least one sherd group from the

Mucking settlement both 'S'-shaped and crescent-shaped stamps occur together on the same pot.

The Mucking settlement also produced two unusual E2 (grid triangle) stamps. The sherd group illustrated in Fig 185.10 (1257N 562E) is decorated with a stamp virtually identical to one from Caistor by Norwich (Myres 1977a, *Corpus* fig 177.1830). The second E2 came from GH 134 (Fig 151.8) and is most closely paralleled on a pot from Northfleet which, like the Mucking example, was made in a 'smooth, brown-grey ware' (Myres 1977a, *Corpus* no 345).

Lady Briscoe has noted similarities between a number of the Mucking stamps and those from the Darent Valley sites of Darenth Park, Horton Kirby, Otford, Risely, and Orpington, and a possible stamp link between Mucking and Northfleet (Myres 1977a, *Corpus* nos 3836, 346). Virtually all of the vessels in question derive from the Mucking cemeteries, however, and so will not be discussed in detail here.

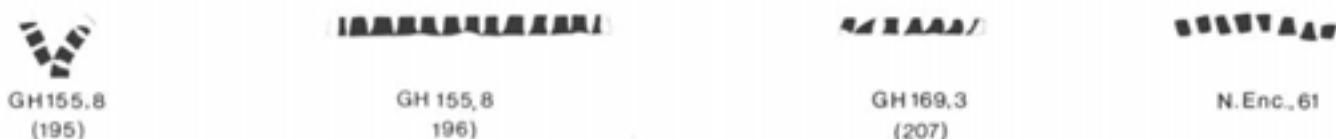
General trends in decoration

Approximately 5% of the sherd groups from the Mucking *Grubenhäuser* are decorated. The average percentage

KI ANIMAL FORMS



N1 SEGMENTED LINES



UNCLASSIFIED



Fig 35 Anglo-Saxon pottery stamps

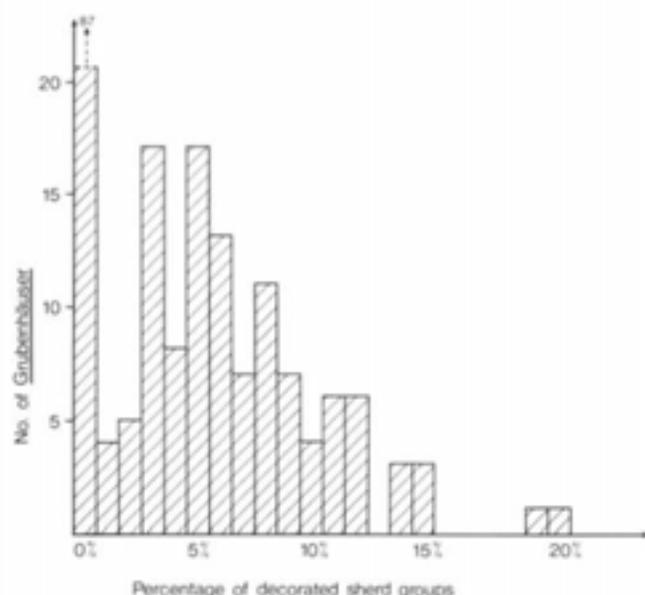


Fig 36 Percentages of decorated sherd groups from *Grubenhäuser*

of decorated sherd groups per *Grubenhäuser* is 3.7%. Eighty-seven huts (41%) contained no decorated pottery, while the highest percentage of decorated sherd groups (21%) came from GH 135, which probably dates to the first half of the sixth century.¹⁷ As shown in Figure 36, the distribution of percentages of decorated sherd groups peaks between 3% and 5% per *Grubenhäuser*.

Within these overall statistical parameters, several spatial and chronological trends are apparent. The bar chart shown in Figure 37 indicates the percentage of decorated sherd groups which are stamped in 12 securely dated *Grubenhäuser* and reveals a marked increase in the proportion of stamping to other forms of decoration in the sixth and seventh centuries. This increase in the popularity of stamping is expressed spatially in Figure 38, which shows how assemblages in which stamping predominates lie primarily to the north-east. This trend in the popularity of stamped decoration has previously been noted by Myres (1969, 34–5), but this is the first time that his hypotheses have been tested on a settlement assemblage of this size.

While the popularity of stamping increases, Figure 39 reveals an overall decrease in the proportion of decorated to undecorated pottery in sixth- and seventh-century assemblages. This is reflected spatially in Figure 40, which shows the highest concentrations of decorated pottery in the south, with a virtual absence of decoration along the inland (western) edge of the site, with the exception of a small pocket of decorated pottery around PHB 53. The *Grubenhäuser* from this inland area also contained relatively little pottery (Fig 13), but produced a number of seventh-century artefacts (Fig 3).

At West Stow, the overall percentage of decorated pottery is a mere 2%, a figure which includes rusticated pottery (West 1985, 128). Russel (1984, 552) has compiled the percentages of decorated pottery for a further ten East Anglian settlements, ranging from 0%–14%, with an average of 7.5%. Most of these assemblages are very small, however. One comprises the pottery from just one *Grubenhäuser*, and the two assemblages with the highest proportions, Grantchester and Snettisham, come from poorly recorded excavations, where collec-

tion was likely to have been biased in favour of decorated pottery. Of the pottery recovered from the presumably sixth-century settlement of Willington, Derbs, 6% was decorated (Wheeler 1979). Mucking, where 5% of the settlement pottery is decorated, thus falls into the middle range of settlement sites in this respect.

In her study of the pottery from Anglo-Saxon settlements in the Upper Thames valley, Berisford (1973, 163) notes that what little decorated pottery there is comes from those *Grubenhäuser* with the lowest percentages of grass tempering, that is to say the earliest huts. On the continent, the 'late Saxon' (c eighth-century) settlements of Bremen-Arbergen and Uphusen in Lower Saxony produced virtually no decorated pottery. At the settlement of Vorbasse in south central Jutland, a decline in the amount of decorated pottery from sixth- and seventh-century contexts is also apparent (S Hvass, pers comm, 1986). This is entirely in accordance with the trends observed in England.

Myres (1969, 34) concludes his discussion of the 'three main decorative elements' of Anglo-Saxon pottery – lines, plastic decoration, and stamps – with this assessment: 'whereas all three may be found throughout the period of settlement, there is a change of character and emphasis in the use of each as time passes'. The truth of this statement has too often been ignored in favour of absolute chronological and ethnic attributions for decorative styles. Myres' thesis that variation of decorative elements over time is generally not absolute, but proportional, is confirmed by the Mucking assemblage and may also be applied to fabric, surface treatment, and form. The presence or absence of an attribute is, therefore, rarely in itself an indicator of date; only when its relative proportion to other types within a context and within the ceramic sequence is assessed can its real significance be weighed.

The interrelationship of pottery attributes

The pottery of early Anglo-Saxon England does not

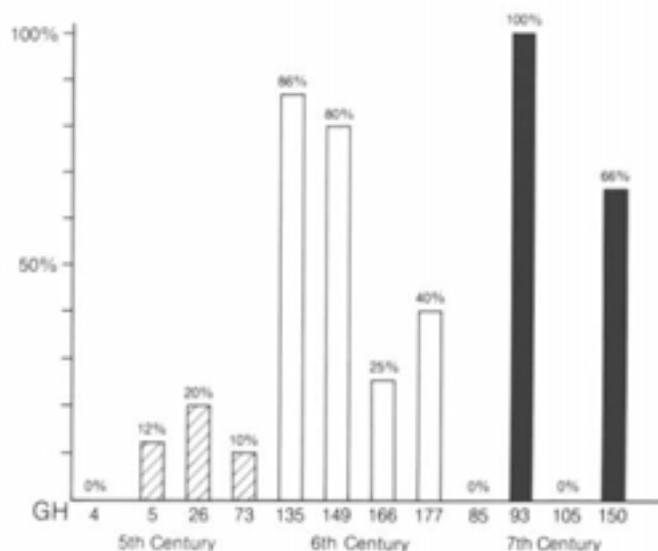


Fig 37 Percentage of decorated sherd groups which are stamped

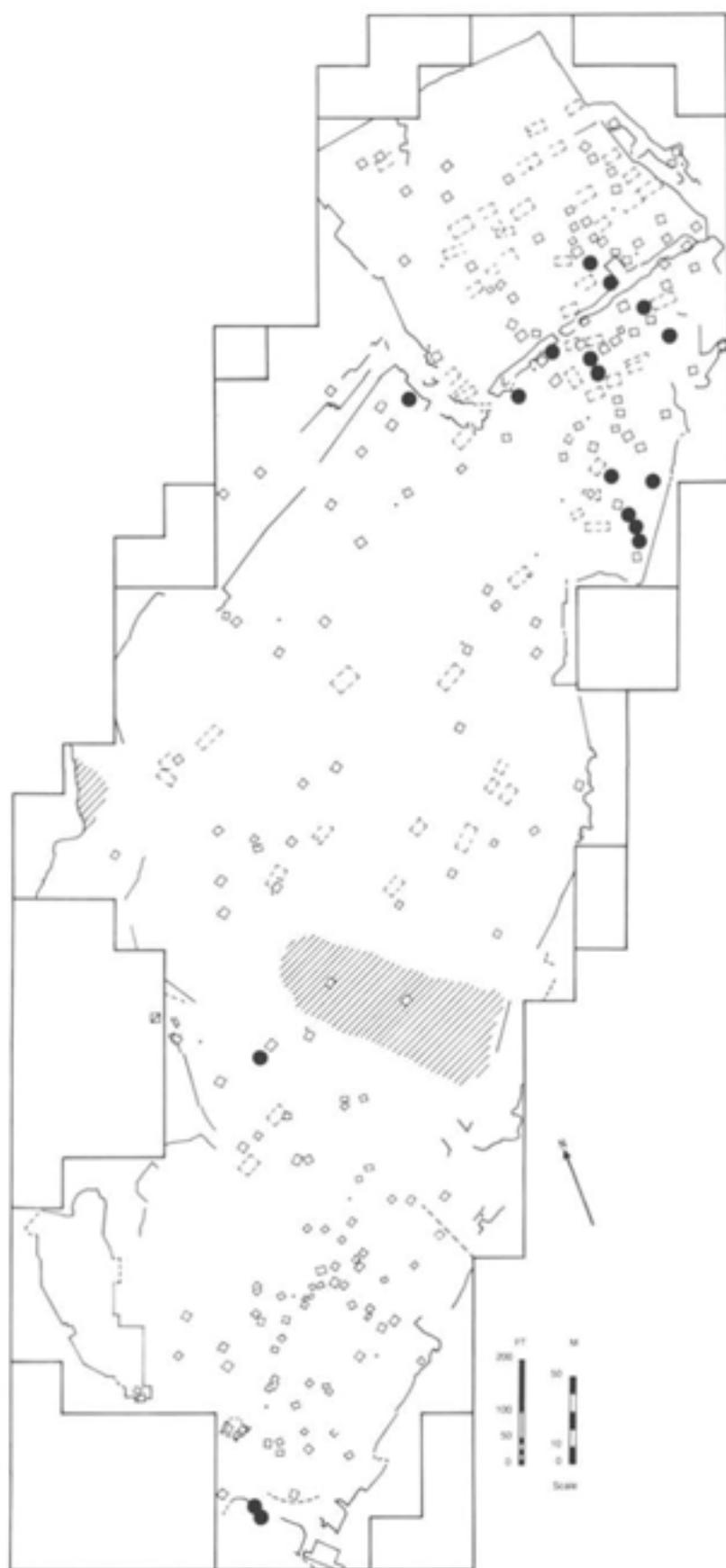


Fig 38 *Grubenhäuser* in which over 50% of decorated pottery is stamped

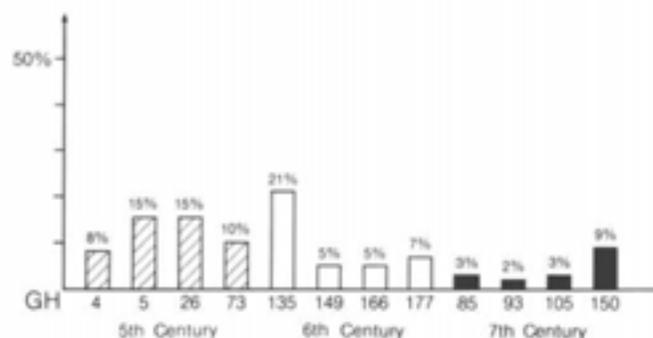


Fig 39 Percentage of decorated sherd groups in 12 *Grubenhäuser* of established date

comprise standardised 'types' defined by the repeated co-occurrence of a particular type of decoration or surface treatment with a particular type of form or fabric (faceted carinated bowls forming a notable exception). Nevertheless, significant associations between attributes do exist, and these are considered below.

Surface treatment and fabric¹⁸

The percentage of coarse-slipped sherd groups which are grass-tempered is far lower (*c* 7%) than for the assemblage as a whole (*c* 49%); it is significantly lower even than the average proportion of grass-tempered sherd groups in the earliest *Grubenhäuser* assemblages. This discrepancy may in part be a reflection of the early date of coarse-slipped pottery, as the proportion of grass-tempered pottery is lowest in the fifth century, but must also be related to the function of the vessels, which was perhaps primarily for storage and transport rather than for cooking.

Of 70 sherd groups with a 'combed' outer surface, only 13 (19%) were grass-tempered, probably a reflection of their predominantly early date. This contrasts with a considerably higher proportion (35%) of grass tempering for rusticated sherd groups. As noted above (p 37), pottery with pinched rustication remained in use longer, and died out more gradually, than did combing; this chronological difference is the most likely explanation for the differing proportions of grass-tempered fabrics.

Surface treatment and form

Because of the highly fragmentary nature of the settlement pottery assemblage, it is difficult to relate surface treatment to vessel form. What is apparent from the small number of relatively complete vessels which have been roughened in some way is the virtual absence of any biconical or carinated forms. Three globular vessels, one ?shouldered jar, two hemispherical bowls, one of which may have had upright lugs, and one vessel with a crudely applied blind lug comprise the identifiable coarse-slipped forms. The only reasonably complete examples of combing include one, and probably a second, large globular jar, and a globular bowl (GH 57, Fig 115.16; GH 127, Fig 148.1; GH 73, Fig 127.6). The forms with pinched rustication include three plates; all show clear signs of secondary burning, and one has a thick, carbonised crust on its smooth surface (GH 31, Fig 98.5). All plates are heavily grass-tempered, presumably to

increase their resistance to thermal shock. No close contemporary parallels are known, although it seems reasonable to suppose that, like the sandstone discs from Vallhagar, Sweden, which have roughly the same diameter, they were used as griddles for baking flat-bread (Stenberger 1955, 1141, fig 520). A number of fired clay discs from Viking period contexts in the Hebrides with finger-impressed surfaces, random perforations, and grass-marked bases have similarly been interpreted as baking trays (Crawford and Switsur 1977; A Lane forthcoming). A splay-sided bowl, a globular bowl, a biconical bowl, a straight-sided bowl, three flat-angled bases, and four globular jars, all with pinched rustication, complete the assemblage (North Enclosure, Fig 182.43, 47, 36, 39, 42, 45; GH 10, Fig 87.14; GH 19, Fig 94.12; GH 38, Fig 103.5; GH 110, Fig 142.20; GH 127, Fig 148.6).

All these types of surface roughening occur almost without exception on wide-mouthed, relatively large vessels. Six out of the eight such vessels with surviving rims have rim diameters greater than 150mm, which may suggest that they were better suited for food preparation than for storage. This same pattern can be seen at West Stow (West 1985), as well as in the pottery of the pre-Roman Iron Age in Germany, and suggests a functional, rather than decorative, purpose behind combing, pinched rustication, and coarse-slipping (Löbert 1982, 29).

Decoration and form

The same problems which complicate the recognition of pottery forms in a settlement assemblage constrain the evaluation of the relationship between form and decoration, particularly if this is to be based upon quantified comparisons. Certain forms (such as carinated and biconical shapes) are easier to recognise from small fragments than others, and the fragmentation of the assemblage breaks down both forms and decorative schemes. A final complication is that the rim and shoulder of an apparently plain vessel may have had decoration elsewhere on the body. In view of these uncertainties, precise quantification of the proportions of different forms and decorative schemes is impossible. Thus the following 'results' present only the clearest, least ambiguous patterns which have emerged. Study of the cemetery pottery will undoubtedly yield more conclusive findings.

- 1 The most marked correlation between a type of decoration and a particular form is that between faceting and carinated bowls; 95% of faceting occurs on carinated bowls.
- 2 Stamping appears most often on biconical forms: 34% of decorated biconicals are stamped, compared with 17% of decorated globular forms and 6% of decorated carinated bowls.
- 3 Only one sherd from the group of 'simple bowls' (ie hemispherical, straight-sided, inturned rim, and splay-sided bowls) is decorated (GH 34, Fig 100.5).
- 4 Carinated bowls are the most highly decorated form, with 88% bearing some type of ornamentation. By comparison, 57% of identifiably biconical forms and 22% of globular vessels, the most common form, are decorated.¹⁹ All other identifiable forms (with the exception of two straight-sided ovoids) are essentially undecorated.

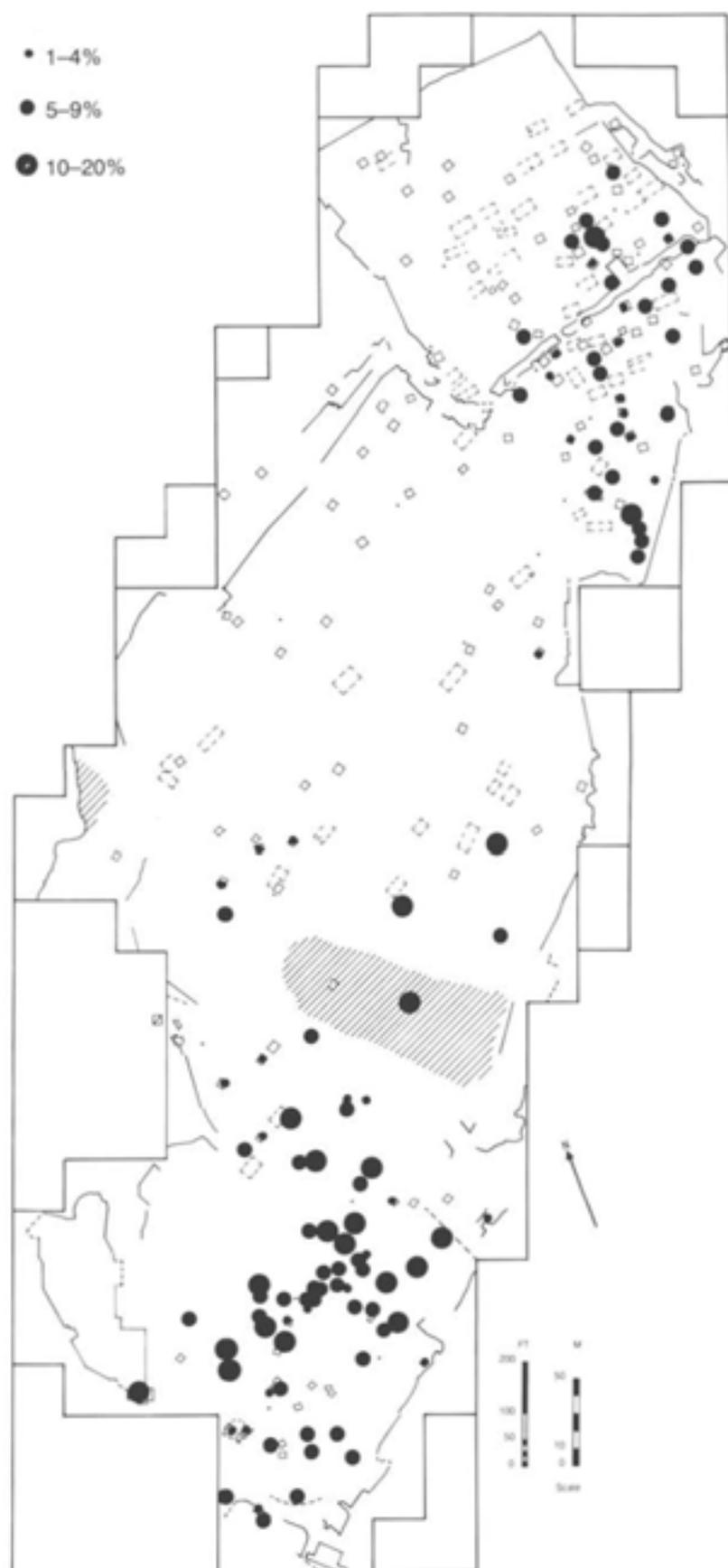


Fig 40 Distribution of Grubenhäuser containing varying percentages of decorated pottery

Decoration and fabric

The primary pattern to emerge regarding the relationship of decoration to fabric is again related to grass tempering: only 19% of decorated sherd groups are grass-tempered, compared with approximately 49% of the total assemblage. This is not to say that only crude, plain vessels are grass-tempered, for this clearly is not the case. The preference for decorating sandy fabrics seems most logically explained by the fact that organic fibres in the clay can mar the surface of a vessel. It is also true, however, that the popularity of grass tempering increases sharply in the sixth and seventh centuries, precisely at the time when decoration becomes less common (Fig 41). Thus, the low proportion of decorated pottery which is grass-tempered may be the result of both chronological and technological factors; decreasing skill in potting could be reflected in the decline of highly decorated pottery and the corresponding increase in the amount of grass-tempered pottery, the former being more difficult to produce, the latter being easier to build and fire.

The few patterns to emerge regarding the relationship of specific decorative styles to fabric also seem to reflect the concurrence of two trends – the prevalence of certain types of decoration with the popularity of grass tempering. For example, five out of seven 'comb-point' decorated sherd groups, which probably date to the seventh century (see above, p 45) are grass-tempered, while only one faceted carinated bowl, a predominantly fifth-century type, is grass-tempered (GH 64, Fig 122.7). Of these bowls, 68% were manufactured in either Fabric 3 or 1c, ie unsorted, sandy fabrics, 11% in Fabric 1a, 6% in an unclassified sandy fabric containing black iron ore, and 3% each in Fabrics 1b, 5, and 7. The remaining 6% cannot

be located. Bossed pottery, while comprising a far smaller group (only ten certain examples), displays greater diversity: four are grass-tempered, two are in an unsorted, sandy fabric, one each was made in Fabrics 4, 5, and 7, and one was made in an unusual, hard, sandy fabric containing felspar (GH 62, Fig 120.3).

Finally, it should be noted that the combination of certain forms, fabrics, and surface treatments find their closest parallels within the same *Grubenhäuser* assemblage, for example the two biconical bowls from GH 73 (Fig 127.20, 25), which suggests manufacture by the same hand and use within the same household.

Pottery comparanda

As Catherine Hills has pointed out (1978), it is much easier to make generalisations regarding regional 'types' for the continental pottery of the fourth and fifth centuries than it is for the more diverse, 'mixed' Migration Period pottery of England. It has become a truism of Anglo-Saxon pottery studies that there are discouragingly few types which are truly restricted in time and distribution. In the vast majority of cases, therefore, it is futile to attempt to pinpoint the continental origins of Anglo-Saxon settlers in England from the style of pottery they produced. A few highly distinctive pieces from the Mucking settlement do, however, merit closer consideration of continental comparanda.²⁰

Pottery assemblages from sites in south-west Jutland such as Darum, Sandbakken, Dankirke, and Drensted contain, not surprisingly, more noticeably 'Anglo-Saxon' components, particularly *Schalenurnen*, than those from the settlements of northern and central Jutland such as Omgård, Vorbasse, or Nørre Snede. On the

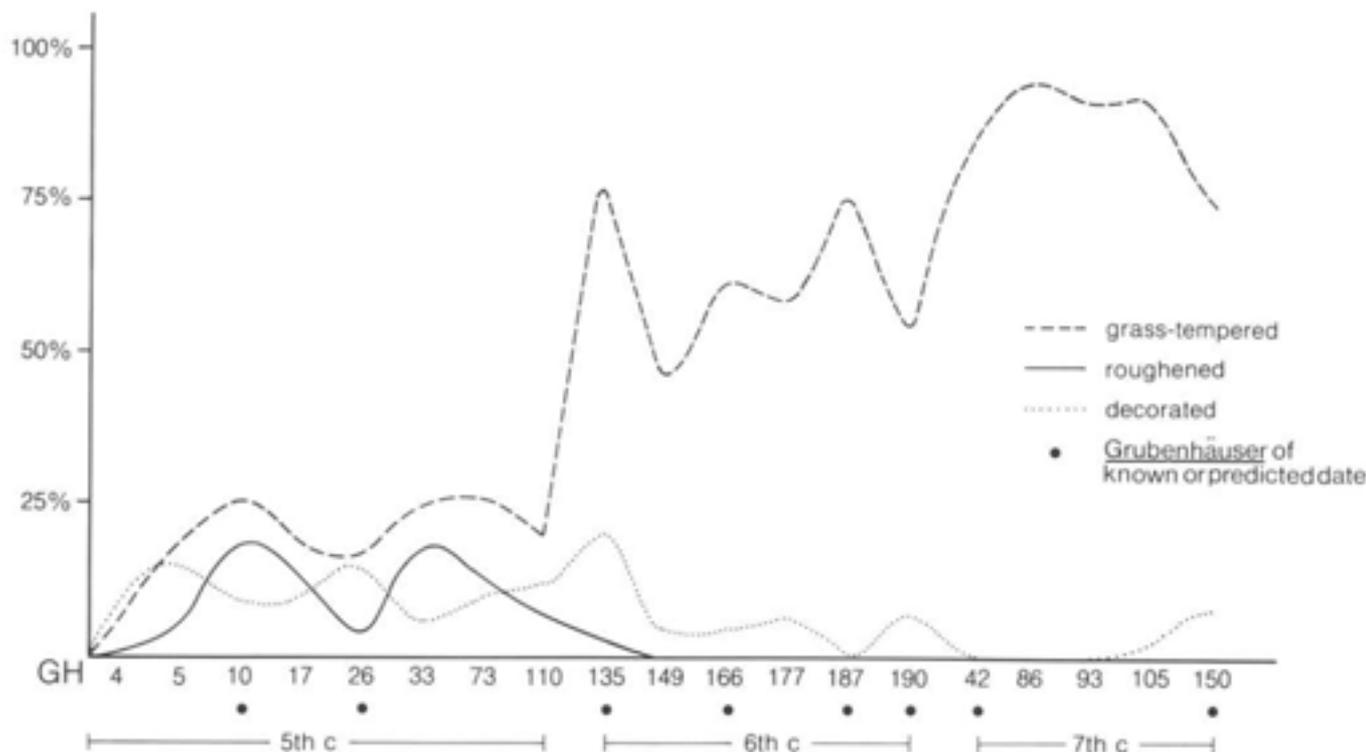


Fig 41 Columnar distribution of grass-tempered, roughened, and decorated sherd groups in *Grubenhäuser* of established or predicted date

whole, however, the decorated pottery of fifth- and sixth-century England has relatively little in common with that of Denmark, apart from a few exceptional parallels, such as those from Canterbury (MacPherson-Grant forthcoming). The little sub-biconical jar from GH 13 (Fig 89.2), to which Myres has already drawn attention (Jones *et al* 1968, 227), has parallels not only from Canterbury and Bulmer, Essex (Myres 1973, 110n), but also from Vorbasse, Darum, Dankirke, and Drengsted (Hamerow 1987a, 1, fig 5.2). The two bossed pots which have been published from Dankirke as 'English' (Thorvildsen 1972, 55), while unusual in Denmark, are by no means typical of the pottery found in England; indeed the form of one of these vessels has been described by Myres as 'Jutish' (Jones *et al* 1968, 227)!

The carinated bowl from GH 17 (Fig 93.23), which originally stood on either a splayed or a pedestal base, is undoubtedly one of the earliest vessels from the Mucking settlement. A number of pedestalled carinated bowls have been found in England, and Myres (1969, 78–80) has identified them as an exceptionally early type. They are by no means identical, however, to the third- and fourth-century *Trichterpokalen* found in northern Germany and the Netherlands (Schmid 1965, Taf X; 1969; Tischler 1954, 57; van Es 1967, 195ff, figs 105.1, 2), and cannot be used to argue for a fourth-century Germanic presence in this country (Genrich 1962, 90). Nevertheless, the high carination and short shoulder of the GH 17 bowl clearly reflect its relationship with the earlier *Trichterpokale*. It is unlikely, however, that there are as many as six such pedestalled carinated bowls represented at Mucking, as Myres suggested (Jones *et al* 1968, 225). Most of the examples he mentions, none of which retains its base, could equally have had flat-rounded or splayed bases.

Many parallels for the Mucking pottery may be found in the settlements and cemeteries of the north-west Elbe-Weser triangle, the *Wurt* settlement of Feddersen Wierde in particular; yet their implications for the connections between the two regions have perhaps been over-emphasised (Genrich 1962, 95; Schmid 1969, 135, 140; Jones *et al* 1968, 225). Full publication of the pottery from Feddersen Wierde must be awaited before the numerous comparative statements which have been made regarding its relationship to the Mucking assemblage can be adequately evaluated. It is already apparent, for example, that handled pots (*Henkeltöpfe*) and rosette designs are central features of the *Wurt*'s early fifth-century ceramic assemblage (Schmid 1969, 136, Abb 2), yet both are exceedingly rare at Mucking.

Pottery which the Dutch refer to as 'Anglo-Saxon', based upon van Giffen's hypothesis that it, as well as the *Grubenhäuser*, was brought to Friesland by a coastal migration from the Elbe-Weser mouth, was dubbed 'Anglo-Frisian' by Myres (1948, 470). Terminology aside, Dutch sites such as the cemetery at Wageningen (van Es 1964, fig 94) do contain striking ceramic parallels with England. Myres had already drawn attention to these similarities in the 1940s (Myres 1948), but in his later work favoured parallels from the north-west Elbe-Weser region. In fact, the pottery sequence from Mucking relates at least as closely to assemblages from the province of Drenthe in the Netherlands as to sites in north-west Germany.²¹

Before concluding this discussion of comparative material, it is necessary to establish where the pottery from

Linford, the southernmost known extent of the Mucking settlement, excavated and published separately, fits into the sequence outlined above for fabric, surface treatment, and decoration. As Linford lies to the south, it could be expected to produce some of the earliest ceramics from the settlement. Indeed, a number of the Linford sherds, most notably the pedestalled carinated bowl (Barton 1962, V.2), can be dated to the early fifth century.²² A summary examination of the Linford pottery (approximately 400 sherds) by the writer revealed a high percentage of decorated sherds (approximately 8%), at least four examples of pinched rustication, and numerous examples of coarse-slipping. The assemblage contains a diversity of fabrics, including Fabric 5 (one sherd of which is coarse-slipped), Fabric 4, and fabrics containing haematite and mica. The variety of pottery fabrics and the low percentage (15–20%) of grass-tempered pottery, together with pottery forms, surface treatments, and fabrics, all indicate that the Linford assemblage belongs to the earliest phase of Anglo-Saxon settlement at Mucking.

Decline in the quantity of pottery

Before concluding the discussion of the pottery, it is necessary to return briefly to the problem of the general paucity of pottery from seventh-century contexts, that is from the *Grubenhäuser* along the inland, or western, edge of the excavated area (Fig 13). The scarcity of this 'late' material has undoubtedly coloured to a degree the comparisons made between it and the pottery of the fifth and sixth centuries, but it may have further significance. Hodges has noted that the overall quantity of middle Saxon (roughly mid seventh- to mid ninth-century) pottery is rather small, and that 'many areas seem to have been aceramic between the end of the cemetery wares [ie the handmade pottery of the pagan period] production and the beginning of wheel-thrown pots in the late ninth, tenth, or eleventh centuries' (Hodges 1981, 53; see also Drury and Rodwell 1978, 146). This impression may be due in part to inadequate retrieval methods, or to changes in patterns of deposition, such as the use of middens instead of *Grubenhäuser* as rubbish tips, but as yet we have no evidence of such changes. The most plausible hypothesis is simply that there was a decline in the amount of pottery being produced at the end of the pagan period, a trend clearly in evidence at Mucking.

Notes

- 1 The discussion of the settlement pottery which follows is largely contained in Hamerow 1987a and summarised in Hamerow 1987b.
- 2 The Anglo-Saxon pottery from Mucking was recorded by MPX on computer using an input program structured according to a Question Sourcefile (QSF) (Moffett 1982, 129). This is simply a list of questions regarding basic contextual information as well as characteristics of the pottery itself. Specifically defined numerical or 'key word' responses were required, although a certain amount of free text was permitted. The raw data files relating to the pottery from *Grubenhäuser* were transferred by the present writer to a relational database system, PDS

- (Personal Data System), and subsequently to a similar system, INGRES. The assistance of the Oxford University Computing Service, and in particular of Paul Salotti, was instrumental in the transferral of the raw datafiles and the structuring of the database. The author is grateful to Jonathan Moffett and Julian Richards for their comments on this chapter.
- 3 The thin-sections were made and described primarily by Ailsa Mainman of the York Archaeological Trust, with contributions by David Williams, University of Southampton. Jenny Lee assigned the fabric types which appear in the original MPX computer record. The author is particularly grateful to them for their assistance and advice, and for allowing her to refer to their results here.
 - 4 Helen Hatcher from the Laboratory for Archaeology and the History of Art in Oxford kindly examined samples of the Mucking pottery in order to explore the possibility of using Atomic Absorption Spectrometry. The author is grateful to her for her comments.
 - 5 The excavator sent four grass-tempered sherds (three unstratified and one from GH 190) to Ian Bailiff, University of Durham, for a feasibility test for thermoluminescence dating. An unstratified sherd produced the following low-accuracy survey date: DUR TL9-1AS, AD 540±290. A higher accuracy dating programme was regrettably never undertaken.
 - 6 The terminology used to describe the pottery fabrics is that recommended by Peacock (1977). The term 'grass-tempered' has been retained in preference to the less precise 'vegetable-tempered' or 'organic-tempered'. 'Grass' is used here to include all grasses, as well as chaff and dung.
 - 7 Mainman and Lee originally recorded ten main fabrics and nine 'unusual' fabrics. This has been amended by the present writer.
 - 8 Clay samples were collected by Paul Barford. Thin-sections of these samples were made and described by Ailsa Mainman. Thanks are also due to Natalie Tobert and Raoul Davie for assisting the writer in the experimental building and firing of 'Anglo-Saxon' pottery.
 - 9 A single sherd was not deemed a sufficiently reliable foundation upon which to base the distribution, after a test of the original recording revealed that a few grains of sand adhering to the surface of a sherd were sometimes classed as *Schlickung*. Approximately 25 single finds of coarse-slipped sherds from pits and ditches, all from the southern sector of the site, are not included in Figure 23.
 - 10 All measurements are based on the pottery from *Grubenhäuser* only.
 - 11 These are defined primarily according to Jensen 1976. The names of the form parts were devised by Rhona Huggins of MPX.
 - 12 Not all independently dated huts could be included in Figure 27, as not all contained identifiable pottery forms.
 - 13 The author is very grateful to Jan Lanting for providing these results from Odoorn.
 - 14 The comb-point decorated sherds come from GH 54, 80, 83, 85, 100, and 104 (Figs 112.4, 132.2, 133.2, 134.7, 137.4, 138.3).
 - 15 The author is grateful to Lady Briscoe for her assistance, and for her generosity in providing unpublished notes. She writes: 'The detailed casting of Anglo-Saxon pottery stamps was developed by Tom Jones in order to facilitate the drawing of the stamps. He discovered that a cold clay called 'DAS' PRONTO took a clear and permanent cast of individual stamps. It was as a result of his work that the Archive of Anglo-Saxon Pot Stamps was set up, the first acquisitions being the stamps from the Mucking cemeteries and settlement. Since the first stamps were received in 1980, the Archive has acquired over 12,000 casts and – including other records – is now approaching 15,000 stamp records. All major museum collections have now been recorded. This has enabled detailed comparisons to be made between stamps from different sites, and it is hoped that future work on pot stamps will make further use of this extensive database.'
 - 16 Only the largest and smallest Alai stamps ('dots') are illustrated at 1:1, in order to indicate their size range.
 - 17 The proportion of decorated sherd groups for GH 6 was 25%, but as it was incompletely salvaged and only eight sherd groups were retrieved, it has not been included in Figure 39.
 - 18 Proportions given refer only to the c 27,000 sherds from *Grubenhäuser*. The inclusion of the pottery from pits and ditches would not substantially alter these results, however.
 - 19 These figures are based primarily upon the illustrated sherd groups from *Grubenhäuser*, and therefore the proportion of decorated to plain examples for each form is too high; this should not, however, alter the relative differences between forms.
 - 20 The following institutions kindly allowed the author to examine the pottery assemblages from these sites: The Focke Museum, Bremen (Bremen-Grambke I and II and Bremen-Mahndorf); Niedersächsisches Landesinstitut für Marschen- und Wurtenforschung, Wilhelmshaven (Flögeln and Dalem); Museum für Naturkunde und Vorgeschichte, Oldenburg (Mahlstedt, Almsloh, and Stenum); Museum Burg Bederkesa (Die Wingst, Loxstedt); Inst of Archaeology, University of Copenhagen (Omgård); National Museet, Copenhagen (Dankirke, Drengsted); Forhistorisk Museum Moesgaard, Århus (Illerup); Vejle-Kulturhistoriske Museum and Skjern-Egvad Museum (Vorbasse and Nørre Snede); Haderslev Museum (Hjemsted); Den Antikvariske Samling, Ribe (Sandbanken, Darum, Stengården, and Hummeluregard II); Groningen Museum (Ezinge); Museum of Assen (Wijster and Midlaren); Biologisch-Arkaeologisch Instituut, Groningen (Odoorn and Eursinge); Friesmuseum, Leeuwarden (Ferwerd, Jijum, Wijnaldum, Dron-rijp, Hallum, Rijnsumageest, Appelseka, Hoogebeintum, and Beetgum); Trent Valley Archaeological Research Committee (Catholme); Norfolk Archaeological Unit (Spong Hill); Oxford Archaeological Unit (Barrow Hills, Radley); Essex County Council (Springfield Lyons); Thurrock Local History Museum (Linford; Ardale School). The author is grateful to the members of these institutions for their help and generosity.

- 21 Such comparative statements are necessarily impressionistic, given that few of these continental assemblages are fully published and that the present writer's examination of some 30 of these assemblages was necessarily cursory.
- 22 The sherd shown in Barton 1962, fig VII.11, is the pedestal base of such a bowl, and not a lid, as it is described in the catalogue. Indeed, judging from its fabric, colour, and dimensions, it may come from the same vessel as fig V.2.

4 Small finds¹

Vessels

Glass

Vessel glass fragments from four *Grubenhäuser* (GH 2, Fig 82.5; GH 62, not illustrated, glass 40; GH 129, not illustrated, glass 255; GH 166, Fig 163.2) and two ditches (N Enc, glass 283; ditch 3958, glass 39) were identified by Harden, Charlesworth, and Evison as probably Anglo-Saxon in date. Roman vessel glass from *Grubenhäuser* identified by Harden is also listed in the inventory, with the date provided by him. The only piece of Anglo-Saxon glass from the settlement which is closely datable is the claw beaker fragment from GH 166 (Fig 163.2), assigned by Evison to her Type 3c, a primarily sixth-century form (Evison 1982, 64).

Copper alloy

Rim fragments of simple copper alloy vessels were recovered from GH 84 and 195 (Figs 133.1, 2, 175.1). A more complete example comes from Dover grave 137, which Evison suggests is a Roman form (1987, 103–4, fig 56).

Wood

The copper alloy clips from GH 63 and 81 (Figs 121.1, 132.2) are almost certainly repairs for wooden bowls similar to examples found in the Mucking cemeteries (Jones and Jones 1975, 178), as well as in Dover Grave 150 (Evison 1987, 105, fig 60) and Spong Hill Inhumation 34 (Hills *et al* 1984, fig 90/1a–c).

Iron staples or joiners' dogs were found in GH 71 and 82 (Figs 126.3, 133.1). These seem too small to have been used in timber buildings, and may have been used to repair wooden vessels, as were similar copper alloy staples found in Sewerby Grave 23 (Hirst 1985, fig 40, 94).

Articles of dress

Beads

Materials other than glass

Three non-glass beads were recovered from *Grubenhäuser*: an amethyst bead from GH 203 (Fig 177.1), unique to the site and dating to the seventh century (Huggett 1988, 66; Arrhenius 1978, 12), an amber bead from GH 102 (Fig 137.1), and a jet disc bead from GH 131 (Fig 149.1), a rare find in Anglo-Saxon contexts (Evison 1987, 60).

Glass beads

A total of 26 largely complete glass beads, and five fragmentary beads whose form is unidentifiable, came

from Anglo-Saxon settlement contexts. The great majority occurred as single finds in hut fills, and only in GH 57 was the number of beads sufficient to suggest that they may represent a bead string or collection of beads (GH 57, Fig 114.4–8).

The monochrome beads are described in accordance with the bead shapes defined by Evison (1987):

Disc: 7, one dark blue translucent (GH 35, Fig 101.2), one green translucent (GH 36, Fig 102.2), one light green translucent (GH 199, Fig 176.1), one green opaque (GH 79, Fig 131.1), two red-brown opaque (GH 57, Fig 114.4, GH 58, Fig 116.5), one dark brown core coated with yellow (GH 79, Fig 131.2)

Drawn multiple globular: 4, all blue-green translucent (GH 57, Fig 114.5–8)

Drawn cylinder: 4, three dark blue translucent (GH 9, Fig 86.1, 2; GH 15, Fig 90.3), one beaded and almost colourless (GH 155, Fig 159.2)

Short cylinder: 3, two green opaque (GH 179, Fig 170.2; GH 202, Fig 176.1), one yellow-green opaque (GH 207, Fig 177.1)

Biconical: 1, glossy yellow, opaque (GH 86, Fig 134.1)

Triple-disc: 1, blue-green, opaque (GH 175/185, Fig 167.2)

Eight polychrome beads were found in the Anglo-Saxon settlement. Six of these are decorated with marvered dots and trails. These include: three disc beads with looped trails (GH 2, Fig 82.4; GH 40, Fig 104.1; GH 55, not illustrated); one disc bead with a spiral trail (GH 179, Fig 170.1); one annular bead, 'black' with inlaid cream dots (GH 139, Fig 153.1); and one cylinder bead with a white core, red-brown looped trail, and green dots (GH 133, Fig 150.1). Two other cylinder beads were decorated with 'reticella' cables. The bead from GH 59 (Fig 117.2) with its yellow and red-brown twisted thread design and three-band composition is essentially identical to the Schretzheim Group 48 beads, a type considered by Evison to be sixth-century or later in date and a probable import, while the bead from the late seventh-century GH 168 (Fig 165.4) is of much poorer quality, consisting of green and yellow 'reticella' cables marvered onto a red-brown core (Koch 1977, 211, Farbtafel 4, 48.6–9; Evison 1987, 65; Evison and Cooper in West 1985, 72).

Brooches

Saucer brooches

Two copper alloy cast saucer brooches and the copper alloy backplate of an applied brooch were recovered from the Mucking settlement. The saucer brooch fragment from GH 27 (Fig 96.2) appears to be a failed casting with an unusual type of zoomorphic ornament. Dickinson has noted that the brooch from GH 187 (Fig 172.2) had 'a secondary pin holder fixed by boring a hole through its face'. She suggests (*pers comm*, 1985) a date in the early to mid sixth century for both brooches. The backplate of a fifth-century applied brooch came from GH 62 (Fig 120.1) (Evison 1978, 268).

Button brooches

The button brooches from GH 166 (Fig 163.1) and the late fill of the North Enclosure (Fig 185.2) may both be assigned to Avent and Evison's type Ai, a Kentish type dating primarily to the first half of the sixth century (Avent and Evison 1982, 98). Of the button brooch with seven-spiral ornament and pelleted border from GH 16 (Fig 91.1; Avent and Evison 1982, fig 12.i), Dickinson writes (pers comm, 1985): 'No doubt its manufacture is related to that of both proper saucers and buttons, and given its spiral design, a dating around the early sixth century is likely.'

Annular brooches and variants

The plain copper alloy annular brooch with a notch and double-ridged catch from GH 177 (Fig 168.2a, b) belongs to Ager's type E4 (cf Ager 1985, fig 5.f, from Eastry). The brooch was recorded under the same catalogue number as an iron pin. These objects are illustrated together and presumed to be associated. A narrow-banded annular brooch with punched decoration and transverse lines from the upper fill of pit 25244 (Fig 192.1) closely resembles in size and decoration a brooch from Sarre illustrated by Ager under his type G (1985, fig 4.i). The iron ring fragment from GH 143 (Fig 153.2) may represent a third annular brooch. A pair of iron annular brooches of similar dimensions were found in Portway Grave 9 (Cook and Dacre 1985, fig 44). None of these brooches is closely datable on typological grounds, but all can be assigned with reasonable certainty to the fifth or sixth centuries.

Disc brooch

Only one disc brooch, from GH 193, is recorded from the settlement (Fig 175.1). The copper alloy brooch is decorated with the ring and dot ornament characteristic of disc brooches which are dated by Dickinson (1979) primarily to between AD 450 and 550.

Penannular brooches

Although usually considered to be of British manufacture, the penannular brooches from the Mucking settlement are considered here because of their regular occurrence in Anglo-Saxon graves. The simple iron penannular brooch with a round-sectioned hoop from GH 26 (Fig 96.6) belongs to White's class Ca (1988, 9) which he considers to be post-Roman. In her consideration of the finds from GH 26, Evison also suggests a late Roman or early Anglo-Saxon date for the brooch (Jones *et al* 1969, 155). The copper alloy penannular brooch with 'animal head' terminals from GH 55 (Fig 112.1) is closely paralleled by a brooch from Bifrons, Grave 6 (Brown 1915, 4, pl CIX.2, 456-7) and belongs to White's Class E, which he considers to be late Roman (the brooch may actually have come from Romano-British Grave 141, which lay immediately adjacent to GH 55). Finally, the copper alloy penannular brooch from GH 175/185 (Fig 167.1) is similar to one from Grave 67, Portway Down, Hants, for which Butcher cites first-century parallels (Cook and Dacre 1985, 94-5).

Miscellaneous brooches

A Perlberg (or Luton) type supporting-arm brooch from the late fill of RBI (Fig 185.1) is described by Evison as follows: 'Narrow keeled bow, foot only slightly widened; decorated by transverse lines on arm and foot. A broken perforated lug at each end of head' (Evison 1977, 137; also Jones and Jones 1975, fig 55.8; Böhme 1986, 527-8, Abb 49.4). Two more supporting-arm brooches were recovered from Graves 987 and 989 in Mucking cemetery II (Böhme 1986, Abb 49.2, 3). The brooches are datable to the first half of the fifth century (Evison 1977; Böhme 1986, 529-30).

The copper alloy brooch with a semicircular head and Style I ornament from GH 135 (Fig 151.1) belongs to a small group of brooches of which examples are known from the Kentish cemetery at Bifrons and from the cemetery at Herpes in the Charente, although unlike these the Mucking example is not gilded (Brown 1915, 3, pl 35.7; British Museum 1923, pl XIV 2). Related sub-types come from the Isle of Wight (Arnold 1982, fig 23.1) and northern France (eg from Nouvion-en-Ponthieu, Piton 1985, pl 44, Vron, Seillier *et al* 1974, fig 1, and Hérouvillette, Decaens 1971, 91, fig 11, s.2). Werner (1961, 57, Taf 16) has suggested that these brooches were probably manufactured in southern England in the early sixth century. Arnold's distribution map (1982, fig 50) emphasises the Kentish/Frankish distribution of this sub-type.

The copper alloy three-lobed small-long brooch with a radiate headplate from GH 81 (Fig 132.1) is heavily corroded, with traces of simple punched decoration surviving as a border design. The closest parallels for the unusual shape of the headplate and the four pronounced lobes on the footplate can be found amongst the Visigothic brooches illustrated by Zeiss (1934, 77, Taf 2.7, 3.9) belonging to his *Blechfibeln*, Group B, and dated by him to the first half (most probably the first third) of the sixth century. The affinities of this type are wide-ranging and difficult to localise, however, as is underscored by the appearance of a related brooch at the site of Oxbøl in south-west Jutland (Hatt 1958, fig 24).

A garnet-headed pin and a 'safety pin' brooch were found lying on or just above the floor of GH 42 (Fig 105.1, 2). The pin is an example of a well-known seventh-century type (eg from Dover, graves 134, 155, 161, Evison 1987; also Meaney and Hawkes 1970, 36). The 'safety-pin' brooch is more unusual, and can be added to the three more elaborate, but undoubtedly related, examples illustrated by White (1988, 40-1, fig 22:1-3) and the five silver brooches from the barrow burial at Swallowcliffe Down (Speake 1989, 49, fig 44). Though rare, these brooches, like the pins, reflect the 'innovation in female dress fashion perceptible in seventh-century cemeteries', which involved a movement away from massive brooches and towards lighter dress fasteners and ornaments (Meaney and Hawkes 1970, 36).

A small equal-armed brooch of gilt copper alloy, decorated with red enamel, was recovered from GH 190 (Fig 173.1). The closest parallels are two silver-gilt brooches inlaid with garnets from the Chessell Down cemetery on the Isle of Wight (Arnold 1982, grave 45.xii, fig 13; unprov, fig 26.23) and a garnet-inlaid brooch from Herpes (British Museum 1923, pl XIV.3). Some of Hübener's Group 6 Merovingian equal-armed brooches, whose distribution focuses upon the Pas-de-

Calais and the Argonne-Aisne-Yonne region, also show some affinities with this type. This group, admittedly quite diverse, is dated by Hübener (1972, 225) from the second half of the sixth century to the first half of the seventh century. A date of manufacture sometime in the sixth century seems likely for the GH 190 brooch.

The matching front and back pieces of the only early Anglo-Saxon brooch mould to be found in England were recovered from GH 109 (Fig 141.1). The circumstances of the find have already been published by the excavator (Jones 1975b; 1977). Analysis by x-ray fluorescence of the brooch mould fragments by Justine Bayley revealed no traces of metal; it is possible that the mould was never used. A detailed description of the mould fragments and a consideration of their typological significance and regional affinities by Leslie Webster follows. Here it is relevant only to note their chronological significance: the fragments derive from a mould for a square-headed brooch for which a date between AD 500 and 570 is likely (Hines 1984).

The brooch mould (GH 109, Fig 141.1A-C)

by Leslie Webster

The two fragments from GH 109 represent parts of the front and back components of a two-piece mould for casting an Anglo-Saxon square-headed brooch. Both are of the same densely-textured, fine sandy reddish clay, darkened in places presumably through firing. They have wide flanges (max 14mm) and the front portion fits neatly over the back.

The fragment of the front matrix is 53mm long by 35mm high and 16mm thick (maximum dimensions; Fig 141.1A). It is gently rounded on the exterior. It represents just over half the length of the upper edge of the brooch's rectangular headplate. Parts of three free-standing animal masks from the outermost border can be seen, with grooved collars, prominent eyes and nose-rib, and scrolled nostrils. Below them is part of a rectangular rib separating this outer zone from the central panel of the headplate. At the surviving corner of the headplate the animal masks are replaced by twin zoomorphic features, not now clearly identifiable, of which only parts survive.

The fragment of the back matrix is 35mm long by 60mm high and 20mm thick (maximum dimensions; Fig 141.1B). It is thicker than the front half and has a flat underside. The fragment preserves the full height of the vertical edge of the headplate, and for a small area of the upper corner of the headplate engages with the front portion at right angles (Fig 141.1C). The back matrix shows clearly the concave reverses of the outer frieze of the animal masks and of the other zoomorphic cornerpiece. The sturdy rectangular moulding which on the back of the brooch divided these from the plain central zone is also clearly visible. A detail not seen on the front matrix fragment is a small process at the bottom outer corner of the headplate, the reverse of what must have been a zoomorphic lobe of the type seen on square-headed brooches of Hines Group 3 (Hines 1984).

Moulds of Migration Period date are fairly widely known on the continent, though so far only at Mucking have moulds for producing early Anglo-Saxon metal-

work been identified. The largest and most important assemblage of this date is that excavated at the settlement complex at Helgö, near Stockholm, which has not yet been fully discussed from a technical point of view (Holmqvist 1972). Many of these moulds were also for square-headed brooches of the regional Swedish type, and correspond closely in technical details with the Mucking mould fragments. Like them, the Mucking fragments are from a two-piece mould manufactured from finely gritted porous clay and show the characteristic flat base and rounded upper part reflecting the sequence in which they were produced from the pattern. The brooch would have been cast in one piece (the pin excepted) with the ingate most probably located at the foot. The Mucking fragments show no traces of registration holes or dowels, the clearly fitting overlap of front on to back performing this function instead. The two would have been additionally held in position during casting by an outer casing of fresh clay, but no evidence of this survives. The impressions on both halves of the mould are crisp and firm, and were presumably taken direct from a wooden or metal pattern. It is not out of the question that an existing brooch was used to produce the mould.

The evidence provided by these mould fragments, though slight, is sufficient to identify the type of square-headed brooch produced from the mould, and to make possible some observations about the significance of its presence at Mucking. The free-standing border of animal masks along the headplate and the zoomorphic lobes at the outer corners of the headplate are diagnostic features which mark the brooch as one of a small group of square-headed brooches included by Leeds in his class A2 (1949) and subsequently reclassified by Hines (1984) as his Group 3. The group comprises four brooches only: grave 22, Chessell Down, Isle of Wight; grave 9, Linton Heath, Cambs; Tuddenham, Cambs; and Paglesham, near Southend, Essex. The group has a marked south-eastern distribution, with the exception of the outlier at Chessell Down. Of these, the Chessell Down brooch appears to show the earlier stage, giving the most coherent and intelligible version of their common and complex decorative scheme. The Linton Heath brooch, of which the Tuddenham example is a feeble copy, exhibits a more degenerate version of the zoomorphic decoration on the headplate in which crucial elements of the design seen on the Chessell Down brooch, such as the human profiles, are misunderstood and barbarised. The bow and footplate, and the frieze of animal masks on the Linton Heath brooch, are clearly adapted from another source.

The Paglesham brooch is an intermediate stage, combining the headplate, bow, and terminal disc of the Linton Heath brooch with the footplate of the Chessell Down piece. The zoomorphic ornament is more streamlined than Chessell Down, but still intelligible, while the free-standing animal masks are crisper than on Linton Heath, with ribbed collars at their necks. When so little survives to show the nature of the Mucking brooch it is unwise to offer much in the way of speculation. However, enough survives of the face masks to show that, though not identical, they are closer to the firmly modelled Paglesham ones, with the same ribbed collars, than to the other two mask-bordered brooches in this group.

The presence of two closely related brooches on the Essex bank of the Thames estuary has important impli-

cations for inter-regional contacts at this period. There is growing evidence to show that the contacts between Kent and Essex across the Thames were very close from at least the early sixth century onwards, as other sixth- and seventh-century Kentish metalwork from the cemeteries and settlement at Mucking itself demonstrates, confirming the evidence of Kentish connections presented by material from other estuarine sites at Rainham, Prittlewell, and Southend. It is most probably via some Kentish contact that this Essex/Cambridgeshire group of brooches is linked with the Chessel Down, Isle of Wight, example, it being well attested by documentary and archaeological evidence that communities on the Isle of Wight in the sixth century had strong links with eastern Kent (Arnold 1982, 103, 106–7). The Mucking mould fragments add a new dimension to this pattern of trade and folk movement, as well as to our notions of workshop processes and the development of Anglo-Saxon zoomorphic art.

Pins²

Iron pins were distinguished from nails by their round shanks; some or all could be of Roman manufacture. Most of the Mucking pins are featureless fragments and are not discussed here. Barford has, however, devised a classification based on shank diameter and profile (Barford 1981).

The largest group is Barford's Type B: pins with a shank diameter of 3–4mm. The group includes several complete pins, at least some of which may have been used as dress fasteners. The complete pins can be divided into those with spiral or crook-shaped heads (GH 42, Fig 105.5) and those with heads of a shape not naturally produced by forging, ie cuboid- or spherical-headed pins. These heads must have been shaped by filing or grinding down a forged 'blank', perhaps in imitation of bone or copper alloy pins. The spherical-headed pins (GH 9, Fig 86.6; GH 32, Fig 98.1; GH 152, Fig 157.3) are similar to Crummy's Type 3 Roman bone pins, while the cuboid-headed pin (GH 48, Fig 109.1), resembles Crummy's Type 4 (1983, figs 19, 20).

There are, in addition, four copper alloy pins, including the seventh-century garnet-headed pin from GH 42 discussed above (p 61), a second pin from GH 42 (Fig 105.3) with a spherical head, a shaft fragment from GH 71 (Fig 126.1), and a corroded spherical-headed pin fragment from GH 67 (Fig 124.1). All are of indeterminate date. The tip of a bone pin was recovered from GH 33 (Fig 99.2).

Pendants

The round, opaque turquoise glass pendant in a copper alloy 'dog-tooth' setting from GH 52 (Fig 111.1) appears to be without close parallel. It seems to be a humbler version of the seventh-century Kentish dog-tooth settings in gold, for example the triangular pendant set with a cabochon garnet from Barfriston, Grave 48 (Faussett 1856, 143, pl IV.5), an oval blue glass pendant from Finglesham Grave 138 (Hawkes and Grainger forthcoming), and an oval pendant inlaid half with garnet and half with light-blue glass from Dover Grave 29 (Evison 1987, 56, fig 17).

The function of the transparent deep purple glass-inlaid ornament from the late fill of the North Enclosure (Fig 180.4) is uncertain, although in shape it most closely resembles a smaller, early seventh-century pendant from King's Field, Faversham, inlaid with garnets and blue glass (Brown 1915, 3, pl B.III). Such drop-shaped or oval pendants are broadly seventh century in date (Avent 1975, 1, 9, 56).

Belt fittings

Six late Roman 'military'-type belt fittings were recovered from the settlement. The cast, openwork belt plate from GH 113 (Fig 143.1), of Hawkes and Dunning Type 2a, consists only of a fragment of the hinge and arcading, but this is sufficient to suggest a close parallel with examples from Vermand, Sarre, and Traprain Law (Hawkes and Dunning 1961, figs 6, 18.i; Böhme 1986, Abb 9.3). The date range proposed for such belt plates spans the second half of the fourth century to the early fifth century (Hawkes 1974, 389).

Disc belt attachments with suspension loops were found in GH 12/21, 22, and 57 (Figs 89.2, 95.1, 114.1). The example from GH 22 is complete and decorated very simply with concentric rings around the central rivet. The disc-attachment from GH 57 is somewhat more elaborate, and parallels closely the example from Mucking Cemetery II, grave 979 (Evison 1981b, fig 6a–c). The suspension loop is broken and bent over sharply, suggesting that it was reused as a pendant. The best-known British examples of this type of belt fitting come from Dyke Hills, Dorchester, and Milton-next-Sittingbourne, Kent (Hawkes and Dunning 1961, fig 1.5, 2.b). Although such disc-attachments appear with chip-carved belt sets in the late fourth century on the continent, they are also associated with 'simple' belt fittings (*Einfache Gürtelgarnituren*) in the first half of the fifth century (Böhme 1986, 473; 1989).

Two fragments of tubular-sided attachment plates with moulded decoration were recovered from the late fill of the North Enclosure (Fig 180.1). Such fittings are believed to have originated on the continent in the first half of the fifth century (Jones *et al* 1969, 155; Böhme 1986, Abb 19.10, 11; Böhme now believes (1989) that these can be dated more precisely to the second third of the fifth century) and were fastened to the ends of military belts. The rectangular plates are missing from the Mucking examples, and all that remains are the ribbed tubular edges. The oddly placed rivet holes presumably relate to their reuse. A third fragment of such a fitting comes from GH 26 (Fig 96.2), which retains part of its attachment plate (Evison 1969). Complete examples of this type of belt fitting were found at Dorchester and Milton (Hawkes and Dunning 1961, figs 1, 2).

In addition to these late Roman fittings, a tubular belt fitting of a type associated with the 'quoit brooch style' horizon was found in GH 27 (Fig 96.1), and a second possible example comes from the late fill of the North Enclosure (Fig 180.3). These fittings, D-shaped in section, have been dated to the fifth century by Evison (1968, 240–1). Hines (1990) has pointed out that, in the case of the few objects decorated in the 'quoit brooch style' which derive from datable contexts, none of these contexts can be dated before c AD 450.

Two buckles, presumably of Anglo-Saxon date, come from settlement contexts. The small, square, copper alloy buckle plate from GH 26 (Fig 96.1) has been described by Professor Evison as a type which 'might occur at any time in the pagan Anglo-Saxon period' (Jones *et al* 1969, 155). The ribbed edge of the iron buckle loop from GH 5 (Fig 84.4) revealed no traces of inlay, and its form is most closely paralleled by late Roman examples (eg Böhme 1986, Abb 19).

Coins

A group of three silver coins (Fig 165.1–3) found on the floor of GH 168 provides the latest and most secure date from the Mucking settlement. The coins are examples of the rare BX type of primary *scattas*, an early East Saxon royal coinage of which only ten others, nearly all from different dies, are known (Metcalf and Hills 1984; Metcalf, pers comm, 1987). The *scattas* were originally published by Jones and Rigold (1977), the latter dating them to c AD 690. Blackburn has recently argued convincingly for a revised date of AD 680–5 (Grierson and Blackburn 1986, 188 and table 14). Two additional *scattas* have recently been recovered by metal detectors from a field near the excavations. One of these, now in the Ashmolean Museum, is a type BII (AD 700–10), and the other is a series E, 'porcupine' type (c 700–c 740).³

Bone and antler artefacts

The following objects undoubtedly represent only a small fraction of the original population of bone and antler objects, which was largely destroyed by the acidic soil conditions. Two antler combs were recovered from the settlement, both single-sided, composite triangular forms (GH 47/53, Fig 108.1; GH 57, Fig 114.9). Fragments of what is presumably a third comb come from GH 212 (Fig 178.1). Perhaps the largest published corpus (21) of Anglo-Saxon triangular antler combs comes from West Stow. The excavator was unable to suggest any clear chronological development for this form, however, other than a broadly fifth- to sixth-century date (West 1985, 126). Four spindlewhorls, probably manufactured from femoral heads, a bone cylinder (GH 47/53, Fig 108.2), and the tip of a pin (GH 33, Fig 99.2) comprise the remaining bone or antler artefacts from the settlement. Sawn antler is recorded from GH 23, 58, 63, and 149.

Personal items

Knives

Only the most complete examples of the 60 knives and knife fragments from the settlement are illustrated here. Typological and metallurgical analyses of the knives from the settlement are being undertaken together with those from the cemeteries, and the results will be presented together (Hirst and Clark forthcoming). The great majority of the knives from the settlement are, however, fragmentary, and their original shape cannot be determined with any precision.

Firesteels or purse mounts

Fragments of two sub-triangular firesteels or purse mounts were recovered from the Mucking settlement, one from GH 57 (no 299) which cannot now be located, and the other from the late fill of the North Enclosure (Fig 180.8). Although the object from GH 57 is described as fragmentary, the example from the North Enclosure is largely complete and inlaid with an unidentified metal. It differs from the firesteels discussed by Brown (1977a) in that it lacks a central buckle (cf other English firesteels, for example those from Polhill; Hawkes 1973, fig 56). It does however have a central perforation, and a buckle may have been riveted on here.

Miscellaneous

The iron objects from GH 32, 95, and 129 (Figs 98.2, 136.1, 148.3) are fittings of uncertain function. They could perhaps be attachments for clothing or belts. The hooked attachment from GH 132 (Fig 150.2) and the fitting from GH 134 (Fig 151.3) may have come from leather objects. The tweezers from GH 43 (Fig 106.1), and probably the incomplete set from GH 83 (Fig 133.1), belong to Green's type I, considered by her to be a Roman type (Myres and Green 1973, 105). Several fragments of rolled copper alloy sheet (eg GH 2, 5, 36, Figs 82, 84, 102) may represent the ferrules of cosmetic brushes as discussed by Brown (1974). The double hooked iron terminal from GH 169 (Fig 165.1) may be related to the copper alloy 'girdle hangers' discussed by Steuer (1982, Abb 21, 31.3–5).

Spinning and weaving equipment⁴

Spindlewhorls from Anglo-Saxon contexts

Thirty-seven fired clay or sherd spindlewhorls and 14 spindlewhorls composed of other materials were recovered from the fills of the Mucking *Grubenhäuser*. Of these objects, 31 are largely complete. The spindlewhorls can be classified into four types:

- Type 1: sherd whorls (12)
- Type 2: disc-shaped fired clay whorls (16)
- Type 3: other fired clay forms (9)
- Type 4: whorls of other materials (14)

Type 1: Sherd whorls

Apart from SPW 39 (GH 202, Fig 176.2), manufactured from a sherd of Anglo-Saxon grass-tempered pottery, and SPW 37 (unstratified, Fig 194.1), which may also have been made from an Anglo-Saxon sherd, all Type 1 spindlewhorls are made from sherds of Roman pottery which have been ground down and perforated. The whorls range in diameter from 35–49mm with an average diameter of 40mm, and in weight from 13–31g, with an average weight of 21g. The central perforations, a measure of spindle size, have an average minimum diameter of 8mm. All but one of these objects derive from *Grubenhäuser*, suggesting that most if not all Type

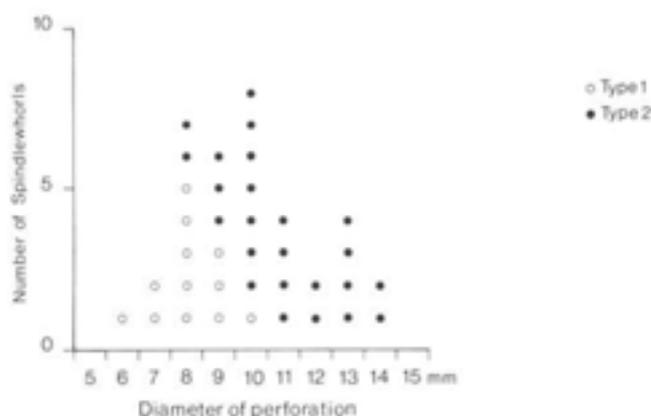


Fig 42 Perforation diameter of Type 1 and Type 2 spindlewhorls

1 spindlewhorls are not residual Roman objects but were manufactured and used in the Anglo-Saxon period.⁵

Type 2: Disc-shaped fired clay whorls

Of the 16 disc-shaped spindlewhorls, 14 are made of a grass-tempered fabric. The whorls range from 37–60mm in diameter (average 44mm), with an average weight of 40g. The perforations are generally larger than those of the sherd whorls, and range from 8–19mm (average 12mm), indicating that these heavier Type 2 whorls were used with substantially larger spindles, perhaps to spin a finer fibre (Figs 42, 43). The whorls may be further subdivided into three sub-types: (a) those with tapered edges, (b) those with vertical edges, and (c) those with rounded edges. There is no significant variation in the distribution of fabric or form across the site.

Type 3: Miscellaneous fired clay whorls

This third group comprises nine whorls and a variety of forms. Only four of these are complete, and all but two came from the middle or upper fills of *Grubenhäuser*. Their fragmentary nature, context, and fabric suggest that a number of these spindlewhorls may be residual prehistoric objects. The main forms are flattened globular and biconical, made of a variety of fabrics. Type 3 spindlewhorls are diverse with regard to diameter, weight, perforation size, and distribution.

Sub-type (a) consists of four small, abraded scraps of flattened globular or biconical whorls from GH 32, 121, 152 (Fig 157.2), and 154 (Fig 158.2). Some or all of these fragments may be prehistoric. Sub-type (b) comprises four complete biconical forms. The decorated spindlewhorls from GH 30 and 152 (Figs 97.1, 157.1) are, judging from their fabric and form, Anglo-Saxon in date. The remaining 3(b) whorls are somewhat different, however. SPW 36 (GH 211, Fig 178.2) is made of a heavily sand-tempered fabric, while SPW 20 (GH 120, Fig 146.1) is unusually 'tall', but in a grass-tempered fabric. Sub-type (c) is represented by SPW 12 (GH 57, Fig 114.11), a thick, flat whorl with rounded edges, made in a ?chalk-tempered fabric. Its date is uncertain.

Type 4: Spindlewhorls of other materials

These all derive from the fills of *Grubenhäuser*. SPW 97 (GH 1, Fig 82.1) and SPW 100 (GH 145, Fig 154.1) are of turned bone, the latter possibly cut from the head of a femur and decorated with incised lines. Both are disc-shaped with straight edges. Two other bone whorls, SPW 98 (GH 15, Fig 90.5) and SPW 99 (GH 61, Fig 120.1) are discs with tapered edges. A severely weathered perforated chalk object from GH 72 (Fig 126.1) may be the remains of a spindlewhorl.

Five disc-shaped shale spindlewhorls with either straight or slightly rounded edges were recovered (GH 2, Fig 82.6; GH 5, Fig 84.2; GH 15, Fig 90.4; GH 43, Fig 106.2; GH 157, Fig 159.1; cf Lawson 1975, 272, fig 14e). A fragment of a shale disc decorated with ring and dot design, possibly a spindlewhorl, comes from GH 181 (Fig 170.1). Shale spindlewhorls are known from Roman sites and it is possible that the Mucking examples are indeed of Roman manufacture, either reused or simply residual (eg Clarke 1979, fig 87.388 and 96.504). The seven small perforated lead discs discussed below (p 70) may also have functioned as spindlewhorls.

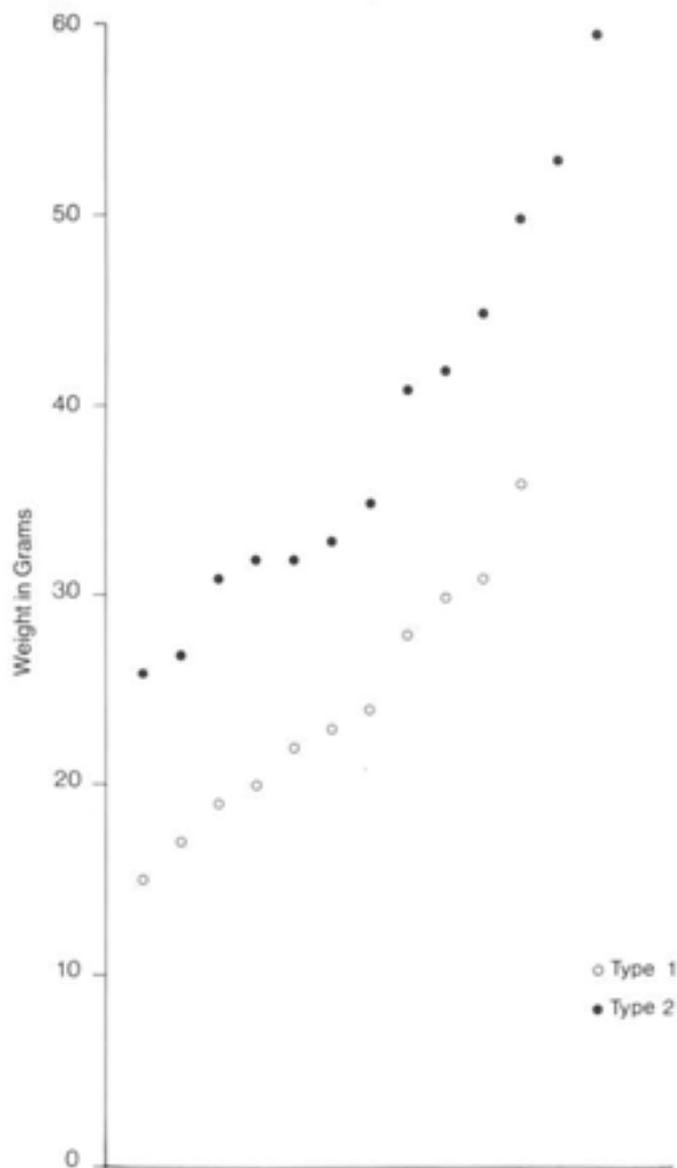


Fig 43 Comparison of the weights of Type 1 and Type 2 spindlewhorls

Anglo-Saxon spindlewhorls from other contexts

These include two Type 2a spindlewhorls, SPW 24 and SPW 57. SPW 24 was recovered from the upper fill of the RBII enclosure ditch, near GH 3, while SPW 57 (unlocated) came from clearing over the outer ring of the South Rings. The third potentially Anglo-Saxon spindlewhorl, SPW 41, is a large, heavy, Type 3c whorl from the late fill of the North Enclosure ditch (Fig 180.5).

Anglo-Saxon fired clay loomweights

Hurst (1959) has classified Anglo-Saxon loomweights into annular, intermediate, and 'bun-shaped' weights, a classification based upon Wheeler's earlier definition (1935, 154-5). Weights are defined as 'annular' when the diameter of the central perforation is greater than the width of the surrounding clay ring (Hurst 1959, 23-4) while intermediate weights have central perforations which are smaller than the width of the ring. 'Bun-shaped' weights have small, pierced holes and belong essentially to the late Saxon period. Fragments of at least 180 annular and intermediate fired clay loomweights were found in Anglo-Saxon contexts at Mucking. Only one possible bun-shaped example was found (GH 46, FC 2056). Two unusual 'stirrup-shaped' loomweights, one complete and one fragmentary, were found from the lower levels of GH 137 and 110 (Figs 152.1, 141.1), both of which also contained a number of ordinary annular weights. The writer is unaware of any British parallels for this form; their context makes a date in the Anglo-Saxon period highly likely.

Of the 106 loomweights identifiable by type, 88 (83%) are annular, ten (9.4%) are intermediate, and 8 (7.5%) are

borderline annular/intermediate. Approximately 13% of the loomweights are complete or nearly complete. The remainder are represented by small fragments. These nevertheless are believed to represent the largest English assemblage of early Anglo-Saxon loomweights, particularly when unfired weights are taken into account.

Annular weights were an Anglo-Saxon introduction into this country (Hurst 1959, 25, 77n) and were the most common type of loomweight in the earliest period of Anglo-Saxon settlement in England, although the more robust intermediate and 'bun-shaped' types were in use in contemporary settlements on the continent (Hope Taylor 1977, 182).⁶ The typological sequence of loomweights observed elsewhere suggests that intermediate weights are generally later than annular forms, although at least 6 out of the 16 annular/intermediate and intermediate weights from Mucking are from fifth- or sixth-century contexts. The transition from annular to intermediate weights was undoubtedly gradual, and it can be assumed that there existed a substantial chronological overlap.

The relative distribution of the loomweights according to weight and diameter suggests considerable uniformity. Of the 121 weights whose approximate diameter could be calculated, 82 (68%) measured between 100 and 120mm (Fig 44). When these are further broken down by *Grubenhaus*, standardisation within specific groups of loomweights can be observed more clearly (Fig 45). The same is true with regard to weight. Two main groups are indicated: one weighing between 200 and 300g, the other between 400 and 450g, although the sample for which total weight could be calculated is relatively small (Fig 46).

At least eight weights were deliberately marked with finger impressions or stabbed with a stylus or similar

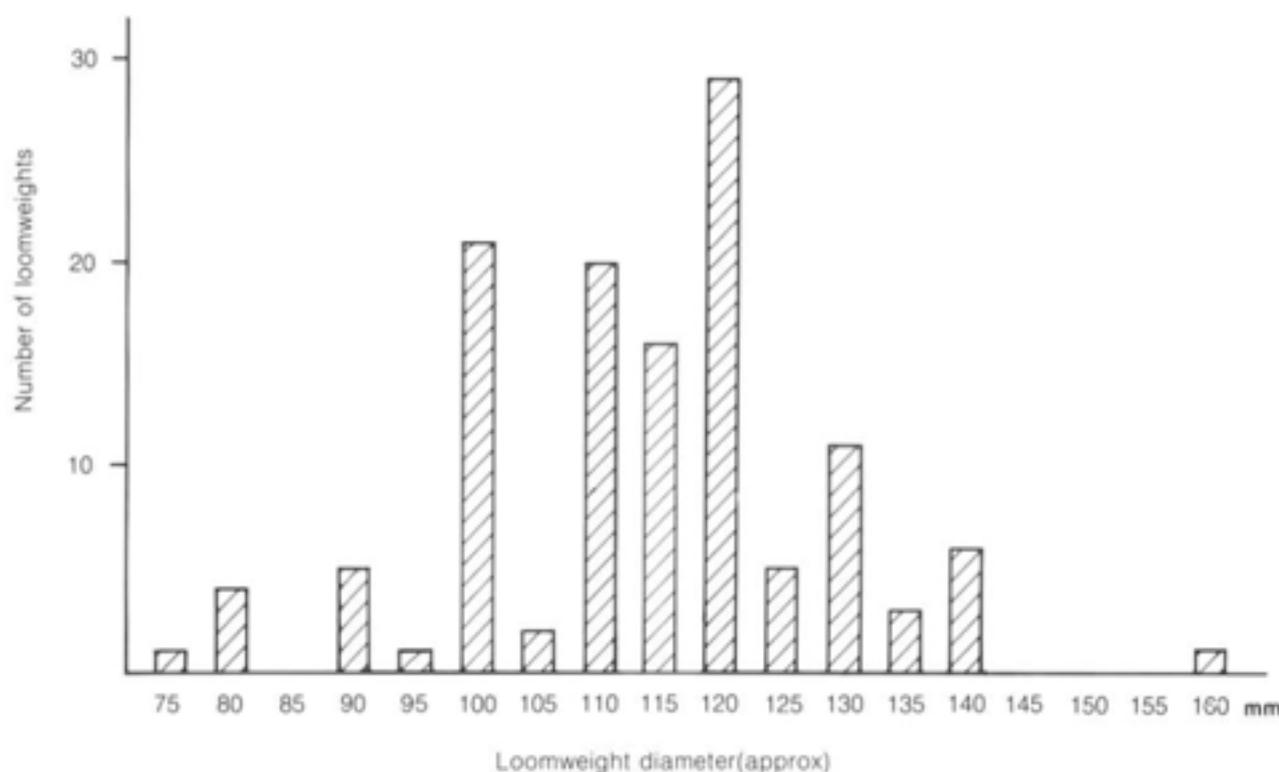


Fig 44 Fired clay loomweight diameters

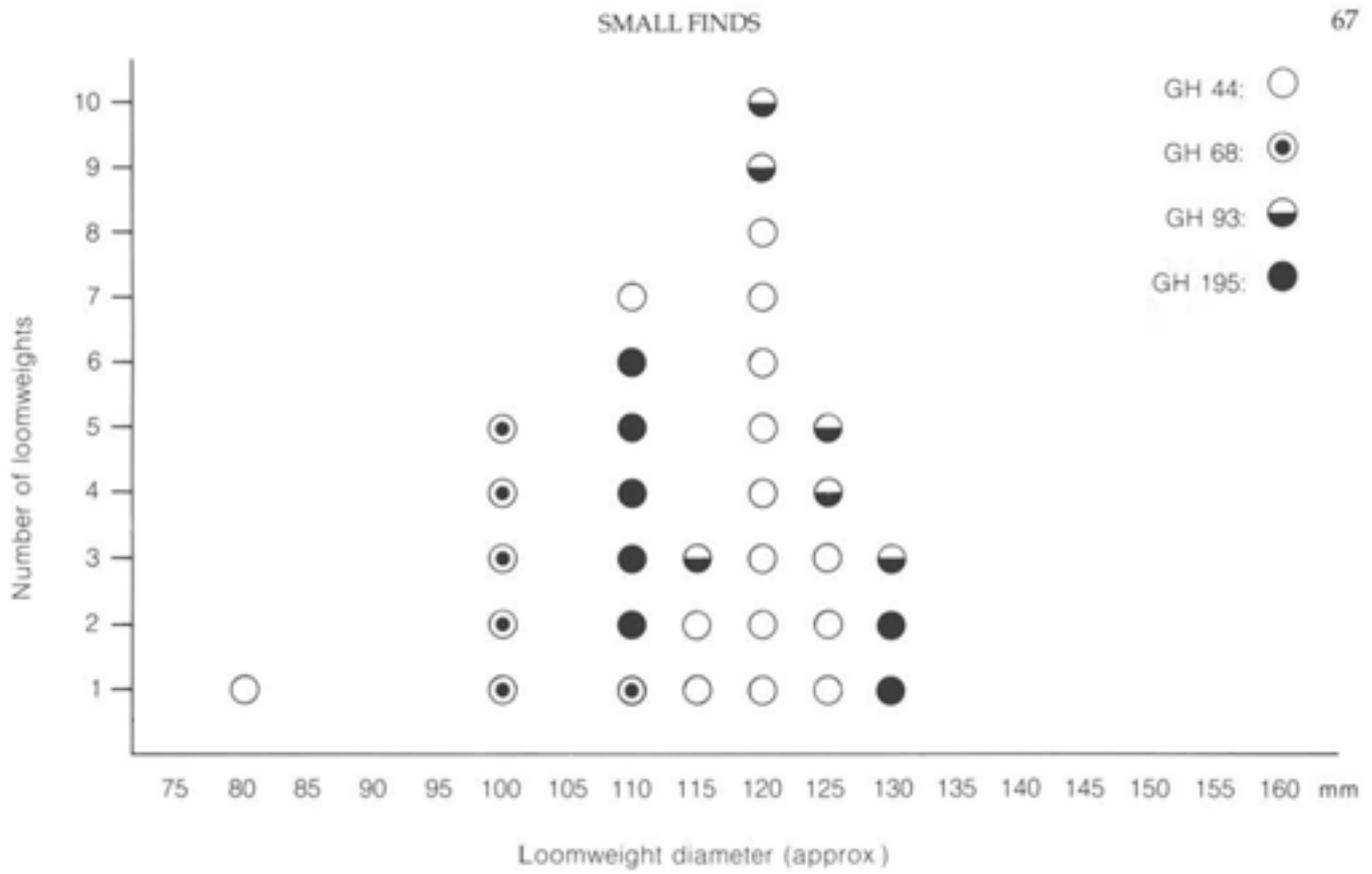


Fig 45 Fired clay loomweight diameters: Grubenhaus groups

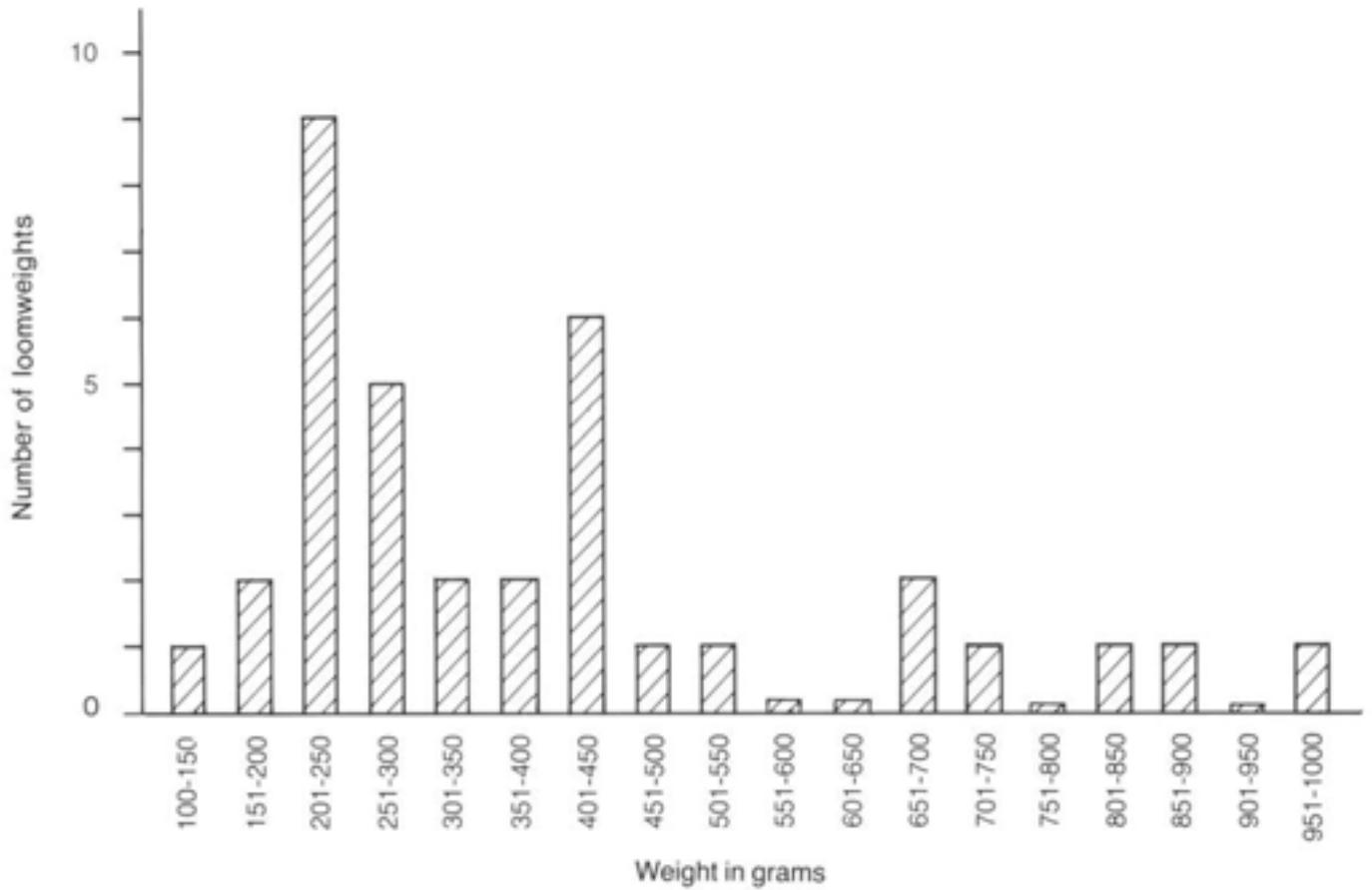


Fig 46 Fired clay loomweights: distribution of weights

tool (eg GH 44, Fig 107.1). The possibility that stabbing was an attempt to facilitate water loss during firing (cf the stabbing on medieval jug handles and thick rims) seems unlikely, as the stabbing occurs on only one place along the circumference of the loomweight. It may have been a form of notation when a complex shed was to be constructed, or a mark of ownership. Of the six marked weights whose form can be determined, half are intermediate types, a much higher percentage than for the assemblage overall (9.4%). Other marked or decorated weights are known from Old Erringham, Sussex (Holden 1976, fig 3), Ramsbury, Wilts (Haslam *et al* 1980, fig 19), and Dalem and Midlum, Lower Saxony (Zimmerman 1982, Abb 12, 13), all of which are 'intermediate' or 'bun-shaped' forms.

The loomweights can be grouped into two broad fabric types: the first and most common is a fine, lightly grass-tempered fabric, the second a coarser, sandier fabric, sometimes also grass-tempered. Most of the weights are relatively friable, have oxidised surfaces with reduced cores, and many spalled in the course of firing.

Unfired loomweights

Dozens of unfired loomweights were identified in the course of excavation, usually lying on or near the bottom of *Grubenhäuser*.⁷ The clay of these weights is almost always described as light orange brown, presumably brickearth, sometimes containing fine grass temper. The largest groups of unfired loomweights were found in GH 84 and 105 (Figs 76, 77). In GH 84, 140 weights, presumably too many for one loom, were found lying in at least nine jumbled rows. Jones and Jones (1974b) suggested that at least some of the weights had been stored in the hut. Other unfired clay loomweights have been recognised at Catholme, Staffs (Webster and Cherry 1977, 212), Willington, Derbys (Wheeler 1979, 129, 210), West Stow, Suffolk (West 1985, 138), Ham, Surrey (Hope Taylor 1977, 182), and at Dalem, Midlum, and Feddersen Wierde in Lower Saxony (Zimmerman 1982, 127).

Structural fittings

A wide range of structural fittings was recovered, presumably deriving from the demolition or decay of buildings; it is, however, possible that many are Roman survivals.

Some 500 iron nails account for over half of the iron objects from Anglo-Saxon settlement contexts. These have been listed but not illustrated. Their distribution suggests that most or all are Roman in date and residual.

Eight diamond-shaped roves (illustrated examples: GH 155, Fig 159.3; GH 160, Fig 160.1; GH 179, Fig 170.4, GH 187, Fig 172.3) were originally recorded from the Mucking settlement, although the identification of GH 187.3 as a rove is uncertain. Diamond-shaped roves were used as washers on nails and rivets and would have been particularly useful for fixing thin planks of wood to a framework without splitting. Such roves are known from a range of Anglo-Saxon contexts: at Sutton Hoo, they derived from boat timbers (Bruce-Mitford 1975, 121; 1952, 15 pl IV; Wheeler 1935, 183–4, pl xvii);

at Yeavinger they were associated with seventh-century timber buildings (Hope Taylor 1977, 193); and at the Dover Buckland cemetery, they were found primarily in women's graves (Evison 1987, 118). Diamond-shaped roves are also known from Roman contexts, for example at Fishbourne (Cunliffe 1971, 128, figs 55.6–7).

The loop hinge from GH 5 is of a type known from Roman contexts and is probably residual (GH 5, Fig 84.3; Cleere 1958). The three 'double-spiked loops' (GH 50, Fig 110.2; GH 58, Fig 116.8; GH 93, Fig 135.1) also have Roman parallels (Manning 1985, 130, pl 61). The spikes would have been fixed to the wood leaving a projecting loop, and could have performed a variety of functions.

Strip fragments

There is a tendency to classify iron strip fragments as 'binding' from wooden objects, particularly on Roman sites (eg Keppie *et al* 1975, 96–114). It is unlikely, however, that this accounts for more than a small number of the strip fragments from Mucking, as very few of these have the rivet or nail holes required for attachment (eg GH 9, Fig 86.7; GH 17, Fig 92.5; GH 56, Fig 113.2). It seems more likely that most of this material represents scrap metal and smithing waste, as the strip is the basic form produced by forging and might be discarded during the production of objects or the reforging of old iron. At least some of the curved copper alloy strips, however, almost certainly do represent binding (eg GH 11, Fig 88.1; GH 35, Fig 101.1; GH 134, Fig 151.1). Some strips could of course be fragments of finished and broken objects.

Sheet fragments

Most of the sheet iron from Anglo-Saxon contexts is of uncertain origin, and again much could be smithing waste. The riveted pieces of copper alloy sheet from GH 57 and 58 (Figs 114.2, 116.2) may be repairs or fittings for a very thin wooden vessel or, more likely, for a leather container. The punch-decorated copper alloy sheet from GH 58 and 177 (Figs 116.2, 168.1) appear to be fragments of decorative mounts.

Chainwork and rings

A number of plain iron rings were recovered from the settlement. At least some of these rings derive from chainwork, such as the swivel from GH 60 (Fig 119.2), which may be part of a pot chain, and the chain links from GH 77 (Fig 130.7). The hook from GH 85 (Fig 134.2), now badly corroded, was originally described as a pot hook directly comparable to one from Ramsbury (Evison 1980, 37–8, fig 21.21). Finer chainwork is evidenced by the figure-of-eight link from GH 179 (Fig 170.5), which is similar to a link from Sewerby Grave 24 (Hirst 1985, fig 41) and the corroded links from GH 2 (Fig 82.3). A fourth possible chain link is recorded from GH 132 (no 591), but this cannot now be located. Copper alloy chain links and a plain copper alloy ring were found in GH 2 and 69 (Figs 82.3, 125.1).

Keys

The keys from Anglo-Saxon settlement contexts at Mucking have Roman as well as Anglo-Saxon parallels, and could thus be residual. Only two of the keys (GH 77, Fig 130.8; GH 80, no 429, not illustrated) came from within the Roman field system, however. The key with an L-shaped bit from GH 77 parallels keys from Anglo-Saxon graves in the Dover Buckland cemetery (Evison 1987, Grave 44/4a, fig 26, and Grave 55/3a, fig 30). Two small T-shaped lift keys, from pit 6193(f) (Fig 188.1) and GH 134 (Fig 151.4) were probably used to lock small boxes or caskets. The hooks with looped terminals from GH 146 and 149 (Figs 154.1, 155.1) may be latch lifters (cf Fishbourne, Cunliffe 1971, 2, fig 58.27) or barb-spring padlock keys with corroded square bits (cf Verulamium, Frere 1972, 68.80). A small Roman ring-key for a lever lock from GH 169 may well have been kept as a curio (Jones 1975b, 38, fig 3).

Weapons

Four probable spear- or arrowhead fragments (GH 4, Fig 83.3; GH 12/21, Fig 89.3; GH 58, Fig 116.7; GH 42, not illustrated) are recorded from the Anglo-Saxon settlement. The examples from GH 42 and 129 are too fragmentary for positive identification, however, and the small, leaf-shaped blades from GH 12/21 and 58, and the probable spearhead socket from GH 4, cannot be dated with any precision (Swanton 1973, 46). A socketed, leaf-shaped spearhead was also recovered from the Linford site (Barton 1962, 100).

Tools

by Carole Morris

Iron bars (GH 7, Fig 85.5; GH 12/21, Fig 89.4a,b; GH 33, Fig 99.4)

These bars could all be fragments of larger objects or possibly smith's raw material, ie blanks awaiting manufacture into objects or offcuts from this process. Bar iron such as this is being increasingly recognised from excavations. Early Anglo-Saxon examples come from Site F at Shakenoak (Brodrigg *et al* 1972, 239, 243, fig 47), while later Saxon examples come from Gloucester (Morris 1988, 39, 334-5, 339, fig 19), and numerous Viking Age pieces are known from York (P Ottoway, pers comm). With their narrow, tang-like ends, the objects from GH 12/21 and 33 could even be steels for use in conjunction with flints to produce a flame. Hawkes has suggested that similar tanged iron rods were used as sharpening steels. They are found particularly in seventh-century graves, for example at the Polhill cemetery (Hawkes in Philp 1973, 199, figs 57 (no 578) and 58 (nos 583 and 599)).

Iron shears (GH 12/21, Fig 89.5; GH 104, Fig 138.1)

Iron shears are relatively common finds on Anglo-Saxon settlements, for example at Maxey (Addyman 1964, fig 16.11), and are also known from inhumations and cremations. Shears with an expanded bow similar to the example from GH 104 were found in a cremation from Spong Hill (Hills 1981, fig 155.1961)

Iron chisel blade fragment (GH 39, Fig 103.1)

This chisel blade fragment is probably from a woodworker's carving chisel, a tool characterised by its small, narrow blade with bevelled cutting edge. They are nearly always tanged or socketed for a wooden handle which can be hit with a mallet. Early Anglo-Saxon parallels for the Mucking blade come from Spong Hill Inhumation 55 (Morris forthcoming a), Alfriston Inhumation 52 (Evison 1965, 108, fig 16j), Shakenoak (Brodrigg *et al* 1973, 388-92, fig 58), and Sedgeford (unpublished, Kings Lynn Museum TF714 363), while a late tenth/twelfth-century tool with a similar function was found at Cheddar (Rahtz 1979, 267, fig 90.6).

Iron hand sickle or reaping hook (GH 57, Fig 114.12)

The outline of this sort of tool suggests the way in which it was held and used. Unlike a larger sickle whose handle was grasped in the hand allowing the blade to be swung, this small type of hand sickle was grasped so that the forefinger curved round the back of the blade, leaving the other three fingers and thumb to grip the wooden handle. It could be used for controlled cutting of smaller bunches of stems or even individual stems. Only the very centre of the blade was sharpened and could cut. Three close parallels were found in the excavation of the early Saxon settlement at West Stow (West 1985, figs 30.4, 48.1, 242.2).

Iron awls (GH 81, Fig 132.3; GH 142, Fig 153.2)

Iron awls such as these are common finds, sometimes retaining their original wooden or bone handles. Their form seems to be consistent over time, and it is difficult on shape alone to differentiate between Roman, Saxon, Viking, and medieval awls in Britain. They were used by leatherworkers for making small holes in leather, and also by other craftsmen such as woodworkers. An iron awl in a bone handle was found at West Stow (West 1985, fig 188.1), and awls without handles were found on sites C and F at Shakenoak (Brodrigg *et al* 1973, fig 58.400; 1972, fig 52.315).

Iron punch (GH 105, Fig 139.1)

Punches with pointed or blunt ends and flat solid heads were used by metalworkers to make holes in ferrous and non-ferrous metals. The form of such tools changes little over time and both Roman and early Saxon parallels are known for the Mucking tool, for example in hoards at Carlingwark and Blackburn Mill (Piggott 1952–3, figs 10.C64, 13.B45–46), Catsgore (Leech 1982, fig 84.27), Ilchester (Leach 1982, fig 125.53), and Shakenoak (Brodrigg *et al* 1973, fig 58.395 and 398)

Iron ?gimlet fragment (GH 129, no 583)

When examined by the writer, this object was not considered to be a true twist bit which removes shavings from the cutting point as it bores a hole. Rather, it is a gimlet which was used by a woodworker to start a cut which a spoon bit could enlarge into a hole. This task can also be performed by an awl (see above). A fragment of a similar tool was found at Shakenoak (Brodrigg *et al* 1972, fig 42.194), while another fragment and a complete tool with a tang for a handle were found in Viking Age deposits at York (Morris forthcoming b).

Iron round shave (GH 139, Fig 153.2)

This type of tool is designed to smooth and shave along the grain of curved objects, for example the jointed edges of staves on the inside of a circular coopered vessel. Round shaves are a vital part of a cooper's toolkit and it is very likely that the Mucking tool was a cooper's tool. Its size would have made it ideal for shaving the inside of vessels such as the small bronze- or iron-bound buckets known from early Anglo-Saxon cemeteries. The idea that this type of tool was used for hollowing out the interior of solid wooden vessels (Roesdahl *et al* 1981, 123) is misleading. There is no archaeological evidence for either Anglo-Saxon or medieval circular bowls being hollowed with a shave. On the contrary, all circular Anglo-Saxon bowls were lathe-turned.

The Mucking tool is the earliest example of its type to be found from Anglo-Saxon England. The only other surviving round shaves date to the late Saxon and Viking periods, for example from York, c AD 975 (Morris forthcoming b, sf 7278 22081), Durham, tenth/eleventh century (Carver 1979, fig 13), and Mastermyr, c AD 1000 (Ardwisson and Berg 1983, fig 27.54)

Leatherworker's iron sleaker or scudding knife (GH 168, Fig 165.5)

This kind of tool usually had a wooden handle which lay along the back of the blade and into which both tangs were fixed. It was used at various stages in the tanning process to remove dirt and/or lime. There are no early examples of this kind of tool to compare with the Mucking example, but, as with many tools, its form remained constant over a long period of time. Medieval sleakers of exactly the same type have been found in Kings Lynn (Goodall and Carter 1977, fig 133.37), Knaresborough

(Waterman 1953, fig 1.22), and North Elmham (Goodall 1980, fig 266.55).

Iron metalworker's hammer (pit 25850, Fig 192.2)

The date of this object is uncertain as the pit in which it was found was, at the time of writing, unphased.

Smiths held their raw material in tongs and worked it with heavy and lightweight hammers. The Mucking tool is one of these lighter hammers, and although there are very few early Saxon metalworking hammers to compare it with, its general shape, and especially the sloping chisel-like tail, is very similar to those of the later Saxon and medieval period, eg Nazeing, eleventh century (Morris 1983, 34, fig 3C), Mastermyr, c AD 1000 (Ardwisson and Berg 1983, figs 20.65, 21.67), York, tenth/eleventh century (Ottoway forthcoming, sf 5636 14704), and Wintringham, medieval (Goodall 1977, fig 46.62). Roman metalworking hammers seem to have been somewhat different, as is suggested by two examples from the Carlingwark hoard (Piggott 1952–3, fig 9, C42, C43) and two from Newstead (Curle 1911, pl LXIII) which are double-ended, straight tools with expanded centres. They do not have the sloping chisel-like tail which characterises the Anglo-Saxon and medieval hammers.

Lead rings and perforated discs

The only complete lead objects recovered from the Anglo-Saxon settlement were 28 rings and perforated discs (in GH 4, 10, 15, 17, 18, 56, 50, 66, 77, 182, and the North Enclosure). Five such rings were found lying on or near the floor of GH 17 along with 3.6kg of molten lead (Figs 91, 92). Groups of weights also came from GH 66 and 77. At the Linford site, one *Grubenhuis* produced no fewer than 20 cast lead rings, six of which lay in a row. The presence of 'lead waste' in the same feature suggests that an uncritical acceptance of the structure as a weaving-hut may be unwarranted (Barton 1962, 67–8).

Cast lead rings and perforated lead discs found in Anglo-Saxon contexts have often been interpreted as loomweights, although their actual function is uncertain. One of the Mucking rings (GH 60, Fig 119.1) exhibits slight transverse notches which may have been worn by suspension threads, but these are too faint to be conclusive. It further seems unlikely that a relatively scarce commodity such as recycled Roman lead would be used to manufacture loomweights, when clay was much more readily available and simpler to work with. When the relative distribution of lead discs and rings according to weight and diameter is plotted (Fig 47), two size groups emerge. As is apparent from Figures 46 and 47, the heavier group is on the whole lighter than the 'light' group of fired clay loomweights, which weigh between 200 and 250g, the heavier group weighing between 400 and 450g. It is equally plausible to suggest that such perforated discs were simply ingots. A more convincing case can be made, however, for the identification of the six smaller perforated discs with straight or tapered edges as spindlewhorls, which are known to have been made in a variety of materials (GH 16, 40, 46, 56, 65, 67, ditch 170N 563E). The average weight of these

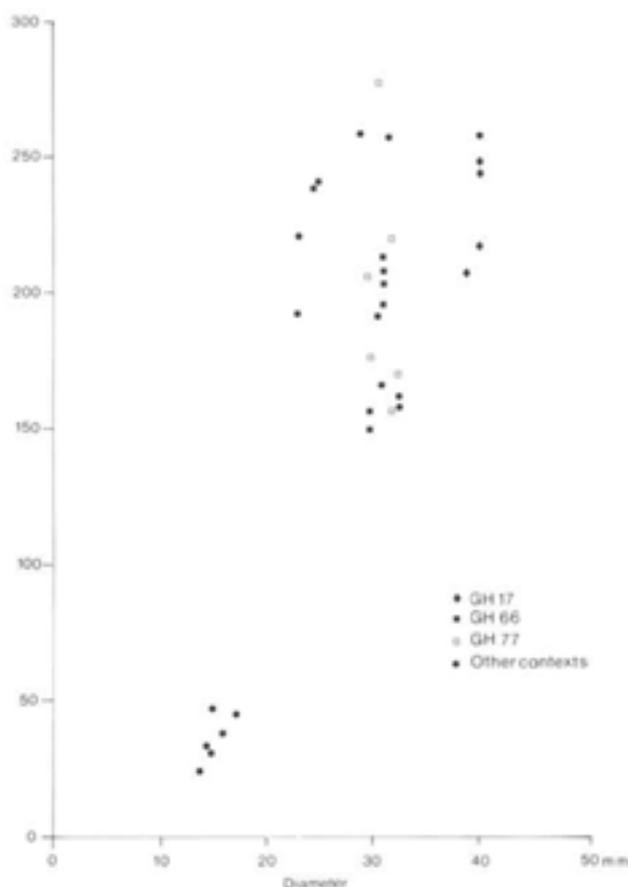


Fig 47 Perforated lead discs and lead rings: weights (g) and diameters (mm)

discs, 44g, is very close to that of the Type 2 fired clay spindlewhorls.

As can be seen in Figure 47, the groups of lead rings or discs found in GH 17, 66, and 77 are essentially identical in diameter within each GH group, but can vary considerably in weight. This could be explained if the groups of discs were cast in the same mould which was not always filled to the same level. This often appears visually to be the case. Failed castings of lead rings come from GH 15 and 211 (Figs 90.6, 178.1).

Lead rings have also been recorded from Anglo-Saxon settlements at Keston, Kent (Webster and Cherry 1973, 145), St Neots, Cambs (Lethbridge and Tebbutt 1933, 144), Barton Court Farm, Oxon (Miles 1986), Hanwell, Middlesex (Wheeler 1935, 136, fig 19), and the terp settlement of Ezinge, Friesland (van Giffen 1936; Fries Museum, Leeuwarden).

Lead rods, strips, and sheet are illustrated from several *Grubenhäuser* (GH 9, Fig 86.4, 5; GH 10, Fig 87.2, 3; GH 47/53, Fig 108.3, 4; GH 182, Fig 171.3, 4), as are possible lead ingots (GH 41, Fig 104.1; GH 57, Fig 114.10).

Figure 9 shows the distribution of *Grubenhäuser* containing lead, presumably stripped from the Romano-British farm or villa which lay nearby (see Going in Clark 1993). It shows how these huts concentrate in the southern sectors of the site, corresponding to the earlier phases of settlement. The simplest explanation for this pattern is that the local supply of plundered lead was exhausted by the later sixth century.

Roman artefacts from Anglo-Saxon contexts

In her unpublished MPhil thesis, Kinnes examined the relative frequencies of Roman and Anglo-Saxon pottery in the fills of the first 30 *Grubenhäuser* excavated at Mucking (Kinnes 1968, 228–32).⁸ She noted that, unlike prehistoric and Iron Age pottery, Roman pottery was found regularly in *Grubenhäuser* fills, even when the hut was not cut into earlier features. In order to interpret the presence of Roman pottery in hut fills, the relative frequencies of Roman and Anglo-Saxon pottery in different levels of four *Grubenhäuser*, GH 2, 9, 17, and 29, were plotted. The hut which was not dug into a Roman ditch, GH 17, not surprisingly contained a markedly lower proportion of Roman pottery. While the number of Roman sherds dropped sharply in the lower levels of all four huts, the number of Anglo-Saxon sherds peaked at a depth of about 9in (230mm). Quantification of the Anglo-Saxon and Roman pottery in all 30 *Grubenhäuser* led Kinnes to the conclusion 'that while Saxon and Roman sherds occurred in almost equal proportions in the upper levels, in the lower ones the Saxon outnumbered the Roman by about three to one' (ibid, 231, fig 68). These preliminary observations have been expanded upon by C Going (see below).

In only one *Grubenhäuser*, GH 57, was the quantity and nature of Roman finds such that deliberate collection and 'curation' of Roman objects seems likely; five beads, an unidentified fitting, a disc belt attachment, 22 Roman coins, a penannular brooch (unlocated), and fragments of two shale bracelets were distributed throughout the fill. The riveted copper alloy sheet (GH 57, Fig 114.2) may have been a repair to a leather container or pouch in which these finds were kept.⁹

Roman pottery from the *Grubenhäuser*

by Chris Going

Mucking is one of the few Anglo-Saxon settlement sites which has also produced 'Romano-Saxon' pottery. To Myres (in Jones *et al* 1968, 224), its occurrence in two *Grubenhäuser* (GH 8 and 9) was a 'clear case for the use of these wares in an Anglo-Saxon context'. The past quarter-century has seen 'Romano-Saxon' pottery restored to its proper place as a later Roman regional ceramic type. However, recent examination of Roman pottery from post-Roman contexts on two Saxon settlement sites, Heybridge in Essex and West Stow in Suffolk, suggests that it may not all be dismissed as straightforwardly residual material.

Both the Heybridge and West Stow assemblages differ intriguingly from conventional later Roman assemblages, both in terms of their fabric proportions and in the kinds of sherds represented. At Heybridge, in comparison with the later Roman contexts on the same site (eg the later fourth-century ditch, 122), there was a significantly higher proportion of later Roman fine wares in the post-Roman contexts. Indeed, two Saxon *Grubenhäuser* (nos 1 and 3) produced 40% of the total quantity of Oxfordshire oxidised wares recovered in the excavation. The high total of later Roman fine wares found led to the conclusion that they might have been

used in conjunction with post-Roman pottery on the site (Drury and Wickenden 1982, 20–5, figs 8, 9, table 7). A similarly aberrant pattern is evident in the pottery from post-Roman levels at West Stow (sherd n = 376). There, no less than 77% of the relevant Roman pottery comprised either Oxfordshire oxidised wares or Nene Valley colour-coated fabrics. If the samian data (Hartley and Dickinson 1985, 82) had been added to the table, the colour-coated sherds would have totalled over 80% of the entire assemblage recovered from the post-Roman contexts. By comparison, these three fabrics accounted for less than 20% of the pottery found in late Roman contexts at nearby Icklingham. Comparison of coarse ware totals at these two sites yields 2% at West Stow as opposed to figures of 58 and 65% at Icklingham. Break-downs of sherd types (eg rims, bases, and body sherds) at West Stow produced an equally unusual picture, with approximately two-thirds of the sherds being classed as rim or base sherds. It was suggested that there had been deliberate collection of colour-coated and other 'significant' sherds at the expense of the far commoner reduced wares.

In order to see if there was a similar selection bias at Mucking, a sample of the Roman pottery found in the *Grubenhäuser* there was examined. Ideally, this would have included an exhaustive categorisation of whole assemblages from a statistically significant fraction of the *Grubenhäuser*, but time constraints led to the selection of certain ceramic categories within which biases would show up readily. This comprised all the samian, together with all readily accessible catalogued fine wares: Nene Valley colour-coated wares, Oxfordshire oxidised wares, and Hadham oxidised wares, as well as miscellaneous colour coats (the relevant computer record serials are annexed to site archive file RB POT 1). These were separated into rims, bases, decorated (or other significant) body sherds, and body sherds lacking recognisable decoration. The results are tabulated in Table 7.

In contrast to West Stow, the most common fine ware found in the Mucking *Grubenhäuser* was samian. The most probable explanation for this is the fact that the site as a whole appears to have seen a substantial diminution of activity after the mid fourth century – the period when Oxfordshire oxidised wares and Nene Valley products are most commonly found in Essex. In consequence the non-samian sample, at 41 sherds, was barely sufficient to permit any meaningful statistical breakdown. However, as only 13 of the sample sherds could be classed as body sherds, this may imply the existence of some selection criteria.

Just over half of the samian sherds (123) were classifiable as 'significant' (ie rims, bases, or decorated sherds). This sample was compared with a control from non-*Grubenhäuser* features to see whether any selection bias was present. The first sample (119) suggested it was. However, an enlarged non-*Grubenhäuser* sample (Table 7c; 492 sherds) produced a figure of c 60% 'significant' sherds, which suggests that the *Grubenhäuser* data may have been produced by chance. The *Grubenhäuser* figures were then split into their constituent excavation spits to see if a pattern might emerge (Table 7b). Although these sub-totals are very small, there are hints of an apparent increase in the number of featureless sherds in the upper levels. This is probably due to plough zone damage or the intrusion of plough-degraded material.

Table 7 Romano-British pottery from *Grubenhäuser*: characterisation of the fine wares by sherd type

A: Fine wares from the <i>Grubenhäuser</i>					
Fabric	Rims	Bases	Dec	Body	Total
Nene Valley c/c	–	4	2	3	9
Oxon c/c	7	1	6	9	23
Hadham red	2	–	3	–	5
Misc c/c	2	–	1	1	4
Samian	25	23	10	65	123
Total:	36	28	22	78	164

B: Samian from <i>Grubenhäuser</i> : spit by spit breakdown of the figures					
Excavation spit	Rims	Bases	Dec	Body	Total
Not known/given	3	4	–	9	16
1	5	6	–	16	27
2	7	3	2	14	26
3	4	2	3	15	24
4	3	4	2	5	14
5+	3	4	3	6	16
Total:	25	23	10	65	123

C: Other samian (n = 492)					
	Rims	Bases	Dec	Body	Total
	162	80	45	205	492

Sample origins (*Grubenhäuser* nrs): 1(fw) 2(g) 8-9(fw) 10-12(g), 36(s/g), 37(s), 38(s/fw/g), 39(s), 40(s/fw/g), 41(s), 42(s), 43(s/fw), 46(fw), 47-8(s), 49(s/fw/g), 50(s/fw), 51(s), 52(fw), 53(s/fw), 54(s), 57(fw), 58(s/fw) 59(s), 60(s/g), 61(s/fw), 62(s/fw), 63(s/fw/g), 64(fw), 65(fw) 66-7(s), 69(s), 71-2(s), 73(s/fw), 74(s/fw), 75(s/fw), 77(s), 79(s), 80(fw), 81-2(s/g), 91(g), 101(s), 104-5(s), 107-8(s), 113(s/fw), 116(s), 119(s), 127(s), 129-32(s), 135(s), 148(s), 149(fw), 153(s), 155(g), 168(s), 175(s), 180(g), 182(fw), 184(s), 189(s)

Key: s = samian; fw = fine wares; g = glass

A sample of glass from the *Grubenhäuser* was examined to see whether it could augment the picture. Initial results suggest a bias towards vessel rims and bases, which implies selection.

In sum, the present evidence for deliberate ceramic selection at Mucking is rather less clear than at either Heybridge or West Stow. However, further work will be necessary before it is possible to make a definitive statement.

Roman coins from Anglo-Saxon contexts

by Chris Going

Of the total number of Roman coins from the excavation (133), no fewer than 44 (33%) were found in *Grubenhäuser* (Table 8). This appears at first glance to be an exceptionally high proportion of the coins found. When the figure is examined more closely, however, it appears that of this number only 13 came from 'layers considered by M U Jones to be contemporary [viz Anglo-Saxon] deposits' (King 1988, 225). Of this rather smaller total, no fewer than ten are from a single *Grubenhäuser* (GH 57). One might add to this the observation that 22 Roman coins in all were recovered from GH 57, although they were quite widely dispersed in the fill. The ten coins in question are all issues of the third and

Table 8 Roman coins from Anglo-Saxon contexts*

Context	Mucking coin number
GH 9	level 1 coin 1
GH 12	level unknown coin 3
GH 31	level unknown coin 12
GH 47	level 2 coin 60
GH 51	level unknown coins 21, 22
GH 57	level 7 coin 54
	level 6 coin 40
	level 5 coins 41, 43-4, 48, 56, 63
	level 3 coins 45-6, 50
	level 2 coins 38, 42, 49, 55, 60
GH 62	level 2 coins 30, 162
GH 73	levels 2 & 5 coin 63, 66
GH 90	level unknown coin 75
GH 113	level 3 coin 113
GH 118	level 2 coin 115
GH 152	level 6 coin 130
GH 195	levels 4 & 3 coins 125, 129
Grave 123	coin 86
Grave 789	coins A-E

* for coin identification, see *Going forthcoming*

fourth centuries AD, the flimsiness of which might have made them more difficult to pierce for suspension than the more robust, earlier *sestertii* and *dupondii* – the latter being the denomination of one of the two perforated coins from the site, coin 86 from Anglo-Saxon Grave 123 (Hirst and Clark forthcoming) and coin 122 from the North Enclosure (Fig 180.2). From grave 789 in Anglo-Saxon Cemetery II came five more coins, three Antoniniani of Postumus, a further coin of Tetricus, and an unidentified coin (White 1988, 86, no 168, where the burial is given the incorrect number of 249; for this burial see also Hirst and Clark forthcoming).

While the total percentage of coins from the lower levels in the *Grubenhäuser* (ie levels 5-7) is thus much smaller (9.7%), the number of coins in the upper levels still seems too great to be mere coincidence. But how accurately the archaeological record reflects the actual use of the coins is uncertain. The removal of tons of overburden from the site as a whole (and probably of most of the Roman levels as well, leaving only deeper features such as ditches, postholes, and pits) has undoubtedly deprived us of a considerable body of data. It is probable that the comparatively small number of Romano-British small finds excavated from the settlement is also a reflection of this loss. All that can be said is that the Roman settlement produced few coins from ditches and pits, where it is probable that relatively few were deposited in the first place. Thus it can only be claimed with some confidence that deliberate collection has taken place in the case of GH 57, with its collection of coins, and Grave 789.

Notes

1 The author gratefully acknowledges the assistance of Tania Dickinson in the discussion of the saucer brooches from the Mucking settlement, and wishes

to thank Leslie Webster, Sonia Hawkes, and Dafydd Kidd for their comments on the Anglo-Saxon jewellery. The discussion of the finds in chapter 4 is not intended as an exhaustive consideration, as this would be premature in advance of the analysis of the cemetery finds. It focuses primarily on the chronologically diagnostic finds on which the phasing of the settlement is based, and on classes of artefacts which are particularly well-represented in the Mucking settlement. A number of finds which were originally recorded are now either corroded beyond recognition or unlocated. Although listed in the inventory, these have been excluded from the discussion, apart from exceptional cases (eg the iron gimlet from GH 129 (see p 70)).

- Over 900 iron objects were recovered from Anglo-Saxon settlement contexts at Mucking, compared to some 9000 iron objects from other period contexts. Represented in this total are approximately 500 nails, 60 knives or knife fragments, 85 pins, 111 fragments of iron strip or sheet, and 176 unidentifiable or 'other' objects. A number of objects had greatly deteriorated by the time of writing, and early x-radiographs were not always available to assist in their identification and illustration. The identification and discussion of iron objects is based in part on a detailed archive report on the Anglo-Saxon ironwork from the Mucking settlement by P M Barford (1981; *Mucking, Essex: iron from Saxon contexts*). His report includes not only descriptions and measurements of the objects, but detailed discussions of corrosion products, knives, and nails, which have been omitted here for the sake of brevity.
- The author is grateful to Michael Metcalf for the information regarding the recent *scaetta* finds from Mucking.
- The reader is invited to consult the unpublished archive report, *Fired clay from Saxon contexts*, by P M Barford (1986), for a fuller discussion of spindlewhorls and loomweights. The discussion of these artefacts in this volume is based on this report, and the typological groupings of the spindlewhorls are those defined by Barford. The author gratefully acknowledges Paul Barford for making available the results of his extensive research.
- At Colchester, four of the five illustrated whorls made from Roman pottery sherds came from post-Roman contexts (Crummy 1983, fig 71).
- A discussion of the loomweights from Feddersen Wierde (including both annular and pyramidal forms) is published in Haarnagel 1979, 283, Taf 67-69.
- 'Puddles' of raw clay on the floors of some *Grubenhäuser* (eg GH 142, Fig 78) may in some cases represent weathered unfired loomweights. Although a number of unfired loomweights were collected, these could not be located in the archive.
- Barbara Kinnes' results are presented here with her kind permission.
- The author is grateful to Leslie Webster for this last observation.

5 Environmental and technological evidence

Animal bone from Anglo-Saxon contexts

by Geraldine Done

Introduction

It must be emphasised at the outset that the preservation of bone at Mucking was extremely poor, owing primarily to the acidity of the subsoil. Ten samples for which pH was measured (M J Hughes, pers comm) ranged from 6.6 to 7.2 with a mean value of 6.88, levels at which calcium phosphate, the main constituent of bone, may dissolve relatively rapidly. Though the sampling was limited, it probably reflects slightly acidic conditions across the whole site. Almost all of the remanent bone (including modern sheep burials) was friable and 'threadbare'. Emissions from a modern industrial plant in the area may have contributed to the adverse conditions for bone survival.

A secondary destructive factor was, and continues to be, storage conditions. When this study began in 1971, there was already a backlog of bone excavated over the previous six years, and all too often a bag, when opened, yielded a stream of dusty particles.

The main body of animal bone from Anglo-Saxon

contexts came from the *Grubenhäuser*; other Anglo-Saxon features provided little of significance. The exception, the so-called 'antler ditch' (ditch 296), is included in this account. Bone occurred in 183 huts, with identifiable bone in 69 (Table 9). Only eight huts contained more than 100 fragments (Table 10). It is possible that these huts were originally rich enough in bone to allow dissolution to set up a buffering effect, perhaps giving rise to a better local environment for bone preservation. There can be little doubt that the larger bones of robust architecture fared better than the smaller bones of small mammals. The bone frequencies listed in Table 11 reflect this, showing a predominance of mandibles, distal humeri, and astragali. Sixty-five percent of the huts contained fewer than 20 fragments. Throughout the site erosion and fragmentation of the bones defied attempts to identify butchering marks.

The information gleaned from the faunal remains at Mucking, when seen in relation to the scale of the excavation, is thus minimal. The picture it presents must be regarded as incomplete and tentative.

Table 9 Anglo-Saxon *Grubenhäuser* – bone fragment distribution (for key see page 76)

	Horse	Ox	Sheep	Pig	Dog	Deer	Bird	LM	SM	RT	Other	Total
GH 1	-	8	-	3	-	1	-	2	-	-	-	14
GH 2	2	56	3	6	-	3	4	3	-	-	-	77
GH 3	-	-	-	-	-	-	-	1	-	-	-	1
GH 4	-	2	-	-	-	-	-	-	-	-	-	2
GH 5	-	1	1	-	-	-	-	-	-	-	-	2
GH 6	-	3	-	-	-	-	-	-	-	-	-	3
GH 7	-	-	-	-	-	-	-	-	-	/	1	2
GH 8	-	1	-	-	-	-	-	-	-	-	-	1
GH 9	1	21	1	1	-	-	-	-	-	/	-	25
GH 10	2	24	6	2	8	2	-	-	-	-	-	44
GH 11	2	28	4	5	-	-	-	6	-	-	-	45
GH 12	7	32	3	2	-	1	-	2	-	-	-	47
GH 13	1	10	-	-	-	-	-	-	-	-	1	12
GH 15	-	11	2	6	-	-	-	-	-	-	1	20
GH 16	-	8	3	1	-	-	-	-	-	-	7	12
GH 17	5	94	17	24	-	3	1	22	-	-	-	166
GH 19	-	35	-	7	-	-	-	1	-	-	-	43
GH 20	2	15	2	-	-	1	-	2	-	-	-	22
GH 21	-	-	-	-	5	-	-	2	-	/	-	8
GH 22	-	8	-	-	-	-	-	1	-	/	-	10
GH 23	1	28	6	7	-	7	-	8	-	-	-	57
GH 24	-	8	-	-	-	-	-	1	1	-	-	10
GH 26	-	23	2	8	-	2	-	10	-	-	-	45
GH 28	-	-	-	-	-	-	-	2	-	-	-	2
GH 29	3	23	6	5	-	-	-	-	2	-	-	69
GH 30	-	10	1	1	-	-	-	3	-	-	-	15
GH 31	5	9	1	5	-	-	-	1	-	-	-	21
GH 32	2	15	2	-	-	-	-	4	1	/	-	24
GH 33	2	47	30	73	3	8	-	18	11	-	4	196
GH 34	-	1	-	1	-	-	-	1	-	/	-	4
GH 35	3	7	-	2	-	1	-	10	2	/	-	26
GH 36	-	2	1	-	-	-	-	1	1	/	-	6
GH 37	-	-	-	1	-	-	-	1	-	/	-	3
GH 38	-	3	-	-	-	-	-	1	-	/	-	5
GH 39	-	1	-	-	-	-	-	1	-	/	-	3
GH 40	4	5	-	-	-	-	-	4	-	/	-	13
GH 41	6	12	5	1	-	-	-	6	2	-	-	32
GH 42	2	28	28	13	-	2	-	3	3	-	-	79

	Horse	Ox	Sheep	Pig	Dog	Deer	Bird	LM	SM	RT	Other	Total
GH 43	7	7	4	3	-	-	-	16	3	-	-	40
GH 44	-	12	3	2	-	-	2	-	-	-	-	19
GH 45	1	2	1	-	-	-	-	1	-	/	-	6
GH 46	-	-	-	-	-	-	-	2	-	-	-	2
GH 47	-	72	13	8	-	2	-	15	2	/	-	112
GH 47/53	-	10	2	3	-	-	-	-	-	-	-	15
GH 48	2	2	-	4	-	1	-	7	1	-	-	17
GH 49	1	1	-	1	-	-	-	4	-	/	-	8
GH 50	1	10	2	1	-	-	-	4	1	/	-	20
GH 51	1	-	-	-	-	-	-	1	-	/	-	3
GH 52	-	13	2	2	-	-	-	1	-	-	-	8
GH 53	1	1	-	-	-	-	-	-	-	-	-	2
GH 54	1	8	-	-	-	-	-	5	-	/	-	14
GH 55	3	30	4	10	-	2	-	11	1	-	-	61
GH 56	-	10	-	-	-	1	-	3	-	/	-	14
GH 57	6	67	18	20	-	5	4	18	-	-	-	138
GH 58	4	73	33	26	1	19	-	72	10	/	-	239
GH 59	7	8	1	-	-	1	-	8	-	/	-	26
GH 60	-	7	3	2	-	-	-	8	-	/	-	23
GH 61	-	11	2	-	-	-	-	5	1	/	-	19
GH 62	-	30	2	2	-	1	-	4	1	-	-	40
GH 63	2	13	1	1	-	1	-	10	1	/	-	30
GH 64	-	5	-	-	-	-	-	1	-	/	-	7
GH 65	-	1	-	-	-	-	-	-	-	-	-	1
GH 66	-	-	-	-	-	-	-	-	-	/	-	1
GH 67	2	8	-	-	-	-	-	-	-	/	-	11
GH 68	-	1	1	-	-	-	-	-	-	-	-	2
GH 69	-	2	-	-	-	-	-	-	-	-	-	2
GH 70	-	-	-	-	-	-	-	-	-	/	-	1
GH 71	-	5	-	-	-	-	-	1	-	/	-	7
GH 72	-	1	-	-	-	-	-	1	-	/	-	3
GH 73	-	2	1	-	-	1	-	3	-	/	-	8
GH 74	-	4	-	-	-	-	-	2	-	/	-	7
GH 76	-	-	-	-	-	-	-	-	-	/	-	1
GH 77	-	4	1	-	-	-	-	-	-	-	-	5
GH 78	-	1	-	-	-	-	-	-	-	/	-	2
GH 79	71	-	-	-	-	-	-	7	-	/	-	79
GH 81	4	29	7	4	-	3	-	11	4	/	-	62
GH 82	-	2	1	-	-	-	-	5	1	/	-	9
GH 83	-	1	-	-	-	-	-	-	-	-	-	1
GH 84	-	-	-	-	-	1	-	-	4	/	-	6
GH 86	-	3	-	1	-	-	-	-	-	-	-	4
GH 87	-	-	-	-	-	-	-	-	-	/	-	1
GH 88	-	-	-	-	-	-	-	-	-	-	1	1
GH 91 modern rabbit	-	-	-	-	-	-	-	-	-	-	1	1
GH 93	-	1	-	-	-	-	-	-	-	-	1	2
GH 94 (pit 6193)	-	-	-	1	-	-	-	-	-	-	-	1
GH 97	-	-	-	-	-	-	-	-	-	/	-	1
GH 98	-	-	-	-	-	-	-	1	-	-	-	1
GH 100	-	3	-	3	3	-	-	3	-	-	-	12
GH 103	-	1	-	-	-	-	-	1	-	-	-	2
GH 104	-	3	-	1	-	1	-	-	-	/	-	6
GH 105	-	1	-	-	-	-	-	-	-	-	-	1
GH 107	-	1	-	-	-	-	-	-	-	-	-	1
GH 108	-	-	-	-	-	-	-	1	-	/	-	2
GH 110	-	3	-	-	-	-	-	-	-	/	1	4
GH 111	1	4	-	1	-	-	-	-	-	/	-	7
GH 113	5	43	9	2	-	-	-	12	1	/	-	72
GH 115	-	1	-	-	-	-	-	-	-	-	-	1
GH 116	-	3	-	-	-	-	-	2	-	/	-	6
GH 117	-	2	-	-	-	-	-	-	-	/	1	4
GH 119	-	1	-	-	-	-	-	-	-	-	-	1
GH 120	1	-	-	-	-	-	-	1	-	/	-	3
GH 121	-	-	-	-	-	-	-	-	-	/	-	1
GH 125	-	-	-	-	-	-	-	1	-	-	-	1
GH 126	4	-	-	-	-	-	-	-	-	-	-	4
GH 127	-	2	-	-	-	-	-	1	-	/	-	4
GH 128 (?pit)	-	1	-	-	-	-	-	-	-	-	-	1
GH 129	7	38	9	1	-	4	-	16	2	-	-	77
GH 130	-	-	-	-	-	-	-	-	-	/	-	1
GH 131	2	-	-	-	-	-	-	2	-	-	-	4
GH 132	-	1	-	-	-	-	-	-	-	-	-	1
GH 133	2	1	-	-	-	-	-	-	-	-	-	3
GH 134	2	7	3	-	-	-	-	4	2	/	1	20
GH 136	-	3	-	-	-	-	-	-	-	/	-	4
GH 137	-	3	-	-	-	-	-	1	-	/	-	5
GH 141 (pit 11359)	-	2	-	-	-	-	-	-	-	-	-	2
GH 142	-	1	-	-	-	-	-	3	-	-	-	4
GH 143	-	1	-	-	-	-	-	-	1	/	-	3

	Horse	Ox	Sheep	Pig	Dog	Deer	Bird	LM	SM	RT	Other	Total
GH 145	1	6	-	-	-	-	-	1	-	-	-	8
GH 146	-	-	-	-	-	-	-	-	-	/	-	1
GH 147	(pit 10606)	4	-	-	-	-	1	-	-	-	-	5
GH 148	3	7	1	-	-	1	-	-	-	/	-	13
GH 149	2	82	9	20	-	-	-	85	26	/	1	225
GH 151	-	-	-	-	-	-	-	1	-	-	-	1
GH 152	21	37	5	5	-	2	5	72	6	-	-	153
GH 153	-	1	-	-	-	-	-	-	-	-	-	1
GH 154	17	13	1	-	-	-	-	4	-	-	-	31
GH 155	2	40	5	-	-	-	-	55	-	-	2	104
GH 156	-	2	-	-	-	-	-	-	-	-	-	2
GH 157	1	15	2	3	-	-	-	2	-	-	-	23
GH 158	-	1	-	-	-	-	-	1	-	-	-	2
GH 159	-	3	-	-	-	-	-	1	-	-	-	4
GH 160	-	21	-	1	-	-	-	4	1	-	-	27
GH 161	-	6	1	-	-	-	-	1	-	-	-	8
GH 163	-	1	-	-	-	-	-	-	-	/	-	2
GH 164	-	-	-	-	-	-	-	2	-	-	-	2
GH 165	-	18	1	1	-	-	-	5	1	/	-	26
GH 166	2	35	3	4	-	-	-	11	1	-	-	56
GH 167	-	3	1	-	-	-	-	4	-	/	1	10
GH 168	-	2	-	-	-	-	-	1	-	/	-	3
GH 169	-	8	-	-	-	-	-	1	-	/	-	9
GH 171	-	1	-	-	-	-	-	-	-	-	-	1
GH 173	-	5	-	-	-	-	-	3	-	/	-	8
GH 174	-	-	-	-	-	-	-	-	-	/	-	1
GH 175	-	1	-	-	-	-	-	1	-	-	-	2
GH 177	-	-	-	-	-	-	-	1	-	/	-	2
GH 178	-	1	-	-	-	-	-	-	-	/	-	2
GH 179	-	1	-	-	-	-	-	-	-	-	-	1
GH 180	3	4	-	-	-	-	-	-	-	-	-	7
GH 181	-	10	0	-	-	-	-	-	-	-	-	10
GH 182	1	5	5	-	-	1	-	5	-	-	-	17
GH 183	(ditch 25622)	1	-	-	-	-	-	1	-	-	-	2
GH 184	-	1	-	-	-	-	-	1	-	/	-	3
GH 186	-	1	-	-	-	-	-	2	-	-	-	3
GH 187	-	3	-	-	-	-	-	-	-	/	-	4
GH 188	-	4	-	-	-	-	-	3	-	-	-	7
GH 190	-	1	1	-	-	-	-	-	-	/	-	3
GH 191	-	-	-	-	-	-	-	-	-	/	-	1
GH 195	4	-	-	-	-	-	-	-	-	-	-	4
GH 196	1	-	-	-	-	-	-	-	-	-	-	1
GH 198	3	1	-	-	-	-	-	-	-	/	-	5
GH 199	-	-	-	-	-	-	-	-	-	/	-	1
GH 201	-	-	-	1	-	-	-	-	-	-	-	1
GH 207	-	-	-	-	-	-	-	-	-	/	-	1
GH 208	-	1	-	-	-	-	-	-	-	/	-	2
GH 211	-	2	-	-	-	1	-	-	-	/	-	4
GH 212	1	10	1	3	-	-	-	3	-	-	-	18
GH 213	(pit 1002)	3	2	-	-	-	-	1	-	-	-	6

LM = large mammal; SM = small mammal; RT = ruminant teeth; / = present

Table 10 Bone from *Grubenhäuser* containing over 100 fragments*

	Horse	Ox	Sheep	Pig	Dog	Deer	Bird	LM	SM	RT	Other	Total
GH 17	5	94	17	24	-	3	1	22	-	-	-	166
GH 33	2	47	30	73	3	8	-	18	11	-	4	196
GH 47	-	72	13	8	-	2	-	15	2	/	-	112
GH 57	6	67	18	20	-	5	4	18	-	-	-	138
GH 58	4	73	33	26	1	19	-	72	10	/	-	239
GH 149	2	82	9	20	-	-	-	85	26	/	1	225
GH 152	21	37	5	5	-	2	5	72	6	-	-	153
GH 155	2	40	5	-	-	-	-	55	-	-	2	104

*includes loose teeth

	Food animals as percentage of fragments				Minimum Numbers			
	Horse	Ox	Sheep	Pig	Horse	Ox	Sheep	Pig
GH 17	3.5	67	12	17	1	3	2	3
GH 33	1.3	13	19.7	48	1	2	3	3
GH 47	0	77	14	8	0	3	2	2
GH 57	5	60	16	18	1	5	2	2
GH 58	3	53.5	24	16	1	3	2	2
GH 149	1.7	72.5	8	17.7	1	3	1	4
GH 152	31	54	7	7	2	3	1	2
GH 155	4	85	10	0	1	4	1	0

Table 11 Bone frequency

	Ox		Sheep/Goat		Pig	
	8 GH	All GH	8 GH	All GH	8 GH	All GH
Horn core	5	14				
Skull	17	51		4		3
Mandible	28	72	13	22	19	36
Vertebrae	15	21	P	P	P	
Scapula	11	22	1	1	5	8
Humerus, prox	2	2				
Humerus, dist	14	39	1	3	4	20
Humerus, other	3	6			1	1
Radius, prox	10	24	2	3	5	9
Radius, dist	6	16	2		1	2
Radius, other	1	1		3		1
Ulna	6	10	2	3	5	9
Metacarpal, prox	12	34	3	5		
Metacarpal, dist	11	28	4	5		
Metacarpal, other	4	14		1		
Pelvis	20	33	1	1	1	5
Femur, prox	2	5		3	1	2
Femur, dist	1	4	1	1		
Femur, other	3	5		1		
Tibia, prox	3	6		1		1
Tibia, dist	10	34	2	5	3	5
Tibia, other	3	8	2	5		1
Astragalus	22	57	2	3	5	8
Calcaneum	12	23		2	1	4
Metatarsal, prox	12	28	1	2		
Metatarsal, dist	12	20		1		
Metatarsal, other	6	14	1	5		
Metapodial					16	22
Phalanx 1	19	49	1	2	7	7
Phalanx 2	11	20			2	2
Phalanx 3	5	8	1	1	2	2

Methods

All the bone from each hut was considered together, regardless of level. All identifiable fragments were counted, including loose teeth. The only faunal material yielded by many contexts was ruminant tooth scraps; these were not counted although their presence was recorded.

Initially, length, as well as proximal, distal, and minimum shaft width, were measured. Subsequently, the guidelines proposed by von den Driesch (1976) were followed, and most of the measurements already made were found to be compatible with these. All measurements are to the nearest millimetre. Greater precision was considered to be inappropriate for material which was in poor condition and therefore unable to withstand thorough cleaning. Weighing was therefore ruled out, because of the variable amounts of soil attached to or contained in the bone. The tooth eruption tables given by Sisson and Grossman (1938) have been used, and for most of the cattle, sheep, and pig teeth, Grant's (1975) wear stages have been applied.

The following species were identified from the Mucking *Grubenhäuser*: horse, ox, sheep/goat, pig, dog, cat, red deer, fallow deer, rabbit, domestic fowl (*Gallus*),

goose (*Anser* sp), green plover, ?golden plover, scallop, and oyster. A single flat fish vertebra was also noted.

Farm animals

Cattle bones were recovered from 133 (62%) of the huts, sheep bones from 62 (29%), pig from 50 (23%), and horse from 57 (27%). The overall ratio of cattle, sheep, and pig, an estimate reflecting minimum numbers of individuals represented in the eight huts containing over 100 fragments, was cattle 52%, sheep 19%, and pig 28%. As horse bones occur in numbers roughly comparable to sheep, the horse should perhaps be included with the more conventional food animals, in which case the figures are cattle 46%, sheep 16%, pig 25%, and horse 12%.

Little can be deduced with confidence as to the size of the animals or, more important, as to the likely composition of herds/flocks in terms of age and sex. The age at death in cattle is much as would be expected if they were kept primarily for meat, ie young adulthood. The age data for sheep and pig cover a wide range and are drawn from a small number of individuals, and thus reveal no clear patterns regarding age at death. Measurements and age estimates are provided in Tables 12 and 13 for cattle, Tables 14 and 15 for sheep, and Tables 16 and 17 for pig.

Table 12 Cattle measurements (in mm)

Scapula	LG 60, BG 58				
Humerus	BT 57, 62, 64, 72, 73, 79				
Radius	GL c300 c260	Bp 80	Bfp 75	Bd 67	SD
	262	69		66	33
		64	60		
		66	63		
		74	70		
		86	76		
		50			
		63			
		69			
			63		
				57	
				66	
				71	
Metacarpal	GL	Bp	Bd	SD	
	181	c41	51	27	
	180	c45	c42	26	
	187	51	51	28	
	184	49	47	27	
	190	52	51	33	
	173	53	-	31	
	180	46	-	27	
	195	57	-	-	
	205	67	-	-	
	190	-	52	-	
Range of 26 Bp :- 41-70 mm. Mean 52.9, SD 6.8, median 52					
Range of 18 Bd :- 42-67 mm. Mean 53.6, SD 6.8, median 51					
Tibia					
Range of 24 Bd :- 47-68 mm. Mean 56.6, SD 5.4, median 55					
Astragalus					
Range of 23 GL1 :- 50-67 mm. Mean 59.4, SD 4.6, median 60					
Calcaneum					
Range of 5 GL :- 92-130 mm					
Metatarsal	GL	Bp	Bd	SD	
	223	42	49	21	
	205	42	-	23	
	205	41	48	24	
	216	45	50	24	
	195	-	45	24	
Range of 13 Bp :- 40-59 mm. Mean 46.4, SD 5.3, median 45					

Table 13 Dental wear in cattle

m1	m2	m3	PM2	PM3	PM4	M1	M2	M3	
			✓	✓	✓	✓	✓	✓	(all in wear)
✓	✓					✓	✓	U	
	✓	✓				E			
		✓					U	h	(anomalous)
	✓	✓				b	b	a	
		✓				U	U	E	
						✓	✓	k	
						✓	d	a	
		✓	✓	✓		✓	✓	✓	(all in wear)
		l				c	b	a	
						✓	✓	g	
						j	g	g	
							g	b	
			U	U		m	l	k	
						✓	✓	l	(?very old)
						l	g/h	U	(M3 2cusps)
		U	U	V		✓	✓	a	
			V	b			h	g	
							j	g	
							h	j	
						b	g	k	

Table 14 Sheep measurements (mm)

Radius Bp 25, 27				
Metacarpal	GL	Bp	Bd	SD
	115	19		12
	125	20	25	13
		19		13
		22		25
				21
Tibia Bd 20, 23, 24, 26				
Metatarsal Bp 23, 19				

Table 15 Dental wear in sheep

m1	m2	m	PM2	PM3	PM4	M1	M2	M3
✓	✓	✓				✓	✓	1/2
							U	1/2
							V	1/2
							g	h
					✓	g	g	c
					✓	j	f	b
			✓	✓		g	f	b
							g	h

Six mandibles with all cheek teeth in wear

Table 16 Pig measurements (mm)

M3 L22, 27, 35, 41
Humerus Db 30, 32, 34
Radius Bp 25, 26, 27, 28
Tibia Bd 26, 27, 30
Astragalus GL1 40 GLm 37
36

Table 17 Dental wear in pigs

I1	I2	I3	C	m1	m2	m3	PM1	PM2	PM3	PM4	M1	M2	M3
V	✓	✓	✓	j		E					d	U*	
V	✓	✓	✓	j							d	U*	
												d	c
												e	a/b
												c	b
											U	E	
											c	b	?
											b	V	?
											b	V	
											✓	✓	U*
											✓	✓	U*
											✓	✓	U

The assemblage of horse bones comprises almost entirely jaw, tooth, and metapodial fragments, with the exception of the material from GH 79 which is notable in that it contained only horse bones. These were poorly preserved and badly eroded, but came from at least two horses, one aged 5 years, and one aged c 20 years. Two loose canine teeth could be attributed one to each horse, and may indicate that the remains represent two entire males. The skeletons are by no means complete, but as bones from both the axial and appendicular sectors survive, with some of the forelimb bones in articulation, deliberate burial seems likely. Withers height is estimated at slightly over 14 hands (measurements pro-

Table 18 Horse measurements (mm)

Humerus	Bd	77			
Radius	Bfp	76			
	Bd	59, 61			
Metacarpal	CL	BP	Bd	SD	
	c220	45		34	
		45			
			40		
			40		
Tibia	Bd	50, 69, 73			
Astragalus	GH	LmT	Bd		
	50	49	47		
	59	56	48		
	50				
Metatarsal	GL	Bp	Bd	SD	
	272		49	34	
	267	43	44	29	
			40		
			40		

vided in Table 18). The age range represented by all the horse bone from the site is from under 3 years to c 20 years. No butchering marks on horse bones were noted, apart from three chopped metapodials. These could well represent preliminary stages in the working of these bones which are particularly suited to manufacture. While it is possible that horses were slaughtered for meat at Mucking, the fact that the distribution of horse bones is on a similar scale to that of sheep or pig may simply be a result of the small size and incomplete nature of the sample.

Other animals

The bone record for the smaller domestic and wild species is sadly deficient. Cat bones were noted in two huts and dog in five, although both cat and dog must have been familiar animals. Few bird bones were recovered, and only a single fish bone survives. Fish were readily available, however, and must have provided an important food source. The smaller wild vertebrates are entirely absent, but the larger deer have left some traces.

Red deer was identified in 29 huts, but the most notable find came from ditch 296 (cut 3958) (150N 550E) which contained at least ten antlers. The deposit, if not the original ditch-cut, is likely to be of Saxon date (see pp 19–20). Measurements of eight of the antlers are provided in Table 19, together with comparative data from a recently collected antler from the New Forest. All the antlers were naturally shed and most were from well-grown stags (casting burr diameters range from

44–86mm), suggesting antler-gathering forays. One antler fragment shows that the beam was sawn off above the brow tine junction and there is a second instance of a point sawn from its beam. There are otherwise no signs of working. The ditch contained a brickearth fill and was thus one of the few features at Mucking capable of holding water for any length of time. Antler is much easier to work when softened by prolonged soaking. The location of the antlers in the ditch may thus reflect deliberate exploitation of the wet conditions it provided in an otherwise well-drained area. A length of the ditch had been inadvertently destroyed by the gravel quarry and the full extent of the deposit is thus unknown. Salvaged material from this area included more antler.

Worked bone and antler

Five *Grubenhütten* (GH 23, 33, 58, 63, 149) contained worked antler, either squared off, smoothed, or hollowed out. A fallow deer antler in GH 23 had been cut across the widest part of the palm and two pieces of antler from ditch 296 (see above) may have been sawn.

Butchery and disease

Evidence of butchery undoubtedly suffered severely from erosion. Thirty-one instances of cutting, chopping, or splitting were noted on a variety of bones from 14 huts, including horse proximal metacarpals and metatarsals. Two bones bore traces of gnawing. Evidence of disease was extremely scarce: an occasional exostosis and some irregular wear on teeth.

Conclusions

A preliminary assessment of the animal bone from Mucking expressed the hope that a relatively complete picture of the faunal remains would be forthcoming as excavation proceeded. It soon became clear, however, that the bone record was seriously deficient because of the differing 'survivability' of bones in an environment hostile to skeletal material. Evaluation of the domestic livestock at Mucking is thus highly problematic, and meaningful evaluation of the wildlife is impossible.

Table 19 Antler measurements (mm)

	a	b	c	d	e	f	g	h	modern
Greatest diam burr	44	81	68	86	64	c60	82	70	73
Greatest width above brow tine				46		75		c 47	57
Greatest width above bez tine	47	53				51		39	48
Total length beam	600	600		520		480	650+	565	950
Length brow tine	280	c350			330		330	250	213
Length bez tine		c360						70	263
Length trez tine	180+	370						c170	325

Grain impressions in early Anglo-Saxon pottery from Mucking

by Marijke van der Veen

Introduction

Approximately 27,000 sherds of early Anglo-Saxon pottery were recovered from the Mucking *Grubenhäuser* (H Hamerow, pers comm). Many of these were found to contain grain impressions. Mrs Jones submitted a selection of 256 sherds from 81 *Grubenhäuser* to the writer for identification. The basis of selection is not known, but is unlikely to have been statistically random. It is not clear whether these sherds can be regarded as representative of the pottery assemblage as a whole; the selected sherds make up slightly less than 1% of the total, but they do come from a wide range of *Grubenhäuser* from various parts of the site and of various dates (H Hamerow, pers comm). The pottery is thought to have been locally produced, and is dated between c AD 420 and c AD 700. This report discusses the results of the identifications of the grain impressions.¹

Methods

Of the 256 sherds submitted for identification, 244 were found to contain impressions of plant remains. In order

to identify the species represented by the impressions, the holes of the impressions were filled with rubber latex, which was then allowed to dry at room temperature. When dry, the latex could be pulled out, producing a positive cast of the original plant specimen. These casts were identified under the microscope, using 15x magnification. The results are given in Table 20.

Results

In total, 575 impressions were identified. Of these, 292 were found on the outside surface of the sherds, 240 on the inside surface, 42 in the broken sections, and one on the rim of a vessel. In four cases the charred specimens were still in position, indicating that the pottery was fired at a relatively low temperature.

The majority of the impressions (69%) were of barley. Oats made up 8%, wheat 6%, and indeterminate cereal grains 12%. The remainder consisted of five grains of either wheat or rye, two cultivated pea seeds, seven weed seeds, one fern, and nine indeterminate impressions.

The barley grains were classified as hulled when they had parallel ridges on the dorsal surface and a more or less angular cross-section. Perfectly straight grains were identified as belonging to a central floret, while twisted grains were identified as belonging to lateral florets. When it was not possible to ascribe the grain to either a central or lateral floret because of the incompleteness of the impression, the grain was classified as indeterminate. Grains not clearly showing either the dorsal ridges or an angular cross-section, but equally not possessing transverse wrinkles on the dorsal surface, were classified as *Hordeum* sp. Virtually all the barley grains could be identified as belonging to a hulled variety. The ratio of central grains to lateral grains was 1:1. In six-row barley this ratio is 1:2, while in two-row barley it is 1:0. Thus, the impressions definitely include *Hordeum vulgare* (six-row, hulled barley), but some *Hordeum distichum* (two-row, hulled barley) may also be present.

Forty-one rachis internodes of barley were also present. Several of them could be identified as *Hordeum vulgare* (six-row barley). The presence of basal nodes of barley indicates that the ears were reaped by cutting the straw below the ears and not by plucking the ear (Hillman 1981).

Two species of wheat were identified: *Triticum spelta* (spelt wheat) and *Triticum aestivum* (bread wheat). Both were represented by grains and chaff fragments. The grains of bread wheat were broadest near the embryo, and relatively round and plump. The rachis internodes showed the characteristic 'shield' shape. The grains of spelt were still enclosed by their glumes, forming a complete spikelet, with the rachis internode attached, rising upwards. A number of wheat grains could not be identified to species as the impressions were incomplete. They have been classified on the basis of overall shape as either emmer/spelt wheat or spelt/bread wheat. Five grains looked like wheat but had a relatively large embryo and a blunt apex, and might belong to rye. They were identified as *Triticum/Secale*.

Two species of oats were present: *Avena sativa* (cultivated oats) and *Avena fatua* (wild oats). The identifications were based on the shape of the articulation scar of the floret bases. In wild oats a large, oval articulation

Table 20 Grain impressions in 244 sherds of Anglo-Saxon pottery

BARLEY	
<i>Hordeum</i> , hulled, central grains	77
<i>Hordeum</i> , hulled, lateral grains	78
<i>Hordeum</i> , hulled, indet grains	156
<i>Hordeum</i> sp. grains	30
<i>Hordeum</i> , basal nodes	4
<i>Hordeum</i> , rachis internodes	41
<i>Hordeum</i> , lemma bases	11
WHEAT	
<i>Triticum aestivum</i> , grains	11
<i>Triticum aestivum</i> , rachis internodes	3
<i>Triticum spelta</i> , grains	2
<i>Triticum spelta</i> , glume bases	5
<i>Triticum spelta</i> , rachis internode	1
<i>Triticum</i> sp (spelt/bread wheat), grains	6
<i>Triticum</i> sp (emmer/spelt), grains	8
OATS	
<i>Avena sativa</i> , grains	8
<i>Avena fatua</i> , grains	17
<i>Avena</i> sp, grains	23
OTHER CEREALS	
<i>Triticum/Secale</i> (wheat/rye)	5
Cerealia, indet grains	66
Cerealia, indet chaff fragments	4
PULSES	
<i>Pisum sativum</i> (pea)	2
WEEDS	
<i>Bromus</i> sp (brome grass)	2
<i>Vicia/Lathyrus</i> (vetches)	2
<i>Polygonum convolvulus</i> (black bindweed)	2
<i>Atriplex</i> sp (orache)	1
OTHER	
fern frond, indet	1
indet	—9
TOTAL	575

scar is present, while in cultivated oats only a small fracture surface is visible. In 23 cases the floret base was not visible on the impression; these grains were identified as *Avena* sp. Wild oat is a very common arable weed.

The presence of two peas, *Pisum sativum*, is very interesting as pulses rarely occur as impressions in pottery. In one case, the charred pea was still in place.

The remaining impressions comprised seven weed seeds, belonging to *Bromus* sp (brome grass), *Vicia/Lathyrus* (vetches), *Polygonum convolvulus* (black bindweed), and *Atriplex* sp (orache), all common arable weeds. One impression of a fern was found. As this only showed the upper side of the frond it was not possible to identify it to species. The venation and sori patterns are used to separate ferns, but they both occur on the lower part of the frond, which was not visible in this case.

Discussion

The presence of grain impressions on the outside, inside, and breaks of the pottery sherds indicates that the plant remains were deliberately incorporated as a tempering agent, rather than accidentally incorporated from food remains scattered on the surface on which the pots were built. In the latter case one would expect to find impressions only on the outside and base of the pots. The incorporation of complete grains must have weakened the pottery fabric, as the grains left relatively large holes behind after firing.

Grain impressions in Anglo-Saxon pottery from other sites show a similar predominance of barley. Jessen and Helbaek (1944) studied impressions from 18 sites in Oxfordshire, Suffolk, and Cambridgeshire, and found 80 impressions of hulled barley, 3 of naked barley, 14 of cultivated oats, and one each of wild oats, flax, and woad. At Baston, Lincs, pottery from an Anglo-Saxon cemetery produced 17 impressions of barley, 3 of wheat, and 2 of oats (Mayes and Dean 1976). At Clapham, London, Anglo-Saxon pottery is reported to contain many impressions of six-row, hulled barley and some oats (Densem and Seeley 1982). At Northampton, the seeds in both fabrics (S1 and S2) of early to late Anglo-Saxon pottery (c AD 400–900) were chiefly barley (Williams and Shaw 1981). At West Stow, Suffolk, the impressions on Anglo-Saxon pottery consisted mainly of hulled barley, with only two possible wheat grains and one oat grain (Murphy 1985). Finally, at Spong Hill, Norfolk, Anglo-Saxon cremation urns contained impressions of hulled barley, though a few grains and rachis internodes of bread wheat and grains of cultivated oats and rye were also present (Murphy 1985).

Charred plant assemblages from Anglo-Saxon sites give a different picture from that provided by grain impressions in pottery, however. While barley is present on all sites, it is not the most abundant cereal (Green 1981; Murphy 1985). At Stratton Park, Hants, bread wheat and barley were found (Murphy 1981). At Cowdery's Down, Hants, very few plant remains were found, but bread wheat, barley, oats, and one celtic bean were recovered (Green 1983). At Southampton, spelt, bread wheat, barley, and oats were present (Monk 1980). At West Stow, Suffolk, spelt, bread wheat, barley, and oats were present (Murphy 1985). At Stonea, Cambs, spelt, bread wheat, and barley were recorded (van der

Veen forthcoming). On none of these sites was barley the dominant species.

The presence of a few remains of *Triticum spelta* (spelt wheat) at Mucking is of interest. The evidence from West Stow and Stonea suggests that the cultivation of spelt wheat continued into the Anglo-Saxon period in East Anglia (Murphy 1985; van der Veen forthcoming). The results from Mucking appear to support this hypothesis. The presence of *Pisum sativum* (peas) is important, as these two seeds may well represent the first recorded peas from the Anglo-Saxon period. Although the species is recorded for the Roman period (and a few late Iron Age examples are known), no certain identifications are known from Anglo-Saxon contexts (Green 1981).

Present evidence suggests that grain impressions in pottery do not necessarily provide an accurate reflection of the relative importance of different crops in the arable economy of Anglo-Saxon settlements. It is striking, however, that the impressions on all Anglo-Saxon pottery assemblages known to the writer are dominated by barley grains. Might this indicate that barley was selected deliberately as a tempering agent? The selective use of specific harvest products for particular technological and domestic purposes has been recorded for the manufacture of briquetage (spelt), tenth-century bell moulds (oat grains, wheat chaff, and weed seeds), and medieval daub (wheat straw) (Green 1981). Further research, coupled with experimental work, is required.

Analysis of the copper alloy objects from the Anglo-Saxon settlement at Mucking

by Michael Heyworth

Introduction

Of the non-ferrous metal objects recovered from excavations of the early Anglo-Saxon cemeteries at Mucking, 117 were selected for analysis in order to identify the alloys used. The objects analysed came from a variety of graves in both cemeteries and were chosen to provide a broad range of objects. In addition, nine diagnostically Anglo-Saxon copper alloy objects from the settlement were analysed. These objects (all of which came from *Grubenhäuser*) were comparable in type to those found in the graves of the associated cemeteries, and it was thought that they were likely to be of comparable alloys.

It is believed that the objects analysed comprise a representative selection of the non-ferrous objects found in the settlement and cemeteries. The majority were copper alloys, although 17 silver objects and one ferrous object with silver inlay were also analysed. The analyses of the cemetery finds will be discussed in greater detail in Hirst and Clark forthcoming (see also M Heyworth, AML Reports Nos 178/88 and 179/88).

Analytical methods

All the objects were analysed qualitatively by energy-

dispersive X-ray fluorescence (EDXRF) using a Link Systems Meca 10-42 machine. The primary radiation source was an X-ray tube with a rhodium target run at 35kV and the fluorescent X-rays were detected by a Si(Li) detector. The elements recorded were copper (Cu), zinc (Zn), gold (Au), mercury (Hg), lead (Pb), silver (Ag), and tin (Sn). Where inlays or surface coatings were present, both the bulk metal and the inlay or coating were identified.

No surface preparation was carried out on the objects and so the results will have been affected by surface contamination, corrosion and the depletion of elements from the surface that this can produce, and any variations in surface topography. They should nevertheless give a reasonable indication of the nature of the alloys used in the production of the objects.

Results

Most objects contained detectable amounts of tin, zinc, and lead, but in very different proportions. The results of the analyses for both settlement and cemeteries are given in Table 21, where the objects are listed by *Grubenhäuser* or grave, and an alloy name has been assigned to each object. Three graves (123, 246, and 249) are from Cemetery I while the remaining graves are from the larger Cemetery II. The relationships between the various alloy names used here and the composition of the objects are shown in Figure 48. Brasses are mainly copper and zinc, bronzes mainly copper and tin, while gunmetals contain significant amounts of both tin and zinc. Many of the alloys also contain large amounts of lead and are then described as 'leaded'.

The analyses of the objects were qualitative and it is not therefore possible to quote precise levels of each element present in the alloys as a percentage. However, by using the signal intensities for each element in the EDXRF spectrum, it is possible, by comparison with standard alloys of known composition, to compare approximately the levels of each element relative to the others.

The majority of the copper alloys from Mucking are bronzes (copper and tin), and nearly a quarter contain significant amounts of lead. Of the nine objects analysed from the settlement, the numbers of each alloy type are copper 1, bronze 7, and leaded gunmetal 1.

Table 21 Copper alloy analysis

Context/no	Object	Alloy
GH 16.1	Button brooch	Bronze
GH 27.2	Saucer brooch	Bronze
GH 42.1	Pin, garnet-headed	Leaded gunmetal
GH 42.2	Safety pin brooch	Copper
GH 62.1	Applied brooch backplate; back	Bronze
GH 62.1	Applied brooch backplate; front	Bronze (Tin/Lead coated)
GH 81.1	Radiate brooch	Bronze
GH 135.1	'Bifrons type' brooch	Bronze
GH 175.1	Penannular brooch	Bronze
GH 187.2	Saucer brooch; back	Bronze
GH 187.2	Saucer brooch; front	Bronze (Hg gilded)



Fig 48 Ternary diagram of copper alloys

Two of the objects had surface decoration: one was mercury gilded (GH 187, AML793154) and the other was coated with tin/lead (GH 62, AML741).

Of the 163 analyses undertaken on the objects from the cemeteries, the numbers of each alloy type are as follows: copper 2, bronze 133, brass 3, gunmetal 7, silver 17, and ferrous 1. Of the 133 bronzes, 24 were leaded and 12 contained lower, though not negligible lead contents.

The figures are quoted as the number of analyses and not as the number of objects, as several of the composite objects were made up of more than one alloy type. Some of the objects also had surface decoration of the following types: tinned 6, mercury gilded 22, silver inlay 1.

In all, 117 objects from 26 graves were analysed. Although a variety of objects were examined, the majority were dress items such as brooches, rings, buckles, and strap-ends. Heyworth 1988, table 2, lists these objects by type.

Discussion

The main purpose in analysing the copper alloys from the Mucking settlement was to compare the results with those obtained from the associated cemeteries. Although the number of objects analysed from the settlement is very small, the same pattern of alloy usage is apparent, and it is likely that the copper alloys found in the settlement came from the same source(s) as those buried in the cemeteries.

Slags and ironworking residues

by Gerry McDonnell

Most of the eight slag deposits which can be dated with reasonable certainty to the Anglo-Saxon period are characterised by the presence of smelting slag, in particular slag blocks (SLB). Most of these deposits came from the fills of *Grubenhäuser*, although two derive from pits and another from a group of pits. This follows the general pattern of slag distribution at Mucking, namely that the largest quantities of slag derive from large features. All these deposits represent dumping of ironworking residues, and not *in situ* ironworking.²

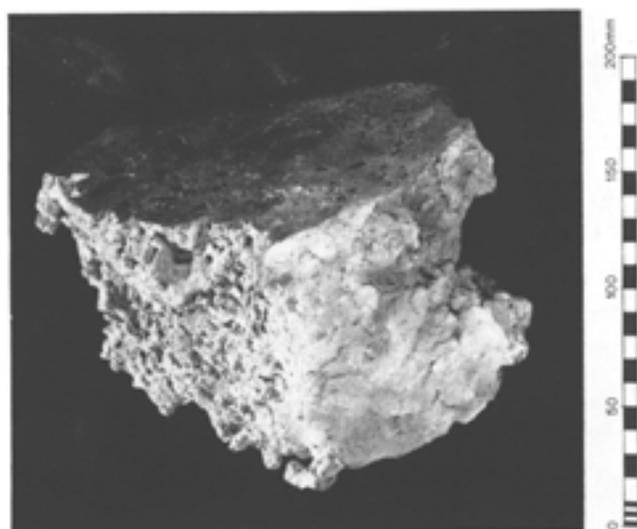


Fig 49 Iron slag

Three relatively small deposits of this period, containing between 1 and 5kg of slag, were found (pit 1002, GH 42, GH 129). Two were deposits of smithing slag and one contained both smithing and smelting slag. These deposits can only be considered as evidence of ironworking activity carried out in the general area rather than specific indicators of the location of smithing and smelting.

The larger deposits are more significant, however. All contained both smelting and smithing slag, indicating that the processes were carried out in the same place. The three major foci of activity occurred around GH 196, GH 202, and GH 44 and 45.

Smelting slag occurred mostly in the form of slag blocks (Fig 49) except for the deposit in GH 202 which also contained 4kg of tap slag. Slag blocks recently excavated at Little Totham in Essex have been dated to the seventh century AD (Curr Archaeol 1989). The *Grubenhäuser* from Mucking which contained ironworking debris likely to be Anglo-Saxon are also sixth- or seventh-century in date. The total weight of the slag blocks from the site (all of which are presumed to be Anglo-Saxon in date) is 118kg (Table 22). This could represent either a single phase of iron smelting activity or a series of smaller smelting operations carried out over a longer period. It does not, however, represent major iron smelting operations.

The evidence emerging from Essex indicates that ironworking during the Anglo-Saxon period took place on a small scale to satisfy local needs. It is not known which iron ores were used, but it is probable that they were extracted locally, probably from within a mile or so of the settlement. The most likely sources are either 'bog ores' from watery environments (that is, the concentration of iron compound by precipitation from slow moving or stagnant waters) or ironstones from glacial deposits of clays or gravels, perhaps by-products of the clay extracted for pottery manufacture or daub. The smithing debris from pit group 14325 was the only deposit large enough to indicate the location of a smithy. The others represent small individual dumps of debris.

Table 22 Anglo-Saxon slag deposits

context	slag type (weight kg)
pit 1002(aa)	smithing + tap slag (5.0) (0.07)
pit 10218(i)	smelting (24.0)
?pit group, cut 14325	smithing + smelting (14.0) (9.0)
GH 42	smithing (2.0)
GH 44/GH 45	smithing + smelting (6.0) (19.0)
GH 129	smithing (5.0)
GH 196	smithing + smelting (3.0) (10.0)
GH 202	smithing + smelting (6.0) (14.0)

Few ironworking sites are known from the Anglo-Saxon period, and this paucity of data hampers our understanding of ironworking technology in this period. The picture which emerges is of Anglo-Saxon smiths with the capacity for producing high quality objects, especially edged tools such as knives, but there is as yet no evidence for centres of iron and steel production. Furthermore, no smelting sites have been identified from the major centres of iron production in the Roman and medieval periods, such as the Sussex/Kent Weald or the Forest of Dean, where major ore deposits are located.

Slag block smelting was the main method of iron smelting used at Mucking, although slag tapping may also have been employed, judging from the evidence from pit 1002 and GH 72. Slag block smelting technology has been identified at Little Totham and at Romsey, Hants (McDonnell 1988), neither of which is sited near major iron ore deposits. The Romsey iron smelting activity is thought to date to the sixth or seventh centuries, but this has not yet been confirmed by independent dating methods. The quantity of slag recovered from Romsey is much greater than that from Mucking (SLB = 252kg, other smelting slag = 312kg, of which only 3kg was tap slag), and derives from a smaller area of excavation. This would strengthen the argument that the smelting slag from Mucking represents small-scale activity. No other contemporary sites producing significant evidence of iron smelting have been excavated.

There are equally few comparable data for smithing sites of this period. Hamwic (Andrews forthcoming) is roughly contemporary, but can be considered to be an 'urban' site. A small, possibly seventh-century, Anglo-Saxon smithy has been excavated at Wharram Percy, East Yorkshire, from which approximately 100kg of smithing debris was recovered (McDonnell 1985). This material was concentrated around the smithy, and had suffered little or no later disturbance. It is therefore probable, allowing for the wider dispersal and significant proportion of 'unstratified' material at Mucking, that the Anglo-Saxon smithing debris from Mucking represents one or several small smithies.

Technology of the glass inlays from Mucking

by Julian Henderson

Introduction

A study of Anglo-Saxon vitreous materials must include vessel glass, glass beads, and metal enamel; these are technologically related by the use of frequently similar raw materials. Most published chemical analyses of Anglo-Saxon glass are for weakly tinted vessel glass, often of a pale green, yellow, or blue colour. These results have provided evidence for conservatism in the use of a soda-lime-silica glass with a relatively low magnesia content in the Anglo-Saxon period, and a generalised decrease in the content of the alkali (soda) over time. The decrease in soda is probably due to the recycling of a proportion (though not necessarily all) glass as cullet (scrap glass). Glass used for the manufacture of Anglo-Saxon beads has been quantitatively analysed to a relatively limited extent (Biek *et al* 1985), yet the range of colours used in glass beads, and therefore the use of a wide range of raw materials, offers greater scope in the investigation of the production, distribution, and use of Anglo-Saxon glass. The decorative glass inlays from Mucking ought, therefore, to be seen as forming part of the context for the manufacture and use of decorative glass, such as in bead production.

Techniques of sampling and analysis

Micro-samples of decorative glass were removed from the transparent deep purple glass from the mount or pendant from the North Enclosure (Fig 180.4) and the opaque turquoise glass pendant from GH 52 (Fig 111.1). These samples were then mounted in epoxy resin and

polished for electron-probe microanalysis (Henderson 1988). Each sample was analysed four times and an average composition was calculated. In the event, both glasses were found to be relatively homogeneous. The chemical analyses of both are given in Table 23.

Technological considerations

The chemical composition of the glass inlays from Mucking both fall within the established soda-lime-silica compositions of the many Anglo-Saxon glass vessel fragments which have been analysed. There are, however, no comparable published data for Anglo-Saxon vessels of these particular colours. The chemical analyses of beads from the Anglo-Saxon cemetery at Sewerby, Yorks, do however illustrate that a composition comparable to that of the glass pendant from GH 52 was used in an opaque turquoise bead, although no lead figure is given (Biek *et al* 1985, table 7). The accepted wisdom is that the turquoise colour is produced in glass by copper (cupric) oxide in the presence of lead oxide dissolved in the glass. In the case of the Mucking glass this is not the case, as lead was only detected at a level of 0.2% which, from the point of view of the development of the turquoise colour, is probably insignificant. It is however probable that the calcium antimonate crystals which are present render the glass opaque and may provide the chemical environment for the development of the turquoise colour. The chemical analysis of opaque Roman glass tesserae and enamels has shown that they have very similar compositions and may well have been manufactured in the same locations. The use of calcium antimonate as an opacifier in these materials is also found in the opaque turquoise enamel, and from this point of view they are technologically related. Analysis of some opaque turquoise glass used in the manufacture of a bead from the Anglo-Saxon cemetery at Apple Down, West Sussex, shows that lead oxide was indeed used in the development of glass colour (Henderson 1990a).

The purple colour of the glass inlaid ornament from the North Enclosure is due to manganese oxide at a level of 2.2%. Again, the glass falls into the technology used from the later Iron Age through to the Roman period in Europe. The glass is of a typical soda-lime-silica composition, with the expected level of iron in the glass. It is probable that iron was associated with manganese as a mineral and that a frit containing a manganese-rich mineral was deliberately introduced into the glass melt in order to colour it. The analysis of apparently 'black' glass from the Apple Down cemetery showed that manganese oxide was also present in association with iron oxide, the manganese oxide occurring at slightly lower levels than in the Mucking glass (Henderson 1990a).

Archaeological implications

Analysis of samples of transparent purple and opaque turquoise decorative glasses from Mucking firmly place them in the tradition of European pre-Roman Iron Age and Roman glass technology. It is possible that the glass used in these objects was recycled Roman vessel glass (cullet) which had been melted to the point where it

Table 23 Electron-probe microanalysis of two glass inlays from Mucking (weight % oxide)

	<i>Opaque turquoise</i>	<i>Translucent purple</i>
Na ₂ O	11.7	19.3
MgO	0.6	1.0
Al ₂ O ₃	2.4	2.3
SiO ₂	70.1	63.1
P ₂ O ₅	0.1	0.1
SO ₃	0.4	0.4
Cl	1.2	0.8
K ₂ O	0.9	0.7
CaO	7.4	7.7
TiO ₂	0.1	0.1
Cr ₂ O ₃	ND	ND
MnO	0.8	2.2
Fe ₂ O ₃	0.8	0.8
CoO	ND	ND
NiO	ND	0.1
CuO	2.1	ND
ZnO	ND	ND
As ₂ O ₃	ND	ND
SnO ₂	0.1	ND
Sb ₂ O ₃	1.2	ND
BaO	0.1	0.1
PbO	0.2	0.1

became sufficiently fluid to mould and subsequently to mount on to the metal surfaces. Calcium antimonate is particularly common in Roman glass tesserae and enamels, and one or other of these may well have provided the source for the enamel used here (Henderson 1990b; *in press*).

Comparison of the chemical compositions of the Mucking glasses with extant analyses of Anglo-Saxon glass beads shows that the same basic components and colorants were used. From this one can infer that the same basic technology is involved, including melting temperatures and basic moulding techniques. The production of decorative metalwork is likely to have been regarded as a higher-status pursuit than the manufacture of glass beads.

Our knowledge of Anglo-Saxon glass chemical compositions is mainly based on analyses of weakly-tinted vessel glass. The analysis of highly coloured glass beads and decorative inlays offers the possibility of identifying a much wider range of raw materials used in glass production and coloration, and may eventually offer

greater hope of identifying production centres. Frustratingly, firm archaeological evidence for the processes of Anglo-Saxon glass manufacture is at present lacking.

Notes

- 1 The writer would like to thank Mrs M U Jones and Dr A J Mainman for inviting her to examine the pottery, Dr H Hamerow for her comments regarding the context of the sample, and English Heritage for funding the work. Specialist examination of some of the many seed impressions observed during initial processing of the Anglo-Saxon pottery was made possible by a grant allocated by the DoE Ancient Monuments Laboratory. This enabled three batches of sherds to be examined as well as some prehistoric and Romano-British material. The relevant AML reports are nos 3300, 3833, and 3834.
- 2 For more detailed characterisation and discussion of individual slag deposits, and an account of the analysis of ferrous metalworking residues of all periods from Mucking, see McDonnell in Clark 1993.

6 The spatial development of Anglo-Saxon Mucking

The site plan

The complications created during the course of excavation by the constantly shifting quarry face were such that the boundaries of the excavated area could in some places only be approximated from site notebooks and field plans, as indicated in the site atlas (Clark 1993). It is furthermore apparent that, in certain areas of the site, rescue conditions dictated that only major features such as *Grubenhäuser* and ditches could be excavated or even plotted. An attempt has been made in the site atlas to distinguish the areas which were incompletely investigated; this includes much of the site south of Cemetery II. While variable excavation conditions must have affected the identification of more fugitive features such as posthole buildings, it is assumed that all *Grubenhäuser* were recorded.

Spatial development and layout of the settlement

The distributions of chronologically diagnostic finds and of certain pottery attributes (fabric, decoration, surface treatment) evoke a clear picture of shifting settlement, as indicated in Figure 50. It must be remembered, however, that the boundaries as drawn are essentially artificial and merely represent the boundaries between concentrations of fifth-, sixth-, and seventh-century assemblages; they are not absolute, nor do they represent abrupt shifts or discontinuous settlement phases. Rather, it seems more plausible to view this shifting as a gradual process, perhaps occurring one or two farmsteads at a time.

Waterbolk (1982, 103) has defined two general types of settlement shift: the first, when the main building within a farm complex changes position within its yard or property, and the second, when the entire settlement relocates. Because 'yards' as such cannot be identified with any certainty at Mucking, it is unlikely that the first type of shift can ever be recognised. It is clear, however, that the extent, location, and layout of the settlement changed over the three centuries during which it occupied the gravel terrace. The underlying cause of this shifting remains elusive, although evidence from Scandinavian excavations suggests that it relates, at least in part, to agricultural practices, and that abandoned farmyards were subsequently used as arable (Hvass 1979).

In the initial phase of settlement (Fig 50, phase A), the south-western sector of the terrace was the focus of relatively dense occupation; most of the *Grubenhäuser* (approximately 77) lay close together, with up to three phases of rebuilding. The few examples of intercutting *Grubenhäuser* and 'chains' of huts were found in this part of the site. This evidence is suggestive of a semi-permanent settlement, what German archaeologists and geographers have termed a *Dauersiedlung*. The virtual absence in this area of posthole buildings, which were particularly difficult to discern in the loose gravel subsoil, is, in this writer's view, almost certainly a result of particularly hurried excavation in advance of quarrying. Thus the tentative suggestion that 'the excavated

area at Mucking which appears to contain no halls, only sunken-featured buildings, may represent a craft industrial complex' (Welch 1985, 15) cannot be archaeologically supported, particularly as at least two posthole buildings (PHB 34 and 21) have now been identified from this area, and a third was excavated further to the south in Linford Quarry (Barton 1962).¹ The siting of *Grubenhäuser* in this southernmost sector appears to have been influenced in part by the location of prehistoric, and especially Roman, field ditches (Fig 51). The huts occasionally cut one of these ditches, but usually they appear instead to congregate alongside them. The attraction, it seems, was not the ease with which a sunken floor could be dug out from a ditch which had silted up, but rather that the remnant ditches, and perhaps surviving hedges, presented alignments which conditioned settlement layout. The same pattern can be seen along parts of the North Enclosure.

The small quantity of late fifth- or early sixth-century material which came from this southernmost sector (eg GH 16 and 27, Figs 91.1, 96.2) suggests some continuity into the sixth century (Fig 50, phase A/B). Metalwork and the ceramic sequence indicate, however, that in this period the main focus of settlement shifted northward, just beyond, and apparently overlapping, Cemetery II. In this sector, although building orientations show some variation, these were essentially on the same alignment as the Roman field ditches, which also formed a boundary along two sides of Cemetery II. This phase of settlement appears to have been smaller (in total, approximately 13 *Grubenhäuser* and 8 posthole buildings), possibly briefer in duration, and certainly more dispersed than the initial occupation (Phase A).

The third phase of settlement (Fig 50, phase B/C), which corresponds roughly to the sixth and seventh centuries, may overlap chronologically with this central scatter of buildings (phase A/B). Occupation was still along the terrace edge, but had now moved further to the north-east. Here, settlement was again relatively dense (55 *Grubenhäuser* and approximately 20 posthole buildings).

The seventh century (Fig 50, phase C) saw a shift of settlement westward, away from the edge of the terrace, where it consisted of widely dispersed farmsteads (54 *Grubenhäuser* and approximately 23 posthole buildings). It is possible that part of the sixth- and seventh-century settlement extended down the north-eastern slope. This slope, however, was relatively steep and covered by brickearth, therefore yielding few cropmarks. It was, furthermore, not under threat and excavation there was not attempted.

The latest datable finds from the excavation, as noted earlier (p 64), are three *scattas* dated to c AD 685 from GH 168 in the northern sector of the settlement. Recently, however, two intermediate *scattas* recovered by a metal detector user from a field near the Mucking excavations were reported to the Ashmolean Museum: one is a type Bii *scatta* (now in the Ashmolean's collections) and the other is a series E, 'porcupine' type. These coins bring the latest dated phase of Anglo-Saxon occupation well into the eighth century.² Mucking lies, furthermore, within a few miles of a site at Tilbury from which a large number of intermediate *scattas* have been

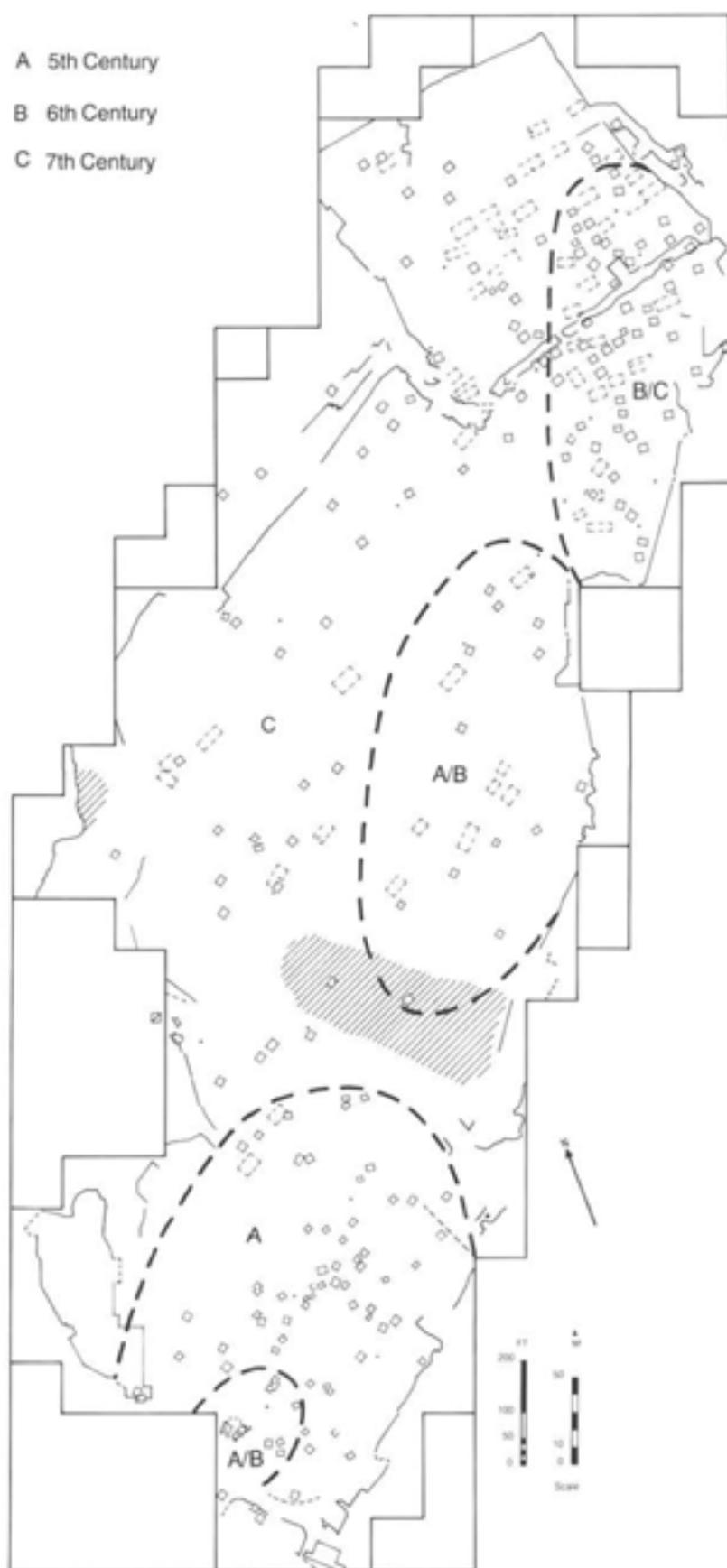


Fig 50 Phased plan of Anglo-Saxon settlement

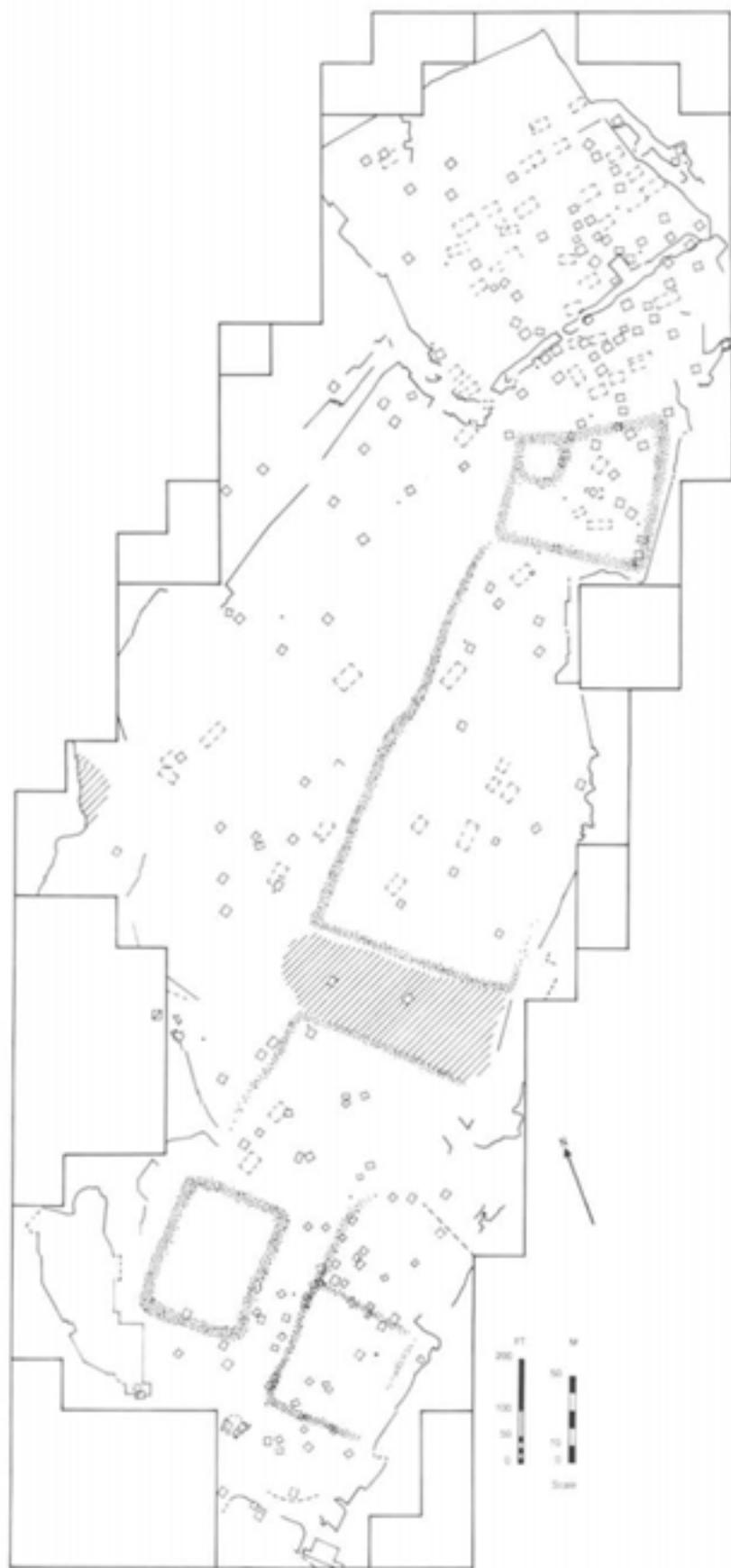


Fig 51 Prehistoric and Roman features presumed to have been visible in the Anglo-Saxon period

recovered which overlap chronologically with the Mucking coins (Blackburn and Bonser forthcoming). The precise relationship between these coin finds and the as yet undiscovered site of St Cedd's monastery, founded in 'Tilaburg' in AD 653 (Bede, *HE*, iii, 22) must for the time being remain a matter for conjecture. It is tempting to postulate that the Tilbury *scattas* relate to a secular settlement or market in the vicinity of the monastery.³ The foundation of a monastery at Tilbury must have had an effect on the Mucking community; yet the coin evidence demonstrates that the settlement continued to occupy the terrace for at least half a century after the foundation of Cedd's monastery.

Interpretations of settlement morphology

No other early Anglo-Saxon settlement has been excavated on as large a scale as Mucking, and this makes any comparative study highly tentative. Broadly speaking, Mucking compares well in plan to the scattered settlements or *Streusiedlungen* of the pre-Roman and early Roman Iron Age on the continent, such as the Dutch settlement of Hijken in Drenthe or Flögeln in the Elbe-Weser triangle of Lower Saxony (Haarnagel and Schmid 1984, 216–21, Abb 72, 74; Schmid 1982b, 91, Abb 15a). Like them, groups of farmsteads lie together without well-defined properties or boundaries or a high degree of planning or regularity apparent in the layout of the buildings, as observed by Tacitus:

It is well known that none of the German tribes live in cities, that even individually they do not permit houses to touch each other; they live separated and scattered, according as spring-water, meadow, or grove appeals to each man. (*Germania*, 16)

In no part of the settlement is a high degree of regulation apparent in the layout of the buildings. James *et al* (1985, 198) have suggested that in Anglo-Saxon settlements generally, 'where *Grubenhäuser* occur alongside the earthfast buildings...there appears to be a regular relationship between the two types of structure, with a *Grubenhäuser* parallel with the main building just offset from the main door axis.' In only a few cases, however, can such a relationship be discerned at Mucking, eg between PHB 53 and GH 101. While it is certainly possible that fencelines were stripped away, there is no perpendicular arrangement of buildings indicating yards or the disposition of buildings within enclosures.

The loose spatial organisation of the settlement, combined with the absence of any obviously 'central' buildings, large halls, or substantial enclosures, generated the hypothesis that Mucking was a 'pioneering' settlement, a first landfall for storm-tossed immigrants (Jones 1974a, 34). Yet it is clear from the two Mucking cemeteries that the founders of the Anglo-Saxon community at Mucking and their descendants possessed wealth and a social hierarchy. While none of the burials would seem to merit the title of 'princely', the presence of at least six sword-burials in Cemetery II reflects both wealth and high rank (Jones and Jones 1975; Evison 1973; 1981b). A number of explanations for the failure of this wealth and social differentiation to be reflected in the structure of the settlement may be offered:

- 1 Poor preservation and uneven recovery of the structural evidence has produced a misleading picture.
- 2 More highly organised or regulated settlements such as Cowdery's Down are of even higher status.
- 3 Settlement morphology is not a reliable indicator of the wealth or status of a community's members, but is instead more closely linked to structures of land holding and the degree of regulation within a community.
- 4 Indicators of relative status within the cemeteries may reflect the standing of individuals *within* families of broadly equal rank, and not the ranking of different families within the community as a whole (Sherlock and Welch forthcoming; Jørgensen 1987).
- 5 The 'high status' buildings simply lie elsewhere, beyond the excavated area.

These explanations are of course greatly simplified and, since so few associated settlements and cemeteries of the fifth to seventh centuries have been excavated on an adequate scale, one is left with little evidence against which models may be tested. It is, however, of interest to note that on the continent a number of fourth- and fifth-century settlements (for example Flögeln, Wijster, and Vorbasse) exhibit a much more orderly layout, not to mention large, post-built houses (Haarnagel and Schmid 1984, Abb 78). Could the incoherent layout and uniformly small buildings at Mucking reflect 'stress' and disorder induced by the processes of the migration, and could this same stress have led to the investment of wealth in the burial of dead members of the community in order to establish an ancestral claim to the land and its resources (cf Shepard 1979; Bullough 1983)?

This social 'stress' and such a response to it are admittedly hypothetical formulations. Yet, if the model outlined above is correct, ancestral ties to a 'sacred zone' around the cemeteries could explain the continued occupation of an otherwise inhospitable location, initially selected for settlement either, perhaps, through compulsion or for strategic reasons. Chapelot and Fossier (1985, 41) have proposed a similar model for the relationship between early medieval communities and the land: '...This attachment to the land was not economic, military, or political, but religious. By this we [mean]...a sacred area inherited by a group, independently of any economic possibilities.'

Chapelot and Fossier have noted the obvious importance of the spatial relationship between cemeteries and early medieval villages. The latter, they suggest, frequently moved about a 'sacred zone', while the cemeteries remained static. This model sees the ultimate abandonment of pagan cemeteries and their replacement by burials in a churchyard as 'the breaking of the religious link between the land belonging to the dead and that of the living', although, as Morris has noted, this process was a gradual one (*ibid*, 41; Morris 1983).

The Mucking settlement and cemeteries appear to form a single unit: Cemetery I lay only 25m from the nearest *Grubenhäuser*, while the settlement actually spilled over onto areas of Cemetery II. Excavations both in England and on the continent are revealing a growing number of cemeteries from the Germanic Iron Age, Migration, and Merovingian periods which lie directly on the edges of associated settlements,⁴ and demonstrate that these settlements could shift without affecting the position of the cemeteries. Not until the conversion to Christianity and the relocation of ceme-

teries to churches was this fundamental relationship altered.

Questions of demography

Both quantitative factors (the absolute number of people and buildings) and socio-economic factors (communal arrangements such as paths and fences, for example, or functional differentiation of buildings) must be taken into account when assessing the demographic composition of a community (Jäger 1977, 63).

Despite the poor preservation of skeletal material, the cemeteries, rather than the settlement, provide the best evidence with which to formulate hypotheses regarding the composition of the population and its social structure. Analysis of the cemeteries may enable fifth-, sixth-, and seventh-century populations to be differentiated. Such differentiated numbers will undoubtedly vary markedly from the average population size calculated below which, of course, does not reflect fluctuations in numbers over time. Yet a preliminary comparison between cemeteries and settlement can already be made regarding average population size. It must be stressed, however, that these statistics represent only theoretical averages, and rest upon the following unprovable assumptions:

- 1 A lifespan for ground-level buildings of c 35 years⁵
- 2 An original population of c 65 posthole buildings (ie assuming most of the settlement has been recovered)
- 3 A total length of Anglo-Saxon occupation at Mucking of c 300 years
- 4 An original total of c 850 burials in Cemeteries I and II (implicit in this is the assumption that both cemeteries relate to the excavated settlement)
- 5 Reproductive generations of 16.5 years, based on anthropological analyses of Merovingian burials (Dierkens 1981, 37–9)
- 6 An average life expectancy of 30–35 years for those surviving infancy (Boddington and Cadman 1981, 122)

All these conditions appear plausible, yet the problem of population size remains exceedingly complex. We do not know, for example, how precisely the Mucking cemeteries mirror the living community; it seems certain that the number of excavated graves does not include most infant and child graves. We are also left to make an educated guess at how many people ordinarily occupied a building of a given size (Millet *et al* 1983, 249; Dyer 1986, 42). A final ambiguity is introduced by the fact that not all posthole buildings need have served as living quarters.

Donat and Ullrich have examined a number of Merovingian *Reihengräberfelder* of the sixth and seventh centuries for demographic patterning, utilising anthropological analyses of skeletal material. Based upon these analyses, and upon rather tenuous evidence from Germanic law codes, particularly the *Lex Salica*, they argue for the existence of 'ancestral farms' with 20 to 30 inhabitants (Donat and Ullrich 1971, 256). The substantially smaller size of most English houses compared to those from Warendorf, for example, imply that in any case here, the large, ancestral farm was unlikely to have formed the basic unit of settlement. Donat and Ullrich's research does suggest, however, that most communities

must have had at least a few households which included members of three generations (*ibid*).

These lingering imponderables regarding the size and composition of the resident familial group need not, however, prevent us from considering the figures yielded by the excavated data, with all their deficiencies.

Between 51 and 63 burials, all inhumations, were recovered from Cemetery I; it is assumed that only a relatively small number were destroyed before the cemetery was recognised, although the graves do not show up in aerial photographs. Cemetery II lay some 150m to the east, and contained approximately 754 burials, roughly one-third inhumations and two-thirds cremations. As is already apparent from the phasing of the settlement, there is not a simple equation between two cemeteries and two settlements; only a complete analysis of the former may eventually explain the existence of two at least partly contemporary burial grounds.

Nevertheless, a crude assessment of the numbers represented in the cemeteries yields the following figures. Given approximately 850 burials over three centuries, or approximately 18 reproductive generations of 16.5 years, the average population *per generation* is between 46 and 56 (allowing for a correction factor of $\pm 10\%$).⁶

$$\frac{850 \times 18}{300} \pm 10\% = 46-56$$

The size of the reproductive generation tells us little about the size of the settlement at any given time, however, and, as Dierkens (1981, 40n) notes, the lack of information about the number of infants buried makes the figure still less informative. It is more relevant to calculate the average 'active' population at any one time, ie discounting infants:

$$\frac{\text{no burials} \times \text{life expectancy for adult}}{\text{length of occupation}} \pm 10\%$$

$$\frac{850 \times 33}{300} \pm 10\% = 94 \pm 10\%$$

As virtually no posthole buildings were recovered from the southern sector of the site, we can only hazard an estimate of approximately 65 for the original 'population' of posthole buildings. Building phases of at least 35 years for posthole buildings and half that for *Grubenhäuser* would mean, on average, at least 8–10 posthole buildings and 14 *Grubenhäuser* standing at one time. These estimates are far from satisfactory, however, as they present a static demographic picture. In reality, considerable fluctuations in population would have taken place.⁷

The structural evidence contains little to suggest a highly organised community, although the density of *Grubenhäuser* in the fifth-century phase, and the rough alignment of buildings in parts of the sixth- to seventh-century phase, suggest some coherence. Mucking, despite its size, is therefore best described not as a single, sprawling village, but rather as a shifting hamlet, at times perhaps more than one. These hamlets in turn consisted of conglomerations of single farmsteads whose spatial relationship ranged from focused to dispersed. These changes in settlement structure must reflect varying levels of social interaction, from a relatively integrated community to one in which there can have been few communal arrangements such as paths or shared enclosures.



KEY

- ◆ Early Anglo-Saxon burials
- Early Anglo-Saxon buildings
- ⊕ Parish Church
- Parish boundary

Fig 52 Mucking and surrounding parishes

Conclusions

Until analysis of the cemeteries is complete, it is impossible to offer any firm comment on the ways in which structural changes apparent in the Mucking settlement reflect socio-economic developments. While the shifting and ultimate dispersal of the settlement have obvious implications for patterns of landholding, inheritance, and the perpetuation of family farms, so little is known regarding the field systems of this early period that interpretations of this evidence must remain conjectural. It is, however, of interest to note that the marked dispersal of farmsteads occurs at a time when the size of individual huts increases and the evidence for craft production (weaving and ironworking, for example) is most pronounced.

One possible explanation for the relative density of the fifth-century settlement is that it was contained by a continuing sub-Roman presence in the area, and that only after the estuary had been fully secured by the Anglo-Saxon population was greater dispersal possible. From having been restricted to a derelict Roman field system on the terrace, the settlement could then incorporate the richer alluvial soils and marsh, resulting in a territorial 'slice' extending from gravel terrace to the

river, much like the modern parish (Fig 52). This is a model which has recently been suggested for the Upper Thames valley and for Bedfordshire (Hawkes and Matthews 1985; Hawkes 1986). The situation at Mucking, however, remains enigmatic and a matter for speculation.

Notes

- 1 It does, however, appear that at the settlement of West Heslerton, N Yorks, a separate 'industrial' quarter consisting solely of *Grubenhäuser* has been identified (Powlesland 1990)
- 2 D M Metcalf, pers comm, 1989; the author is grateful to Michael Metcalf for his comments regarding the Mucking coins.
- 3 Hart (1966, 118) assumes that the Tilbury monastery faded out soon after the establishment of the monastery at Barking c 666, ie before *scattas* came into circulation. As the two communities lay some 20km apart, there is no obvious support for this assumption.
- 4 For example: West Stow, Suffolk (West 1985); Bishopstone, Sussex (Wilson and Hurst 1969, 240); Puddlehill, Beds (Hawkes and Matthews 1985); Spong Hill, Norfolk (Hills *et al* 1984); West Heslerton,

N Yorks (Powlesland 1987); Flögeln, Kr Wesermünde (Kossack *et al* 1984, Abb 89); Gladbach, Kr Neuwied; Burgheim, Lkr Neuburg a d Donau (Donat and Ulrich 1971, 243); Rullstorf, Kr Lüneburg (Gebers 1985); Bremen-Mahndorf (Brandt 1969).

5 Van Es (1967, 365) established eight building phases of roughly 35 years at Wijster, based upon structural and stratigraphic evidence much superior to that from Mucking.

6 The formulae used for the demographic calculations

are those used by Dierkens 1981, following Acsádi and Nemeskéri 1957. The average population size of approximately 60 cited in Hamerow 1987 and 1988 relates to the size of reproductive *generations*, not the community as a whole.

7 Various figures for the number of burials in the Mucking cemeteries have been cited in past publications. The figures presented here are those arrived at by Hirst and Clark after detailed examination of the archive.

7 The historical and topographical contexts of Mucking reconsidered

A re-examination of the historical and topographical contexts of the Mucking Anglo-Saxon settlement is needed in light of its chronological and spatial development, as presented in chapter 6 above. No detailed discussion of the evidence from the two Mucking cemeteries is as yet possible, nor will an extensive re-evaluation of the substantial literature dealing with the documentary and archaeological evidence for the earliest Anglo-Saxon settlement in Britain be attempted here. The archaeological data yielded by the Mucking settlement cast considerable light on general questions regarding the formation, size, development, and functioning of early Germanic settlements. They can, however, contribute little which is new to our understanding of historical events and chronology. What follows is therefore only a brief consideration of the historical background of the earliest Germanic settlement in south-east England, followed by a more detailed evaluation of the topographical context of the Anglo-Saxon settlement at Mucking.

The historical context

The problem of the excessively early date originally assigned to the initial Germanic settlement at Mucking, based upon so-called 'Romano-Saxon' pottery and late Roman 'military' metalwork, was introduced in chapter 1. Contrary to Myres' assertion made over 20 years ago, 'Romano-Saxon' pottery was not in 'direct association' with Anglo-Saxon material at Mucking. Indeed, only two sherds derive from *Grubenhäuser*, compared to 25 from the late fills of Roman ditches; none came from Anglo-Saxon occupation layers or closed contexts. Their appearance here, therefore, cannot be used to support the suggestion that these wares 'were used in an Anglo-Saxon context by folk who were also using some of the earliest Germanic pottery to be found in Britain' (Myres in Jones *et al* 1968, 222–4). In other words, Mucking has produced no evidence to suggest that 'Romano-Saxon' pottery is anything other than a late Romano-British pottery type, some of whose decoration echoes Germanic motifs (Roberts 1982).

It has been apparent for some time that certain types of late Roman official metalwork found in Germanic burials, for example the simple disc belt attachments of the type found in GH 22 and GH 57 (Figs 95.1, 114.1), continued in use in the first half of the fifth century (Böhme 1986, 473; 1989). The cumulative evidence from Britain for Germanic metalwork dating to c AD 400 or earlier is, furthermore, not insignificant (Böhme 1986). Yet it is clear that the number of Germanic burials dating to this period is far smaller. This situation is clearly illustrated at Mucking, as John Hines has pointed out in a recent paper (1990). Several objects from the Mucking cemeteries have been dated to the late fourth or early fifth century by Böhme (1986) and Evison (1981b), but the question of their context has been largely neglected. Thus, the manufacture of the Hawkes and Dunning Type II buckle from Grave 989 may indeed date to the second half of the fourth century, but it was buried with a 'Howletts' type brooch with an upturned foot which dates to the first half of the fifth century. Further, Grave

90 yielded an early fifth-century equal-armed brooch, but also a late fifth-century button brooch. Grave 987 contained an unquestionably early fifth-century supporting-arm brooch, which was, however, buried with a later trefoil-headed small-long brooch; and so on. It appears that none of the grave groups from Mucking may be dated with any certainty to before c AD 420–450.

Until relatively recently, tenuous typological sequences and an over-emphasis on continental ceramic parallels resulted in chronological distortions regarding the date of the earliest Germanic pottery found in England (eg Myres and Green 1973, 13, 33, 43–5). This created a substantial discrepancy between the dates assigned by Myres to the earliest pottery (eg from Caistor-by-Norwich), which he dated to the third century, and the earliest burials dated by ornamental metalwork. The new trends in the dating of this 'earliest' pottery, detailed in chapter 3, demonstrate the longevity of these pottery types and play a crucial role in reconciling this discrepancy.

The initial suggestion that the first Germanic settlers at Mucking were fourth-century *laeti* was soon replaced by the hypothesis that they were instead *foederati*, independent barbarian units under their own leadership who provided military service and were presumably issued with Roman military gear in return, ultimately, for land granted to them by treaty (Jones *et al* 1968, 226; Evison 1981b, 141). The first record of federates being granted land in the west concerns the Visigoths, who were settled in southern Gaul in 418; as 'there is no evidence to suggest that it had an unrecorded British precedent' (Morris 1974, 229), a date no earlier than c 420 for the introduction of federate settlement into Britain is indicated. The evidence from Mucking is not inconsistent with this scenario.

By the middle of the fifth century, however, the nature of such a settlement would have changed. If records compiled some 400 years after the event are to be believed, such a garrison guarding the mouth of the Thames may have become irrelevant, for at least part of the region had fallen under Saxon control; the entry in the Anglo-Saxon Chronicle, *sub anno* AD 456 (*recte* 457), relates how in that year the Britons were defeated at Creacanford (Crayford), and 'left Kent and fled to London in great terror'. In connection with this question of the nature of the earliest Germanic settlement at Mucking, it may be significant that the settlement expanded northwards and inland in the sixth and seventh centuries, away from the restricted but 'strategic' position afforded by the area of the Double Rings, occupied in the fifth century.

The hypothesis that Germanic settlement along the lower Thames in the first half of the fifth century was of a mercenary nature, brought in to bolster the strained defences of the *civitates* after the rescript of Honorius in 410, and intended primarily to protect London, thus remains historically plausible. It has been argued alternatively that London by the second quarter of the fifth century was abandoned (eg Brooks 1986), but that 'London in AD 400 was still a wealthy and well defended city' although 'Romano-British town life cannot have survived in London much if at all after the middle of the fifth century' (Biddle 1990). As Biddle has pointed out,

the problem is a complex one, for the archaeological and written evidence for fifth-century London is to an extent contradictory:

Archaeological evidence of the kind already available from Verulamium for the continuance of Romano-British town-life until the middle of the fifth century, and written evidence for conditions at the time of St Germanus' visits to Britain in 429 and 447, make it clear enough that London would have been unusual in south-eastern Britain if it were not still in some sense an organised community as late as AD 440-50. But although the existence of a fifth-century London need not be doubted, archaeological evidence of its presence is still very thin. (Biddle and Hudson 1973, 18)

It has been suggested that abandonment of some areas of London may have commenced already at the end of the second century, culminating with the accumulation of substantial layers of 'dark earth' (Dyson and Schofield 1984, 285). Certainly for the first half of the fifth century, the artefactual evidence is undeniably scanty: a group of fifth-century pewter ingots from Battersea, the two late fourth- or early fifth-century Tower hoards, fifth- or sixth-century amphorae sherds (Biddle and Hudson 1973, 14), a mid fifth-century applied brooch from a bath-house at Billingsgate (Welch 1975, pl XX.6), and a small group of late Roman belt fittings (Hawkes and Dunning 1961, 17, fig 13e) comprise the most significant finds. Calling this apparent 'archaeological negative' into serious question are substantial and expensive construction projects undertaken at the end of the fourth or beginning of the fifth century, the building of a riverside wall and the addition of bastions to the land wall being those most often cited (Dyson and Schofield 1984, 285). These important exceptions, combined with the recent discovery of two presumably Germanic burials dating to the late fourth or early fifth century just outside the east wall of Roman London, one with a 'military style' belt set (Mills and Whittaker 1991), and the absence thus far of early Anglo-Saxon cemeteries within a roughly eight-mile radius of the city, provide strong indications of 'the survival in London of a dominant element' during the early fifth century (Biddle and Hudson 1973, 19).

The evidence from Mucking cannot, of course, prove the case either way; it can only demonstrate a modest Germanic presence on the Thames estuary in the first half of the fifth century (a half dozen graves at most are datable to this period), which occupied a relict Roman field system² and acquired through uncertain means a small quantity of late Roman 'official' metalwork with both civilian and military affinities (Tomlin 1976, 191; Hawkes 1974). Although this material has long been regarded by Anglo-Saxon archaeologists as providing direct evidence for the positions of *foederati*, Roman scholars are far more cautious in their evaluation of these objects, and specifically of the *cingulum*, or official belt fittings. Salway (1981, 388, n2) observes:

This group of archaeological data probably cannot tell us anything about the use or distribution of barbarian mercenaries.... It does not disprove the idea that bodies of barbarian troops in Roman pay were employed in Britain, but only indicates that this

material does not necessarily have anything to do with them.

The historical explanation for this presence remains elusive. The use of *foederati* in England is an assumption made on rather insubstantial evidence contained in the western *Notitia Dignitatum* (Salway 1981, 418; Ward 1973, 262) and Gildas's reference in *De Excidio* (23, 5) to the *annona* (monthly rations) and *epimonia* (supplies of grain) with which federate soldiers were paid. Bartholomew's suggestion that a passage in Zosimus's *Historia nova* (vi, 5.3) can be taken to refer to barbarian soldiers stationed in Britain has since been refuted (Bartholomew 1982; Thompson 1983). The essence of this still unresolved puzzle has been summed up by Hills (1979, 388): 'The earliest graves in an Anglo-Saxon cemetery might represent the earliest independent settlers as well as they might represent the latest mercenaries.'

At Mucking, as elsewhere, the archaeological evidence demonstrates coincidence of Romano-British and Anglo-Saxon settlement, but the difficult question of 'continuity' persists. There is, certainly, continuity of land-use (Reece 1989), but neither the settlement nor the cemeteries yield clear evidence for a 'phase of overlap' between, or integration of, the Romano-British and Anglo-Saxon communities. The nature, status, and indeed location of the Romano-British settlement at Mucking remain to be established. The Roman finds from the excavation have generally been assumed to relate to a villa lying somewhere off the terrace; it is possible, however, that they derive from the Romano-British farm which was excavated within the Double-ditched Enclosure (C Going, pers comm). A detailed discussion of the four Romano-British cemeteries excavated at Mucking will be presented by Going in the forthcoming volume on the Roman settlement, but his findings may be summarised here.³ All four cemeteries contained a few burials which are likely to date to a period post AD 350. Only Romano-British cemetery I, however, contained potentially 'very late' burials, namely Roman 'style' inhumations without grave goods which could be late fourth or even early fifth century, but are by definition impossible to date with certainty (Rahtz 1977). It is most likely, however, that all four cemeteries went out of use by the end of the fourth century.

Evidence from Mucking, the most nearly complete excavation of an early fifth-century settlement and associated burials in Britain, would seem to suggest that the handful of such early burials excavated at Dorchester, Abingdon, Mitcham, Croydon, and elsewhere do not represent the tip of an iceberg, but that such early Germanic settlement was, in fact, on a relatively small scale.⁴ As noted earlier, of the graves which can be dated, a maximum of six belong to this period, and the earliest nucleus of the settlement is unlikely to have contained more than 20 *Grubenhäuser*. Hawkes's suggestion (1986, 73) that one or two 'officer-class males...led and trained local recruits', although speculative, may prove significant; Mucking cemeteries I and II each yielded one apparent 'founding male' grave: 117 and 979 respectively (Evison 1981b).

As Reece has noted (1989), most aspects of socio-economic discontinuity are difficult, if not impossible, to detect in the archaeological record. At the very least, the

silting up of Roman ditches by the time of the Saxon settlement and the establishment of two new cemeteries seem to reflect discontinuity in some sense. Yet the imprecision in the dating of the latest and earliest phases respectively of Romano-British and Anglo-Saxon settlement means that a significant chronological gap between the two at Mucking remains unproven and is perhaps unprovable.

The topographical context

The topographical position of Mucking – in view of the Thames estuary and near a river crossing – combined with its elevation provide it with an exceptional vantage, similar to that enjoyed by the Saxon settlement of Bishopstone, Sussex, with its extensive view over the Ouse estuary (Bell 1978). Either strategic motives, compulsion of some sort, or a combination of the two provide the most plausible explanations for the selection of this otherwise exposed site for settlement. The presence of a native settlement in the more attractive setting off the terrace, in the area of the modern farm, may be indicated by the place-name of the latter, Walton's Farm: *W(e)ahl-tun* may refer to a 'settlement of the British' (Fig 1; Cameron 1980). Although Reaney (1935, 163–4) traces the byname to the landowner in 1199, Simon de Waleton, it is probable that its origins lie earlier, and indeed that the Norman landowner took his name from the Anglo-Saxon place-name (cf von Feilitzen 1976).⁵

Nearby Anglo-Saxon settlement⁶

A number of early and middle Anglo-Saxon settlements and burials have been identified in the vicinity of Mucking, as shown on Figure 2. These sites, listed below, indicate a considerable density of settlement on and around the Boyn Hill terrace.

Ardale School, N Stifford: One cremation, nine inhumations, and three ?barrow ditches were excavated in 1979–80. One posthole building, five *Grubenhäuser*, and one pit were revealed c 75m to the east. Approximately 200 sherds of Anglo-Saxon pottery were recovered; all are grass-tempered, and represent a series of plain, irregular, ill-formed vessels. Pottery and grave goods suggest a date range from the late sixth to seventh centuries (Wilkinson 1988, 24–58).

Stifford Clays: One posthole building and an associated gully containing grass-tempered pottery were excavated in 1979–80 (Wilkinson 1988, 19–24).

Orsett Cock: Four *Grubenhäuser* and one possible post-hole building were excavated on the Boyn Hill terrace between 1976 and 1979 (Toller 1980). Drawings of selected sherds suggest a fifth- to sixth-century date, and show close affinities with the Mucking stamped pottery. A further three or four huts were excavated in 1983 at Barrington's Farm, just to the west of the earlier excavations (Milton 1987).

Orsett Neolithic Enclosure: Two inhumations (within small ring ditches) dating to the late seventh or eighth century were excavated in 1975 on the Boyn Hill terrace (Webster 1985).

Gun Hill, West Tilbury: One *Grubenhäuser* was excavated on a 75ft gravel spur in 1968. The pottery assemblage

from the hut is entirely grass-tempered, suggesting a date in the sixth century or later. Cropmarks suggest that more huts lie to the north-east (Bingley 1972–3; Drury and Rodwell 1973).

Stanford-le-Hope: A single jar decorated with comb-point impressions was recovered from an unspecified context (Myres 1977a, Corpus no 3760).

Chadwell St Mary: A sherd of Anglo-Saxon pottery was acquired by Colchester Museum in 1923 – 'a fragment of an Anglo-Saxon cinerary urn of coarse brown ware found at Chadwell St Mary, ornamented with tooled horizontal lines and triangular groups of rosettes and semi-rosettes' (Colchester Museum 1923, 19)

The relationship between south-east Essex and Kent

Historical, geographical, and archaeological evidence all suggest regular interaction between south-east Essex and Kent in the fifth to seventh centuries. Despite the comparative historical obscurity of the East Saxon kingdom (there is no East Saxon chronicle, and few charters), it is clear that strong political connections existed between Essex and Kent from at least the sixth century onwards, as evidenced most strikingly by the marriage of the East Saxon king, Sledd, to Ricula, sister of Æthelberht of Kent (Yorke 1985, 16, 31). Dunnett has, furthermore, postulated (1975, 63) that south-east Essex contained a network of minor Roman roads, and has pointed out the likelihood of a road at East Tilbury 'taking traffic from the ferry which is known to have crossed the Thames here' to Kent, somewhere in the vicinity of Higham. Buckingham Hill Road, which forms the southern boundary of the excavated area and divides the Linford and Mucking sites, could well represent an ancient ridgeway leading to such a river crossing between East Tilbury and Higham (Thornhill 1977, 123). The similarities between stamped pottery from south-east Essex and north Kent and the distributions of garnet-inlaid jewellery and 'Jutish-style' pottery (Jones *et al* 1968, 227; see also Webster, this volume, pp 62–3) are manifestations of the close links between these two regions.

Pastoral and woodland resources

The range of economic resources available to the Saxon settlement can only be guessed at. The land on the terrace today is poor, although it cannot be assumed to have been agriculturally marginal in the fifth to eighth centuries. Domesday Book assesses the manor of Mucking [*Mucinga*] at ½ a hide and 30 acres to the king, and records: 'In this Hundred are 6 free men who hold 2 hides and 50 acres. Always 2 ploughs. Then 3 small holders now 6; then 1 slave, now none. Then woodland, 100 pigs, now 55; the 13th part of 1 fishery' (Rumble 1983, 9,14). Good quality arable and marsh for grazing lie close at hand, and it seems most likely that the territory exploited by the Anglo-Saxon settlement, like that of the modern parishes (see Fig 52), consisted 'of slices from the coast, through marsh to gravel terrace', ensuring with this arrangement roughly equal access to

the full range of pastoral and agricultural resources (Jones 1974a, 34).

Given its position on the estuary near a natural crossing point, the Mucking settlement was ideally placed to benefit from trade going up the Thames, as well as with Kent. The substantial quantity of Frankish pottery recovered from the site reflects ready access to at least some imports. As noted earlier, Mucking lies just a few miles from a site at Tilbury which has yielded an exceptional number of Anglo-Saxon coins, overlapping chronologically with the Mucking *scattas*. The contrast between Tilbury, with its large coin assemblage reflecting lively cross-channel transactions, and Mucking, a substantial, apparently thriving community only a few miles away, yet with few traces of monetary activity, reflects a socio-economic hierarchy in which settlements within the same region had variable access to the coin-based economic network.

The place-name Mucking

by Margaret Gelling⁷

There are several factors which can cause an English place-name to end in *-ing*. The two commonest of these factors are the ones which concern us here. Such a name is most likely to be derived:

- 1 from an Old English form in which the plural suffix *-ingas* has been added to a man's name or to a place-name, to give a meaning 'followers of x' or 'dwellers at x'; or
- 2 from a form in which the singular suffix *-ing* has been added to a man's name or to a significant word to give a meaning 'place associated with x' or 'place characterised by x'.

The crucial difference between the plural *-ingas* and the singular *-ing* names is that the plural type can be made to carry a considerable weight of historical significance which cannot be attached to the singular one. It is not necessary to rehearse in detail the historiography of the *-ingas* place-name. Very briefly summarised it begins in 1849 with a suggestion that names like Reading ('followers of Read') indicate the presence of the earliest Germanic settlers. This suggestion, much refined by a number of very eminent scholars, became dogma, and held the field until it was challenged by Dodgson in 1966. Dodgson's suggestion of a later date for *-ingas* names than the first decades of settlement has also been refined and developed and now holds most of the field.

Since the argument turns mainly on the poor correlation between *-ingas* names and early Anglo-Saxon archaeology, Mucking occupies a special place in the discussions which began in 1966. When the English Place-Name Society's survey of Essex was compiled, before the Second World War, the place was not known to be of special archaeological importance, and the early spellings available for the name were not examined with great care. Mucking was casually assigned to the plural category and considered to mean 'the followers of Mucca'. The later archaeological discoveries, which occurred at the same time as the Dodgson attack on the theory that *-ingas* names date from the first coming of the English, seemed to confirm the old theory; and there

was some understandable resentment among supporters of the old theory when (having been asked by Mrs Jones to reconsider the name) the present writer reached the conclusion that it was more likely to be singular than plural.

Certainty is only possible when spellings survive from before the Norman Conquest, as they do, for example, for the Essex names Clavering ('clover place'), Docking ('dock place'), and Barking ('followers of Berica'). After the Conquest the finer distinctions of spelling were not observed to the same extent, but it is nevertheless possible to say that the Middle English spellings for the place-names Fobbing and Mucking indicate that the former is almost certainly and the latter very probably a singular formation of the Clavering/Docking type rather than a plural *-ingas* name like Barking.

Fobbing and Mucking, the two isolated *-ing* names in south central Essex, may be 'places associated with men named Fobba and Mucca'. As regards Mucking, however, a case could be made for an etymology 'soft place', based on a hypothetical ancient Germanic term cognate with Old Norse *myki* 'dung', from which modern English *muck* is believed to derive. Such a name would be similar to Deeping in the Lincolnshire fens which consists of the singular suffix *-ing* added to the adjective *deop*, 'deep'. In Berkshire, where the survival of pre-Conquest charters makes it easier to assign *-ing* names definitively to the plural or singular categories, the singular type is mostly evidenced in the naming of small streams. This suggests the possibility that Mucking and Fobbing were originally the names of creeks.

The *-gē* place-name element

At least one place-name incorporating the rare element *-gē*, derived from the German *gau* referring to a 'district' or 'region', occurs in south-east Essex, that of Vange. Vange, referring to the 'fen district' (*fenn-gē*), lies less than four miles from Mucking (Reaney 1935, 174-5). Smith (1956, 196-7) describes this ending as 'found chiefly in the south-east in place-names of great antiquity [becoming] obsolete at an early date in OE'. This form of place-name appears already in the seventh century, and its distribution is almost exclusively Kentish (Cox 1975, 64). Hawkes (following Reaney 1961) has suggested that the distribution of these *-gē* elements reflects a very early form of regional administration in Kent, with centres at Eastry (*Eastore-gē*), Sturry (*Stur-gē*), and Lyminge (*Limen-gē*) (Hawkes 1979, 95; 1982, 74-5). It is possible that in Essex too a form of royal estate organisation, or system of 'territorial confederacies', was in operation at a very early date (Dodgson 1966, 14-15); such an administrative network would undoubtedly have imposed certain constraints upon the dense pattern of settlement on the Boyn Hill terrace.⁸

Conclusions

It has been argued here that Mucking belongs to the broad category of *Wandersiedlungen*, the by now familiar phenomenon of 'wandering settlements' known on the continent (Jankuhn 1986, 96). It seems likely that such

mobility was also the norm in early Anglo-Saxon England: the excavated settlements at West Stow, Suffolk, Chalton, Hants, New Wintles Farm, Oxon, and Purwell Farm, Oxon, all reflect varying degrees of mobility (West 1985, 2, fig 301; Berisford 1973, 40, 42–3). For three centuries, the Mucking settlement, though mobile, continued to utilise the same ancestral burial grounds. The density of settlement in the Mucking region and the proximity of the *-ge* place-name element suggest that this movement was not at random, but operated within a defined territorial unit. The settlement evidence from south-east Essex is too patchy to test these hypotheses adequately, or to draw firm conclusions. The primary evidence consists of a series of terrace-top settlements, occupied in at least some cases from the fifth to the seventh centuries. The possibility of contemporary settlement on the terrace slopes or in valley bottoms cannot, however, be dismissed (Hamerow 1992).

The mobility of the Mucking settlement and the ultimate abandonment of its pagan cemeteries can be related to wider changes in the Anglo-Saxon landscape. Changes in attitudes towards landholding, the endowment of religious foundations with substantial land grants, as well as demographic changes and agricultural developments must ultimately have affected the pattern of early and middle Saxon settlement. A model, often referred to as 'the Middle Saxon shift',⁹ suggests that these developments resulted in a widespread shift of settlements away from the seemingly marginal locations they occupied in the fifth and sixth centuries to better quality land by the eighth century (Arnold and Wardle 1981).

Some of the difficulties with this model have been addressed by Welch (1983) and are considered in detail by the present writer elsewhere (Hamerow 1991). Certain aspects of the Middle Saxon shift model are of direct relevance to Mucking, however, and these may be summarised here. First, the mobility of the settlement casts serious doubt on the identification of sites supposedly 'abandoned' by the end of the seventh century, and of 'new centres' founded at roughly the same time (Arnold and Wardle 1981). These may in many cases be merely the 'early' and 'late' phases of shifting settlements of which only a small area has been excavated (Russel 1984, 112). Mucking demonstrates this point: had only its northernmost sector been excavated, Mucking would no doubt have been hailed as one of the 'new centres' founded in the seventh century. Further, the virtual absence of pottery in the latest huts at Mucking underscores the difficulties of recognising seventh- and eighth-century contexts and thus highlights the dangers in assuming the abandonment in the seventh century of settlements founded in the fifth and sixth centuries.

It is appropriate here to re-emphasise Mrs Jones's assertion (1973, 9) that 'complete rescue was the right target'. Despite its deficiencies, area excavation provided a far more accurate picture than any sampling method could have yielded; the key to the development of the settlement lies in broad spatial patterning, and therefore almost any sample would have produced a grossly misleading picture. Even with such large-scale excavation, the edges of the settlement cannot be securely defined; we do not know, for example, whether settlement between the main area of excavation and the *Grubenhäuser* excavated by the North Ring was contin-

uous. The thinning out of features along the inland edge of the excavated area may, furthermore, simply represent the beginnings of a more dispersed pattern of settlement, and not its boundaries. Uncertainty also remains concerning the date of the latest phase of settlement on the terrace, although the most recent coin finds suggest that it continued well into the eighth century.

With the recognition of settlement mobility as an essential factor in determining rural settlement patterns in early and middle Saxon England, the still widely-held view that only the failed, abandoned settlements of this period are available for excavation seems less persuasive (Hawkes 1986, 85). It is important that these settlements are not regarded as atypical or 'failed' communities, but instead as the byproducts of a natural, indeed 'typical', pattern of migrating settlement. The fact that so few Anglo-Saxon settlements have been excavated on a large scale has led to a distorted perception of settlement patterns; hypotheses of desertion and 'gaps' in settlement are frequently offered as explanations when incomplete excavation is more likely to blame. Surface survey, no matter how thorough, can rarely exclude the disconcerting possibility that the missing phase of settlement lies in the next field. The mobility of the Mucking settlement thus has considerable implications for future excavation and survey strategies.

Notes

- 1 'Her Hengest 7 Æsc his suna fuhton wiþ Bryttas on þære stow þe is gecweden Creacanford 7 þær ofslogan .iiiiim wera, 7 þa Bryttas þa forletan Kentland 7 mid myclum ege flugen to Lundenbyrig' (Taylor 1983, 13). The use of the late Saxon form Lundenbyrig, which appears in connection with Alfred's reoccupation of the city, 886/7, emphasises the late date of this annal (*ibid.*, 39).
- 2 The latest Roman pottery, namely Late Oxford, Mayen, and Portchester Wares dating to post 360, derived from the fills of ditches which had largely silted up (C Going, pers comm).
- 3 The writer has benefited greatly from discussions with Chris Going regarding late Roman Mucking, and is pleased to acknowledge his forthcoming publication here.
- 4 Very few of these early burials were excavated under modern conditions, however, or derive from large-scale excavations.
- 5 Bull has suggested, however (1973), that 'Waleton' may in fact refer to 'the tun by a wall', and that Simon de Waleton may have held property at Tilbury, possibly a 'tun by a wall', and subsequently moved to Mucking.
- 6 The writer gratefully acknowledges the assistance of the Essex County Council Archaeology Section, and of Susan Tyler and Paul Gilman in particular, for providing unpublished information regarding sites and finds in the Mucking region.
- 7 For a detailed discussion of the place-names of the Mucking area see Gelling 1976.
- 8 A H Smith suggested that Margaretting, also in south-east Essex, 'may be an *-ingas* derivative of *-ge*, denoting 'district dwellers' (Smith 1956, 196–7). In this he, like Reaney (1935, 258–9), follows Ekwall's comments in his first edition of his *English place-names in -ing* (1923, 46). In his second edition, however

(1962), Ekwall lists Margaretting not as a - *gē* name, but simply as a name in -*ingas* ('followers of Giga'), though even this is far from certain (M Gelling, pers comm, 1989). The author is indebted to Margaret

Gelling for her comments on the Margaretting place-name.

- 9 See Hamerow 1991 from which much of the present discussion is drawn.



Plate 1 PHB 2



Plate 2 PHB 13



Plate 3 GH 188 under excavation

The inventory of features and finds

The arrangement of the inventory

The inventory is laid out as follows: the posthole building plans and finds (pp 102–7, Figs 54–56); the *Grubenhäuser* (GH) plans and finds (pp 108–290; GH plans at 1:100, Figs 57–71; GH plans at 1:50, Figs 72–81; GH finds, Figs 82–178); Anglo-Saxon pit plans (Fig 179) and finds and pottery from ditches, pits, postholes, and unstratified contexts (pp 291–313; Figs 180–194).

Errata

One *Grubenhäuser* (GH 44) and six posthole buildings (PHB 19, 23, 29, 51, 52, 53) were mistakenly left unlabelled on the site atlas plans (Clark 1993). In the entry

for each of these, the relevant plan number is given and the coordinates will allow the feature to be recognised; in the case of GH 44 the feature lies at the edge of the excavated area and is labelled cut 13575. As already noted in chapter 1 (p 4), several features labelled on the plans as *Grubenhäuser* have been reclassified as pits; these features are listed in the inventory together with their site atlas references. Two post-built structures have erroneously acquired PHB numbers on the site atlas plans: PHB 54 (1710N 710E) on plan 17 and PHB 55 (310N 250E) on plan 3.

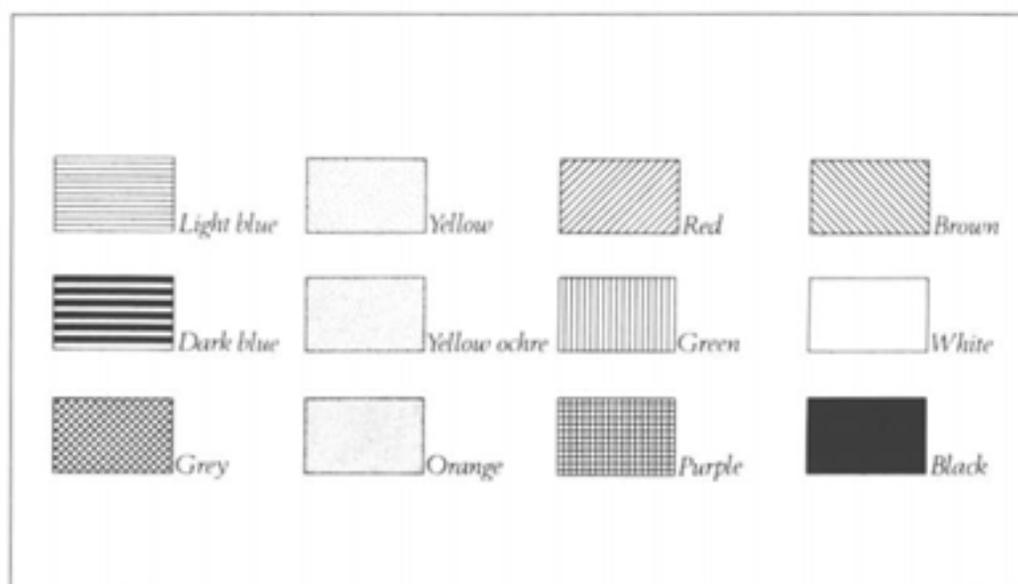


Fig 53 Colour symbols for glass

The posthole buildings

PHB 1

1420N 680E (Fig 54) Site atlas plan 16

This building was the largest and best preserved of the Mucking posthole buildings, and the first to be recognised. The postholes were substantial and evenly spaced; the corners were apparently reinforced. Two opposing entrances were situated in the centres of the long walls, with a third entrance in the eastern wall. A postbuilt partition at the eastern end created a separate chamber. Dimensions: L 12.6m, W 6.8m

No illustrated finds

PHB 2

2290N 680E (Fig 54; Plate 1) Site atlas plan 22

PHB 2 also yielded an apparently complete ground plan. Its postholes were less substantial than those of PHB 1, and the northern wall included a series of small double posts. The most notable feature of this building is the partition slot at the eastern end which, it appears, replaced or preceded the more usual posthole partition. Two central, opposing doorways were located in the long walls, and a third may have been situated in the eastern wall, cf PHB 1. Dimensions: L 10.9m, W 5.6m

Illustrated finds

Fig 56.1 ?Backplate of copper alloy belt fitting, possibly Roman (Bronze 534/AML820869)

PHB 3

2320N 800E (Fig 54) Site atlas plan 22/23

PHB 3 was made up of evenly spaced posts and had weak corners. Three entrances are suggested. Three postholes lying within the eastern end of the building may represent a partition. Dimensions: L 11.2m, W 5.8m

No illustrated finds

PHB 4

2170N 930E (Fig 55) Site atlas plan 23

The eastern gable wall of this building seems to have had reinforced corners. Like PHB 1-3, PHB 4 had a small eastern chamber, but its overall dimensions were somewhat smaller. The postholes were relatively widely spaced. Dimensions: L 9.8m, W 5.0m

No illustrated finds

PHB 5

1300N 180E Site atlas plan 12

The ground plan for this building was irregular and incomplete. No western gable wall was recorded, and only the southern wall appears to have been at all substantial. The ground plan reveals no obvious door posts and is exceptionally narrow. The small size of the postholes contributes to the overall impression of an ephemeral structure. Dimensions: L c 9.6m, W 3.5m

No illustrated finds

PHB 6

1410N 660E Site atlas plan 17

Only the western half of this building was well preserved. The surviving corners were weak and three pairs of double posts were set into the northern wall. Dimensions: L unknown; W 4.9m

No illustrated finds

PHB 7

1610N 790E (Fig 55) Site atlas plan 17

The ground plan consisted of evenly spaced postholes. Few traces of the eastern wall survived. Dimensions: L c 9.9m, W 4.6m

Illustrated finds

Fig 56.2 Splay-sided bowl, neatly perforated from the outside
Light brown surfaces; black core with some reddening
Fabric 2 (8271.1)

PHB 8

2130N 890E (Fig 55) Site atlas plan 23

Only the northern and southern walls of PHB 8 can be identified with certainty. A porch-like structure extended beyond the northern doorway. The postholes were closely and evenly spaced. Dimensions: L unknown, W c 4.7m

No illustrated finds

PHB 9

2240N 660E (Fig 56) Site atlas plan 22

No eastern gable wall was recorded. The simple rectangular plan consisted of relatively small, widely spaced postholes, and two central, opposed doorways. Surviving dimensions: L c 8.9m, W 4.0m

No illustrated finds

PHB 10

1250N 750E (Fig 56) Site atlas plan 14

No trace of an eastern gable wall was recorded, although it may have been cut into, and obscured by, the fill of a Roman ditch. Six pairs of double posts were incorporated into the northern and southern walls. Surviving dimensions: L 6.3m, W 4.1m

No illustrated finds

PHB 11

2270N 760E Site atlas plan 22

PHB 11 intersected with PHB 33 at its western end, although their relative sequence was not established. The western gable wall of PHB 11 was irregular. The eastern wall appeared weak and incomplete. Two central, opposed doorways were located in the long walls. Surviving dimensions: L c 7.6m, W 4.1m

No illustrated finds

PHB 12

2420N 970E Site atlas plan 25

PHB 12 was aligned with GH 184, and consisted of a simple, rectangular groundplan of irregularly spaced postholes. Surviving dimensions: L c 7.6m, W 3.8m

No illustrated finds

PHB 13

2350N 1050E (Plate 2) Site atlas plan 23

At its western end, PHB 13 abutted PHB 18, which may have been part of a fenced enclosure rather than a building. No eastern gable wall was recorded, although it may have lain beyond the edge of excavation. The postholes were small and included several double posts. Doorways were probably centrally located. Surviving dimensions: L 9.7m, W 4.7m

No illustrated finds

PHB 14

2170N 720E Site atlas plan 22

A series of postholes adjoining the eastern gable wall may have been part of a porch-like structure. Probable entrances were positioned centrally in the long walls. Surviving dimensions: L c 9.1m, W 4.4m

No illustrated finds

PHB 15

2340N 920E Site atlas plan 23

The eastern gable wall incorporated a slot or pit (cut 25726) with reddened sides which contained vitrified sand. Two internal and two external posts at the eastern end of the building may be the remains of an internal partition. Two double posts were located in the northern wall. Dimensions: L 10.2m, W 4.3m

No illustrated finds

PHB 16

1720N 930E Site atlas plan 18

PHB 16 intersected another structure, possibly a posthole building, of which only the southern wall, and a section of the northern wall, survived. The two opposed doorways of PHB 16 were slightly to the east of centre. The north-west and north-east corners were reinforced, and four pairs of double or reinforced posts were located in the

northern wall. A shallow hearth lay immediately outside the southern line of postholes. Dimensions: L 11.0m, W 4.3m

Illustrated finds

Fig 56.3 Body sherd decorated with H2c stamps; from a series of intercutting pits (pit 11880) within, though not necessarily contemporary with, PHB 16; stamp-linked to a sherd from pit 1002 (Fig 187, pit 1002.2)

Black throughout; surfaces lightly burnished
Fabric 3 (8302.1)

PHB 17

2230N 890E Site atlas plan 23

A small, irregular rectangular structure with poorly defined gable walls. A possible entrance was situated in the northern wall. Dimensions: L c 6.7m, W 3.4m

No illustrated finds

PHB 18

2330N 1040E Site atlas plan 23

PHB 18 may have been part of a fenced enclosure or shed associated with PHB 13. Only the southern wall comprised substantial postholes; the other 'walls' were indicated by an irregular series of postholes and stakeholes. Approximate dimensions: L 9.0m, W 4.7m

No illustrated finds

PHB 19

1260N 100E Site atlas plan 12 (unlabelled)

This structure abutted and was perpendicular to PHB 28. The southern wall apparently consisted of a shallow foundation trench (cut 5544), with possible post impressions recorded in the base of the slot. It is not certain, however, that this trench, which ran parallel to PHB 19's northern wall (in which there is no obvious entrance) actually represents the southern wall. An alternative interpretation is that the northern line of postholes is the remnant of a fenced enclosure connected to PHB 28. The recording of the eastern end of PHB 19 was complicated by an earlier ditch and by GH 86, which may have obscured part of the building. Approximate dimensions: width between the northern line of postholes and the timber slot 5.8m; L c 10.2m

No illustrated finds

PHB 20

1200N 730E Site atlas plan 14

This structure, which lay directly to the west of PHB 37, was roughly square, but otherwise poorly defined. Approximate dimensions: L 5.0m, W 5.0m

No illustrated finds

PHB 21

580N 320E Site atlas plan 6

The southern wall contained two pairs of double posts, and a partition ran across the eastern end of the building. PHB 21 appears to have been cut by GH 64, although the excavation record is ambiguous regarding this sequence. Approximate dimensions: L 9.6m, W 5.3m

No illustrated finds

PHB 22

1110N 400E Site atlas plan 13

Only the northern and southern walls of this building were defined. Approximate dimensions: L 9.1m, W 4.8m

No illustrated finds

PHB 23

1020N 550E Site atlas plan 11 (unlabelled)

Only the southern wall of this structure, which was aligned with GH 107, was clearly defined; L c 9.0m. The distance between it and a line of six postholes (including two double posts) presumed to represent the northern wall was 4.2m.

No illustrated finds

PHB 24

2200N 740E Site atlas plan 22

This structure consisted of two lines of postholes. Approximate dimensions: max L 6.8m, W 3.7m

No illustrated finds

PHB 25

2150N 1070E Site atlas plan 23

Two parallel lines of postholes were aligned with GH 162. Three postholes to the east of the two long walls may represent the gable wall. Approximate dimensions: max L 11.6m, W 4.6m

No illustrated finds

PHB 26

1890N 680E Site atlas plan 20

Only the northern wall of this structure was clearly defined. Approximate dimensions: L 9.0m, W 4.1m

No illustrated finds

PHB 27

1840N 930E Site atlas plan 21

Two parallel lines of relatively small postholes were spaced 5.2m apart. The longer wall may have been as long as 13m.

No illustrated finds

PHB 28

1230N 100E (Fig 56) Site atlas plan 12

This building lay near the western edge of the excavated area. It was situated perpendicular to and abutting PHB 19, and was cut by ditch 5226. Dimensions: L 10.1m, W 4.8m

No illustrated finds

PHB 29 and PHB 30

2030N 1010E; 2020N 1010E Site atlas plan 21 (PHB 29 unlabelled)

The sequence of these two intersecting buildings was not established. Approximate dimensions: PHB 29 L 7.9m, W 4.8m; PHB 30 L 6.0m, W 4.2m

No illustrated finds

PHB 31/31a

2390N 800E Site atlas plan 24

Two apparently intersecting buildings. Approximate dimensions: length uncertain; approximate widths 5.2m and 4.8m

No illustrated finds

PHB 32

1970N 680E Site atlas plan 20

Approximate dimensions: min L 9.6m, W 5.3m

No illustrated finds

PHB 33

2290N 750E Site atlas plan 22

Approximate dimensions: min L 7.4m, W 4.3m

No illustrated finds

PHB 34

480N 270E Site atlas plan 6

Approximate dimensions: min L 8.4m, W 4.6m

No illustrated finds

PHB 35

2000N 660E Site atlas plan 20

Dimensions: unknown

No illustrated finds

PHB 36

1110N 680E Site atlas plan 14

Only a single line of postholes can be identified with certainty. Dimensions: unknown

No illustrated finds

PHB 37

1200N 760E Site atlas plan 14

Approximate dimensions: L 11.6m, W 5.5m

No illustrated finds

PHB 38

1740N 900E Site atlas plan 18

Two lines of parallel, unevenly placed postholes may represent a building, although there was virtually no trace of gable walls. Approximate dimensions: min L 6.0m, W 3.8m

No illustrated finds

PHB 39

1980N 930E Site atlas plan 21

Possible posthole building or fence consisting of an agglomeration of unevenly spaced postholes aligned with GH 148. Approximate dimensions: min L 8.0m, W 4.8m

No illustrated finds

PHB 40

1990N 970E Site atlas plan 21

Two walls were defined. Approximate dimensions: min L 5.6m, W 4.0m

No illustrated finds

PHB 41

2240N 770E Site atlas plan 22

Possible posthole building or fence. Approximate dimensions: min L 6.6m

No illustrated finds

PHB 42

1780N 930E Site atlas plan 18

Cut by GH 132. Approximate dimensions: min L 7.8m, W c 3.8m

No illustrated finds

PHB 43

2060N 940E Site atlas plan 21

Approximate dimensions: min L 6.0m, W 3.8m

No illustrated finds

PHB 44

1130N 590E Site atlas plan 13

Approximate dimensions: L 6m, W 4.8m

No illustrated finds

PHB 45

2300N 970E Site atlas plan 23

Approximate dimensions: L c 5.4m, W 3.7m

No illustrated finds

PHB 46

2380N 1020E Site atlas plan 23

Approximate dimensions: L c 9.7m, W c 5.2m

No illustrated finds

PHB 47

2410N 530E Site atlas plan 24

Two parallel, slightly staggered lines of postholes of indeterminate length were situated c 5.2m apart. A line of postholes may indicate the western wall.

No illustrated finds

PHB 48

2440N 870E Site atlas plan 25

Dimensions: min L 9.6, W 3.6m

No illustrated finds

PHB 49

2000N 900E Site atlas plan 21

Approximate dimensions: L 8.2m, W 6.1m

No illustrated finds

PHB 50

2515N 880E Site atlas plan 25

Approximate dimensions: L 5.5m, W unknown

No illustrated finds

PHB 51

2460N 840E Site atlas plan 25 (unlabelled)

An internal partition was located in the eastern end. Approximate dimensions: L 7.2m, W 3.7m

No illustrated finds

PHB 52

2060N 900E Site atlas plan 21 (unlabelled)

Cut by GH 81. Dimensions: L 7.4m, W 4.1m

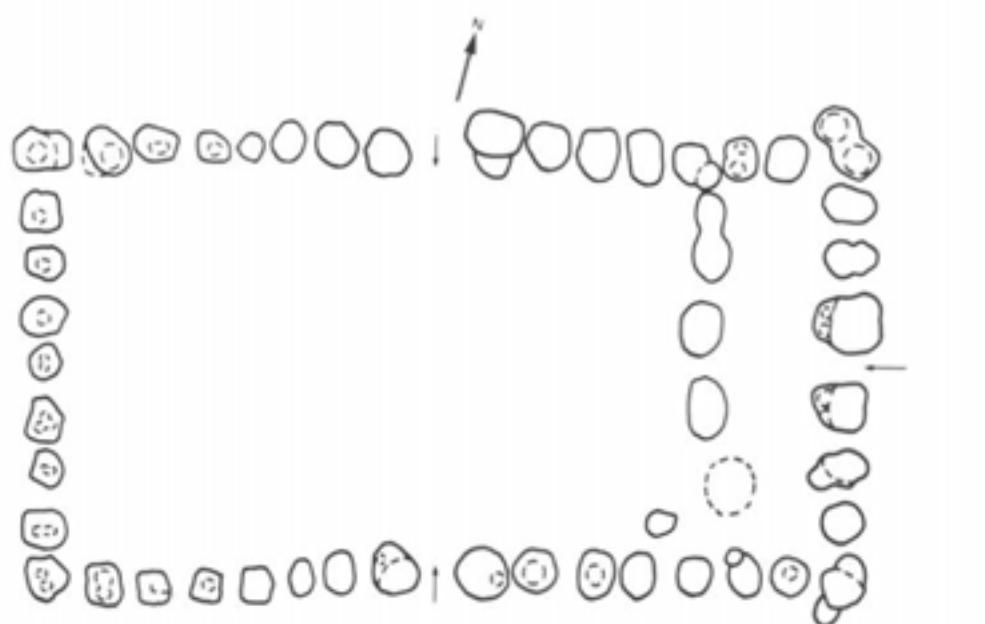
No illustrated finds

PHB 53

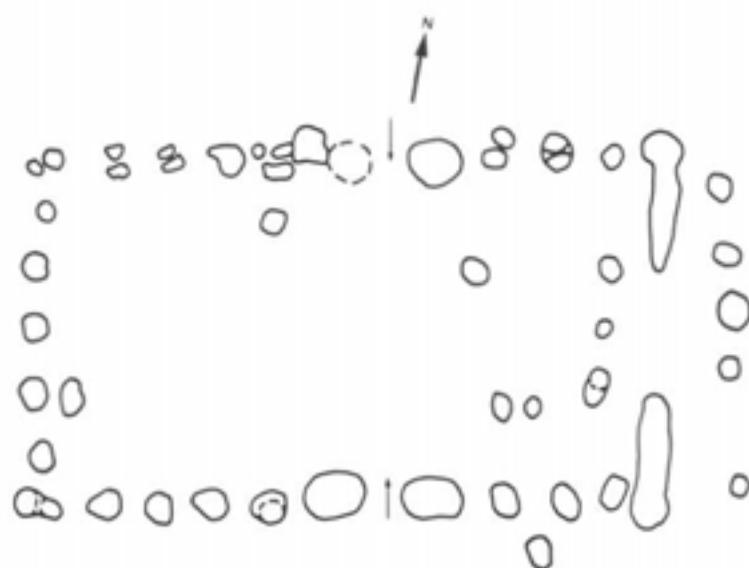
1040N 310E Site atlas plan 10 (unlabelled)

Cut by GH 101. Approximate dimensions: L 10.4m, W 5.1m

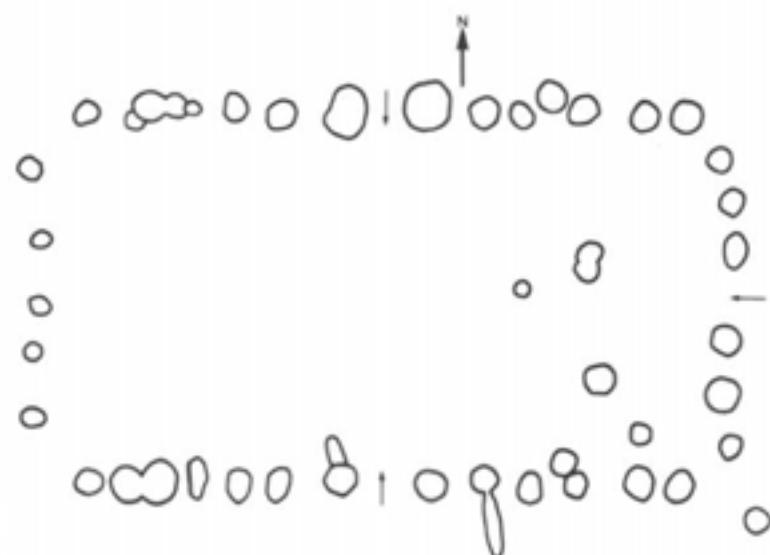
No illustrated finds



PHB 1



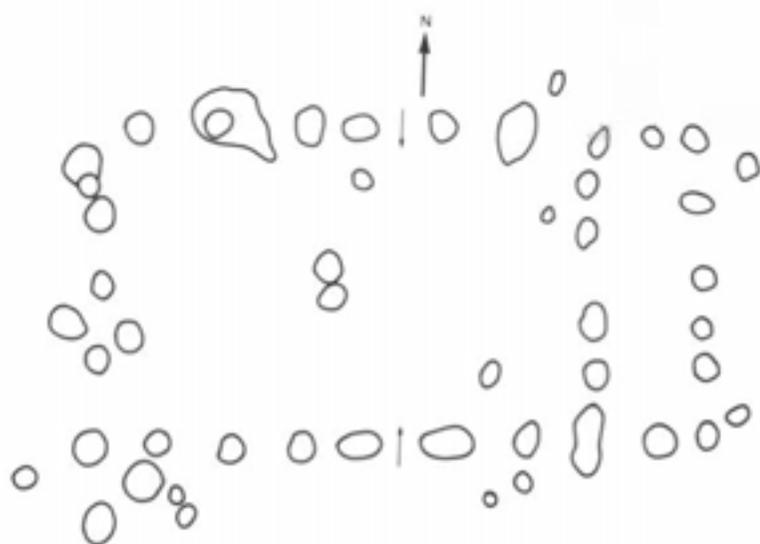
PHB 2



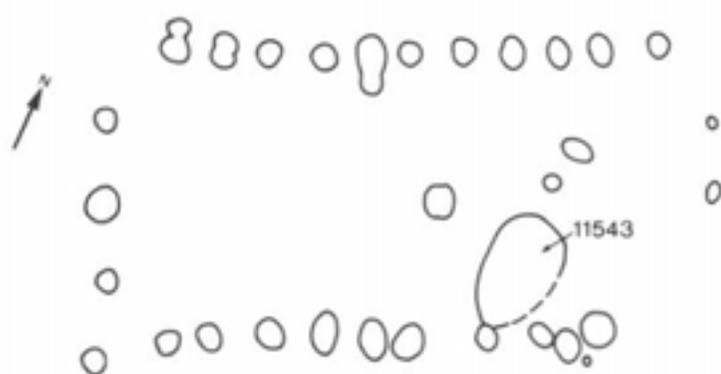
PHB 3



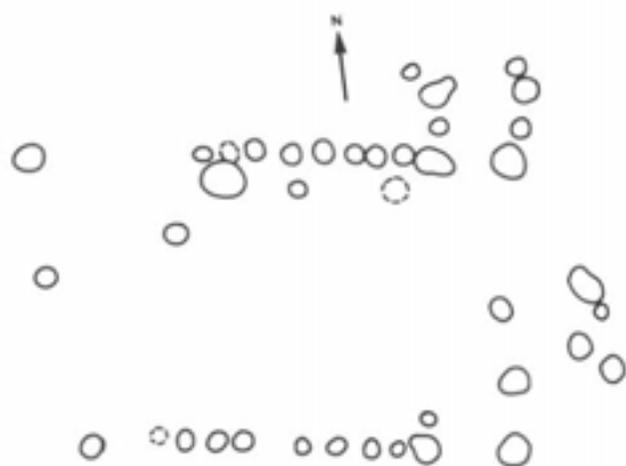
Fig 54 Plans of posthole buildings



PHB 4



PHB 7



PHB 8



Fig 55 Plans of posthole buildings

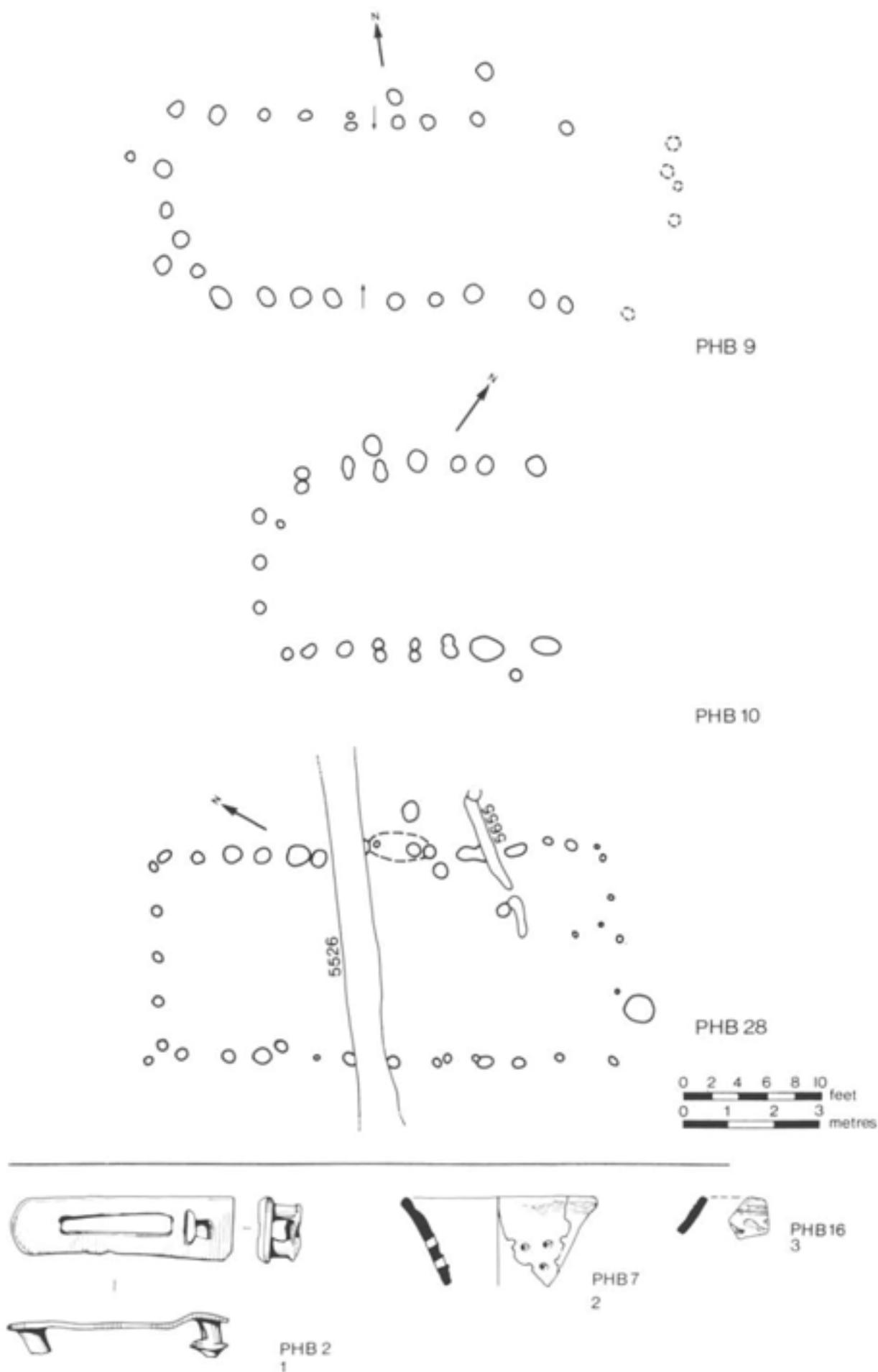


Fig 56 Plans of posthole buildings; finds from PHB 2, 7, and 16 (scales: 1, 1:1; 2-3, 1:3)

The Grubenhäuser

GH 1

50N 300E (Figs 57, 82)
3.58m×3.23m Site atlas plan 3

Illustrated finds

- 1 Bone spindlewhorl, turned (SPW 97)
- 2 Fired clay spindlewhorl, Type 2c; grass-tempered fabric, with red-brown to black surfaces and black core (SPW 1)

Not illustrated

Two joined copper alloy strips, perforated at one end; L 24mm (Bronze 11/AML321)
Three iron nails

Illustrated pottery

- 3 Hemispherical bowl
Black, unfinished outer surface; dark red-grey, lightly smoothed inner surface
Fabric 1b, densely grass-tempered (1.1)
- 4 Faceted carinated bowl; one facet lies between two shallow dimples
Black, lightly burnished outer surface; dark grey, smoothed inner surface
Fabric unclassified: 1a matrix containing moderate black iron ore, feldspar, calcareous inclusions, common unsorted quartz sand, and sparse large quartzite grits (1.2)
- 5 Rim sherd
Lip folded to the outside, then burnished
Black surfaces with dark grey core; burnished exterior, smoothed interior
Fabric 1c, relatively coarse (4.1)
- 6 Rim
Black throughout; both surfaces lightly smoothed
Fabric 2 (4.4)
- 7 Biconical vessel decorated with A4 stamp; very similar stamp on GH 9.15
Black throughout; smoothed outer surface, and unfinished inner surface
Fabric 2 (13.7)
- 8 Splay-sided bowl with ?spout, rather crudely formed
Outer surface grey to red-grey and smoothed; inner surface dark grey, unfinished
Fabric 2 (13.18)
- 9 Rim
Black throughout; both surfaces lightly burnished
Fabric 1b (9.1)
- 10 Straight-sided ovoid
Exterior dark grey to red-brown, smoothed, flaking in patches; interior black and smoothed
Fabric 1b (13.1)

GH 2

55N 310E (Figs 57, 82, 83)
3.53m×3.07m Site atlas plan 3

Illustrated finds

- 1 Copper alloy sheet, rolled, possible ferrule (Bronze 64/AML364)
- 2 Copper alloy ingot (Bronze 61/AML361)
- 3 Copper alloy chain links, corroded (Bronze 57/AML357)
- 4 Translucent glass disc bead, green with white trail (Glass 20)
- 5a, b Five fragments (two illustrated) of light green vessel glass with thin, self-coloured horizontal trails, and a nicked vertical trail (Glass 26.2)

- 6 Shale spindlewhorl, turned (SPW 92)

Not illustrated

Copper alloy ring, two fragments; diam c 6mm (Bronze 12/AML322)
Copper alloy disc-shaped ?weight, Roman; copper alloy casing enclosing a non-magnetic material, probably lead; diam 24mm (AML369)
Copper alloy coil and pin of ?first-/second-century brooch (Bronze 62/AML362)
Glass rim, double folded, light green, ?Roman (Glass 26.1)
Iron strip; L 33mm (Iron 4/AML178)
Iron bar; L 45mm; probable nail shank (Iron 8)
Iron pin; L 9mm (Iron 9/AML190)
Iron pin; L 8mm (Iron 10/AML95)
Three iron nails

Illustrated pottery

- 7 Dish
Rim folded and smoothed over; surfaces red-brown with reduced areas and lightly smoothed; black core
Fabric 3, coarse, containing moderate mica and sparse flint (26.2)
- 8 Biconical bowl
Black throughout; both surfaces smoothed
Fabric 3, coarse, containing moderate haematite and flint (27.2)
- 9 Globular vessel
Black throughout; lightly burnished, partially abraded outer surface, smoothed inner surface
Fabric 1c (27.3)
- 10 Carinated bowl with two notched collars over a band of diagonal grooves
Black throughout; burnished outer surface, smoothed inner surface
Fabric 1c (28.2)
- 11 Four body sherds, decorated with a faceted cordon between two slightly raised, slashed collars, with traces of diagonal grooves on the body
Interior smoothed, exterior lightly burnished; both surfaces red-grey to dark grey
Fabric 1c (28.6)
- 12 Pedestal base, crudely formed
Lightly smoothed surfaces, dark grey to red-brown; dark grey core
Fabric 3, rather coarse (29.1)
- 13 Perforated body sherd
Black throughout; both surfaces smoothed
Fabric 3 (23.5)
- 14 Rim and 'corrugated' neck
Black throughout; both surfaces carefully smoothed
Fabric 3, rather coarse and containing a moderate quantity of mica (30.2)
- 15 Globular vessel decorated with a row of unclassified stamps above a row of A5a stamps decorating the shoulder
Black throughout; lightly burnished exterior, smoothed interior
Fabric 3 (30.1)

GH 3

70N 310E (Figs 57, 83)
3.43m×3.20m Site atlas plan 3

Illustrated finds

- 1 Fired clay spindlewhorl, Type 2a; brown to black surfaces with a black core; grass-tempered fabric (SPW 24)

Not illustrated

Four iron nails

Illustrated pottery

- 2 Body sherd
Exterior pinched and yellow-red; interior smoothed and brown; core black
Fabric 2 (34.2)
- 3 Body sherd
Exterior yellow-red and combed; interior black and smoothed
Fabric 2 (32.4)
- 4 Rim
Both surfaces lightly smoothed; exterior red-yellow, interior and core grey
Fabric unclassified, containing common grass temper and ?calcareous material (33.7)
- 5 Rim with external clay appliqué
Black throughout; both surfaces smoothed
Fabric 1b, containing abundant grass temper (33.5a)
- 6 Pierced upright lug
Surfaces smoothed and red-brown; dark grey core
Fabric 2, rather hard (36.1)
- 7 Globular vessel with short flaring rim; could be from the same vessel as 5
Dark grey to dark red-brown throughout; exterior carefully smoothed; interior wiped
Fabric 1b containing abundant grass temper (33.5b)

GH 4

50S 300E (Figs 57, 83, 84; plan inadequate for illustration)
3.91m×2.44m Site atlas plan 1

Illustrated finds

- 1 Lead disc, perforated (AML274)
- 2 Fired clay spindlewhorl, Type 2c; sandy fabric, dark brown to black (SPW 2)
- 3 Iron spear ?socket with incised lines around mouth of socket; X-radiograph revealed no traces of inlay (Iron 16/AML170)

Not illustrated

Copper alloy pin, unlocated (Bronze 3/AML315)
Copper alloy ?pin fragment, unlocated (Bronze 5)

Fragments of two iron nails

Illustrated pottery

- 4 Straight shoulder, with grooves defining raised cordons
Black throughout; both surfaces lightly burnished
Fabric 3 (44.2)
- 5a, b Handled biconical cup
Dark red-grey throughout; exterior burnished, interior smoothed
Fabric 3, relatively fine (44.3, 45.3)
- 6 Carinated bowl
Exterior lightly burnished, dark to medium red-brown; interior smoothed and black
Fabric unclassified: smooth matrix containing sparse large rounded flint, moderate unsorted quartz sand and grass temper and common white mica, which imparts a distinct glitter to the finished surface (46.2)
- 7 Hollow-necked vessel
Interior surface black and highly burnished; exterior dark red-brown to black and burnished
Fabric 3 (46.4)
- 8 Biconical bowl
Black throughout; burnished exterior, smoothed interior
Fabric 3, fine (46.11)
- 9 Rim
Black throughout; burnished surfaces, external carbonised deposits
Fabric 3, coarse (47.2)

- 10 Carinated bowl
Smoothed, red-brown surfaces; dark grey core
Fabric 3, fine and containing sparse grass temper (47.1)

GH 5

50N 50E (Figs 57, 84, 85)
4.03m×3.28m Site atlas plan 2

Illustrated finds

- 1 Copper alloy ferrule consisting of two tubes of rolled sheet, one set inside the other, with a copper alloy hook projecting from the outer tube (AML7)
- 2 Shale spindlewhorl, turned (SPW 93)
- 3 Iron loop hinge (Iron 18)
- 4 Iron buckle loop and tongue; X-radiograph shows no inlay (Iron 17)

Not illustrated

Copper alloy strip with one finished edge, slightly curved; L 60mm (Bronze 23/AML6623)

Copper alloy sheet fragment, unlocated (Bronze 23)

Lead fragment, melted; 84g (Lead 108)

Iron strip, folded; L 38mm (Iron 21)

Iron nail fragment

Illustrated pottery

- 5 Hemispherical bowl
Red-brown throughout; carefully smoothed surfaces
Fabric 1c (49.2)
- 6 Bowl with faceted cordon above a diagonally slashed cordon; exceptionally well-made
Black throughout; burnished surfaces
Fabric 3, fine (50.6)
- 7 Hemispherical bowl with slightly thickened rim
Red-brown to black; both surfaces smoothed
Fabric unclassified, containing abundant ill-sorted quartz sand, common felspar, and moderate calcareous inclusions (50.5)
- 8 Globular vessel with short, flaring rim
Dark grey throughout; outer surface lightly burnished above the shoulder; shoulder roughened; inner surface smoothed
Fabric 3, coarse (50.4)
- 9 ?Basal sherd
Dark grey throughout; outer surface combed, inner surface smoothed
Fabric 4 (50.13)
- 10 Body sherd, perforated
Dark grey throughout; exterior abraded, interior smoothed
Fabric 3, coarse (50.23)
- 11 Rim
Black throughout; smoothed surfaces
Fabric 3 (50.12)
- 12 Faceted carinated bowl
Black throughout; both surfaces burnished
Fabric unclassified: contains abundant ill-sorted quartz sand and a moderate quantity of ?clay pellets (50.8)
- 13 Faceted carinated bowl
Surfaces dark grey and burnished; core red-brown with red external margin
Fabric 3 (50.7)
- 14 Rim
Black throughout; both surfaces burnished
Fabric 1c (51.1)

- 15 Shoulder decorated with two vertical grooves beneath two horizontal grooves
Black throughout; both surfaces burnished
Unclassified fine fabric containing abundant well-sorted quartz sand and moderate white mica (53.4)
- 16 Bowl with raised, diagonally slashed cordon on the shoulder
Black throughout; both surfaces burnished
Fabric 3, rather coarse (55.1)
- 17 Biconical bowl
Dark grey throughout; outer surface burnished, inner surface wiped smooth
Fabric 1c (55.4)
- 18 Rim
Both surfaces lightly smoothed; exterior light red-brown, interior black
Fabric 1b (55.13)
- 19 Rim
Red-brown throughout; outer surface smoothed, inner surface unfinished
Fabric 3, coarse (55.3)
- 20 Hemispherical bowl on a pedestal base; under the base two apparently deliberate finger impressions
Dark grey to dark red-grey throughout; lightly burnished outer surface, smoothed inner surface
Fabric 1b (56.1)
- 21 Globular pot
Red-brown to dark red-grey throughout; both surfaces carefully smoothed; the organic tempering aligned vertically, suggesting that the thin, even walls of this large vessel were achieved by pinch-potting rather than coiling
Fabric 1b (57.6)
- 22 ?Straight-sided bowl
Black throughout; both surfaces burnished
Fabric 1b (57.3)
- 23 Carinated bowl decorated with A1b stamps
Red-grey to dark grey; both surfaces burnished
Fabric 1a (57.7)

GH 6

35N 50E (Fig 85)

No feature plan; one of the first two huts to be excavated; the two main postholes were located, but the exact dimensions of the structure were not established Site atlas plan 2

Finds, not illustrated

Copper alloy strip; L 18mm (Bronze 67 / AML367)

Iron nail

Illustrated pottery

- 1 Grooved, applied boss
Black throughout; burnished exterior, carefully smoothed interior
Fabric unclassified: contains common ill-sorted quartz sand with moderate felspar and ?calcareous material (59.2)
- 2 Carinated bowl
Black throughout; exterior burnished, interior scraped smooth
Fabric 3, fine (59.1)
- 3 Vertical rim, externally thickened
Black throughout; smoothed exterior, unfinished interior
Fabric 2, very friable (59.3)

GH 7

25S 24SE (Figs 57, 85, 86; not all postholes and stakeholes were excavated)

3.86m x 3.50m Site atlas plan 1

Illustrated finds

- 1 Pottery spindlewhorl, Type 1; black-burnished ware (SPW 5)

- 2 Pottery spindlewhorl, Type 1; Hadham ware (SPW 6)

- 3 Fired clay spindlewhorl, Type 2a; grass-tempered fabric, with grey, smoothed surfaces (SPW 3)

- 4 Fired clay spindlewhorl, Type 2a; grass-tempered fabric, with dark brown to dark grey surfaces (SPW 4)

- 5 Iron bar, broken at one end; no distinct handle, tang, or blade (Iron 29 / AML195)

- 6 Iron ring (Iron 24 / AML169)

Not illustrated

Iron strip; L 20mm (Iron 27 / AML186)

Fragments of two iron nails

Illustrated pottery

- 7 Pierced applied lug
Unfinished brown-red exterior, abraded interior
Fabric 1b containing abundant grass temper (61.2)

- 8 Splay-sided bowl
Dark red-brown smoothed exterior, black smoothed interior
Fabric 2 (62.4)

- 9 Body sherd decorated with two A1a stamps
Exterior dark grey, interior dark red-grey; both surfaces smoothed
Fabric 3, coarse (62.11)

- 10 Body sherd, decorated with D2a stamps
Red-brown throughout; smoothed surfaces
Fabric 1b (65.11)

- 11 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 3 (66.1)

- 12 Rim
Dark grey throughout; both surfaces smoothed
Fabric 2 (70.2)

GH 8

40S 23SE (Figs 57, 85)

3.65m x 2.62m Site atlas plan 1

Illustrated finds

- 1 Iron knife (unnumbered)

Not illustrated

Copper alloy pin, ?Roman (Bronze 7 / AML319)

Copper alloy sheet fragment, unlocated (Bronze 10)

Ribbed green glass handle, Roman (Glass 8)

Square, green glass bottle fragment, Roman (Glass 9)

Iron strip; L 28mm (Iron 30)

Two iron nails

Illustrated pottery

- 2 Footring base
Black, unfinished interior; dark red-grey, unevenly smoothed exterior
Fabric 2 (76.1)

- 3 Straight-sided ovoid
Dark red-grey smoothed outer surface; black smoothed inner surface
Fabric 1b (76.3)

- 4 Straight-sided bowl
Outer surface red-brown and smoothed; inner surface dark grey and unfinished
Fabric 3, coarse (76.4)

- 5 Splay-sided bowl
Black throughout; smoothed surfaces
Fabric 1c, containing sparse grass temper (76.5)

- 6 Splay-sided bowl, unlocated; recorded as grass-tempered and finished on both surfaces (78.1)

- 7 Body sherd
Black throughout; both surfaces smoothed, with seed/grain impressions in outer surface
Fabric 3 (77.3)
- 8 Rim of perforated vessel
Dark red-grey smoothed surfaces; dark grey core
Fabric 1b, densely grass-tempered (80.4)
- 9 Body sherd
Light red-brown throughout; both surfaces smoothed
Fabric 3 (80.3)
- 10 Globular vessel with a short, vertical rim
Black throughout; smoothed surfaces
Fabric 1b (80.1)

GH 9

30S 220E (Figs 57, 86, 87)
4.37m×3.66m Site atlas plan 1

Illustrated finds

- 1, 2 Two translucent, drawn cylinder dark blue glass beads (Glass 5, 6)
- 3 Lead disc, perforated (AML277)
- 4 Lead rod (AML278)
- 5 Lead strip, cut (AML279)
- 6 Iron pin with spherical head (Iron 43/AML176)
- 7 Iron strip with rivets (Iron 36/AML164)

Not illustrated

Copper alloy coin, Roman, very worn (Coin 1)
Copper alloy coin, Roman, fair condition; Winged Victory with shield and spear (R), CONSTANTINOPOLIS (O), AD 330-5 (Bronze 9/AML690897)
Colourless vessel glass fragment, Roman (Glass 3)
Iron ?bow brooch, two corroded fragments (Iron 45/AML196)
Iron strip; L 34mm (Iron 44)
Iron knife, four fragments (Iron 33/AML690941)
Iron nails, six complete and c ten fragmentary

Illustrated pottery

- 8 Wheel-thrown body sherd with rouletted decoration
?Frankish; light red-brown throughout, in a hard, sandy fabric
- 9 Rim
Red-grey, smoothed exterior; dark grey smoothed interior
Fabric 1a (103.1)
- 10 Body sherd, perforated; two perforations not completely pushed through
Both surfaces smoothed; red-grey interior, light red-brown exterior
Fabric 1c (101.1)
- 11 Rounded base
Light red-brown throughout; both surfaces smoothed
Fabric 1a (103.2)
- 12 Body sherd
Black throughout; exterior burnished, interior smoothed
Fabric 1c (103.4)
- 13 Splay-sided bowl
Black throughout; both surfaces smoothed
Fabric 3, containing sparse grass temper (103.5)
- 14 Splay-sided bowl or lid
Dark grey throughout; smoothed surfaces
Fabric 5 (100.4)
- 15 Biconical vessel, decorated with B1 d stamps; same die used on GH 1.7
Light red-brown exterior; black abraded interior
Fabric 1b (108.1)

- 16 Grooved neck
Black throughout; carefully smoothed surfaces
Fabric 1a (111.1)
- 17 Neck decorated with horizontal grooves and possible N1b stamps ('comb-point'), although these are obscured by surface impressions of burnt-out vegetable matter
Black throughout; outer surface burnished, inner smoothed
Fabric 1b (112.5)
- 18 Straight-sided bowl
Black throughout; smoothed surfaces
Fabric 1b (111.6)
- 19 Rim
Black throughout; unevenly burnished exterior, smoothed interior
Fabric 1b, containing common unsorted quartz sand (115.1)
- 20 Rim, flat-topped and well-made
Light red-grey smoothed surfaces; dark grey core
Fabric 1b (111.5)

GH 10

95N 215E (Figs 57, 87, 88)
4.03m×3.66m Site atlas plan 3

Illustrated finds

- 1 Copper alloy bracelet with punched and incised decoration, 2 joining fragments, late Roman (Bronze 46/AML346 & 380)
- 2 Lead ring (AML280)
- 3 Lead strip, folded and pressed against a plain lead disc (AML304)
- 4 Iron knife blade (Iron 49/AML105)
- 5 Iron knife (Iron 48/AML111)

Not illustrated

Copper alloy bow brooch fragment, first-century (Bronze 18/AML4)
Green glass rectangular bottle fragment, Roman (Glass 21)
Blue glass bead fragments (Glass 27)
Iron sheet fragment; L 15mm (Iron 52/AML223)
Two iron nails

Illustrated pottery

- 6 ?Upright lug
Red-brown lightly smoothed surfaces; dark grey core
Fabric 1b (125.3)
- 7 Body sherd
Grey throughout; exterior smoothed, interior unfinished
Fabric 3 (123.5)
- 8 Body sherd decorated with C3a stamps
Grey throughout; exterior smoothed, interior unfinished
Fabric 1c (123.9)
- 9 Faceted carinated bowl
Light red-brown throughout; burnished outer surface, smoothed inner surface
Fabric 1a (126.1)
- 10 Grooved shoulder
Black throughout; outer surface burnished, inner surface smoothed
Fabric 3 containing sparse large (4.5mm) subrounded flint, moderate feldspar, and sparse magnetite (127.7)
- 11 Faceted carinated bowl, unlocated; recorded as burnished and of an unusual fabric (127.15)
- 12 Inturned-rim bowl; rim built up with clay appliqué over core
Black throughout; both surfaces burnished
Fabric 3 containing moderate white mica and sparse subangular flint (up to 4.0mm) (127.5)
- 13 Rim
Dark grey throughout; both surfaces smoothed
Fabric 3 (unnumbered)

- 14 Globular pot
Black throughout; outer surface lightly burnished between rim and shoulder, then wiped and finger-pinned below the shoulder; traces of external carbonised deposits; inner surface smoothed
Fabric 1a (131.2)
- 15 Rim and shoulder
Light red-brown throughout; both surfaces evenly smoothed
Fabric 1b (131.3)
- 16 Fragment of a pedestal base
Dark grey throughout with crudely finished surfaces
Fabric 1a matrix, containing common white mica and quartzite grains up to 3.0mm (131.5)
- 17 Carinated bowl
Black throughout; smoothed surfaces, the inner surface showing traces of burnishing; a strip of clay luting visible inside the carination
Fabric 3, containing common quartzite grits up to 1.5mm (131.9)
- 18 Hemispherical bowl
Dark grey throughout; lightly burnished surfaces
Fabric 3 (127.6)

GH 11

130N 213E (Figs 57, 88)
3.71m x 3.28m Site atlas plan 3

Illustrated finds

- 1 Copper alloy binding (Bronze 14/AML323)
- 2 Copper alloy sheet fragment with partial rivet hole (Bronze 32/AML333)
- 3 Iron strip, cut and folded (Iron 59/AML227)

Not illustrated

Copper alloy strip, two small fragments (Bronze 59/AML359)
Copper alloy bar, unlocated (AML360)
Copper alloy fragment, possible pin head (AML363)
Green glass bottle fragment, Roman (Glass 24)
Two iron pin fragments; L 15mm, 20mm (Iron 53, 54/AML90, 91)
Iron object, ?knife tip; L 39mm (Iron 55/AML106)
Three iron nails

Illustrated pottery

- 4 Faceted carinated bowl
Black throughout; burnished surfaces
Fabric 3, containing common well-sorted quartz sand (135.1)
- 5 Body sherd
Red-brown burnished exterior; black smoothed interior
Fabric 1a (135.3)
- 6 Biconical bowl
Black throughout; both surfaces carefully smoothed
Fabric 5 (136.5)
- 7 Rim
Black throughout; burnished exterior, smoothed interior
Fabric 3 (136.6)
- 8 Small globular vessel with short, flaring neck
Black throughout; both surfaces smoothed
Fabric unclassified, containing common well-sorted quartz sand, sparse haematite, and moderate ?felspar (138.4)
- 9 Faceted carinated bowl
Light red-brown throughout; outer surface burnished, inner surface smoothed
Fabric 4 (138.7)
- 10 Rim
Dark red-grey throughout; smoothed surfaces
Fabric 1c (138.8)

- 11 Body sherd
Black, wiped exterior; dark red-brown wiped interior
Fabric 1b (140.2)
- 12 Shoulder
Light red-brown, smoothed surfaces; black core
Fabric 3, fine (143.7)
- 13 Biconical bowl with hollow diagonal bosses
Black throughout; both surfaces burnished to a high lustre
Fabric 7, exceptionally hard, and containing sparse crushed ?fossiliferous chalk (143.9)
- 14 Base of a ?third-century Romano-British jar, whose edges have been ground down to form a shallow dish
Fabric fine and sandy, and a uniform light grey throughout (144.4)
- 15 Shoulder
Black throughout; both surfaces burnished
Fabric 3, exceptionally hard (145.6)
- 16 Complete biconical pot, rather crudely made
Black throughout; exterior lightly smoothed with carbonised patches, interior pitted and rough
Fabric 3, coarse (145.11)
- 17 Straight-sided bowl
Black throughout with smoothed surfaces
Fabric 3 (141.2)
- 18 ?Shouldered vessel, 50% complete, with thin, even walls
Exterior black to red-brown and burnished; interior smoothed and black
Fabric 1c, hard (145.8)

GH 12/21

185N 138E (Figs 57, 89)
3.37m x 3.20m Site atlas plan 3

Illustrated finds

- 1 Copper alloy blade (Bronze 50/AML350)
- 2 Copper alloy disc-attachment, fragment (AML339)
- 3 Iron spear- or arrowhead (Iron 61/AML89)
- 4a, b Iron bar, hooked, three fragments (Iron 64/AML107)
- 5 Iron shears (Iron 745/AML132)

Not illustrated

Copper alloy coin, Roman; VICTORIA AVGGG, Den Arcadius, AD 388+ (Coin 3)
Copper alloy strip, two fragments, probably from a finger ring (Bronze 27/AML329)
Copper alloy bow brooch, Roman (Bronze 51/AML351)
Copper alloy split bow brooch, Roman (AML332)
Glass bottle fragment, blue-green, Roman (Glass 12)
Window glass fragment, green, cylinder blown Roman (Glass 13)
Glass bottle fragment, blue-green, Roman (Glass 28)
Window glass fragment, green, double glossy, third/fourth-century (Glass 29)
Lead fragment and droplets, melted; total weight 65g (AML303)
Iron hook, unlocated (Iron 81/AML241)
Iron knife blade, two fragments (Iron 60/AML67)
Iron fragment, curved; L 35mm (Iron 62/AML83)
Iron rod with round cross-section and square-sectioned tang or handle; possible sharpening steel; L 74mm (Iron 63/AML88)
Iron cylinder; L 60mm, diam 28mm (Iron 66/AML109)
Iron strip; L 25mm (Iron 73/AML234)
Iron point, ?tip of knife; L 40mm (Iron 75/AML236)
Iron strip; L 40mm (Iron 82/AML242)
Iron nails, eight complete, c seven fragmentary

Illustrated pottery

- 6 Body sherd
Black throughout; wiped surfaces
Fabric 2 (152.6)

- 7 Hollow-necked vessel with flat-topped rim
Black throughout; burnished rim and exterior, smoothed interior
Fabric 1b (154.3)
- 8 Carinated bowl
Black throughout; burnished surfaces
Fabric 3, hard (158.12)
- 9 Shoulder with raised collar
Light red-brown throughout; both surfaces burnished
Fabric 1c (159.11)
- 10 Rim
Black burnished surfaces; dark red-grey core
Fabric 7, containing sparse to moderate ?fossiliferous chalk or shell, sparse haematite, and common unsorted quartz sand in a 1a matrix (159.12)
- 11 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 1c containing sparse large angular flint (164.7)
- 12 Inturned-rim bowl
Exterior red-grey and burnished; interior and core black
Fabric 1b (166.7)
- 13 Rim and shoulder with folded rim
Black throughout; smoothed exterior, wiped interior
Fabric 1b (159.9)
- 14 Carinated bowl
Dark red-grey throughout with lightly burnished surfaces
Fabric 1c (166.8)
- 15 Miniature hemispherical bowl, made from a single clay disk, pinched at opposite ends to form handles
Light red-brown throughout with unfinished surfaces
Fabric 3 (163.4)

GH 13

150S 203E (Fig 89; salvaged without detailed plan or sections; described as having had a charcoal layer at floor level, six postholes, and one-two stakeholes)
3.81m x 3.81m Site atlas plan 1

Finds, not illustrated

Copper alloy strip, four small fragments (Bronze 68/AML368)
Lead fragment; 6g (Lead 109)
Iron blade fragment (Iron 86/AML87)
Iron nail shank

Illustrated pottery

- 1 Carinated bowl, originally on a pedestal or splayed base
Dark red-grey throughout; both surfaces burnished
Fabric unclassified, containing large, subangular quartzite grits (175.1)
- 2 Small biconical pot with a lightly offset shoulder, decorated with shallow, broad grooves
Dark grey throughout; both surfaces burnished
Fabric 3, exceptionally hard, containing common large quartzite grits, averaging 1mm (175.2)
- 3 Rim and shoulder
Outer surface dark red-grey and burnished; inner surface black and burnished
Fabric 1b (175.5)
- 4 Everted rim, unlocated; recorded as roughened on both surfaces and grass-tempered (176.1)
- 5 Hollow neck, unlocated; recorded as burnished on both surfaces and grass-tempered (177.1)
- 6 Body sherd, unlocated; recorded as burnished on both surfaces and of a coarse, sandy fabric (177.2)
- 7 Hemispherical bowl, unlocated; recorded as burnished on both surfaces and of a sandy fabric (176.6)

- 8 Rim and shoulder with crudely applied boss
Light red-brown throughout; burnished exterior, smoothed interior
Fabric 1b (176.4)
- 9 Vertical rim
Black throughout; outer surface burnished, inner surface smoothed
Fabric 3 (176.9)
- 10 Hemispherical bowl, perforated
Black throughout; outer surface burnished, inner surface burnished over high points around perforations and covered with a whitish deposit where unburnished
Fabric 1c, relatively hard (179.1)

GH 14 = pit 13890 Site atlas plan 3**GH 15**

70S 320E (Figs 57, 90)
3.40m x 3.35m Site atlas plan 1

Illustrated finds

- 1 Copper alloy ?split pin (Bronze 26/AML328)
- 2 Laminated copper alloy strip, two fragments (Bronze 55/AML355)
- 3 Glass bead, drawn cylinder, dark blue (unnumbered)
- 4 Shale spindlewhorl, turned (SPW 95)
- 5 Bone spindlewhorl, turned, decorated with concentric grooves (SPW 98)
- 6 Lead ring, failed casting
- 7 Iron ring (Iron 88/AML68)

Not illustrated

Dark green glass vessel, rim and neck, Roman (Glass 22)
Green glass stemmed goblet with pontil mark, pushed-in base, and hollow folded foot, fourth-century (Glass 272)
Lead disc, perforated; unlocated (AML281)
Iron ring; diam 34mm (Iron 90/AML70)
Two iron nails

Illustrated pottery

- 8 Two body sherds decorated with A1b stamp
Black throughout; exterior burnished, interior smoothed
Fabric 3, fine (189.1a, b)
- 9 Body sherd with sharply cut grooves
Red-brown to dark grey throughout; both surfaces smoothed
Fabric 3 (194.3)
- 10 Globular bowl with offset neck; similar in form and fabric to 14
Black throughout; both surfaces evenly burnished
Fabric 3 (194.4)
- 11 Globular jar
Light red-brown exterior, black interior; both surfaces lightly burnished
Fabric 1b, densely grass-tempered (192.5)
- 12 Globular vessel with short, flaring rim
Dark red-brown throughout; exterior smoothed, interior wiped smooth
Fabric 1b (194.11)
- 13 Dish with trimmed, sharply everted rim
Black throughout; exterior smoothed, interior burnished
Fabric 3, fine (194.9)
- 14 Bowl with offset neck and flat, trimmed rim; similar in form and fabric to 10
Black throughout; both surfaces evenly burnished
Fabric 3 (194.15)

GH 16

50S 330E (Figs 57, 91)
3.12m×3.05m Site atlas plan 1

Illustrated finds

- 1 Bronze (EDXRF) button brooch with seven-spiral design and an iron pin (AML17)
- 2 Copper alloy strip, cut and flattened at one end (Bronze 595/AML283)
- 3 Lead ring (AML282)

Not illustrated

Copper alloy rod, hooked; L 22mm (Bronze 17/AML326)
Iron sheet fragment; L 21mm (Iron 96)
Iron strip, two fragments; L 28mm/50mm (Iron 93 & 94/AML72&77)

Illustrated pottery

- 4 Body sherd with faceted cordon
Black throughout; exterior smoothed, interior unfinished
Fabric 3, very coarse (204.3)
- 5 Straight-sided bowl, perforated from the outside; flat-topped, trimmed rim and a single internal groove
Smoothed exterior, unfinished interior with light brown surfaces; dark grey core
Fabric 1b (206.1)
- 6 Hollow-necked vessel, well-made
Exterior red-brown, interior black; both surfaces smoothed
Fabric 1b (207.1)
- 7 Globular vessel with flaring neck
Exterior light red-brown, interior black with carbonised deposits; both surfaces smoothed
Fabric 1b (209.3)

GH 17

40S 370E (Figs 57, 91-93)
3.35m×3.05m Site atlas plan 1

Illustrated finds

- 1 Copper alloy wire (Bronze 19/AML327)
- 2 Lead ring (AML298)
- 3 Lead ring (AML 300); 2 and 3 may have been cast in the same mould
- 4 Lead ring; flat surface stabbed and scored (AML296)
- 5 Iron strip with two rivets (Iron 97/AML79)

Not illustrated

Green glass flask, outplayed rim with self-coloured trail, third/fourth century (Glass 23)
Lead strip, hooked; L c 35mm (Lead 288)
Lead ring; diam 80mm, 250g (AML 299)
Lead ring, broken and slightly distorted into a 'horseshoe' shape; diam c 70mm, 214g (AML 297)
Lead fragments, melted, from hut floor; total weight c 3.6kg (Lead 66)
Five iron nails

Illustrated pottery

- 6 Body sherd decorated with an unidentified stamp or comb point impressions
Grey throughout; smoothed surfaces
Fabric 3 (222.1)
- 7 Body sherd with shallow grooved decoration
Red-brown to dark grey throughout; both surfaces lightly burnished
Fabric 3, very coarse (223.1)
- 8 Body sherd
Red-brown combed exterior, black smoothed interior
Fabric 1b (231.1)

- 9 Carinated bowl
Grey throughout; burnished exterior, scraped interior
Fabric 4 (225.1)
- 10 Two body sherds, decorated with snail shell impressions (K1c stamps)
Black throughout; both surfaces evenly burnished
Fabric 4 (225.2)
- 11 Rim
Black throughout; both surfaces burnished
Fabric 1c (227.3)
- 12 Rim
Black throughout; burnished exterior with carbonised deposits, smoothed interior
Fabric 1c (228.1)
- 13 Sub-biconical pot, rather crudely formed; similar to 14 in fabric, colour, and finish
Dark brown to black; both surfaces burnished
Fabric 1a (228.5)
- 14 Biconical bowl; see 13
Very dark brown to black throughout; both surfaces unevenly burnished
Fabric 1a (228.6)
- 15 ?Low-bulbous pot decorated with A1a stamps
Outer surface red-brown to black and smoothed; inner surface red-brown and smoothed; core reddish
Unclassified fabric, containing abundant unsorted quartz sand, common flint and haematite (up to 4.0mm), and sparse mica (234.1)
- 16 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 4 (234.4)
- 17 Biconical vessel
Black throughout; burnished exterior, smoothed interior
Fabric 3 (234.5)
- 18 Globular bowl with short flaring rim
Black throughout; both surfaces burnished
Fabric 1c (228.7)
- 19 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 4 (229.2)
- 20 Rim
Black throughout; both surfaces burnished
Fabric 3 (234.10)
- 21 Hemispherical bowl
Light red-brown; both surfaces smoothed
Fabric unclassified: hard, containing abundant unsorted quartz sand, common feldspar and calcareous material, and a moderate quantity of grass temper (234.14)
- 22 Flat-angled base
Light red-grey throughout; burnished, grooved exterior, smoothed interior
Fabric 3, hard (232.1)
- 23 Carinated bowl, originally on a pedestal or splayed base
Black throughout; both surfaces evenly burnished
Fabric 3, fine and hard (236.1)
- 24 Globular vessel with offset shoulder
Black throughout; exterior burnished, interior smoothed
Fabric 1c (236.3)
- 25 Globular bowl
Black throughout; highly burnished exterior, smoothed interior
Fabric 1c (236.4)

26 Faceted carinated bowl
Red-brown to dark grey; both surfaces smoothed
Fabric 1c, containing common angular and subrounded flint (up to 5.0mm) and moderate haematite (237.1)

27 Body sherd
Red-grey, pinched exterior; black smoothed interior
Fabric 2, relatively hard, containing abundant grass temper and common quartz sand (238.1)

28 Straight-sided bowl with a slightly offset shoulder
Black throughout; both surfaces evenly burnished
Fabric 3, hard (239.4)

29 Body sherd
Light red-brown to grey; smoothed surfaces
Fabric 1c (239.2)

GH 18

115N 130E (Figs 57, 94)

4.12m×3.05m Site atlas plan 3

Illustrated finds

1 Lead disc, perforated (AML301)

2 Iron knife (Iron 101/AML63)

Not illustrated

Two iron nails

Illustrated pottery

3 Body sherd
Red-grey throughout; finger-nail impressed exterior, smoothed interior
Fabric 1c, containing sparse grass temper (244.5)

4 Upright lug, probably from the same vessel as 3
Dark red-grey throughout; both surfaces smoothed
Fabric 1c, containing sparse grass temper (246.1)

5 Globular bowl
Light red-brown, smoothed exterior; black smoothed interior
Fabric 1c (250.1)

GH 19

62S 382E (Figs 58, 94)

3.81m×3.50m Site atlas plan 1

Finds, not illustrated

Iron spike; L 115mm (Iron 107)

Iron nail

Illustrated pottery

1 Shoulder
Black throughout; both surfaces smoothed
Fabric 1c (254.2)

2 Complete splay-sided bowl with flat-angled base
Exterior dark grey to red-brown, scraped and wiped smooth; interior grey, lightly smoothed with fingers
Fabric 3 (254.4)

3 Shouldered jar with short, flaring neck and flat-angled base; approximately 50% complete; similar fabric and finish to GH 34.17
Outer surface light red-grey to dark red-grey and burnished; inner surface grey and smoothed
Fabric 1c (261.4)

4 Straight-sided bowl
Red-grey throughout; both surfaces smoothed
Fabric 1a (255.1)

5 Inturned flat-topped rim
Light red-brown to dark grey throughout; unevenly smoothed surfaces
Fabric 1c (258.2)

6 Globular bowl
Black throughout; burnished surfaces
Fabric 3 (255.3)

7 Vertical, flat-topped rim
Black throughout; both surfaces smoothed
Fabric 1b (257.4)

8 Body sherd
Dark brown, evenly smoothed exterior; black, evenly smoothed interior
Fabric 3 (257.10)

9 Hemispherical bowl with flaring rim
Dark grey; both surfaces lightly smoothed
Fabric 3 (255.4)

10 Straight-sided vessel
Exterior black, lightly burnished, and covered with carbonised deposits; interior red-brown and evenly smoothed
Fabric 1c (255.5)

11 Hemispherical bowl
Red-brown throughout; both surfaces smoothed
Fabric 1a (260.1)

12 Globular jar
Exterior finger-nail impressed and red-brown to dark grey; interior surface and core black and unfinished
Fabric 3, coarse (261.1)

13 Body sherd
Outer surface red-brown and pinched; inner surface dark grey and scraped smooth
Fabric 3, coarse (261.2)

14 Faceted carinated bowl; extremely well-made
Black throughout; both surfaces, including the facets, burnished
Fabric 3, fine (261.3)

15 Biconical bowl
Brown-red throughout; outer surface weathered, inner surface smoothed
Fabric 1c (262.1)

16 Carinated bowl with a row of A1a stamps above a slashed carination
Light red-brown throughout; weathered surfaces
Unclassified fabric: fine, containing common quartz sand, feldspar, and sparse ?clay pellets (262.2)

17 Grooved neck
Outer surface red-brown and lightly burnished; inner surface smoothed and dark grey
Fabric 1c (263.3)

GH 20

162S 348E (Figs 58, 95)

3.73m×3.15m Site atlas plan 1

Finds, not illustrated

Copper alloy scraps (unnumbered)

Illustrated pottery

1 Body sherd decorated with A4a stamp
Black throughout; smoothed surfaces
Fabric 1b (271.2)

2 Upright pierced lug
Light red-brown, wiped exterior; dark grey, unfinished interior; the join between the lug and the rim clearly visible
Fabric 1b (271.3)

3 Body sherd
Black throughout; exterior scored, interior unfinished
Fabric 3 (275.1)

4 Body sherd
Black throughout; both surfaces smoothed
Fabric 3 (275.2)

- 5 Footring base; footring crudely formed and incompletely smoothed on to the body of the pot
Light brown-red to dark grey; lightly smoothed
Fabric 1b (275.3)
- 6 Rim
Exterior red-brown; interior dark grey; both surfaces smoothed
Fabric 1b (275.4)
- 7 Body sherd with applied boss/lug
Exterior light red-brown and smoothed; interior black and smoothed
Fabric 1b (273.7)
- 8 Globular vessel with folded rim
Exterior red-brown to dark grey and smoothed; interior black and lightly burnished
Fabric 1c (275.6)
- 9 Hemispherical bowl
Light grey exterior, light red-grey interior; both surfaces unfinished
Fabric 3, containing sparse grass temper (275.5)

GH 21 see GH 12/21**GH 22**

120N 320E (Figs 58, 95)
3.48m×3.30m Site atlas plan 3

Illustrated finds

- 1 Copper alloy disc-attachment with suspension loop, late Roman (Bronze 77/AML381)

Not illustrated

Copper alloy sheet, four small fragments (AML365)
Iron knife blade; L 65mm (Iron 114/AML583)
Iron nails, three complete, one shank

Illustrated pottery

- 2 Inturned-rim bowl
Black throughout; both surfaces smoothed
Fabric 1b (281.2)
- 3 Hemispherical bowl
Black throughout; both surfaces smoothed
Fabric 1b (286.2)
- 4 Rim
Dark grey throughout; both surfaces carefully smoothed
Fabric 3 (283.10)
- 5 Rim
Both surfaces red-grey and smoothed; dark grey core
Fabric 3 (283.9)

GH 23/24

50N 420E (Fig 58)
3.30m×2.39m/2.18m×1.85m Site atlas plan 4

GH 23 is recorded as containing several pieces of sawn antler (fallow deer) and abundant signs of burning; the fill also contained substantial quantities of animal bone, but little pottery; an adjacent pit, 10–22in deep, containing large quantities of charcoal, was thought to be a small *Grubenhaus* (GH 24) with a small area of burning on the floor of the hollow

Finds, not illustrated

Iron knife fragment; L 85mm (Iron 117)

GH 25

60N 380E (Figs 58, 95)
2.74m×2.44m Site atlas plan 3

No finds

Illustrated pottery

- 1 Biconical vessel
Black throughout; outer surface burnished, inner surface smoothed
Fabric 2 (303.1)
- 2 Bowl with flat, trimmed rim
Black throughout; both surfaces evenly burnished
Fabric 3 (303.2)

GH 26

145N 325E (Figs 58, 96)
3.73m×3.00m Site atlas plan 3

(Finds published by Evison in Jones *et al* 1969)

Illustrated finds

- 1 Copper alloy buckle plate with the remains of a double projection to fold over the loop and a single iron rivet (AML336)
- 2 Copper alloy tubular-sided belt attachment plate, fragment (AML335)
- 3 Copper alloy strip (Bronze 95/AML402)
- 4 Iron knife fragment (Iron 118/AML245)
- 5 Iron pin (Iron 120/AML564)
- 6 Iron penannular brooch, White class Ca (Iron 119/AML512)

Not illustrated

Iron ?pin fragment; L 59mm
Two iron nails

Illustrated pottery

- 7 Pedestal base, unlocated; described and discussed by Myres in Jones *et al* 1969, fig 3, 421a (unnumbered)
- 8 Applied boss or lug
Black throughout; burnished surfaces
Fabric 1c (307.1)
- 9 Hemispherical bowl
Dark grey throughout; both surfaces smoothed
Fabric 1c (308.7)
- 10 Necked vessel
Exterior brown to dark grey, interior dark grey; both surfaces smoothed
Fabric 1b, densely grass-tempered (308.2)
- 11 Biconical bowl decorated with A2a and K1b stamps
Black throughout; both surfaces burnished to a high lustre
Fabric 3, hard and fine (309.1)
- 12 Globular vessel
Black throughout; unevenly burnished outer surface, smoothed inner surface
Fabric 1c (310.2)
- 13 Rim and body sherds
Dark grey throughout; both surfaces lightly burnished
Fabric 3, fine (308.1a, b)
- 14 Shoulder
Black throughout; both surfaces burnished
Fabric 1c (308.4)
- 15 Faceted carinated bowl
Black throughout; burnished exterior, smoothed interior
Fabric 1c (308.6)
- 16 Shoulder
Black throughout; burnished outer surface, carefully smoothed inner surface
Fabric 4 (310.3)
- 17 Grooved shoulder
Black throughout; both surfaces burnished
Fabric 1c (310.4)

- 18 Rim
Black throughout; evenly burnished surfaces
Fabric 3; light-coloured, curved inclusions, ?calcined bone (311.4)
- 19 Carinated bowl decorated with A2 stamps
Dark grey to black throughout; exterior evenly smoothed, interior carefully burnished
Fabric 1c, exceptionally hard (312.2) (Myres in Jones *et al* 1969, fig 3, 418a)
- 20 Two body sherds
Black throughout; exterior weathered, interior burnished
Fabric 1c (310.5)
- 21 Shoulder with raised, faceted cordon
Black throughout; both surfaces burnished
Fabric 3 (316.1)
- 22 Bowl with everted rim
Black throughout; unevenly burnished outer surface, smoothed inner surface
Fabric unclassified, containing abundant soft, off-white inclusions (316.5)

GH 27

15N 360E (Figs 58, 96)

3.58m x 2.31m Site atlas plan 3

Illustrated finds

- Copper alloy D-sectioned tubular belt fitting (Bronze 16/AML325)
- Bronze (EDXRF) saucer brooch fragment with Style I decoration; failed casting (Bronze 22/AML16)

GH 28

235N 380E (Figs 58, 97)

3.51m x 2.90m Site atlas plan 3

Finds, not illustrated

Two iron nails

Illustrated pottery

- Hemispherical bowl with flat-topped, trimmed rim
Exterior red-brown, interior black; both surfaces smoothed
Fabric 3 (318.1)
- Grooved body sherd
Exterior red-brown, interior black; both surfaces smoothed
Fabric 3 (319.1)
- Body sherd
Both surfaces black and lightly smoothed; exterior finger-nail impressed
Fabric 2 (320.2)
- Body sherd decorated with C1a stamps
Grey throughout; weathered surfaces
Fabric 4 (327./1)
- Complete straight-sided bowl with flat-angled base
Red-grey throughout; both surfaces smoothed
Fabric 1a (328.1)

GH 29

250N 390E (Figs 58, 97)

3.25m x 3.35m Site atlas plan 3

Finds, not illustrated

Lead fragment; 6g (unnumbered)

Iron spike; L 88mm (Iron 133)

Four iron nails

Illustrated pottery

- Grooved shoulder, probably from a carinated bowl
Light red-brown exterior, black interior; both surfaces burnished
Fabric 1c (340.1)

- Rim
Dark grey, smoothed surfaces; red-grey core
Unclassified fabric: coarse, containing abundant quartz sand and common haematite (332.2)
- Body sherd
Exterior red-grey, wiped and pinched; interior dark grey and smoothed
Fabric 1b (344.2)
- Two cross-joining body sherds decorated with D2a and G2a stamps; 4a comes from GH 43 (637.1)
Red-grey, lightly burnished surfaces; black core
Fabric 3, hard (334.10)
- Shoulder with shallow and crudely formed grooves
Light red-brown throughout; exterior smoothed, interior wiped
Fabric 1b (336.1)
- Carinated bowl; a strip of clay applied to the inside of the carination is visible in section
Black throughout; both surfaces smoothed
Fabric 3 (338.1)
- Carinated bowl with diagonal 'facets' on the carination
Black throughout; both surfaces burnished
Fabric 1a (335.4)
- Body sherd
Red-grey throughout; exterior combed, interior smoothed
Fabric 1a (343.1)
- Hemispherical bowl
Brown to black throughout; both surfaces lightly wiped smooth
Fabric 3 (344.3)
- Splay-sided bowl
Black throughout; both surfaces smoothed
Fabric 3 (341.10)

GH 30

235N 390E (Figs 58, 97)

3.45m x 2.74m Site atlas plan 3

Illustrated finds

- Fired clay spindlewhorl, Type 2a; decorated with shallow grooves on one surface; grass-tempered fabric, with dark brown to black surfaces, lightly burnished (SPW 88)

Not illustrated

Copper alloy La Tène III brooch (AML502)

Iron pin, two fragments; L 55mm, 32mm (Iron 134&148/AML605)

Iron strip, unlocated (Iron 143)

Iron ?spike, badly corroded; L 95mm (Iron 139/AML548)

Iron nails, seven complete and c three fragmentary

Illustrated pottery

- Rim
Light red-grey; both surfaces smoothed
Fabric 1b (347.1)
- Shoulder with raised, faceted cordon
Dark grey throughout; both surfaces evenly burnished
Fabric 4 (354.1)
- Body sherd decorated with K1c stamps (snail shell impressions)
Black throughout; exterior smoothed, interior abraded
Fabric 1c (357.1)

GH 31

220N 375E (Figs 58, 98)

3.45m x 2.74m Site atlas plan 3

Finds, not illustrated

Copper alloy coin, Roman: PIETAS ROMANA (R), FL MAX THEODORAE AUG (O), AD 337-41 (Coin 12)

c nine iron nails, fragmentary

Illustrated pottery

- 1 Carinated bowl
Black to dark brown; both surfaces burnished
Fabric 1c (369.1)
- 2 Rim, flat-topped and knife-trimmed
Black throughout; burnished exterior and smoothed interior
Fabric 1c (375.2)
- 3 Body sherd
Dark grey throughout; both surfaces evenly smoothed
Fabric 1c, containing common well-sorted quartz sand (377.1)
- 4 ?Hemispherical bowl
Black throughout; both surfaces carefully smoothed
Fabric 1a (383.1)
- 5 Cooking plate
One surface light red-brown with finger-tip impressions; the other surface blackened and smoothed, and covered with a thick, carbonised deposit
Fabric 2, densely grass-tempered (382.2)

GH 32

180N 335E (Figs 58, 98)
3.96m x 3.10m Site atlas plan 3

Illustrated finds

- 1 Iron pin with spherical head (Iron 160/AML691101)
- 2 Iron hook (Iron 159/AML729292)

Not illustrated

Lead fragment, melted; 91g (unnumbered)
Fired clay spindlewhorl fragment, Type 3a; grass-tempered fabric, light brown to grey surfaces with a dark grey core (SPW 7)
Two iron nails

Illustrated pottery

- 3 Carinated bowl with diagonal slashes on the carination
Black throughout; both surfaces burnished
Fabric 4 (388.5)
- 4 Straight-sided ovoid, crudely formed
Light red-grey, smoothed surfaces; dark grey core
Fabric 1b (389.4)
- 5 Hemispherical bowl
Black throughout; both surfaces smoothed
Fabric 1c (389.8)
- 6 ?Shouldered vessel
Red-brown, smoothed surfaces; grey core
Fabric 1b (389.9)
- 7 Applied, pierced lug
Light brown to grey; both surfaces smoothed
Fabric 1b (390.2)
- 8 Globular vessel, rather crudely formed
Dark grey throughout; both surfaces smoothed
Fabric 2
- 9 Grooved shoulder
Grey throughout; burnished exterior, carefully smoothed interior
Fabric 4 (394.2)
- 10 Splay-sided bowl or dish
Grey throughout; burnished exterior, well-smoothed interior
Fabric 4 (394.3)
- 11 Splay-sided bowl
Black throughout; both surfaces smoothed, with external carbonised deposits
Fabric 1b (401.1)
- 12 ?Inturned-rim bowl
Dark grey throughout; both surfaces smoothed
Fabric 1a (403.1)

- 13 Shoulder, decorated with D1a stamps
Black throughout; both surfaces evenly burnished
Fabric 1c (404.2)

GH 33

236N 319E (Figs 58, 99)
3.15m x 2.99m Site atlas plan 3

Illustrated finds

- 1 Copper alloy sheet, folded (Bronze 66113/AML504)
- 2 Bone pin tip with transverse grooves (Bone 20)
- 3 Spindlewhorl, Type 1; Roman grey ware, with slightly splayed perforation (SPW 8)
- 4 Iron bar with tang or handle, broken at wider end; possible sharpening steel (Iron 162/AML513)

Not illustrated

Copper alloy sheet, curved fragment, possible binding (Bronze 116/AML507)
Antler tine (red deer), sawn and polished (Bone 9)
Lead fragment, melted; 325g (AML715322)
Iron sheet fragment, perforated; L 48mm (Iron 164/AML729783)
Iron pin or needle fragment; L 60mm (Iron 171/AML729784)
Iron nails, four complete and c four fragmentary

Illustrated pottery

- 5 Faceted carinated bowl
Black throughout; both surfaces evenly burnished
Fabric 1c (408.9)
- 6 411.1 Globular vessel
Red-grey exterior, black interior; both surfaces carefully smoothed
Fabric 1b (411.1)
- 7 Straight-sided bowl
Black, burnished exterior, dark grey, smoothed interior
Fabric 1b (412.1)
- 8 Body sherd; from the same vessel as GH 73.1 and GH 48.4
Black exterior, wiped with a coarse fibre, then lightly and randomly grooved; interior dark red-grey and smoothed
Fabric 1b (413.2)
- 9 Body sherd
Exterior red-brown with regular, vertical combing; interior black and burnished; core light grey
Fabric 1a (413.3)
- 10 Body sherd
Black, burnished exterior with finger-nail impressions; red-brown, smoothed interior
Fabric 3, coarse (415.1)
- 11 Body sherd
Black, pinched exterior; red-brown, smoothed interior
Fabric 3, coarse (415.2)
- 12 Lid
Black throughout; burnished exterior, smoothed interior
Fabric 1c, hard (417.3)
- 13 Faceted carinated bowl; facets impressed rather than sliced
Black throughout; burnished exterior, smoothed interior
Fabric 3 (417.4)
- 14 Globular jar
Dark red-grey smoothed surfaces; black core
Fabric 3, coarse (418.1)
- 15 Hollow pedestal base, similar to GH 57.21
Black throughout; lightly burnished exterior, carefully smoothed interior
Fabric 1c, containing common well-sorted quartz sand (420.3)

- 16 Globular jar
Black, evenly burnished exterior; red-brown, lightly burnished interior
Fabric 1b (421.1)
- 17 Bowl
Light brown throughout; both surfaces highly burnished
Fabric 3 (424.1)
- 18 Rim and shoulder
Dark brown throughout; both surfaces burnished
Fabric 3, fine (425.2)
- 19 Carinated pot
Black throughout; both surfaces burnished, although exterior surface is heavily abraded
Fabric 1c (426.1)
- 20 Faceted carinated bowl
Black throughout; both surfaces burnished
Fabric 3 (427.2)
- 21 Flat-angled base with grooved cross under base
Black throughout; both surfaces wiped smooth
Fabric 4 (432.1)
- 22 Biconical bowl with flat-topped rim
Black throughout; both surfaces smoothed, although the exterior has been deliberately roughened below the shoulder
Fabric 3 (435.1)
- GH 34**
234N 280E (Figs 58, 100)
3.35m x 3.20m Site atlas plan 3
- Finds, not illustrated*
Copper alloy rivet, unlocated (Iron 174)
Copper alloy sheet fragment, c 11mm square (Bronze 110/AML501)
Green glass mould blown bottle, basal fragment, Roman (Glass 50)
Two iron nails
- Illustrated pottery*
- Shoulder, grooved with double-pointed tool
Black throughout; both surfaces burnished
Fabric 3 (437.1)
 - Body sherd with 7-finger-tip impression
Dark grey throughout; smoothed exterior surface, burnished interior
Fabric 1c (438.1)
 - Shoulder with wide, shallow grooves
Light brown, smoothed exterior, dark grey smoothed interior
Fabric 1c, with abundant coarse quartzite grains and common mica (438.2)
 - Body sherd
Black throughout; exterior smoothed then finger-tip impressed, interior smoothed
Fabric 3, with moderate mica (438.3)
 - Inturned rim decorated with A1 stamp
Black throughout; exterior seems to have been pressed against a smooth, flat surface; interior smoothed
Fabric 3 (440.1)
 - Carinated bowl; same vessel as GH 35.20
Dark grey throughout; weathered surfaces, pitted where calcareous inclusions have leached out
Fabric 5 (440.2)
 - Faceted carinated bowl
Black throughout; both surfaces burnished to a high lustre; facets slightly abraded
Fabric 1c (440.4)
 - Pierced applied lug
Red-brown, smoothed exterior, black, smoothed interior
Fabric 1b, densely grass-tempered (441.1)
 - Body sherd; may be from the same vessel as 13
Exterior dark red-grey, with clay pinched up to form vertical ribs; interior black and evenly burnished
Fabric 1a (441.2)
 - Hemispherical bowl
Dark grey to dark red-grey throughout; both surfaces unevenly burnished
Fabric 3, coarse, containing common mica (441.4)
 - Bowl, with a slightly flaring rim
Grey throughout; both surfaces smoothed
Fabric 1c containing moderate mica and sparse large (6.0mm) subrounded flint (443.3)
 - Globular bowl
Dark grey throughout; both surfaces evenly burnished
Fabric 1c (444.1)
 - Body sherd; may be from same vessel as 9
Outer surface red-grey, pinched up to form vertical ribs; interior black and evenly burnished, with traces of carbonised deposits
Fabric 1a (445.1)
 - Body sherd with faceted cordon
Brown-red throughout; unevenly burnished exterior, smoothed interior
Fabric 2, lightly grass-tempered (446.1)
 - Body sherd
Dark grey throughout; exterior surface burnished, interior heavily abraded
Fabric 1c (449.1)
 - Body sherd
Black throughout; combed exterior, smoothed interior
Fabric unclassified: 1a matrix containing abundant fine quartz sand (452.1)
 - Globular vessel; very similar in fabric and finish to GH 19.3, although not from the same vessel
Exterior dark red-grey to light red-grey and burnished; interior grey and smoothed
Fabric 1c (496.1)
- GH 35**
228N 283E (Figs 58, 101)
3.78m x 2.74 Site atlas plan 3
- Illustrated finds*
- Copper alloy binding (Bronze 132/AML710)
 - Translucent glass disc bead, dark blue (Glass 126)
 - Fired clay spindlewhorl fragment, Type 2a; grass-tempered fabric, red-brown to dark grey surfaces, lightly and evenly burnished (SPW 9)
- Not illustrated*
Copper alloy strip, curved, 7-binding; L 20mm (Bronze 101/AML492)
Lead fragment, melted; 34g (Lead 117)
Iron strip; L 43mm (Iron 178)
Iron fragment, hooked; L 45mm (Iron 175/AML729791)
Two iron nails
- Illustrated pottery*
- Straight-sided ovoid
Black throughout; burnished exterior, smoothed interior
Fabric 2 (455.1)
 - Hemispherical bowl
Red-grey throughout; unevenly smoothed surfaces
Fabric 2 (456.1)
 - Shoulder
Black throughout; burnished exterior, smoothed interior
Fabric 3 (457.3)

- 7 Globular jar
Black throughout; burnished exterior, smoothed interior
Fabric 2 (463.1)
- 8 Shoulder
Black throughout; both surfaces burnished
Fabric 3, fine (463.3)
- 9 Rim
Black throughout; both surfaces burnished
Fabric 1a (468.1)
- 10 Body sherd with applied, pierced lug
Black throughout; lightly burnished exterior, unfinished interior
Fabric 2 (471.1)
- 11 Carinated bowl with small oval impressions just above the carination
Black throughout; both surfaces burnished
Fabric 3, very fine (471.2)
- 12 Shoulder
Black throughout; lightly burnished surfaces
Fabric 3 (473.6)
- 13 Biconical bowl
Light brown exterior, black interior surfaces, both burnished
Fabric 1b (481.1)
- 14 Shoulder
Black throughout; both surfaces burnished, with burnish lines clearly visible
Fabric 1c, containing a plate (4.0mm) of an unidentified hard, iridescent mineral, with a fine, crystalline structure (481.2)
- 15 Carinated bowl
Light red-brown burnished exterior, grey smoothed interior
Fabric 1c (481.3)
- 16 Biconical bowl
Black throughout; lightly burnished and grooved exterior, unevenly burnished interior
Fabric 1c (482.1)
- 17 Body sherd
Red-grey exterior surface, grey interior; both surfaces burnished
Fabric 1c (484.1)
- 18 Shoulder
Exterior black and burnished; interior dark grey and smoothed
Fabric 1b (485.1)
- 19 Shoulder
Red-grey burnished exterior, grey, smoothed interior
Fabric 1c (487.2)
- 20 Biconical bowl, with a shallow horizontal groove above the carination; same vessel as GH 34.6
Dark grey, weathered surfaces, pitted where calcareous inclusions have leached out
Fabric 5 (487.6)
- 21 Straight-sided bowl
Black throughout; both surfaces smoothed
Fabric 2 (490.3)
- 22 Faceted carinated bowl
Very dark brown to black; both surfaces burnished
Fabric 3, very fine (491.1)
- 20 Shoulder from a biconical vessel
Black throughout; both surfaces burnished
Fabric 1c (497.1)

GH 36

195N 280E (Figs 58, 102)
3.35m×3.30m Site atlas plan 3

Illustrated finds

- 1 Copper alloy sheet, rolled; ferrule (AML500)

- 2 Opaque glass disc bead, green (Glass 124)
- 3 Fired clay spindlewhorl, Type 2b; lightly grass-tempered fabric, dark brown to black burnished surfaces, and red-brown external margin (SPW 10)
- 4 Fired clay spindlewhorl, Type 2b; grass-tempered fabric, red-brown to dark grey, with lightly burnished surfaces (SPW 11)

Not illustrated

Copper alloy ligula, Roman (Bronze 106/AML497)

Glass vessel, blue-green folded rim, first/second century (Glass 265)

Lead strip; 20mm×7mm (AML705150)

Iron nails, three complete, and nail fragments

Illustrated pottery

- 5 Faceted carinated bowl
Dark grey throughout; both surfaces lightly burnished
Fabric 3, fine (504.1)
- 6 Globular bowl
Black on the body to light brown near rim; both surfaces evenly burnished
Fabric 3, fine (508.1)
- 7 Body sherd
Exterior light red-brown and combed, interior grey and smoothed
Fabric 5 (509.7)
- 8 Hemispherical bowl with flat-angled base, nearly complete
Light red-grey throughout; both surfaces smoothed
Fabric 1b, containing abundant grass temper and moderate haematite (512.1)
- 9a, b, c Three body sherds, exterior scored and grooved
Black throughout; both surfaces smoothed
Fabric 3 (510.1, 512.5)
- 10 Rim
Black throughout; both surfaces smoothed; lip of rim burnished
Fabric 3 (519.1)
- 11 Ridged shoulder
Exterior black, lightly smoothed; interior grey and evenly smoothed
Fabric 3 (516.1)

GH 37

180N 285E (Figs 58, 102)
4.57m×3.35m Site atlas plan 3

Finds, not illustrated

Iron object, corroded (Iron 185)

Iron pin, two fragments; total length c 18mm (Iron 186/729293)

Iron knife, badly corroded; L 98mm (Iron 187/AML691102)

Illustrated pottery

- 1 Shoulder
Grey throughout; both surfaces smoothed
Fabric 1c (527.3)
- 2 Shoulder
Grey throughout; both surfaces unevenly burnished
Fabric 1b (530.2)
- 3 Splay-sided dish
Red-grey throughout; both surfaces carefully smoothed
Fabric 3 (531.1)
- 4 Rim
Black throughout; both surfaces smoothed
Fabric 1b (533.1)
- 5 Faceted carinated bowl
Light red-brown, smoothed exterior, dark grey, smoothed interior
Fabric 1a (532.2)

GH 38

205N 465E (Figs 59, 103)
3.58m×3.43m Site atlas plan 7

Illustrated finds

- 1 Iron knife, tip broken (Iron 195/AML690841)

Not illustrated

- Vessel glass fragment, green, Roman (Glass 49)
 Vessel glass fragment, green ribbed, ?Roman (Glass 125)
 Two lead fragments; 13g, 8g (AML705123, 705124)
 Iron pin fragment, bent; L 14mm (Iron 192)
 Iron nails, six fragmentary

Illustrated pottery

- 2 Shoulder
 Dark grey, burnished surfaces; red-grey core
 Fabric 3, fine (536.2)
- 3 Shoulder, decorated with N1(?) stamps or comb-point impressions
 Black throughout; exterior burnished, interior flaking but was probably burnished
 Fabric 1b (539.2)
- 4 Beaker
 Light red-brown throughout; both surfaces smoothed
 Fabric 1a (538.1)
- 5 Two body sherds and one basal sherd from a roughly globular vessel
 Light red-brown to dark grey, pinched exterior; black, evenly smoothed interior
 Fabric 1b (539.9)
- 6 Rim
 Red-grey, evenly burnished exterior; dark grey, burnished interior
 Fabric 1a (540.1)
- 7 Body sherd, probably from the same vessel as 9
 Black throughout; lightly burnished exterior, smoothed interior
 Fabric 4, relatively soft (540.4)
- 8 Splay-sided bowl
 Black, smoothed exterior; red-grey, lightly burnished interior
 Fabric 3, fine (542.2)
- 9 Shoulder; probably from the same vessel as 7
 Black throughout; lightly burnished exterior, smoothed interior
 Fabric 4, relatively soft (542.3)
- 10 Hemispherical bowl
 Dark grey to dark brown throughout; lightly, unevenly burnished surfaces
 Fabric 1b (543.1)
- 11 Rim
 Dark grey throughout, with red external margin; both surfaces smoothed
 Fabric 1b, lightly grass-tempered (543.3)
- 12 Rim
 Light red-brown, smoothed exterior; black, burnished interior, lightly scored near the rim
 Fabric 1a (545.1)
- 13 Cooking plate
 Light red-brown, pinched upper surface; dark grey core; light red-brown, smoothed underside with dark brown patches indicating secondary burning
 Fabric 1b (546.1)
- 14 Splayed base
 Dark grey throughout; lightly burnished exterior, smoothed interior
 Fabric 3, fine (546.2)
- 15 Small globular jar, complete; probably produced by pinching up from a single ball of clay
 Red-grey throughout; both surfaces smoothed
 Fabric 1c (548.1)

- 16 Flat-angled base
 Exterior light red-brown, evenly smoothed, and lightly grooved or scored; interior black and burnished
 Fabric 1c (549.1)

GH 39

280N 480E (Figs 59, 103)
 4.42m x 3.45m Site atlas plan 7

Illustrated finds

- 1 Iron chisel blade fragment with parallel-sided blade; although blade edge appears to have been sharpened on both sides, the chamfer is most pronounced on one side only; broken across shank; tang missing (Iron 196)

Not illustrated

Colourless moulded window glass fragment, matt/glossy, first/second century (Glass 268)
 Lead fragment, melted; 45g (AML705125)
 Iron pin, broken; L 52mm (Iron 197/AML691103)

Illustrated pottery

- 2 Body sherd
 Black throughout; both surfaces burnished
 Fabric 1a (561.2)
- 3 Body sherd, decorated with ?G2 stamp
 Black throughout; exterior smoothed, interior burnished
 Fabric 1c (562.1)
- 4 Rim sherd
 Very dark brown to black throughout; both surfaces evenly burnished
 Fabric 1c (563.1)
- 5 Hemispherical bowl, crudely finished
 Light red-brown to grey smoothed exterior; grey smoothed interior
 Fabric 2 (564.1)

GH 40

296N 474E (Figs 59, 104)
 3.60m x 3.20m Site atlas plan 7

Illustrated finds

- 1 Opaque glass disc bead, yellow with green trail (Glass 8/AML792)
- 2 Iron tool fragment, or hollow casing from a larger iron object; possible spade shoe (Iron 202/AML690874)

Not illustrated

Copper alloy strip, curved and broken at both ends; L 34mm (Bronze 133/AML711)
 Copper alloy pin, broken; L 38mm (Bronze 134/AML712)
 Moulded glass bottle fragment, blue-green, first/second century (Glass 65)
 Lead ring, unlocated (Lead 62)
 Lead fragment; 12g (AML705127)
 Lead fragment; 4g (AML705128)
 Iron strip; L 63mm (Iron 203/AML690875)
 Seven iron nails

Illustrated pottery

- 3 Splayed base
 Light red-brown exterior, dark grey interior; both surfaces smoothed
 Fabric 1b (586.1)
- 4 Grooved body sherd
 Dark red-grey throughout; both surfaces smoothed
 Fabric 3, fine (571.2)
- 5 Grooved shoulder
 Dark grey throughout; both surfaces smoothed
 Fabric 3, fine, containing common flecks of mica (579.1)

- 6 Rim, unlocated; recorded as an unusual fabric and burnished on both surfaces (577.1)
- 7 Body sherd
Exterior light red-brown with finger-tip impressions; interior black and smoothed
Fabric 1b, containing common quartz sand (583.3)
- 8 Body sherd
Dark grey exterior, with traces of burnishing; grey-brown smoothed interior; dark grey core
Fabric 7, containing moderate finely crushed shell and sparse haematite (585.4)
- 9 Hemispherical bowl
Light red-brown throughout; both surfaces smoothed
Fabric 1c (586.2)
- 10 Grooved shoulder
Black throughout; both surfaces evenly burnished
Fabric 1c (590.1)

GH 41

310N 489E (Figs 59, 104)
3.56m×3.50m Site atlas plan 7

Illustrated finds

- 1 Lead ingot (Lead 65/AML705129)

Illustrated pottery

- 2 Carination of a ?biconical bowl
Red-grey throughout; both surfaces smoothed
Fabric 1c (602.2)
- 3 Rim, two sherds
Black throughout; unevenly burnished exterior, smoothed interior; very similar in form and finish to 4, although not from the same vessel
Fabric 1b, containing common quartz sand (613.1)
- 4 Biconical jar
Dark brown to black throughout; exterior unevenly wiped and burnished; interior smoothed, with carbonised deposits
Fabric 1b, containing common quartz sand, moderate flint, and feldspar (614.1)
- 5 Small, globular vessel
Red-grey throughout; both surfaces smoothed
Fabric 3 (616.3)
- 6 Two body sherds
Exterior red-brown, smoothed to the shoulder, then lightly and randomly pinched; interior dark grey and smoothed
Fabric 2 (614.2)
- 7 Rim
Black throughout; both surfaces smoothed, although the exterior surface has largely flaked away
Fabric 3, fine (614.3)
- 8 Splay-sided bowl
Red-brown, smoothed exterior, black, unevenly burnished interior
Fabric 2 (615.1)
- 9 Inturned-rim bowl
Black throughout; evenly burnished exterior, interior scraped smooth, then unevenly burnished
Fabric 3, fine (616.1)
- 10 Handle with traces of grooving on body; from same handled vessel as Fig 184.2, from kiln ditch
Black throughout; evenly smoothed
Fabric 3, fine (617.1)

GH 42

725N 115E (Figs 59, 105, 106)
5.00m×3.71m Site atlas plan 6

Illustrated finds

- 1 Leaded gunmetal pin (EDXRF) with a round, flattened head, inlaid on both sides with a slab garnet over hatched gold foil (Bronze 206/AML806)
- 2 Copper 'safety pin' brooch (EDXRF) (Bronze 131/AML662)
- 3 Copper alloy pin with a spherical head, broken (Bronze 135/AML713)
- 4 Small iron knife, tip broken (Iron 214/AML691083)
- 5 Iron pin, broken; X-radiograph suggests a looped head (Iron 209/AML691087)

Not illustrated

Glass flask fragment, blue-green ribbed, second century (Glass 95)
Iron sheet, three fragments (Iron 221/AML729295,691085,729838)
Iron strip; L 60mm (Iron 219/AML729296)
Iron sheet fragment; L 53mm (AML691089)
Four iron nails, fragmentary

Illustrated pottery

- 6 Large, baggy globular bowl, with short, flaring neck; nearly complete, though highly fragmented
Black exterior with oxidised patches, smoothed then unevenly burnished; interior dark grey, wiped smooth with fingers
Unclassified fabric: fine matrix containing common seeds, including 15 carbonised seeds identified by M van der Veen as consisting primarily of wheat (655.1)
- 7 ?Straight-sided ovoid
Very dark brown to dark grey, burnished exterior; black, smoothed interior, with patchy carbonised deposits
Fabric 2 (661.3)
- 8 Globular vessel (profile reconstructed)
Very dark red-grey throughout; exterior surface evenly burnished but heavily abraded, interior carefully smoothed
Fabric 2 (658.1)
- 9 Neckless globular pot
Red-grey, unevenly burnished exterior; dark grey interior, wiped smooth with fingers
Fabric 1b, with common quartz sand (655.3)
- 10 Globular jar; over 50% complete
Red-grey, smoothed exterior; black, smoothed interior
Fabric 2 (655.4)
- 11 Inturned-rim bowl
Dark brown to black, burnished exterior; very dark brown, lightly burnished interior
Fabric 2, fine (661.2)
- 12 Globular jar with flat-topped rim; over 50% complete
Light red-grey to grey exterior, carefully smoothed; red-grey interior, smoothed then unevenly burnished; black core
Fabric 1b (655.2)
- 13 Hemispherical bowl with flaring rim, unlocated; orientation uncertain; recorded as smoothed on both surfaces and grass-tempered (655.5)
- 14 Perforated bowl with a flattened rim; perforated from the outside
Brown-red throughout; smoothed exterior, unfinished interior
Fabric 3, containing sparse grass temper (666.1)
- 15 Splay-sided bowl
Red-grey; lightly burnished exterior, smoothed interior
Fabric 1b (656.2)
- 16 ?Globular vessel
Very dark brown throughout; burnished exterior, smoothed interior
Fabric 2 (661.1)

- 17 Hemispherical bowl on a splayed or solid pedestal base
Dark red-grey to black, smoothed exterior; dark grey, burnished interior
Fabric 3, fine, containing sparse grass temper (661.4)
- 18 ?Straight-sided ovoid
Light brown throughout; both surfaces smoothed
Fabric 1b (661.5)
- 19 Splayed base, carefully formed
Red-brown throughout; both surfaces smoothed
Fabric 3 (662.3)

GH 43

250N 405E (Figs 59, 106)

3.96m×2.85m Site atlas plan 7

Illustrated finds

- 1 Copper alloy tweezers, ?Roman (Bronze 136/AML714)
- 2 Shale spindlewhorl, turned (Shale 5/AML805)

Not illustrated

Corroded copper alloy object; diam c 20mm (AML716)

Copper alloy pin fragment; L 15mm (AML717)

Lead strip; L 35mm (Lead 66/AML705130)

Two lead fragments, melted; 8g, 13g (Lead 67, 68/AML705131, 705132)

Four iron plate fragments; c 3mm thick; L 30mm, 31mm, 32mm, 35mm (Iron 222 and 223)

Two iron nails, and nail fragments

Illustrated pottery

- 3 Faceted carinated bowl; facets very lightly impressed
Dark grey, weathered exterior with traces of burnishing; grey, smoothed interior
Fabric 1a (625.2)
- 4 Small globular bowl
Very dark brown to black, burnished exterior; black, burnished interior
Fabric 3 (626.5)
- 5 Globular vessel
Very dark brown to dark grey exterior, black interior; both surfaces lightly burnished
Fabric 3 (627.1)
- 6 Body sherd
Light brown-grey, combed exterior; grey, smoothed interior
Fabric 1a (629.1)
- 7 Carinated bowl
Dark brown to dark grey, burnished exterior; dark grey, unevenly smoothed interior
Fabric 3, fine (630.1)
- 8 Hemispherical bowl
Dark grey throughout; crudely finished surfaces
Fabric 2 (630.4)
- 9 Grooved body sherd
Black throughout; both surfaces burnished
Fabric 1a (625.1)
- 10 Splay-sided dish
Very dark brown, lightly burnished exterior; black, highly burnished interior
Fabric 1c (632.2)
- 11 Faceted carinated bowl, with sliced facets beneath a faint horizontal groove
Black throughout; both surfaces burnished
Fabric 3, containing sparse white mica (633.2)
- 12 Rim
Black throughout; burnished exterior, smoothed interior
Fabric 3 (623.1)

- 13 Globular bowl; approximately 50% complete
Dark grey throughout with red-brown margin; both surfaces smoothed
Fabric 2 (633.1)

GH 44

770N 90E (Figs 59, 107)

6.40m×4.72 Site atlas plan 6 (unlabelled)

Illustrated finds

- 1 Fired clay annular loomweight, stabbed; sandy, oxidised fabric (FC2150A)

Illustrated pottery

- 2 Body sherd, perforated from the outside
Brown-red throughout; unfinished, weathered surfaces
Fabric 1c (641.1)
- 3 Straight-sided bowl
Dark grey throughout; both surfaces unevenly smoothed
Fabric 2 (641.2)
- 4 Rim
Dark grey throughout; light, both surfaces evenly burnished
Fabric 1b (642.1)
- 5 Rim and shoulder
Brown, smoothed, flaking surfaces; black core
Fabric 1b, densely grass-tempered (642.2)
- 6 Body sherd
Black, evenly burnished exterior; interior black and flaking
Fabric 1b (642.3)
- 7 Hemispherical bowl
Light brown to very dark brown crudely finished, flaking exterior; black smoothed interior, with carbonised deposits
Fabric 2 (642.5)

GH 45

755N 110E (Figs 59, 107)

4.27m×3.66m Site atlas plan 6

Illustrated finds

- 1 Iron hook (Iron 235)

Not illustrated

Iron knife, fragment; L 52mm (Iron 231/AML729302)

Four iron nails, fragmentary

Illustrated pottery

- 2 Shouldered vessel
Dark brown exterior with red margin; brown-grey interior; black core; both surfaces smoothed
Fabric 2, densely grass-tempered (644.6)
- 3 Dish or lid; rim internally thickened
Light red-brown surfaces; dark grey core; smoothed, weathered surfaces
Fabric 1a (645.1)
- 4 Rounded base or shoulder
Outer surface black and lightly combed, then burnished; interior black and burnished
Fabric 1b, densely grass-tempered (646.1)
- 5 Rim
Outer surface brown and lightly burnished, with moderate seed impressions; interior black and smoothed
Fabric 1b (650.1)
- 6 Straight-sided bowl, perhaps from the same vessel as 5
Outer surface brown, with moderate seed impressions, and lightly burnished; interior black and smoothed; flaking of the exterior surface reveals that the organic temper is horizontally aligned, perhaps indicating that the bowl was coil-built
Fabric 1b (651.4)

GH 46

525N 250E (Figs 59, 108)
4.93m×4.57m Site atlas plan 6

Illustrated finds

- 1 Perforated lead disc (AML705126)

Not illustrated

Iron pin; L 60mm (Iron 236/AML729303)
Three iron nails, fragmentary

Illustrated pottery

- 2 Body sherd, unlocated; recorded as having seed and possible textile impressions; sandy fabric (668.1)
- 3 Flat-topped rim
Light red-grey exterior; red grey interior; surfaces smoothed
Fabric 3 (677.2)
- 4 Shoulder
Black, unevenly burnished exterior; brown, smoothed interior
Fabric 2 (676.2)
- 5 Rim from a carefully made, hollow-necked vessel
Dark grey throughout; carefully smoothed surfaces
Fabric 1b (680.1)
- 6 Grooved shoulder
Red-grey throughout; smoothed, but weathered surfaces
Fabric 1a (680.2)

GH 47/53

280N 405E (Figs 59, 108, 109)
Dimensions uncertain Site atlas plan 7

Illustrated finds

- 1 Antler comb (Bone 1)
- 2 Bone cylinder, cut from the shaft of an ox, deer, or horse long bone; one edge rounded off and slightly polished or worn (Bone 14)
- 3 Lead strip, cut and folded (Lead 121)
- 4 Lead sheet with cut edge (Lead 120)

Not illustrated

Roman copper alloy coin; VICTORIAE DD AVGG QNN, Constantius II, AD 341–8, in good condition (Coin 60)
Lead strip with cut edge; 9g (Lead 69/AML705133)
Lead fragments, five, melted; 168g (Lead 70–73, 119)
Lead fragment; 24g (Lead 118)
Iron strip; L 69mm (AML691105)
Iron nails, six fragmentary

Illustrated pottery

- 5 Splayed base
Light red-brown, smoothed surfaces; black core
Fabric 1b (681.2)
- 6 Body sherd
Light red-brown, combed exterior; dark red-grey smoothed interior
Fabric 1c (682.1)
- 7 Body sherd decorated with A4a stamp; from the same vessel as GH 212.3
Black throughout; burnished exterior, smoothed interior
Fabric 1c (686.1)
- 8 Sub-biconical bowl
Dark red-grey throughout; a carefully smoothed exterior, weathered interior
Fabric 4, soft (687.6)
- 9 Low bulbous pot
Black throughout; both surfaces unevenly smoothed
Fabric 2 (688.3)

- 10 Shoulder; the raised cordon bears traces of faceting
Black throughout; exterior abraded but with traces of burnishing; interior lightly and evenly burnished
Fabric unclassified: 1a matrix containing abundant well-sorted fine quartz sand (cf 13) (693.8)
- 11 Small globular bowl
Dark grey throughout; both surfaces smoothed
Fabric 4 (694.7)
- 12 Biconical bowl
Exterior red-brown and smoothed below the carination, dark grey and burnished above; interior black and burnished
Fabric 3 (697.2)
- 13 Hemispherical bowl; approximately 50% complete
Outer surface brown on the body, black under the base, and scraped then lightly burnished; interior dark grey to black, smoothed, and covered by a shiny black carbonised deposit
Fabric unclassified: 1a matrix containing abundant well-sorted fine quartz sand (cf 10) (703.1)
- 14 Carinated bowl
Dark grey throughout; smoothed surfaces
Fabric 3 (707.3)
- 15 Body sherd
Black throughout; unevenly burnished surfaces
Fabric 1c (706.1)
- 16 Biconical vessel with two very shallow grooves
Red-grey exterior, black interior; both surfaces burnished
Fabric 2 (706.2)
- 17 Biconical vessel
Red-brown to black, evenly burnished exterior; dark grey, smoothed, and scratched interior
Fabric 3, containing sparse haematite (706.4)
- 18 Splay-sided dish
Red-grey to grey, smoothed exterior; black, smoothed interior with carbonised deposits
Fabric 1c (708.2)
- 19 Globular bowl
Black, unevenly burnished exterior with carbonised deposits; grey-brown to black interior, wiped smooth
Fabric 1c (708.1)
- 20 Body sherd
Light brown, pinched exterior; black smoothed interior; black core
Fabric 3, hard (711.4)
- 21 Body sherd
Black throughout; lightly, evenly burnished surfaces
Fabric unclassified: 1a matrix containing abundant well-sorted fine quartz sand (cf 10) (722.3)
- 22 Hemispherical bowl
Surfaces black and lightly burnished; core red-grey
Fabric 3; relatively fine matrix containing common large quartzite grits (717.2)
- 23 Carinated bowl; clay luting applied to the inside of the carination
Exterior black and lightly burnished above the carination, grey-brown and smoothed below; interior black and burnished; core dark red-grey
Fabric 1c, hard (720.4)
- 24 Globular bowl; irregular groove probably unintentional
Black throughout; smoothed surfaces
Fabric 1b (723.2)
- 25 Shoulder
Black throughout; both surfaces burnished
Fabric 3, hard (694.1)
- 26 Shoulder
Brown-grey, evenly smoothed surfaces; dark grey core
Fabric 4, hard (723.5)

- 27 Carination, decorated with A5f stamp
Black throughout; lightly, evenly burnished surfaces
Fabric 3, hard (723.7)
- 28 Inturned-rim bowl
Grey-brown exterior, black interior; both surfaces smoothed; black core
Fabric 3 (723.8)
- 29 Jar with an unevenly formed rim
Red-grey to black throughout; smoothed exterior, scraped interior
Fabric 2 (721.1)
- 30 Rim
Black, burnished surfaces with brown-red margins
Fabric 1b (727.1)

GH 48

280N 405E (Figs 59, 109)
Dimensions uncertain Site atlas plan 3

Illustrated finds

- 1 Iron pin (Iron 244/AML690845)

Illustrated pottery

- 2 Biconical bowl
Exterior brown to dark grey with traces of a light, even burnish; interior black and evenly smoothed
Fabric 1c (700.1)
- 3 Shoulder
Black, burnished exterior; red-grey smoothed interior; black core
Fabric 1b, hard (725.3)
- 4 Body sherd, from the same vessel as GH 33.8 and GH 73.10
Black exterior, wiped, randomly grooved and pitted; red-grey smoothed interior; black core
Fabric 1b (728.3)

GH 49

358N 371E (Figs 59, 110)
3.35m×3.15m Site atlas plan 3

Finds, not illustrated

Folded rim of glass bottle, light green, Roman (Glass 73)
Four lead fragments, melted, 94g (Lead 72/AML705136, 73, 75/AML705139, 122)
Lead strip; L 35mm (Lead 74/AML705138)
Lead 'puddle' which collected on the floor of the hut; c 175mm×120mm; total weight 1.76kg (AML705140)
Iron pin; L 37mm (Iron 247/AML729307)
Iron scraps (Iron 248/AML729308)

Illustrated pottery

- 1 Biconical vessel with an applied boss or blind lug
Black throughout; lightly, evenly burnished surfaces
Fabric 4 (733.1)
- 2 Shoulder of a carinated bowl with traces of faceting on the carination
Black throughout; evenly burnished exterior, unevenly burnished interior
Fabric 3, fine and hard (734.1)
- 3 Body sherd, from near base
Exterior light red-grey and weathered, with finger-tip impressions; interior grey and smoothed
Fabric 3 (735.1)
- 4 Body sherd
Exterior red-grey and scored; interior black and smoothed
Fabric 3, coarse (736.2)
- 5 Shoulder from a biconical bowl
Black throughout; both surfaces burnished
Fabric 3, fine and hard (737.3)

- 6 Biconical bowl
Black, burnished exterior with red-brown margin; interior dark red-grey to red-brown, carefully smoothed
Fabric 1c (740.1)
- 7 Rim
Exterior grey-brown with dark grey patches; interior grey; both surfaces carefully smoothed
Fabric 1a (742.1)
- 8 Hemispherical bowl
Black throughout; lightly burnished exterior, smoothed interior
Fabric 3 (742.2)
- 9 Rim
Dark grey throughout; both surfaces carefully smoothed
Fabric 3 (747.2)

GH 50

265N 425E (Figs 59, 110)
5.11m×4.57m Site atlas plan 7

Illustrated finds

- 1 Copper alloy ring, three fragments (Bronze 140/AML718)
2 Iron double-spiked loop (Iron 253/AML690852)

Not illustrated

Two copper alloy fragments, badly corroded (Bronze 141/AML719)
Copper alloy sheet, rolled, two scraps (Bronze 178/AML756)
Eight lead fragments; total weight 19g (unnumbered)
Iron strip; L 50mm (Iron 254/AML690853)
c ten iron nails, fragmentary

Illustrated pottery

- 3 Body sherd
Light-brown, pinched exterior; grey smoothed interior
Fabric 3 (751.2)
- 4 Rim
Red-grey throughout; weathered surfaces
Fabric 3 (753.1)
- 5 Shoulder, unlocated; recorded as being of a sandy fabric (756.1)
- 6 Body sherd with heavily weathered surfaces, but with traces of grooves and stamps
Exterior grey; interior brown
Fabric 1b, lightly grass-tempered (759.1)
- 7 Body sherd
Black throughout; exterior combed, interior smoothed
Fabric 3 (769.1)

GH 51

545N 278E (Figs 60, 110, 111)
3.23m×2.52m Site atlas plan 6

Illustrated finds

- 1 Copper alloy bracelet fragment with traces of incised and stamped decoration; Roman, ?fourth century (AML720)
2 Copper alloy disc; ?backplate of an applied brooch with fragments of the catchplate (Bronze 143/AML721)

Not illustrated

Roman copper alloy coin; Magnentius, SALV DD NN AVG ET CAES, AD 350-3 (Coin 21)
Roman copper alloy coin; GENIO POP ROM, c AD 313-17; worn and corroded (Coin 22)
Iron sheet fragments; maximum L 40mm (Iron 260)
c three iron nails, fragmentary

Illustrated pottery

- 3 Rim and shoulder
Black throughout; evenly burnished exterior, smoothed interior
Fabric 1b (777.2)

- 4 Hemispherical bowl with a flaring rim
Black throughout; lightly, unevenly burnished surfaces
Fabric 1b (788.2)
- 5 Hemispherical bowl, unlocated; recorded as made of an 'unusual' fabric (789.3)
- 6 Body and basal sherds
Exterior light brown to very dark brown, and pinched; interior grey and smoothed
Fabric 3 (789.4)
- 7 Inturned-rim bowl
Grey to light red-brown throughout; both surfaces smoothed
Fabric 1a (790.1)
- 8 Sub-biconical bowl
Dark brown-grey, lightly burnished exterior; light grey-brown, smoothed interior
Fabric 1b (791.1)
- 9 Biconical bowl
Dark red-grey throughout; both surfaces evenly smoothed
Fabric 1b (792.1)
- 10 Biconical bowl
Exterior dark brown to black and unevenly burnished; interior dark grey and smoothed
Fabric 1b (795.2)
- 11 Body sherd
Black throughout; scored exterior, smoothed interior
Fabric 1b (794.1)
- 12 Splay-sided bowl
Dark brown to black throughout; both surfaces smoothed
Fabric 1b (795.1)
- 13 Body sherd decorated with A1a stamps in a rosette design
Black throughout; both surfaces smoothed
Fabric 3, fine (796.2)

GH 52

650N 205E (Figs 60, 111)
5.03m x 3.73m Site atlas plan 6

Illustrated finds

- 1 Opaque, turquoise glass pendant in a copper alloy 'dog-tooth' setting with applied rim (Bronze 144/AML722)

Not illustrated

Iron knife blade; L 40mm (Iron 265)
Iron knife blade and tang; L 53mm; tip broken (Iron 269/AML690857)
Iron pin, broken (Iron 271/AML729309)
Five iron nail shanks

Illustrated pottery

- 2 Body sherd
Grey to brown throughout; exterior pinched, interior smoothed
Fabric 3 (799.3)
- 3 Body sherd
Brown, smoothed exterior; black, smoothed interior
Fabric 1b (802.1)
- 4 Rim
Dark grey throughout; crudely finished surfaces
Fabric 2 (813.1)
- 5 Rim
Dark grey-brown exterior, wiped smooth; very dark grey, smoothed interior
Fabric 1b (819.2)
- 6 Body sherd with raised cordon
Light red-brown, smoothed exterior; very dark grey, smoothed interior, with carbonised deposits
Fabric 1b (819.3)

- 7 Applied, pierced lug
Black throughout; both surfaces smoothed
Fabric 2 (829.1)
- 8 Globular vessel
Light red-brown throughout; lightly burnished exterior, smoothed interior
Fabric 1b (832.1)
- 9 Globular jar
Dark grey-brown throughout; lightly and unevenly burnished exterior, smoothed interior
Fabric 2, exceptionally hard (824.1)

GH 53 see GH 47/53

GH 54

258N 442E (Figs 60, 112)
3.50m x 2.74m Site atlas plan 7

Illustrated finds

- 1 Spindlewhorl, Type 1; Hadham ware (SPW 33)

Not illustrated

Glass moulded bottle base, blue-green, first/second century (Glass 251)
Iron bar, broken; original length c 200mm; diam 4mm (Iron 273/AML729311)
Two iron nails

Illustrated pottery

- 2 Body sherd
Light, red-brown, combed exterior; light red-grey, smoothed interior
Fabric 1a (843.1)
- 3 Shouldered jar with short, vertical rim; found nearly complete on the floor
Dark grey to black throughout; smoothed surfaces
Fabric 1a (846.1)
- 4 Splay-sided bowl, decorated with grooves and a 'comb-point' design
Red-grey smoothed exterior; light red-brown smoothed interior
Fabric 1c (847.1)
- 5 Globular jar
Dark grey to brown throughout; both surfaces smoothed, with finger impressions clearly visible
Fabric 1b (847.2)
- 6 Perforated vessel; perforated from the outside
Light red-grey throughout; weathered surfaces
Fabric 3, fine (850.1)
- 7 Splay-sided bowl
Red-brown, smoothed surfaces; grey core
Fabric 1c, containing common large quartzite grits (850.4)
- 8 Body sherd
Light red-brown, crudely pinched exterior; black, unfinished interior
Fabric 2 (850.3)
- 9 Pierced upright lug
Red-brown, smoothed surfaces; grey core
Fabric 1c, containing common large quartzite grits (cf 7) (854.1)
- 10 Hemispherical bowl
Light red-brown, crudely finished surfaces; dark grey core
Fabric 2 (856.3)
- 11 Globular jar
Red-grey, evenly smoothed exterior; black, smoothed interior
Fabric 1c (848.1)

GH 55

291N 431E (Figs 60, 112, 113)
3.60m x 2.90m Site atlas plan 7

Illustrated finds

- 1 Copper alloy penannular brooch, White class E (Bronze 146/AML724)

Not illustrated

- Bowl of a copper alloy spoon or scoop (Bronze 148/AML726)
Copper alloy strip; L 34mm (Bronze 145/AML723)
Copper alloy steelyard, Roman (Bronze 147/AML725)
Copper alloy ring fragment, round section; diam 16mm (Bronze 149/AML727)
Translucent glass bead fragment, red-brown with yellow trails (Glass 120)
Iron ring fragment; diam 26mm; and an iron strip; L 50mm (Iron 277/AML690860)
Iron fragment, corroded; diam 23mm
c five iron nails, fragmentary

Illustrated pottery

- 2 Body sherd
Red-brown, combed exterior; dark grey, smoothed interior
Fabric 3 (861.1)
- 3 Pierced upright lug
Dark red-grey throughout; smoothed exterior, abraded interior
Fabric 1c (862.4)
- 4 Body sherd
Grey-brown, pinched exterior; abraded, dark grey interior
Fabric 1a (869.1)
- 5 Body sherd with applied pierced lug
Dark grey throughout; both surfaces smoothed
Fabric 3 (874.1)
- 6 Biconical bowl with faint impressions on the carination
Black throughout; surfaces scraped, then burnished
Fabric 2 (874.2)
- 7 Shoulder, decorated with horizontal grooves and a raised cordon
Exterior red-grey and weathered; interior black and burnished
Fabric 3 (874.4)
- 8 Globular jar, evenly formed
Black throughout; carefully smoothed surfaces
Fabric 1c (874.7)
- 9 Straight-sided bowl
Light red-brown, smoothed exterior; black interior, smoothed and covered with carbonised deposits
Fabric 2, densely grass-tempered (863.3)
- 10 Rim
Black throughout; both surfaces burnished
Fabric 3 (875.1)
- 11 Body sherd decorated with K1b stamps; may be from the same vessel as GH 58.31 as both the stamps and fabric are similar
Black, burnished exterior; grey, heavily abraded interior
Fabric unclassified: abundant fine quartz sand, moderate ?felspar, and sparse haematite (878.3)
- 12 Rim and shoulder of a ?biconical vessel
Exterior black, evenly smoothed, lightly burnished, and weathered to reveal a reddish margin; interior black, scraped smooth, and lightly burnished
Fabric 1b (878.4)
- 13 Rim and carination from a biconical vessel
Red-brown to black surfaces, carefully smoothed with traces of burnishing
Fabric 1c (878.8)
- 14 Neck decorated with grooves and a raised cordon, unlocated; recorded as burnished on both surfaces
Fabric 4 (882.6)

- 15 Carinated bowl
Black throughout; burnished surfaces
Fabric 1c (882.7)

GH 56

355N 412E (Figs 60, 113)
3.96m×3.23m Site atlas plan 7

Illustrated finds

- 1 Lead disc, perforated (Lead 43/AML705107)
2 Two iron strips, riveted together (Iron 285)

Not illustrated

Lead strip, nine pieces, two with cut edges; total weight 124g (Lead 42/AML705106, 44/AML705108, 45/AML705109)
Lead fragment; 22g (Lead 46/AML705119)
Iron sheet fragment; L 53mm (Iron 284/AML690859)
c three iron nails, fragmentary

Illustrated pottery

- 3 Body sherd
Black throughout; exterior combed, interior smoothed
Fabric 1c (886.2)
- 4 Biconical bowl
Light red-brown throughout; smoothed surfaces
Fabric unclassified: abundant well-sorted quartzite grains (diam up to 2.0mm) (886.3)
- 5 Faceted carinated bowl with shallow facets
Grey throughout; both surfaces smoothed
Fabric 1c (887.1)
- 6 Rim
Red-grey, smoothed exterior; dark grey, scraped interior
Fabric 1c (887.2)
- 7 Body sherd
Red-brown, roughened exterior; black, smoothed interior; black core
Fabric 3 (890.1)
- 8 Splayed base
Red-brown exterior; dark grey interior; surfaces smoothed
Fabric 3 (892.6)
- 9 Grooved shoulder
Dark grey throughout; surfaces smoothed, with traces of burnishing
Fabric 1c (896.2)
- 10 Hemispherical bowl
Light red-grey throughout; uneven, smoothed surfaces
Fabric 3, fine (892.3)
- 11 Shoulder
Dark grey throughout; lightly burnished exterior, smoothed interior
Fabric 3 (896.6)
- 12 Straight-sided bowl
Dark grey throughout; both surfaces smoothed
Fabric 1a (894.1)
- 13 Globular vessel, well-made
Black throughout; both surfaces burnished
Fabric 3 (895.1)
- 14 Carinated bowl
Dark grey to red-brown, evenly burnished exterior; grey, burnished interior
Fabric 3, hard and fine (898.5)
- 15 Body sherd with raised faceted cordon; facet very shallow
Red-grey smoothed exterior; dark grey smoothed interior; black core
Fabric 3 (895.6)

- 16 Globular vessel
Black, lightly burnished exterior; dark grey, smoothed interior
Fabric 1c (897.3)
- 17 Body sherd, from the same vessel as GH 73, 1151.5 (not illustrated)
Exterior light red-brown, roughly pinched; interior smoothed and black; core black
Fabric 7, containing moderate crushed shell in a coarse matrix (897.6)
- 18 Shoulder
Red-brown to dark grey smoothed exterior, showing traces of burnishing; light grey, smoothed interior; black core
Fabric 7 (898.6)
- 19 Biconical bowl
Grey throughout; both surfaces scraped smooth
Fabric 3, fine (899.1)
- 20 Shoulder
Dark grey throughout; both surfaces smoothed
Fabric 3 (901.1)
- 21 Body sherd with applied blind lug
Dark grey throughout; outer surface intentionally roughened, either by means of an applied gritty slip or by bringing grit to the surface with a wet hand or rag; interior surface smoothed
Fabric 3, coarse (901.2)
- 22 Carinated bowl
Light brown, smoothed exterior; grey, smoothed interior; grey core
Fabric 7 (892.13)
- 23 Faceted carinated bowl, with lightly impressed facets
Grey throughout; both surfaces smoothed
Fabric 3 (893.1)
- 24 Body sherd
Black throughout; both surfaces smoothed
Fabric 3, coarse (900.3)

GH 57

110N 475E (Figs 60, 114, 115)
4.03m x 3.91m Site atlas plan 4

Illustrated finds

- 1 Copper alloy cast disc belt attachment, late Roman; the attachment is in worn condition, broken, and reused, probably as a pendant (Bronze 153/AML731)
- 2 Two pieces of copper alloy sheet with copper alloy rivets; possible repair for a leather or wooden vessel (AML729)
- 3 Copper alloy fitting, fragment, ?Roman (Bronze 154/AML732)
- 4 Opaque glass bead, disc, red-brown (Glass 13/AML797)
- 5 Translucent glass bead, drawn globular, fragment, blue-green (Glass 9/AML793)
- 6-8 Three translucent glass beads, drawn globular, blue-green (Glass 10-12/AML794-6)
- 9 Bone/antler comb with circle and dot stamped decoration and one surviving iron rivet (Bone 2/AML787)
- 10 Lead bar (Lead 49/AML705113)
- 11 Fired clay spindlewhorl, Type 3c; ?chalk-tempered fabric, black throughout with evenly burnished surfaces (SPW 12)
- 12 Iron hand sickle or reaping hook; S-shaped outline, with the blade curving one way and the tang curving away from it; triangular cross-sectioned blade is not sharpened at extreme curved tip, but has a blunt, narrow rectangular cross-section; short rectangular cross-sectioned tang which would have fitted into a small wooden handle (Iron 300/AML729312)

- Twenty-two copper alloy Roman coins:
Postumus, AD 259-68; IMP C POSTVMVS PF AVG (O), SAECVLI FELICITAS (R); good condition (Coin 36)
MINIMISSIMVS FEL TEMP, fourth-century (Coin 37)
VICTORINVS, AD 268-70; fair condition (Coin 38)
GALLIENVS (LAETITIA) AVG, AD 259-68 (Coin 39)
Irregular radiate, c. AD 270+; worn (Coin 40)
Valens, AD 364-78; SECVRITAS REIPVBLICAE, Victory I; good condition (Coin 41)
CAESARVM NOSTRORVM, c. AD 323-4; poor condition (Coin 42)
CARAVSIVS, AD 286-93; worn (Coin 43)
VOT X MVLTX/DN FLCL JVLIANVS DF AUG.VRB.ROM.P, AD 360-3; good condition (Coin 44)
Tetricus I, AD 270-3; worn (Coin 45)
Two unidentifiable coins, probably fourth-century (Coins 46, 50)
VICTORINVS, AD 268-70; good-worn (Coin 47)
VRBS ROMA, AD 330-5; fair-worn (Coin 48)
Tetricus I, AD 270-3; good condition (Coin 49)
Irregular FEL TEMP REPARATIO (fallen horseman), AD 353+ (coin 51)
Valens, AD 365-7; SECVRITAS REIPVBLICAE; good-worn (Coin 54)
Valens, AD 367-75; SECVRITAS REIPVBLICAE; fair-worn (Coin 55)
Valens, AD 367-75; SECVRITAS REIPVBLICAE; good-worn (Coin 58)
Constantius, AD 348-59; FEL TEMP REPARATIO PHOENIX; good condition (Coin 56)
Constantius, AD 322; BEATA TRANQVILLITAS; good condition (Coin 57)
BEATA TRANQVILLITAS CRISPVS NOB CAES. AD 322; good condition (Coin 59)
Copper alloy fragment; c. 33mm x 12mm (AML730)
Shale bracelet fragment, Roman; diam 55mm (Shale 4/AML804)
Shale bracelet, 3 fragments, Roman; diam 68mm (Shale 1-3/AML801, 802, 803)
Iron firesteel or purse-mount fragment, unlocated (Iron 299/AML690869)
Iron knife tip; L 27mm (Iron 292)
Iron strip; L 32mm (Iron 294)
Iron strip, hooked at one end; L 50mm (Iron 297/AML690870)
c. 13 iron nails and nail fragments

Illustrated pottery

- 13 Shoulder, unlocated; recorded as burnished on both surfaces and made of a sandy fabric (912.5)
- 14 Grooved neck
Dark grey throughout; both surfaces smoothed
Fabric 1b (916.6)
- 15 Shoulder
Black throughout; both surfaces smoothed
Fabric 3, fine (917.2)
- 16 Large globular jar
Exterior predominantly red-brown and evenly combed below the shoulder; interior dark grey, smoothed, and unevenly burnished near the rim
Fabric 3, coarse (918.1)
- 17 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 1c (920.5)
- 18 Shoulder and rim of a somewhat crudely formed bowl
Exterior surface brown and unevenly burnished; interior dark grey and smoothed
Fabric 1b (920.1)
- 19 Globular vessel
Exterior dark grey-brown, wiped smooth; interior grey-brown and smoothed
Fabric 1b, containing moderate haematite (915.1)

Not illustrated

Copper alloy penannular brooch, unlocated (Bronze 151)

- 20 Globular jar
Exterior black and unevenly burnished above the shoulder, light brown and smoothed below; interior dark grey and scraped smooth
Fabric 3, fine (924.1)
- 21 Pedestal base, hollow and carefully formed
Black throughout; exterior evenly burnished, interior carefully smoothed
Fabric 1c (921.5)
- 22 Body sherd, decorated with B2c stamp and faint groove
Black, highly burnished exterior; dark grey, smoothed interior
Fabric 1c (922.2)
- 23 Perforated body sherd
Dark grey, smoothed surfaces; red-grey core
Fabric 1c (924.4)
- 24 Carinated bowl
Dark grey throughout; both surfaces smoothed
Fabric 3 (924.9)
- 25 Grooved neck
Black throughout; traces of burnishing on exterior; interior smoothed
Fabric 1c (924.10)
- 26 Applied, pierced lug
Red-grey throughout; exterior smoothed, interior flaking
Fabric 1c (925.6)
- 27 Biconical bowl; approximately 50% complete; well-made and lightly grooved
Red-grey, burnished exterior; black, burnished interior
Fabric 1b (928.1)
- 28 Biconical bowl
Black throughout; both surfaces smoothed
Fabric 7 (929.3)
- 29 Splay-sided dish
Black throughout; both surfaces evenly burnished
Fabric 1c (930.2)
- 30 Carinated bowl
Black throughout with red-brown margins; evenly smoothed surfaces
Fabric 7 (930.10)
- 31 Rim and shoulder decorated with unidentified stamp
Black throughout; both surfaces evenly burnished
Fabric 3, containing moderate flecks of white mica (931.1)
- 32 Faceted carinated bowl
Black throughout; both surfaces burnished
Fabric 1c, containing common feldspar (931.4)
- 33 Globular bowl
Light brown to black exterior with traces of burnishing; black smoothed interior
Fabric unclassified and fine, containing abundant feldspar (932.1)
- 34 Pierced upright lug, unlocated; recorded as smoothed on both surfaces and grass-tempered (933.1)
- 35 Biconical bowl
Dark grey throughout; both surfaces smoothed
Fabric 1c (934.1)
- 36 Carinated bowl, with diagonal groove extending over the carination
Black throughout; both surfaces burnished
Fabric 3 (943.1)
- 37 Biconical vessel
Black throughout; traces of burnishing on both surfaces
Fabric 3 (948.1)
- 38 Biconical vessel
Black throughout; smoothed surfaces and traces of external burnishing
Fabric 1c (948.2)
- 39 Shoulder
Black to light-brown exterior, with traces of burnishing; black, smoothed interior
Fabric 1c (948.3)
- 40 Wheel-thrown Frankish vessel with rouletted decoration
Light-grey surfaces; pinkish-grey core
Fine hard sandy fabric containing moderate grog (940.1)
- 41 Shoulder from large globular vessel
Very dark grey-brown, smoothed exterior with a gritty slip applied below the shoulder; interior very dark grey-brown and smoothed
Fabric 3, coarse (935.1)
- GH 58**
Overlying Well 1 203N 502E (Figs 60, 116, 117)
4.42m×3.20m Site atlas plan 7
- Illustrated finds*
- Silver rod fragment, twisted (AML784)
 - Copper alloy sheet with punched dots along one edge (Bronze 160/AML738)
 - Copper alloy sheet, two fragments, with copper alloy rivets (AML779)
 - Copper alloy strip (Bronze 158/AML736)
 - Opaque glass disc bead, terracotta to dark brown (Glass 14/AML798)
 - Antler tine, ?worked (Bone 10)
 - 7a, b Iron ?arrowhead with split socket and ?associated iron pin (Iron 307/AML690882)
 - Iron double-spiked loop (Iron 321/AML729314)
- Not illustrated*
Iron bar, possible 'joiner's dog'; L 140mm; diam 7mm (Iron 312/AML690887)
c 19 iron nails, fragmentary
- Illustrated pottery*
- Rim and shoulder
Dark brown smoothed exterior; very dark grey, unevenly burnished interior
Fabric 2 (949.1)
 - ?Shouldered vessel
Dark grey throughout; both surfaces carefully scraped smooth, with traces of burnishing; exterior intentionally roughened below the shoulder
Fabric 3, hard and coarse, containing quartzite grits up to 2.0mm (953.2)
 - Vessel with offset shoulder, unlocated; recorded as smoothed on both surfaces and of an 'unusual' fabric (955.4)
 - Hemispherical bowl with everted rim
Light red-brown surfaces, scraped smooth; core black
Fabric 1b (963.2)
 - Shoulder with raised cordon
Black throughout; burnished exterior, smoothed interior
Fabric 1c (953.1)
 - Body sherd
Exterior very dark grey and pinched; interior black and lightly burnished
Fabric 1c (956.1)

- 15 Body sherd
Dark grey throughout; exterior burnished, interior smooth
Fabric 3 (957.1)
- 16 Rim with clay appliqué, possibly forming an upright lug
Applied clay red-grey and unfinished; original rim red-grey and smoothed on the outside, black and scraped smooth on the inside
Fabric 3 (959.1)
- 17 Rim and shoulder of globular vessel
Very dark grey-brown, carefully smoothed exterior; dark grey-brown, smoothed interior
Fabric 3 (967.1)
- 18 Carinated bowl
Exterior dark grey, grooved and scratched; interior dark grey and carefully smoothed
Fabric 3 (957.4)
- 19 Grooved shoulder
Dark grey, scraped exterior; black, smoothed interior
Fabric 3 9961.3)
- 20 Grooved body sherd
Very dark grey, smoothed surfaces; red-brown core
Fabric 1c (964.3)
- 21 Biconical bowl with nicked carination
Very dark grey throughout; both surfaces burnished
Fabric 3, fine (965.3)
- 22 Rim
Black throughout; both surfaces lightly burnished
Fabric 1b, lightly grass-tempered (968.3)
- 23 Body sherd
Exterior grey and combed; interior black and burnished
Fabric 3, containing common feldspar (968.1)
- 24 Hemispherical bowl
Black throughout; both surfaces evenly smoothed
Fabric 1c (968.2)
- 25 Body sherd
Black throughout; both surfaces lightly burnished
Fabric 4 (968.5)
- 26 Body sherd
Dark grey-brown throughout; surfaces smoothed with traces of burnishing
Fabric 4 (968.9)
- 27 Reconstructed profile; only rim sherd could be traced; grooved shoulder based upon a working drawing only; rim crudely formed
Dark grey throughout; both surfaces unevenly smoothed
Fabric 3 (970.4)
- 28 Perforated body sherd
Black throughout; burnished exterior, carefully smoothed interior
Fabric 3 (971.6)
- 29 Body sherd; grooves deeply cut and regular
Dark brown to black throughout; both surfaces carefully scraped smooth
Fabric 1c, hard (971.1)
- 30 Grooved body sherd, unlocated; recorded as burnished and of a sandy fabric (972.1)
- 31 Shoulder decorated with K1b ('brooch spring') stamp; stamp linked to GH 55.11 and GH 67.8, both of which are similar in form and fabric
Black throughout; both surfaces highly burnished
Fabric 3, hard, containing abundant relatively well-sorted quartz sand (973.1)
- 32 Grooved body sherd
Exterior red-grey; interior dark grey; both abraded
Fabric 1c (973.5)
- 33 Body sherd
Red-brown, smoothed exterior; black, smoothed interior; black core
Fabric 3 (978.1)
- 34 Faceted cordon, unlocated; recorded as fabric 3 (975.1)
- 35 Body sherd with hollow, grooved boss
Light brown, smoothed surfaces; dark grey core
Fabric 1c (973.3)
- 36 Slightly offset shoulder
Exterior black and burnished; interior dark grey and wiped smooth
Fabric 3 (979.3)
- 37 Biconical vessel with dimples above the carination
Exterior black and wiped smooth above the carination, burnished below; interior black and burnished, with carbonised deposits
Fabric 3, fine (983.1)
- 38 Shoulder
Black throughout; both surfaces burnished
Fabric 3 (984.3)
- 39 Carination from biconical vessel, with shallow diagonal groove
Black, smoothed exterior; red-brown, abraded interior
Fabric 3 (987.2)
- 40 Grooved body sherd
Black throughout; both surfaces carefully smoothed
Fabric 1c (991.1)
- 41 Footring base
Black, smoothed surfaces; dark red-brown core
Fabric 3 (992.3)
- 42 Body sherd
Dark grey throughout; both surfaces evenly smoothed
Fabric 5 (960.3)
- 43 Body sherd
Black throughout; both surfaces smoothed
Fabric 3 (977.2)

GH 59

190N 500E (Figs 60, 117, 118)

4.37m x 3.12m Site atlas plan 4

Illustrated finds

- 1 Copper alloy sheet, perforated, two fragments (Bronze 161/AML739)
- 2 Glass cylinder bead; yellow, red-brown, and clear 'reticella' cables over a dull, opaque, green-brown core (Glass 15)
- 3 Fired clay spindlewhorl fragment, Type 3a; grass-tempered fabric with grey-brown surfaces and black core (SPW 30)

Not illustrated

Copper alloy ?ingot, irregular fragment; 16g (Bronze 159/AML737)
Glass vessel fragment, pale green, Roman (Glass 45)
Iron knife blade, two fragments; L 27mm, 66mm (Iron 323, 324/AML729315, 729316)
Iron knife; L 115mm (Iron 325)
Corroded iron object; diam 30mm (Iron 328/AML690956)
Ten iron nails, fragmentary

Illustrated pottery

- 4 ?Hemispherical bowl
Light grey-brown, smoothed surfaces; black core
Fabric 2 (996.1)
- 5 Body sherd
Light red-grey, finger-pinched exterior; black, smoothed interior
Fabric 1b (1002.1)
- 6 Splay-sided bowl; approximately 50% complete
Light red-brown throughout; both surfaces smoothed
Fabric 1b (1017.1)

- 7 Straight-sided ovoid
Black throughout; both surfaces evenly smoothed, with common seed impressions
Fabric 1b (1009.1)
- 8 Hemispherical bowl; approximately 40% complete
Black throughout; surfaces scraped, then unevenly burnished
Fabric 2 (1003.2)
- 9 Globular bowl; approximately 25% complete; crudely formed and finished
Light red-grey exterior, crudely finished; red-grey, scraped interior; surfaces contain common seed impressions
Fabric 1b (1011.1)
- 10 Globular jar; approximately 40% complete; thin, even walls, with an evenly moulded rim
Light red-brown, evenly scraped exterior; light red-brown to grey, scraped interior
Fabric 1b (1019.2)
- 11 Globular jar; approximately 25% complete
Light red-grey surfaces with grey patches, evenly scraped smooth; black core
Fabric 1b (1019.1)

GH 60

254N 532E (Figs 60, 119)

3.05m x 2.85m Site atlas plan 7

Illustrated finds

- 1 Lead disc, perforated (Lead 50/AML705114)
- 2 Iron bar with forked end (Iron 337/AML690965)

Not illustrated

Vessel glass fragment, blue-green, Roman (Glass 56)
Glass bowl, blue-green rim fragment, fourth century (Glass 266)
Iron strip; L 32mm (Iron 338/AML690966)
Iron strip with rivet; L 22mm (Iron 340/AML729318)
Two iron nails

Illustrated pottery

- 3 Rim
Black throughout; exterior lightly scored, interior smoothed
Fabric 3, fine (1023.1)
- 4 ?Plate
Dark grey throughout; one surface evenly smoothed with fingers, the other left unfinished
Fabric 1b, lightly grass-tempered, but with abundant grass impressions on the surfaces; ?deliberately grass-marked (1023.6)
- 5 Rim and shoulder; ?straight-sided ovoid
Red-brown throughout; both surfaces smoothed
Unclassified fabric, containing abundant large subrounded and angular quartzite grits, diam 1–2mm (1023.8)
- 6 Carinated bowl with shallow nicks on the carination
Black, smoothed exterior; dark brown, smoothed interior
Fabric 3, fine (1023.13)
- 7 Rim, with shallow groove
Dark grey throughout; exterior lightly burnished, interior smoothed
Fabric 1c (1024.3)
- 8 Rim
Light red-brown throughout; surfaces smoothed with traces of light external burnishing
Fabric contains abundant large quartzite grits, as for 5 (1024.5)
- 9 Globular vessel
Dark grey-brown, smoothed exterior; light grey-brown, smoothed interior; black core
Fabric 3, fine (1025.12)

- 10 Biconical bowl
Light brown exterior with traces of burnishing; black, smoothed interior
Fabric 1c (1028.1)
- 11 Shoulder
Black throughout; smoothed surfaces and traces of external burnishing
Fabric 1b, lightly grass-tempered (1029.7)
- 12 Two body sherds (including a possible hollow boss), stamped with A5a and A2c stamps
Grey throughout; a trace of burnishing on the exterior surface; interior smoothed
Fabric 3 (1024.6)
- 13 Base
Brownish-grey, combed exterior; black, carefully smoothed interior
Fabric 3, fine (1025.3)
- 14 Faceted carinated bowl, with sliced facets
Black throughout; traces of burnishing on both surfaces
Fabric 1c (1028.2)
- 15 Body sherd
Very dark grey throughout; exterior burnished; interior lightly burnished
Fabric 3 (1024.7)
- 16 Shoulder
Black, burnished exterior; dark grey, smoothed interior
Fabric 1c (1025.2)
- 17 Globular jar with short, vertical neck; carefully formed, with flat-topped rim
Exterior black, smoothed, and covered with carbonised deposits; interior brown-grey and smoothed
Fabric 1a (1024.8)
- 18 Rim
Black throughout; both surfaces burnished
Fabric 1a (1030.1)
- 19 Body sherd
Black throughout; both surfaces burnished
Fabric 1c, exceptionally hard (1025.4)
- 20 Hemispherical bowl
Black throughout; traces of burnishing on both surfaces
Fabric 1c (1025.14)

GH 61

340N 453E (Figs 60, 120)

4.12m x 3.28m Site atlas plan 7

Illustrated finds

- 1 Bone spindlewhorl, turned and polished (SPW99)

Not illustrated

Lead fragment; 9g (Lead 51/AML705115)
Iron plate fragments, probably from a large blade (Iron 345/AML690967)
Iron strip fragment; L 46mm (Iron 346/AML690969)
Iron pin fragment; L 30mm (Iron 343)
Three iron nails

Illustrated pottery

- 2 Body sherd
Dark grey throughout; exterior lightly pinched; interior abraded
Fabric 1b (1034.5)
- 3 Biconical bowl
Black, carefully smoothed exterior; dark grey smoothed interior
Unclassified fabric, containing abundant ill-sorted quartz sand, a moderate quantity of black iron ore, and sparse mica in a coarse matrix (1034.6)

- 4 Biconical bowl
Black throughout; both surfaces smoothed
Fabric 3, fine (1035.2)
- 5 Body sherd with a single dimple between horizontal grooves
Black throughout; burnished exterior, smoothed interior
Fabric 1a (1035.4)
- 6 Carination
Black burnished exterior; light red-grey, smoothed interior
Fabric 1b (1035.5)
- 7 Faceted carinated bowl
Black throughout; both surfaces burnished
Unclassified fabric, as for 3 (1035.13)
- 8 Rim
Brown interior, black exterior; both lightly smoothed
Fabric 1c (1038.9)
- 9 Splay-sided bowl
Black throughout; carefully smoothed surfaces
Fabric 3 (1039.1)
- 10 Rim, decorated with four horizontal grooves and impressed facets
Dark red-grey exterior, red-brown interior; both smoothed
Fabric 1b (1041.1)
- 11 Shoulder, decorated with A5g stamps
Black throughout; both surfaces burnished
Fabric 3 (1040.1)
- 12 ?Lid, or hollow boss, decorated with a row of A2c stamps above two horizontal grooves and a row of diagonal slashes; stamp-linked to GH 60.12
Black exterior, dark red-grey interior; both smoothed
Fabric 3 (1040.3)
- 13 Biconical vessel with double-grooved standing arcs
Black throughout; exterior burnished, interior smoothed
Fabric 1c (1040.5)
- 14 Biconical vessel with flat-rounded base
Black throughout; lightly burnished exterior, smoothed interior
Fabric 1b (1047.1)
- 15 Body sherd
Dark grey, combed exterior; black, smoothed interior; internal carbonised deposits
Fabric 3, coarse (1041.2)
- 16 Biconical bowl
Red-grey exterior, lightly and evenly burnished; black interior, carefully smoothed
Fabric 3, fine and hard (1040.4)
- 3 Hollow boss
Light brown exterior; black interior and core; both surfaces evenly smoothed
Unclassified fabric containing common feldspar and sparse large rounded quartzite grains in a fine matrix (1048.2)
- 4 Rim
Black throughout; unevenly smoothed and burnished on exterior, scraped smooth on interior
Fabric 1c (1048.5)
- 5 Footring base, evenly formed
Black throughout; evenly burnished exterior, smoothed interior
Fabric 1c (1049.1)
- 6 Body sherd decorated with D1a stamps; possibly from same vessel as 10
Dark grey, smoothed surfaces; red-grey core
Fabric 3, fine (1049.2)
- 7 Body sherd
Light red-brown surfaces; black core; exterior pinched, interior smoothed
Fabric 3, fine (1049.3)
- 8 Rim
Dark grey to grey-brown throughout; both surfaces smoothed
Fabric 1b (1049.8)
- 9 Globular vessel
Black throughout; surfaces crudely finished, then unevenly burnished
Fabric 2 (1049.9)
- 10 Neck decorated with D1a stamps; may belong to the same vessel as 6
Dark grey throughout; both surfaces smoothed
Fabric 3, fine (1050.1)
- 11 Cooking plate
Upper surface light red-grey, with finger-tip impressions; underside very dark brown and sooty
Fabric 1b, densely grass-tempered (1050.2)
- 12 Body sherd, deeply grooved
Light brown, smoothed surfaces; dark grey core
Fabric 1c (1050.3)
- 13 Body sherd decorated with A5a stamp
Dark grey throughout; weathered surfaces
Fabric 3, fine (1051.1)
- 14 ?Globular vessel with vertical rim; evenly formed
Light red-brown, carefully smoothed surfaces; black core
Fabric 1b (1051.3)
- 15 Hemispherical bowl, carefully formed
Light red-brown throughout; both surfaces carefully smoothed
Fabric 1a (1050.8)

GH 62

170N 527E (Figs 60, 120, 121)
4.29m>3.05m Site atlas plan 4

Illustrated finds

- 1 Bronze backplate of an applied brooch (EDXRF); ?adhesive and tin/lead solder survive on the upper surface; traces of iron on the back suggest that the brooch was originally fitted with an iron pin (AML741)

Not illustrated

Copper alloy Roman coin, heavily worn and corroded (Coin 30)

Vessel glass fragment, green, with horizontal trails, unlocated; seen by Evison and Charlesworth and identified as a probable fragment of a Kempston-type cone beaker (Glass 40)

Three iron nails, fragmentary

Illustrated pottery

- 2 Body sherd
Dark red-grey throughout; combed exterior, smoothed interior
Fabric 3 (1048.1)

GH 63

185N 530E (Figs 60, 121, 122)
3.33m>3.12m Site atlas plan 4

Illustrated finds

- 1 Folded copper alloy sheet with rivet hole; probable binding or repair (Bronze 164/AML742)
- 2 Iron ring (Iron 358/AML729320)

Not illustrated

Copper alloy Roman brooch, 'Colchester' type (Bronze 171/AML749)

?Worked bone or antler fragment; L 14mm (Bone 8/AML791)

Vessel glass fragment, yellow-green with self-coloured trail; L 9mm (Glass 34)

Glass bottle fragment, blue-green, Roman (Glass 44)

Iron ?ferrule; L 37mm, diam 10mm; badly corroded (Iron 352/AML690974)

Iron strip; L 105mm (Iron 354/AML690976)

Iron strip; L 54mm (Iron 360/AML729321)
 Iron knife blade fragments (Iron 359/AML729322)
 Three iron nails, fragmentary

Illustrated pottery

- 3 Biconical bowl
 Dark grey, carefully smoothed exterior; black, burnished interior
 Fabric 3 (1055.12)
- 4 Biconical vessel
 Black, lightly burnished exterior, flaking to reveal a reddish margin; black smoothed interior
 Fabric 2, densely grass-tempered and containing subangular quartzite grits up to 1.5mm (1055.13)
- 5 Body sherd with slightly raised cordon
 Grey throughout; both surfaces smoothed
 Fabric 3, fine (1056.3)
- 6 Biconical vessel decorated with grooves and raised cordons
 Red-brown to dark grey, smoothed exterior; dark red-grey, smoothed interior
 Fabric 5 (1056.9)
- 7 Body sherd
 Red-brown, pinched exterior; dark grey, smoothed interior
 Fabric 1a (1056.10)
- 8 Rim
 Light red-brown surfaces; black core; exterior smoothed, interior scraped
 Fabric 1c (1056.18)
- 9 Faceted carinated bowl with sliced facets
 Black throughout; both surfaces burnished
 Fabric 3 (1056.22)
- 10 Splay-sided bowl with slightly offset shoulder
 Black throughout; crudely finished surfaces
 Fabric 3, coarse (1956.7)
- 11 Biconical pot; reconstructed profile
 Dark grey throughout; scraped and lightly burnished surfaces
 Fabric 1b (1057.1)
- 12 Globular jar
 Light red-brown throughout; both surfaces carefully smoothed
 Fabric 1c, containing moderate feldspar (1058.5)
- 13 Ridged shoulder
 Dark grey throughout; both surfaces smoothed
 Unclassified fabric, coarse and densely packed with abundant well-sorted quartz sand (1057.12)
- 14 Body sherd
 Black throughout; burnished exterior, carefully smoothed interior
 Fabric 1c, hard (1058.9)
- 15 Shoulder
 Black throughout; both surfaces smoothed
 Fabric 3 (1058.10)
- 16 Body sherd decorated with G2a stamps
 Light red-brown throughout; both surfaces smoothed
 Fabric 1c (1059.1)
- 17 Faceted carinated bowl; reconstructed profile
 Black throughout; lightly burnished exterior, carefully smoothed interior
 Fabric 1c (1062.5)
- 18 Rim and shoulder
 Very dark brown to dark grey throughout; scraped exterior, smoothed interior
 Fabric 1a (1062.4)
- 19 Globular pot with offset shoulder; exceptionally well-made
 Black throughout; burnished exterior, carefully smoothed interior
 Fabric 3, hard (1062.6)

- 20 Grooved shoulder
 Black throughout; both surfaces burnished
 Fabric 3, fine (1064.1a)
- 21 Shoulder
 Black throughout; both surfaces carefully smoothed
 Fabric 3 (1064.1b)
- 22 Two body sherds, probably from a biconical vessel
 Black throughout; both surfaces smoothed
 Fabric 3 (1064.1)
- 23 Biconical vessel, two sherds; possibly from the same vessel as 22
 Black throughout; both surfaces smoothed
 Fabric 3, fine (1064.1c)

GH 64

584N 340E (Figs 61, 122)
 3.05m x 2.69m Site atlas plan 6

Finds, not illustrated

Four iron nails

Illustrated pottery

- 1 Rim, well-formed
 Black throughout; both surfaces highly burnished
 Fabric 1c, hard (1071.2)
- 2 Body sherd
 Red-brown, smoothed, then roughly scored exterior; dark grey, smoothed interior
 Fabric 1a (1071.4)
- 3 Body sherd, dimpled
 Light red-brown throughout; both surfaces smoothed
 Fabric 1a (1071.5)
- 4 Rim, well-formed
 Black throughout; both surfaces evenly burnished
 Fabric 1c, hard (1072.2)
- 5 Biconical vessel, with a horizontal groove or facet extending along the carination
 Dark grey throughout; both surfaces smoothed
 Fabric 1c (1072.5)
- 6 Rim
 Black, burnished exterior; dark grey, scraped interior
 Fabric 1b (1075.1)
- 7 Faceted carinated bowl with sliced facets; rather crudely formed
 Black exterior, lightly burnished and flaking; dark grey, unevenly burnished interior
 Fabric 1b (1076.1)
- 8 Hemispherical bowl
 Black throughout; both surfaces scraped, then burnished
 Fabric 1b (1077.1)
- 9 Globular vessel with slightly inturning neck
 Dark brown, smoothed exterior; dark grey smoothed interior
 Fabric 3, fine and containing sparse grass temper (1076.3)
- 10 Globular bowl; approximately 15% complete
 Light brown to dark grey exterior, scraped and unevenly burnished, with highly burnished rim; interior light grey-brown and scraped smooth
 Fabric 1c (1074.1)

GH 65

495N 355E (Figs 61, 122)
 4.45m x 3.53m Site atlas plan 6

Illustrated finds

- 1 Copper alloy disc fragment, possible mount, ?Roman (Bronze 165/AML743)
- 2 Lead disc, perforated (Lead 52/AML705116)
- 3 Iron strip (Iron 368/AML729326)

Not illustrated

Three iron nails, fragmentary

Illustrated pottery

- 4 Body sherd with applied boss or lug and traces of grooving
Black throughout; both surfaces smoothed
Fabric 4 (1081.3)
- 5 Body sherd
Black throughout; exterior lightly, irregularly scored, interior smoothed
Fabric 3 (1083.3)
- 6 Grooved body sherd
Light red-brown, smoothed exterior; dark grey, carefully smoothed interior
Fabric 3 (1085.1)
- 7 Inturned-rim bowl
Red-grey to dark grey smoothed exterior; dark grey interior, wiped smooth
Fabric 1b (1084.5)
- 8 Rim
Black throughout; both surfaces carefully smoothed
Fabric 1b (1085.6)

GH 66

495N 370E (Figs 61, 123, 124)
3.46m×2.82m Site atlas plan 6

Illustrated finds

- 1–5 Lead discs, perforated; 1 and 2 appear to have been cast from the same mould, as do 3, 4, and possibly 5 (Lead 53–57/AML705117–121)

Not illustrated

Moulded bottle fragment, Roman (Glass 79)
Glass mould blown bottle base with moulded design, blue-green, pre-AD 130 (Glass 271)

Illustrated pottery

- 6 Shoulder of biconical vessel
Red-grey throughout; both surfaces smoothed
Fabric 5 (1089.1)
- 7 Carinated bowl with diagonal slashes on the carination
Black throughout; both surfaces evenly smoothed
Fabric 1c (1090.2)
- 8 Shoulder
Black throughout; both surfaces smoothed
Fabric 1a (1090.4)
- 9 Rim
Black throughout; outer surface scraped, then burnished; inner surface burnished
Fabric 3, coarse (1090.7)
- 10 Shoulder
Light red-brown, smoothed exterior; dark grey, carefully smoothed interior
Fabric 3 (1090.8)
- 11 Rim
Dark grey throughout; both surfaces smoothed
Fabric 3, coarse, containing common quartzite grits up to 4.0mm in diameter (1090.11)
- 12 Shallow, straight-sided bowl with flat-rounded base; approximately 50% complete
Exterior dark brown and blackened under the base; interior dark brown; both surfaces smoothed
Fabric 1b, containing common quartz sand and sparse rounded flint (1091.3)

- 13 Rim
Dark red-grey exterior; black interior; both surfaces lightly and evenly burnished
Fabric 5 (1091.4)
- 14 Biconical jar
Black throughout; lightly, evenly burnished surfaces
Fabric 3 (1091.5)

GH 67

377N 470E (Figs 61, 124)
3.81m×3.10m Site atlas plan 7

Illustrated finds

- 1 Copper alloy pin fragment with flattened head, corroded (Bronze 167/AML745)
- 2 Lead disc, perforated (Lead 85/AML705149)
- 3 Iron knife, tip broken (Iron 378/AML729329)

Not illustrated

Copper alloy brooch spring from a 'Colchester' type brooch, Roman (Bronze 166/AML744)
Lead fragments; total weight 10g (Lead 58/AML705122)
Iron fragments, possibly from a knife (Iron 375/AML69099)
Iron pin fragment; L 35mm (Iron 380)
c seven iron nails, fragmentary

Illustrated pottery

- 4 Biconical pot, decorated with oval dimples
Black throughout; surfaces evenly burnished
Fabric 1c (1101.2)
- 5 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 3 (1102.11)
- 6 Body sherd
Brown-red smoothed exterior; dark grey interior
Fabric 1c (1098.5)
- 7 Splay-sided bowl; approximately 25% complete
Grey-brown, smoothed surfaces
Fabric 3 (1100.1)
- 8 Biconical bowl with slightly raised cordon, decorated with K1b stamps; fabric and stamp cf GH 55.11 and GH 58.31
Black, burnished exterior; highly burnished interior; red-brown core
Fabric unclassified: 1a matrix containing moderate haematite and ?felspar and common well-sorted quartz sand (.40mm) (1101.1)
- 9 Body sherd
Black throughout; both surfaces burnished
Fabric 1c (1101.5)
- 10 Globular bowl, unevenly formed
Dark grey throughout; smoothed surfaces
Fabric 3 (1102.10)
- 11 Carinated bowl, with diagonal slash on carination
Light red-brown, weathered exterior; black, smoothed interior
Fabric 3 (1098.4)
- 12 Body sherd
Black throughout; lightly, evenly burnished surfaces Fabric 1c (1101.6)
- 13 Shoulder, carefully formed
Light red-brown surfaces with grey patches; grey core; exterior lightly burnished; interior smoothed
Fabric 4, relatively soft (1102.1)
- 14 Conical neck with everted rim
Black throughout; both surfaces lightly burnished
Fabric 3, coarse (1102.3)

- 15 Pedestal base; join between pedestal and base of the pot visible in section
Black throughout; both surfaces evenly smoothed
Fabric unclassified, containing abundant well-sorted quartz sand and moderate haematite, up to 3mm in diameter (1102.5)
- 16 Body sherd
Black throughout; both surfaces smoothed
Fabric 3 (unnumbered)
- 17 Body sherd
Light brown, pinched exterior; black, smoothed interior
Fabric 3 (1102.9)
- 18 Shoulder
Black throughout; both surfaces smoothed
Fabric 3 (1102.20)
- 19 Rim
Dark grey throughout; lightly burnished exterior, smoothed interior
Fabric 1c (1102.21)
- 20a, b Narrow-mouthed globular jar, with handle; association uncertain
Predominantly black throughout; exterior lightly burnished; interior evenly smoothed, but surface marred by grass temper impressions
Fabric 2, heavily grass-tempered (1103.1)
- 21 Globular bowl
Dark grey-brown, lightly burnished exterior; black, well-smoothed interior
Fabric 1c (1102.14)
- 22 Hemispherical bowl
Black throughout; exterior scraped smooth, interior lightly burnished
Fabric 3 (1102.7)

GH 68

695N 290E (Figs 61, 125)
5.33m×3.45m Site atlas plan 6

Finds, not illustrated

Elongated iron fragment; L. 64mm (Iron 383)
c three iron pins, fragmentary; Iron 385 originally recorded as having a hooked terminal (Iron 384–386)

Illustrated pottery

- 1 Rim
Black throughout; both surfaces smoothed
Fabric 2, densely grass-tempered (1107.4)
- 2 Body sherd decorated with N1 stamp
Light red-brown exterior; grey core; grey interior surface; both surfaces smoothed
Fabric 1c (1108.1)
- 3 Rim
Black throughout; both surfaces burnished
Fabric 1b (1109.1)
- 4 Two rim sherds, with an ?upright lug
Dark brown, crudely finished surfaces; black core
Fabric 2 (1114.1)

GH 69

285N 590E (Figs 61, 125)
3.43m×3.00m Site atlas plan 7

Illustrated finds

- 1 Copper alloy ring (Bronze 262/AML715295)

Illustrated pottery

- 2 Biconical vessel with hollow bosses; A5a stamps decorate the panels between the bosses; exceptionally well-made with thin, even walls
Black throughout with a red-brown external margin; lightly, evenly burnished surfaces
Fabric 4, hard (1121.1)
- 3 Hemispherical bowl
Red-brown exterior; black core and interior; surfaces smoothed; carbonised deposits near the rim
Fabric 1c, containing sparse grass temper (1121.2)
- 4 Straight-sided bowl
Light red-brown throughout; surfaces scraped smooth
Fabric 1b, densely grass-tempered (1121.3)
- 5 ?Lid
Black throughout; traces of burnishing on exterior; smoothed interior
Fabric 1b (1121.5)
- 6 Shoulder
Black throughout; both surfaces evenly burnished
Fabric 3, fine (1121.7)
- 7 Straight-sided bowl on splayed base with two pierced applied lugs; a third lug has broken off
Brown to dark grey exterior, crudely finished; dark grey, smoothed interior
Fabric 2 (1128.1)
- 8 Rim
Dark grey throughout; both surfaces scraped smooth
Fabric 1c, coarse, with sparse large, subangular flint (1121.8)

GH 70

453N 482E (Figs 61, 125)
3.09m×2.74m Site atlas plan 7

Illustrated finds

- 1 Iron ring (Iron 387/AML729332)

Not illustrated

Iron nail, fragmentary

Illustrated pottery

- 2 Shoulder
Black throughout; traces of external burnishing; interior smoothed
Fabric 1b (2067.4)
- 3 Body sherd, decorated with A5f stamp
Light red-brown throughout, with a light red-grey internal margin; exterior shows trace of burnishing; interior smoothed
Fabric 1c, containing sparse grass temper and sparse flecks of red clay (2068.4)
- 4 Body sherd
Thick layer of coarse slip, containing abundant well-sorted quartzite grits averaging 3–4mm in diameter, applied to outer surface; dark grey, with an evenly scraped interior
Fabric 3, coarse (2069.2)
- 5 Faceted carinated bowl, with sharp carination and deeply cut facets
Black throughout; both surfaces evenly burnished
Fabric 3, hard and fine (2070.1)
- 6 Faceted carinated bowl
Exterior weathered, so that facet is barely visible; grey throughout; both surfaces smoothed, with traces of burnishing on the interior
Fabric 5 (2070.2)
- 7 Rim
Black throughout; both surfaces smoothed
Fabric 3 (2070.3)

- 8 Rim
Black surfaces with traces of burnishing; red-brown external margin
Fabric 1c, containing sparse grass temper (2071.1)
- 9 Hemispherical bowl
Black throughout; traces of uneven burnishing on both surfaces
Fabric 3 (2075.1)

GH 71

345N 635E (Figs 61, 126)
4.27m×3.96m Site atlas plan 7

Illustrated finds

- Copper alloy pin, broken (Bronze 211/AML690902)
- Fired clay spindlewhorl, Type 2b; black throughout with lightly burnished surfaces; fine sandy fabric (SPW 89)
- Iron staple (Iron 389)

Illustrated pottery

- Globular bowl
Exterior black and burnished above the shoulder; a gritty slip has been 'sponged on' below the shoulder; interior black and evenly smoothed
Fabric 1b (2077.2)
- Rim
Very dark brown to black throughout; scraped surfaces
Fabric 3, containing moderate flecks of mica (2078.2)
- 6a, b Two body sherds
Light grey-brown to black smoothed outer surface; black, lightly burnished interior
Fabric 3 (2081.1)
- Body sherd, perhaps from a hollow boss; orientation unclear
Dark grey throughout; both surfaces smoothed
Fabric 3, fine (2082.1)
- Body sherd
Brown-red with a raised, slashed vertical cordon; exterior shows traces of burnishing; interior smoothed
Fabric 4 (2081.2)
- Body sherd
Red-brown surfaces; black core; exterior finger-nail impressed; interior smoothed
Fabric 1c, containing sparse grass temper (2082.2)

GH 72

420N 640E (Figs 61, 126)
4.27m×3.96m Site atlas plan 7

Illustrated finds

- Chalk spindlewhorl, very worn (SPW 91)

Not illustrated

Iron knife, point broken; L 105mm (Iron 390/AML690904)
c seven iron nails, fragmentary

Illustrated pottery

- Rim; lip reconstructed, as both the lip and interior surface of the neck have largely flaked away
Black throughout; traces of uneven burnishing on both surfaces
Fabric 1b, densely grass-tempered (2089.1)

GH 73

479N 499E (Figs 61, 126, 127)
3.45m×2.74m Site atlas plan 7

Finds, not illustrated

Copper alloy brooch pin (Bronze 210/AML690901)
Two copper alloy Roman coins, unidentified (Coin 63, 66/AML690913)

Bone comb decorated with incised lines, fragmentary; two iron rivets survive (Bone 4)
Five iron nails, fragmentary

Illustrated pottery

- Rim; resembles 19 in form and finish
Red-brown to black burnished exterior; black interior, wiped then burnished
Fabric 1a (1158.1)
- Flat-topped rim; well-made
Black, burnished exterior; dark grey, smoothed interior
Fabric 4 (1151.2)
- Splayed base
Light red-brown, unfinished exterior; black, smoothed interior
Fabric 2 (1151.3)
- Globular bowl
Red-brown, crudely finished surfaces; black core
Fabric 1c (1152.1)
- Rim, with slightly flattened top
Light red-brown, smoothed exterior; grey, smoothed interior
Fabric 1c, rather coarse, containing sparse grass temper (1151.9)
- Globular bowl
Dark red-brown surfaces; black core; exterior smoothed above the shoulder, combed below; interior smoothed
Fabric 1c, containing sparse grass temper (1153.2)
- Body sherd
Dark grey throughout; both surfaces smoothed
Fabric 4 (1153.4)
- Carinated bowl with faint impressed facets on the carination
Black throughout; burnished exterior, smoothed interior
Fabric 1c (1153.6)
- Biconical bowl with flat-topped rim; similar to 25 and 19
Red-brown exterior, scraped smooth; black interior, unevenly scraped
Fabric 1c (1153.13)
- Body sherd; from same vessel as GH 33.8 and GH 48.4
Exterior black, wiped with a coarse fibre, then grooved, seemingly at random; interior grey-brown and smoothed
Fabric 1b (1154.1)
- Body sherd with applied pierced lug; lug partly pushed out from the inside, then a lump of clay applied to the outside
Light brown exterior; black core and interior; surfaces crudely finished
Fabric 3 (1154.2)
- Body sherd
Dark red-grey exterior, with red margin, smoothed, with traces of burnishing; dark red-grey, smoothed interior
Fabric 1c (1154.3)
- Rim
Red-brown exterior, dark grey interior; smoothed surfaces
Fabric 3, fine (1156.4)
- Neck
Dark grey throughout; both surfaces smoothed
Fabric 1c (1156.3)
- Two body sherds
Red-brown to dark red-grey burnished exterior; brown-red interior, smoothed with a trace of burnishing
Fabric unclassified: 1a matrix containing common white mica and small well-sorted quartzite grits (1.5mm) (1154.6)
- Shoulder
Grey-brown, smoothed exterior; interior dark grey and pitted; dark grey core
Fabric 7: 1a matrix containing moderate finely crushed and well-sorted fossiliferous chalk, and sparse haematite (1158.9)

- 17 Straight-sided bowl on splayed base; rather crudely formed
Black throughout; both surfaces smoothed, with a reddish external margin
Fabric 3, fine, containing moderate white mica flecks (1159.2)
- 18 Inturned-rim bowl
Light red-grey, smoothed surfaces; black core
Fabric 3, fine (1154.12)
- 19 Rim, flat-topped; resembles 1 in form and finish
Black surfaces with red margin; exterior burnished; interior smoothed
Fabric 1c, containing sparse large chunks of haematite (up to 5mm) (1155.1)
- 20 Biconical bowl; resembles 25 in form, fabric, and finish
Dark grey throughout; unevenly smoothed and burnished surfaces
Fabric 1c (1151.6)
- 21 Rim, flat-topped
Black throughout; exterior wiped smooth with traces of burnishing; interior wiped smooth
Fabric 1c (1159.1)
- 22 Globular bowl
Black throughout; surfaces scraped smooth, then unevenly burnished
Fabric 1b (1158.3)
- 23 Carinated bowl with a diagonal slash on the carination
Brown to dark grey throughout; exterior smoothed with traces of burnishing, interior weathered
Fabric 3, fine (1166.1)
- 24 Rim, flat-topped
Black throughout; both surfaces burnished
Fabric 3, fine (1160.3)
- 25 Biconical bowl; resembles 20 in form, fabric, and finish
Black throughout; exterior unevenly burnished, interior wiped smooth
Fabric 1c (1160.7)
- 26 Body sherd
Exterior light grey-brown and pinched; interior dark grey and smoothed
Fabric 3, coarse and densely packed with quartz sand (1163.1)
- 27 Carinated bowl; decorated with unclassified stamp (possibly M1a) and diagonal grooves extending over the carination
Exterior dark brown with traces of burnishing; interior black, wiped smooth, and lightly burnished
Fabric 1c (1164.1)
- 28 Rim
Black throughout; both surfaces burnished, with external carbonised deposits
Fabric 3, fine (1165.1)
- GH 74**
417N 548E (Figs 61, 128)
3.12m×2.79m Site atlas plan 7
- No finds
- Illustrated pottery*
- 1 Straight-sided bowl
Black throughout; smoothed surfaces
Fabric 3, rather coarse (2093.3)
- 2 Body sherd with two crudely applied blind lugs
Black throughout; both surfaces smoothed
Fabric 1a, containing sparse angular flint chips and grass temper (2094.2)
- 3 Globular jar with flat-topped rim
Dark red-grey exterior, roughened with irregular grooves and ridges; black smoothed interior
Fabric 1a (2094.1)
- 4 Globular bowl
Red-brown to dark grey exterior; black interior; both surfaces evenly smoothed
Fabric 5 (2097.5)
- 5 Straight-sided ovoid with an unevenly formed rim
Black throughout; oxidised patches and scraped surfaces
Fabric 1b (2094.6)
- 6 Biconical bowl
Black throughout; traces of burnishing on both surfaces
Fabric 1c (2094.7)
- 7 Body sherd
Red-brown combed exterior; black smoothed interior
Fabric 3 (2094.15)
- 8 Body sherd
Grey throughout; weathered surfaces
Fabric 5 (2094.18)
- 9 Rim and shoulder
Light red-brown, scraped surfaces; black core
Fabric 1b (2096.5)
- 10 Body sherd
Red-yellow exterior, wiped and pinched; black interior, smoothed
Fabric 1b (2097.1)
- 11 Biconical bowl
Black throughout; unevenly burnished exterior, smoothed interior
Fabric 3 (2097.2)
- 12 Carinated bowl with a faceted cordon and diagonal slashes on the carination
Dark grey to red-brown exterior, lightly burnished; dark grey interior, with traces of burnishing; grey core
Fabric 4 (2098.1)
- 13 Carinated bowl
Black throughout; unevenly burnished exterior, smoothed interior
Fabric 3 (2100.3)
- 14 Body sherd
Black throughout; burnished exterior, smoothed interior
Fabric 1b (2103.1)
- GH 75**
415N 578E (Fig 61)
4.75m×3.73m Site atlas plan 7
- No finds
- GH 76**
712N 305E (Figs 61, 129)
5.77m×4.11m Site atlas plan 6
- Finds, not illustrated*
Lead fragment, 7g (AML690919)
- Illustrated pottery*
- 1 Rim
Dark red-grey throughout; crudely finished surfaces
Fabric 2 (2114.1)
- 2 Globular bowl
Light red-brown smoothed exterior; black interior with traces of burnishing and carbonised deposits; surfaces show abundant burnt-out impressions of seeds and chopped 'grass' temper
Fabric 2, densely grass-tempered (2117.1)
- GH 77**
598N 442E (Figs 62, 129, 130)
3.45m×2.31m Site atlas plan 8

Illustrated finds

- 1-6 Perforated lead discs; nos 4 and 5 may be cast from the same mould (Lead 92A/AML690920/690921, 94C/AML690922, 95D/AML690923, 96E/AML690924, 97/AML690925)
- 7 Iron chain links (Iron 407/AML690905)
- 8 Iron key (Iron 406/AML690906)

Not illustrated

Eight iron nails

Illustrated pottery

- 9 Rim
Black throughout; traces of burnishing on both surfaces
Fabric 1a (2123.1)
- 10 Inturned-rim jar
Exterior black with traces of burnishing and thick carbonised deposits near the rim, red-brown and smoothed near the base; interior dark grey and burnished
Fabric 1a (2124.2)
- 11 Straight-sided bowl
Black, burnished exterior with carbonised deposits; brown, smoothed interior
Fabric 1c (2124.3)
- 12 Globular jar with faint finger impressions just beneath the rim
Red-grey exterior; dark grey core; grey interior; both surfaces scraped smooth
Fabric 3, fine (2124.4)
- 13 Globular vessel with unevenly formed rim
Red-grey, scraped surfaces with an external red margin
Fabric 3, coarse (2126.1)
- 14 Biconical vessel; cross joins with GH 79.8
Very dark red-grey throughout; lightly, evenly burnished surfaces
Fabric 1c (2124.11)
- 15 Faceted carinated bowl with unevenly sliced facets
Black throughout; burnished surfaces; facets also burnished
Fabric 1c, containing sparse grass temper (2125.1)
- 16 Body sherd
Dark grey, combed exterior; black, smoothed interior
Fabric 1c (2125.2)
- 17 Shoulder of biconical vessel
Black throughout; traces of light, even burnishing on both surfaces
Fabric unclassified: 1a matrix containing common ?chalk and moderate haematite (2125.7)

GH 78

612N 438E (Figs 62, 131)
3.12m x 2.34m Site atlas plan 8

Illustrated finds

- 1 Copper alloy sheet, two fragments with perforated edge (Bronze 300/AML731251)
- 2 Spindlewhorl, Type 1; Roman oxidised coarseware (SPW 15)

Not illustrated

Copper alloy ring, two fragments; diam c 18mm (Bronze 213/AML690914)

Iron pin; L 100mm, diam 5mm (Iron 415)

c three iron nails, fragmentary

Illustrated pottery

- 3 Rim
Very dark brown, smoothed exterior; black burnished interior
Fabric 2 (2133.1)

- 4 Body sherd
Exterior brown and weathered, with a single finger-tip impression; interior black and smoothed
Fabric 3, containing a moderate quantity of white mica (2133.2)
- 5 Body sherd
Black throughout; exterior combed, interior smoothed
Fabric 3 (2134.4)
- 6 Rim, folded
Black throughout; surfaces smoothed with traces of burnishing
Fabric 3, fine (2134.1)
- 7 Splay-sided bowl
Black throughout; exterior evenly scraped, interior simply smoothed
Fabric 3, fine (2134.3)

GH 79

612N 489E (Figs 62, 131)
3.20m x 3.12m Site atlas plan 8

Illustrated finds

- 1 Opaque glass disc bead, dull green (Glass 79)
- 2 Opaque glass disc bead, dark brown core coated with glossy yellow (Glass 80)
- 3 Perforated lead disc (Lead 97/AML715326)

Not illustrated

Iron bar, fragmentary (Iron 419)

Iron bar; L c 85mm (Iron 420)

c seven iron nails, fragmentary

Illustrated pottery

- 4 Body sherd
Dark grey throughout; outer surface wiped, then neatly pinched; inner surface smoothed
Fabric 3 (2142.2)
- 5 Rim
Dark brown surfaces; black core; exterior burnished, interior smoothed
Fabric 3 (2142.5)
- 6 Globular jar
Black throughout; outer surface smoothed and unevenly covered with a coarse slip; interior smoothed
Fabric 3, coarse, containing sparse grass temper (2143.1)
- 7 Globular bowl with applied blind lug; approximately 30% complete
Black throughout; lightly, evenly burnished exterior; carefully smoothed interior
Fabric 1b (2142.3)
- 8 Biconical vessel; cross joins with GH 77.14
Black throughout with a red-grey margin; surfaces scraped smooth with traces of burnishing
Fabric 1b (2142.8)
- 9 Rim, flat-topped
Brown to black throughout; traces of burnishing on both surfaces
Fabric 1a (2148.1)
- 10 Rim, flat-topped
Black throughout; traces of burnishing on both surfaces
Fabric 1b (2143.2)
- 11 Shoulder, lightly grooved
Black throughout; burnished on both surfaces
Fabric 1a (2143.4)
- 12 Shallow hemispherical bowl
Black throughout; surfaces wiped, with traces of burnishing
Fabric 1c (2143.3)

GH 80

745N 3.80E (Figs 62, 132)
4.88m×4.11m Site atlas plan 6

Finds, not illustrated

Copper alloy scrap, corroded (Bronze 265/AML715298)
Lead strip fragment; L 20mm (Lead 94/AML715323)
Iron nail shank or spike; L 106mm, diam 5mm (Iron 429)
Iron strip, slightly curved; L 35mm (Iron 430)
Iron nail shank

Illustrated pottery

- 1 Rim
Light brown to black throughout; smoothed surfaces
Fabric 1b (2150.1)
- 2 Body sherd
Light red-brown to dark brown exterior, smoothed, with fine 'comb-point' decoration; interior light red-brown to black and smoothed; black core
Fabric 1b (2152.1)
- 3 Globular bowl
Light red-brown to dark brown, smoothed exterior, with abundant impressions of burnt-out organic material; interior black and smoothed
Fabric 2, densely grass-tempered (2155.1)

GH 81

2055N 905E (Figs 62, 132, 133)
4.12m×3.28m Site atlas plan 21

Illustrated finds

- 1 Bronze, three-lobed radiate brooch (EDXRF) with punch decoration; corroded (AML731434)
- 2 Copper alloy binding from the rim of a wooden vessel; mineralised wood inside binding (Bronze 274/AML739121)
- 3 Iron awl; shank is circular in cross-section although the point at which it was fitted into a wooden handle is wider and square in cross-section (Iron 436.2/AML729267)
- 4 Iron pin, recorded as having a spiral head, now corroded (Iron 436.1/AML729267)

Not illustrated

Copper alloy sheet and wire; 12 corroded scraps (Bronze 311, 312/AML744607, 744608)
Copper alloy strip, two corroded fragments; L 7mm, 8mm (Bronze 453/AML750418)
Blown glass vessel fragment, green-brown, fourth-century (Glass 149)
Iron bar, curved and tapering at one end; L 150mm (Iron 432)
Iron strip, curved; L 60mm (Iron 434)
Iron pin; L 65mm; tip broken (Iron 435)
Two iron nails, fragmentary

Illustrated pottery

- 5 Globular vessel with upright lug
Dark brown to black throughout; wiped surfaces
Fabric 2 (1136.3)
- 6 Rim, flat-topped, with a single dimple on the shoulder
Exterior and rim black and burnished; interior brown and smoothed
Fabric 3 (1139.5)
- 7 Straight-sided bowl
Black throughout; lightly burnished surfaces
Fabric 1b (1136.9)
- 8 Biconical vessel
Very dark brown throughout; exterior burnished, interior smoothed
Fabric 1a, containing sparse grass temper (1140.4)

9 Rim

Light grey-brown exterior, smoothed and cracking; light red-brown interior, scraped smooth
Fabric 1b, lightly grass-tempered (1141.11)

10 Pedestal base, crudely formed

Light red-grey, scraped surfaces; black core; carbonised deposits inside the base
Fabric 1b (1141.9)

11 Rim, flat-topped

Black exterior; light brown interior and rim; surfaces show traces of burnishing
Fabric 1b (1141.12)

12 Globular jar, approximately 80% complete; contained animal bone when excavated

Black throughout; exterior lightly and evenly burnished, with carbonised deposits on and above the shoulder; interior smoothed, with traces of burnishing, and carbonised deposits
Fabric 1a (1141.1)

13 Rim

Black throughout; exterior scraped and scored; interior smoothed
Fabric 1c (1141.3)

14 Pierced upright lug, carefully formed

Light brown to black, carefully smoothed exterior; black, smoothed interior
Fabric 1a (1146.17)

15 Globular bowl with flat-topped rim and applied blind lug, which was first pushed out from the inside of the vessel then built up with clay

Exterior black and evenly burnished to the shoulder, then dark brown and scraped smooth below the shoulder; interior black and smoothed
Fabric 1b (2164.2)

16 Globular vessel with two handles

Black throughout; smoothed on both surfaces; traces of internal burnishing
Fabric 1c (1143.1)

GH 82

2135N 990E (Figs 62, 133)
3.28m×3.00m Site atlas plan 23

Illustrated finds

- 1 Iron ?staple (Iron 442)

Not illustrated

Copper alloy disc, corroded, in a lump of iron corrosion; provisionally identified as a Roman coin corroded onto a Roman brooch (Coin 103)
Iron strip, two fragments; L 45mm, 16mm (Iron 437, 438)
Iron bar; L 58mm, broken (Iron 439)
Iron strip, possibly a fragment of a knife blade; L 48mm (Iron 443)
Iron ?pin fragment; L 12mm (unnumbered)
Iron nail

Illustrated pottery

- 2 Body sherd
Exterior brown and combed; interior black and smoothed
Fabric 1a (2173.1)
- 3 Rim, flat-topped
Black throughout; both surfaces smoothed
Fabric 1b (2170.1)
- 4 Inturned-rim vessel
Black throughout; both surfaces smoothed
Fabric 1c (2171.4)
- 5 Rim
Black throughout; both surfaces smoothed
Fabric 1c (2172.2)

- 6 Body sherd, decorated with A5a stamp
Red-brown, smoothed exterior; black, smoothed interior
Fabric 1b (2169.1)
- 7 Rim
Very dark brown, smoothed surfaces; black core
Fabric 2 (2170.2)
- 8 Body sherd
Red-brown, smoothed exterior; black smoothed interior
Fabric 2 (2170.3)
- 9 Straight-sided bowl
Dark brown to black throughout; smoothed surfaces
Fabric 1b, lightly grass-tempered (2179.1)
- 10 Splay-sided bowl
Light red-grey exterior; grey interior; surfaces scraped, then burnished
Fabric 1b, lightly grass-tempered (2174.1)

GH 83

980N 210E (Figs 62, 133)
4.27m×3.51m Site atlas plan 10

Illustrated finds

- 1 Copper alloy tweezers (Bronze 241/AML715289)

Not illustrated

Copper alloy fragment, possibly from a brooch spring (Bronze 243/AML715290)
Iron pin, fragment; L 24mm (Iron 445)

Illustrated pottery

- 2 Rim, abraded; orientation uncertain
Exterior black, unevenly smoothed and decorated with rows of 'comb-point' impressions; interior brown to black
Fabric 2 (2182.1)
- 3 Splay-sided bowl, with pierced applied lug
Dark brown to black throughout; exterior burnished; interior smoothed and burnished at the rim
Fabric 1b (2184.1)
- 4 Evison (1979, fig 13d) has published a sherd from a Frankish spouted pitcher from GH 83. This is illustrated and described as a 'trefoil spout, everted rim, hollow cord in neck, chevron roulette...red core, grey surfaces'; the sherd cannot now be located.

GH 84

840N 420E (Figs 62, 133)
4.45m×3.05m Site atlas plan 10

Illustrated finds

- 1, 2 Two rim fragments from a copper alloy vessel, ?Roman (Bronze 557/AML820891, 560/AML820894)

Not illustrated

Copper alloy sheet fragment, unlocated (Bronze 559/AML820893)
Copper alloy bar fragment; L 12mm (Bronze 561/AML820895)
Copper alloy globule; diam 4mm (Bronze 454/AML750419)

Illustrated pottery

- 3 Applied lug, incompletely pierced
Grey-brown smoothed surfaces; black core
Fabric 1b (2190.1)
- 4 Rim and body sherd; profile reconstructed; orientation uncertain
Grey exterior; light grey interior; black core; both surfaces show traces of burnishing
Fabric 1b (2201.1)

GH 85

1040N 205E (Figs 62, 134)
3.86m×3.20m Site atlas plan 10

Illustrated finds

- 1 Copper alloy sheet fragment, curved (Bronze 269/AML715306)
- 2 Iron hook, severely corroded; original field sketch shows a looped terminal through which a chain link is fastened (Iron 446)
- 3 Iron sheet fragment with two rivets (Iron 450)

Not illustrated

Iron sheet fragment; c 43mm×25mm (Iron 448)
Iron knife blade, badly corroded; L 134mm (Iron 449)
One iron nail and several iron fragments

Illustrated pottery

- 4 Globular bowl
Exterior dark brown to dark grey, evenly scraped smooth; interior dark brown to black and smoothed, with carbonised deposits
Fabric 3, containing sparse grass temper (1170.1)
- 5 Rim, crudely made
Red-grey surfaces, scraped smooth
Fabric 2 (1170.4)
- 6 Globular jar with short, vertical rim
Dark red-grey exterior, scraped and lightly burnished; interior black and smoothed, with carbonised deposits
Fabric 2, moderately grass-tempered and containing common quartz sand (1171.2)
- 7 Rim and 3 body sherds from a ?straight-sided ovoid, decorated with 'comb-point' impressions; reconstructed profile
Exterior light-brown to black and burnished; interior black and burnished
Fabric 1b, densely grass-tempered (1171.4)
- 8 Hemispherical bowl; 80% complete
Black throughout; smoothed surfaces
Fabric 3, containing sparse grass temper (1172.1)
- 9 Pierced upright lug; crudely made
Light red-brown, crudely finished surfaces; black core
Fabric 1b, containing common ill-sorted quartz sand (1172.4)
- 10 Globular bowl
Black throughout; both surfaces burnished
Fabric 1b, exceptionally hard (1174.1)

GH 86

1265N 125E (Figs 62, 134)
4.52m×3.33m Site atlas plan 12

Illustrated finds

- 1 Opaque glass biconical bead, glossy yellow (Glass 475)

Not illustrated

Three iron nails

Illustrated pottery

- 2 Straight-sided ovoid, crudely formed, with short, flaring rim; approximately 20% complete; recorded as containing charcoal and calcined animal bone
Surfaces dark grey at shoulder and rim, light brown below the shoulder, and smoothed; some spalling and common seed impressions
Fabric 2, densely grass-tempered (2217.1)
- 3 Straight-sided ovoid with slightly offset shoulder
Red-brown, smoothed exterior; black, smoothed interior
Fabric 2, densely grass-tempered (2217.3)
- 4 Rim, flat-topped
Very dark brown, smoothed surfaces; black core
Fabric 2 (3313.1)
- 5 Inturned-rim bowl; well-made, with thin, even walls; approximately 40% complete
Predominantly light brown smoothed surfaces; black core
Fabric 1b (2212.1)

- 6 Hemispherical bowl, somewhat unevenly formed; approximately 40% complete
Dark grey-brown, smoothed exterior; black, smoothed interior
Fabric 2, densely grass-tempered (2213.1)
- 7 Straight-sided ovoid; well-made
Very dark brown to black exterior, evenly burnished; black interior, scraped smooth, with traces of burnishing
Fabric 1b (2218.1)
- 8 Straight-sided ovoid, rather unevenly formed; approximately 70% complete; compares very closely in fabric and colour with 2
Exterior brown, with dark grey rim and shoulder, hand-wiped; interior dark grey and smoothed
Fabric 2, densely grass-tempered (2217.2)

GH 87

1090N 0 (Fig 62)

4.12m×3.30m Site atlas plan 9

Finds, not illustrated

Iron scraps

GH 88

1530N 230E (Figs 62, 135)

3.91m×3.45m Site atlas plan 16

Finds, not illustrated

Iron knife blade; tang and tip broken; L 80mm (Iron 459)

Illustrated pottery

- 1 Rim, flat-topped
Dark brown, crudely finished surfaces; black core
Fabric 1a (2232.1)

GH 89

1543N 221E

No plan could be located for this feature Site atlas plan 16

GH 90

1075N 430E (Fig 63)

4.27m×3.35m Site atlas plan 20

Finds, not illustrated

Copper alloy Roman coin, unidentified (Coin 75)

GH 91

1823N 280E (Figs 63, 135)

4.27m×3.86m Site atlas plan 19

No finds

Illustrated pottery

- 1 Globular bowl; rim approximately 50% complete, with approximately 20% of the body
Brown-red, smoothed surfaces; black core
Fabric 1b (2239.1)

GH 92

1785N 210E (Fig 63)

3.20m×2.51m Site atlas plan 16

No finds

GH 93

1785N 972E (Figs 63, 135)

3.58m×2.59m Site atlas plan 20

Illustrated finds

- 1 Iron double-spiked loop, broken (Iron 466)

Not illustrated

Lead strip; L 46mm (Lead 124)

Iron pin fragment; L 90mm (Iron 467)

Iron strip; L 26mm (Iron 469)

Three iron nails

Illustrated pottery

- 2 Globular jar
Brown, smoothed exterior; black, smoothed interior
Fabric 2, densely grass-tempered (2254.1)
- 3 Globular jar
Red-brown to brown, smoothed exterior; interior dark grey and wiped smooth
Fabric 1b (2251.1)
- 4 Body sherd, decorated with A5b stamp
Black throughout; weathered exterior, smoothed interior
Fabric 1b, densely grass-tempered (2248.6)
- 5 Rim, crudely made
Red-brown exterior, wiped smooth; black, smoothed interior; surfaces marked by grass temper
Fabric 1b, densely grass-tempered (2257.1)
- 6 Globular bowl
Very dark brown, smoothed surfaces with external carbonised deposits; black core
Fabric 2 (2249.2)
- 7 Globular jar
Red-brown to black exterior; black interior; crudely finished surfaces
Fabric 2, coarse, containing common unsorted quartz sand (2263.1)
- 8 Hemispherical bowl
Black throughout; smoothed surfaces and internal carbonised deposits
Fabric 3, fine (2263.2)
- 9 Globular jar, well-made; approximately 20% complete
Exterior black on and above the shoulder, red-brown below, and lightly, evenly burnished; interior black and smoothed
Fabric 1b, containing moderate quartz sand (2264.2)
- 10 Dish
Grey-brown, smoothed exterior; dark brown interior, smoothed, with traces of burnishing
Fabric 2 (2262.1)
- 11 Hemispherical bowl with flat-rounded base
Very dark brown exterior; black interior; surfaces smoothed and unevenly burnished
Fabric 3 (2264.1)
- 12 Hemispherical bowl with slightly offset shoulder
Light red-brown, smoothed surfaces, exterior flaking; grey core
Fabric 1b (2256.1)
- 13 Large, straight-sided bowl with flat-topped rim; approximately 30% complete; found lying beneath loomweights on floor of hut; profile reconstructed
Brown, smoothed surfaces, marked by grass temper; black core
Fabric 2, densely grass-tempered and friable (2265.1)

GH 94 = pit 6193 (f) Site atlas plan 16**GH 95**

1911N 544E (Figs 63, 136)

4.88m×3.66m Site atlas plan 20

Illustrated finds

- 1 Iron hook with two rivets (Iron 474)

Not illustrated

Iron plate, riveted, unlocated (Iron 475)

Three iron nails

Illustrated pottery

- 2 Globular jar
Dark grey exterior, smoothed, with traces of burnishing; brown, smoothed interior; black core
Fabric 1b (2282.1)

- 3 Rim
Brown, smoothed exterior; dark grey, smoothed interior; black core
Fabric 1b (2283.1)
- 4 Rim
Black throughout; both surfaces smoothed
Fabric 3, fine, containing sparse grass temper (2285.1)
- 5 Rim; crudely made
Red-brown, crudely finished exterior; grey, smoothed interior
Fabric 2, lightly grass-tempered (2290.1)
- 6 Rim; crudely made
Outer surface red-brown, crudely finished, and flaking; inner surface grey and smoothed
Fabric 2, densely grass-tempered (2289.1)

GH 96

1764N 416E (Figs 63, 136)
4.75m×4.06m Site atlas plan 16

Illustrated finds

- 1 Iron knife with broken tang (Iron 479)

Not illustrated

Iron pin, broken; L 103mm (Iron 483)
Iron pin, recorded as having a spiral head; now disintegrated; L 81mm (Iron 484)
Iron pin, two fragments (Iron 478/AML729269)
Three iron nails, fragmentary

Illustrated pottery

- 2 Shoulder
Black throughout; smoothed surfaces
Fabric 1b (2295.1)
- 3 Rim, flat-topped and crudely made
Black throughout; both surfaces smoothed
Fabric 1b (2301.1)
- 4 Rim
Red-brown, smoothed exterior; black smoothed interior
Fabric 2 (2296.1)

GH 97

1950N 528E (Figs 63, 136)
5.08m×3.79m Site atlas plan 20

Finds, not illustrated

Iron nail shank

Illustrated pottery

- 1 Rim
Light brown smoothed surfaces; black core
Fabric 1b (2305.1)
- 2 Base, flat-rounded
Brown, smoothed surfaces; black core
Fabric 1b (2306.1)

GH 98

1857N 481E (Figs 63, 136)
4.33m×3.32m Site atlas plan 20

Finds, not illustrated

Iron bar; L 110mm (Iron 488)
Iron ?pin fragment; L 50mm (Iron 490)
Iron nail fragments

Illustrated pottery

- 1 Rim
Black throughout; abraded surfaces
Fabric 2 (2310.1)

- 2 Rim
Red-brown exterior; dark grey interior; surfaces smoothed
Fabric 1b (2311.1)
- 3 Hemispherical bowl
Light brown, smoothed surfaces; black core
Fabric 1b (2312.1)
- 4 Rim
Red-brown, smoothed surfaces; black core
Fabric 1b, containing common quartz sand (2314.1)
- 5 Rim
Black throughout; crudely finished surfaces
Fabric 2 (2314.6)

GH 99

1140N 200E (Figs 63, 136)
3.96m×3.43m Site atlas plan 12/13

No finds

Illustrated pottery

- 1 Base
Dark brown exterior; black interior; both surfaces smoothed
Fabric 1c (2318.1)
- 2 Rim
Black throughout; both surfaces smoothed
Fabric 2 (2325.1)

GH 100

1108N 338E (Figs 63, 137)
4.88m×3.63m Site atlas plan 13

Illustrated finds

- 1 Spindlewhorl, Type 1, oxidised Roman ware (SPW 16)
- 2 Spindlewhorl, Type 1, amphora sherd (SPW 17)
- 3 Iron wedge-shaped object, provisionally identified as a fragment of iron spade shoe; faint traces of a V-sectioned groove survive around the inside edge (Iron 491)

Not illustrated

Copper alloy arrow- or spearhead fragment, Bronze Age (Bronze 291/AML729138)
Five iron nails, fragmentary

Illustrated pottery

- 4 Body sherd with 'comb-point' decoration; similar to GH 85.7 and GH 83.2
Dark brown, unevenly burnished exterior; black, smoothed interior
Fabric 1b (2330.1)
- 5 Globular jar
Dark brown-grey, smoothed exterior; brown, smoothed interior
Fabric 1b (2330.2)
- 6 Hemispherical bowl with flat-topped rim
Dark grey throughout; both surfaces smoothed
Fabric 3 (2331.2)
- 7 Globular jar, well-made; very similar to and possibly from the same vessel as 9
Black throughout; burnished surfaces
Fabric 1b (2332.1)
- 8 Hemispherical bowl; crudely made
Dark grey throughout; smoothed surfaces
Fabric 2 (2333.1)
- 9 Globular jar with flat-topped rim; evenly made
Black throughout; burnished surfaces
Fabric 1b (2335.1)

- 10 Globular jar; approximately 30% complete; well-made
Red-brown to black exterior, scraped then lightly burnished; outer surface spalled, presumably during firing; interior grey and wiped smooth
Fabric 1b (2336.1)

GH 101

1030N 310E (Fig 63)
4.52m×3.56m Site atlas plan 10

Finds, not illustrated

Copper alloy sheet fragment with cut edge; L 40mm (Bronze 289/AML729136)
Three iron nails, fragmentary

GH 102

1470N 315E (Figs 63, 137)
4.45m×3.66m Site atlas plan 16

Illustrated finds

- 1 Amber bead (Bead 21)
- 2 Spindlewhorl, Type 1, Roman oxidised coarseware (SPW 18)

Not illustrated

Iron strip fragment; one end rounded, with a rivet hole; L 25mm (Iron 501)
Iron nail shank

Illustrated pottery

- 3 Flaring rim
Black throughout; burnished exterior, carefully smoothed interior
Fabric 1b, lightly grass-tempered (2350.3)
- 4 Straight-sided bowl
Dark grey-brown throughout; smoothed surfaces
Fabric 1b (2345.1)
- 5 Rim and two body sherds, perforated from the inside
Brown, smoothed surfaces; black core
Fabric 1b (2350.1)

GH 103

1115N 263E (Figs 64, 138)
3.96m×3.45m Site atlas plan 13

No finds

Illustrated pottery

- 1 Rim, flat-topped
Black, unevenly burnished exterior; brown, smoothed interior
Fabric 3, containing sparse grass temper (2358.1)
- 2 Straight-sided ovoid
Light brown to dark grey, lightly burnished exterior; black smoothed interior, with faint finger marks near the rim
Fabric 3 (2359.1)
- 3 Globular jar with rounded base; well-made; approximately 60% complete
Brown to black exterior, carefully smoothed, then lightly burnished; black interior, smoothed and flaking
Fabric 2, relatively coarse, containing common ill-sorted quartz sand and moderate angular flint chips (average 3mm) (2360.1)

GH 104

1097N 268E (Figs 64, 138)
3.81m×3.05m Site atlas plan 10

Illustrated finds

- 1 Iron shears, blade tips missing; wide expanded bow narrows markedly into both side bars which have square cross-sections (Iron 505)

Not illustrated

Iron sheet scraps (Iron 508)
Iron sheet fragment, unlocated (Iron 511)

Two iron nails, fragmentary

Illustrated pottery

- 2 Rim, flat-topped
Black throughout; exterior crudely finished; interior abraded
Fabric 3 (2363.2)
- 3 Body sherd with 'comb-point' decoration, unlocated; fabric recorded as grass-tempered (2364.4)
- 4 Rim
Light brown surfaces, scraped smooth; black core
Fabric 1b (2364.2)
- 5 Globular jar
Brown-red to black exterior, lightly and evenly burnished; red-brown interior, smoothed and flaking; black core
Fabric 2 (2370.2)
- 6 Globular jar with slightly flaring rim and flat-rounded base; approximately 25% complete
Brown to black smoothed exterior; black, smoothed interior with a thick carbonised deposit near the base (base is 2365.1)
Fabric 1b (2364.1)

GH 105

1216N 365E (Figs 64, 139)
4.88m×3.68m Site atlas plan 13

Illustrated finds

- 1 Iron punch with plain, flat head; parallel-sided, tapering only at pointed end (Iron 515)

Not illustrated

Two iron nail fragments

Illustrated pottery

- 2 Globular jar with exceptionally thin, even walls; resembles 3 in fabric and finish; approximately 50% complete
Exterior light brown on rim and shoulder, black on body and base, and lightly burnished; interior black, carefully smoothed, and burnished at rim
Fabric 2, densely grass-tempered and exceptionally hard (2047.1)
- 3 Globular jar with shallow, hollow, vertical bosses; approximately 40% complete
Red-brown to very dark brown exterior; interior grey-brown to dark grey; surfaces smoothed but marked by heavy grass tempering
Fabric 2, exceptionally hard but densely grass-tempered (2048.1)
- 4 Rim
Red-brown exterior; black interior; both surfaces smoothed; black core
Fabric 1b, densely grass-tempered (2047.2)
- 5 Globular bowl, unlocated; recorded as burnished on both surfaces
Fabric 1b (2049.2)
- 6 Rim; approximately 25% complete; well-made
Brown exterior with reddish margin and traces of burnishing on rim; interior red-brown; both surfaces smoothed
Fabric 1b, densely grass-tempered, containing a moderate quantity of haematite (2050.1)
- 7 Straight-sided bowl with slightly flaring rim; rim and body approximately 50% complete
Very dark grey-brown, lightly burnished surfaces; black core
Fabric 1b, densely grass-tempered (2051.5)
- 8 Globular or low-bulbous jar
Exterior brown on rim and shoulder, black on body, and lightly, evenly burnished; interior light brown to grey and smoothed, with traces of burnishing near the rim; black core
Fabric 1b, densely grass-tempered (2051.2)

- 9 Hemispherical bowl
Grey-brown smoothed surfaces with traces of internal burnishing; black core
Fabric 1b, densely grass-tempered (2043.1)
- 10 Straight-sided bowl with a slightly flaring rim; base complete; body and rim approximately 50% complete
Black throughout; exterior lightly and evenly burnished, including under base; interior smoothed
Fabric 1b, densely grass-tempered and friable (2040.1)
- 11 Straight-sided ovoid
Exterior red-brown to dark grey, smoothed and unevenly burnished; interior grey and smoothed; both surfaces marked by grass temper; black core
Fabric 1b, densely grass-tempered (2049.1)
- 12 Rim; approximately 50% complete
Light red-brown to grey throughout; carefully smoothed surfaces, lightly and unevenly burnished
Fabric 1b, densely grass-tempered (2052.1)

GH 106

1255N 440E (Figs 64, 140)
4.12m×3.28m Site atlas plan 13

Finds, not illustrated

Small copper alloy disc, badly corroded and adhering to an iron fragment; possible rivet head (Bronze 290/AML729137)

Iron scraps

Illustrated pottery

- 1 Globular jar
Dark brown, smoothed surfaces; black core
Fabric 1b (2375.1)
- 2 Pierced applied lug
Dark brown exterior, wiped smooth; black, smoothed interior
Fabric 1b, exceptionally hard (2373.1)

GH 107

989N 559E (Figs 64, 140)
3.37m×2.90m Site atlas plan 11

Finds, not illustrated

Lead lump, 42g (Lead 125)
Five iron nails, fragmentary

Illustrated pottery

- 1 Rim
Black throughout; both surfaces lightly burnished
Fabric 3 (2377.3)
- 2 Rim
Very dark brown, lightly burnished exterior; black, smoothed interior
Fabric 3 (2377.4)
- 3 Rim, flat-topped
Dark grey throughout; both surfaces unevenly burnished
Fabric 1c (2377.5)
- 4 Shoulder; from the same vessel as GH 109.2
Black exterior, lightly and evenly burnished; grey-brown core; light brown, evenly smoothed interior
Fabric 7 (2378.3)
- 5 Shoulder
Black throughout; both surfaces smoothed
Fabric 3 (2378.4)
- 6 Body sherd
Brown to black exterior; brown interior; lightly burnished surfaces
Fabric 3 (2378.8)
- 7 Rim, flat-topped and evenly formed
Black, burnished surfaces; red-grey core
Fabric 5 (2379.1)

- 8 Sub-biconical vessel
Black to red-brown, unevenly burnished exterior; black interior, wiped smooth and lightly burnished
Fabric 3 (2379.2)
- 9 Body sherd
Very dark red-grey throughout; exterior unevenly burnished, interior wiped smooth
Fabric 1c (2379.4)
- 10 Rim
Both surfaces brown and smoothed; dark grey core
Fabric 2 (2379.6)
- 11 Rim, crudely formed
Black throughout; exterior smoothed and unevenly burnished; interior smoothed
Fabric 2 (2379.8)
- 12 Shoulder, unevenly grooved
Brown, smoothed exterior; black, lightly burnished interior
Fabric 1c (2378.9)
- 13 Rim
Red-brown smoothed surfaces; black core
Fabric 3, fine (2381.1)
- 14 Straight-sided bowl
Black exterior, lightly and evenly burnished; dark grey interior, carefully smoothed
Fabric 3 (2381.2)
- 15 Rim
Very dark brown to black exterior; dark grey interior; both surfaces wiped smooth and lightly burnished
Fabric 1c (2382.1)
- 16 Biconical vessel
Black, carefully smoothed surfaces; red-grey core
Fabric 3, fine (2382.2)
- 17 Bowl with offset shoulder
Brown, smoothed exterior; black interior, wiped smooth and lightly burnished
Fabric 1c (2385.3)
- 18 Hemispherical bowl with flat-topped rim
Black throughout; exterior lightly burnished; interior smoothed
Fabric 1b (2390.1)
- 19 Rim
Brown exterior; dark grey interior; both surfaces smoothed
Fabric 3 (2390.2)

GH 108

801N 560E (Figs 64, 140)
5.84m×4.27m Site atlas plan 11

Illustrated finds

- 1 Copper alloy loop, broken (Bronze 585)
2 Copper alloy wire loop (Bronze 571/AML820905)

Not illustrated

Copper alloy scraps (Bronze 573, 584, 583, 585)
Translucent glass bead, brown, crushed (Glass 476)
Translucent glass bead, green, two fragments (Glass 512 and 521)
Translucent glass bead, blue, crushed (Glass 518, 520, 522)
Bubbly vessel glass, olive green, small fragment (Glass 519)
Iron strip, two fragments, possible knife blade; L 19mm, 33mm (Iron 764)
Two iron nails

Illustrated pottery

- 3 Biconical vessel decorated with A5a stamps
Brown to dark grey with lightly, evenly burnished surfaces
Fabric unclassified: contains fine, well-sorted quartz sand, unevenly distributed through the fabric so that there are concentrations of sand and areas where inclusions are dense (2391.1)

- 4 Body sherd decorated with C2d and A1b stamps
Exterior brown and smoothed; interior black and wiped smooth
Fabric 1b, exceptionally hard (2391.2)
- 5 Biconical vessel
Dark grey exterior with a light, even burnish; black, evenly burnished interior; reddish internal margin; black core
Fabric unclassified: 1a matrix containing moderate unsorted quartz sand and red clay pellets (2393.6)
- 6 Shoulder and body sherd
Red-brown, lightly burnished exterior; grey, smoothed interior; grey core
Fabric unclassified: exceptionally fine, hard sandy fabric, cf a very fine fabric 4 (2395.1)
- 7 Body sherd
Dark grey throughout; smoothed surfaces
Fabric 3 (2395.8)
- 8 Globular jar
Black, evenly burnished exterior; grey, carefully smoothed interior
Fabric 3, fine (2397.1)
- 9 Globular vessel
Black throughout; exterior lightly and evenly burnished; interior scraped smooth
Fabric 3 (2403.1)
- 4 Two body sherds
Brown to black surfaces; exterior partly pinched, partly burnished; interior carefully smoothed
Fabric 1c (1178.1)
- 5 Body sherd
Black throughout; both surfaces highly burnished
Fabric 1b (1180.1)
- 6 Globular vessel with flat-topped rim folded over and burnished
Red-brown to black exterior, evenly smoothed; dark brown interior, smoothed
Fabric 2, lightly grass-tempered (1180.2)
- 7 Faceted carinated bowl
Dark grey-brown, carefully smoothed surfaces, with light internal burnishing
Fabric 3 (1181.1)
- 8 Faceted carinated bowl
Dark red-brown exterior; black interior; both surfaces burnished
Fabric 3, fine and hard (1181.2)
- 9 Body sherd, dimpled
Dark grey, burnished surfaces
Fabric 3, fine (1181.3)
- 10 Biconical vessel
Black throughout; lightly, evenly burnished exterior, smoothed interior
Fabric 3, rather coarse (1180.5)

GH 109

1040N 650E (Figs 64, 141)
3.56m x 2.64m Site atlas plan 11

Illustrated finds

- 1 Fired clay square-headed brooch mould, two fragments

Not illustrated

Iron ring, broken; diam 78mm (Iron 526)

Illustrated pottery

- 2 Body sherd; from the same vessel as GH 107.4
Black exterior, lightly and evenly burnished; light brown, evenly smoothed interior; grey-brown core
Fabric 7 (2408.4)
- 3 Rim
Black throughout; both surfaces lightly and evenly burnished
Fabric 1b, exceptionally hard (2408.1)

GH 110

1110N 740E (Figs 64, 141, 142)
4.17m x 3.05m Site atlas plan 14

Illustrated finds

- 1 Fired clay stirrup-shaped weight; fine sandy fabric, orange to grey surfaces, and dark grey core (FC2079)

Not illustrated

Tapered iron bar, broken; L 58mm (Iron 528)
Iron strip; L 27mm (Iron 532)
Iron tang, probably from a knife; L 38mm (Iron 534)

Illustrated pottery

- 2 Straight-sided bowl, well-made
Dark grey surfaces, wiped smooth, then lightly and evenly burnished
Fabric 1c (1181.10)
- 3 Body sherd
Exterior black and crudely combed; interior dark grey and smoothed
Fabric 3 (1177.3)
- 11 Rim; well-made with slight external thickening
Black, highly burnished surfaces
Fabric 3 (1181.6)
- 12 Globular bowl
Brown to black exterior, lightly and evenly burnished; dark grey interior, evenly smoothed
Fabric 3, coarse, containing abundant well-sorted angular to sub-rounded quartzite grits (0.5–1.0mm) (1181.11)
- 13 Flat-topped rim; well-made
Very dark brown exterior; black interior; both surfaces lightly and evenly burnished
Fabric 3 (1182.3)
- 14 ?Biconical jar with round, solid shoulder bosses; exceptionally well-made; approximately 40% complete
Grey, carefully smoothed exterior; light grey, smoothed interior, with some spalling
Fabric 5 (1182.1)
- 15 Body sherd decorated with shallow groove
Black exterior, lightly and evenly burnished; very dark brown interior, smoothed
Fabric 2 (1183.1)
- 16 Two body sherds
Very dark brown throughout; both surfaces lightly burnished
Fabric 4 (1184.4)
- 17 Shoulder
Black throughout; burnished surfaces
Fabric 3, coarse (1184.6)
- 18 Faceted carinated bowl
Exterior black and burnished; interior flaked away
Fabric 3 (1187.1)
- 19 Shoulder
Black, evenly smoothed surfaces; red-grey core
Fabric 3 (1190.1)
- 20 Straight-sided bowl
Exterior brown to black and pinched; interior very dark brown and smoothed; rim burnished
Fabric 3, coarse (1193.1)

GH 111

930N 746E (Figs 64, 142)
2.54m x 2.34m Site atlas plan 11

Illustrated finds

- 1 Copper alloy rod or spatula, flattened at both ends (Bronze 525)

Not illustrated

c six iron nails, fragmentary

Illustrated pottery

- 2 Rim, flat-topped and well-made
Exterior dark grey; interior dark brown-grey; both surfaces weathered
Fabric 3, containing abundant, very fine quartz sand (1194.2)
- 3 Rim
Very dark brown, smoothed exterior with carbonised deposits; black, carefully smoothed interior
Fabric 1b (1194.4)
- 4 Hemispherical bowl
Black throughout; surfaces carefully smoothed
Fabric 1b (1194.5)
- 5 Body sherd
Exterior light red-brown, weathered and pinched; interior black, with a light, even burnish
Fabric 1a, exceptionally hard (1194.6)
- 6 Globular bowl; approximately 75% complete
Red-brown to very dark brown, carefully smoothed exterior with traces of burnishing; dark grey, carefully smoothed interior
Fabric 1c, containing sparse large angular and sub-rounded flint (1195.3)
- 7 Body sherd with evenly cut horizontal grooves
Exterior brown; interior dark grey; surfaces smoothed, with traces of burnishing
Fabric 4 (1195.2)

GH 112

112N 826E (Figs 64, 143)
2.29m x 1.83m Site atlas plan 14

*No finds**Illustrated pottery*

- 1 Carinated bowl with broad, horizontal grooves
Light red-brown to dark grey throughout, scraped smooth on both surfaces
Fabric 1b, containing abundant quartz sand (2412.1)
- 2 Hemispherical bowl
Black throughout; both surfaces carefully smoothed, with a trace of internal burnishing
Fabric 1c (2412.2)
- 3 Hemispherical bowl; well-made
Grey throughout, with slight oxidation near rim
Fabric unclassified: 1a matrix containing common ill-sorted quartz sand and white mica flecks (up to 1.8mm) (2414.4)
- 4 Straight-sided bowl, crudely made; approximately 40% complete
Black throughout; both surfaces roughly scraped
Fabric 1b, coarse, containing moderate large (up to 4mm) rounded to sub-angular flint (2415.1)
- 5 Globular bowl; exceptionally well-made; approximately 40% complete
Exterior black with traces of burnishing above the shoulder, reddened and scraped smooth below; interior black and carefully scraped smooth
Fabric 1c (2414.1)

GH 113

1975 290E (Figs 64, 143, 144)
3.86m x 3.63m Site atlas plan 1

Illustrated finds

- 1 Copper alloy belt plate fragment, late Roman (Bronze 409/AML744719)
- 2 Bronze disc, inlaid with lead-rich 'red' enamel (EDXRF); cut down from a larger disc (Coin 113/AML744716)
- 3 Iron knife (Iron 546)

Not illustrated

Copper alloy sheet, folded fragment; L 30mm (Bronze 410)
Copper alloy sheet, three scraps (Bronze 422, 430/AML744732, 744740)

Vessel glass fragment, olive green (Glass 304)

Four iron nails, fragmentary

Illustrated pottery

- 4 Body sherd with blind applied lug
Light brown, smoothed exterior; black, scraped interior
Fabric 1b (2418.1)
- 5 Rim and body sherds decorated with unclassified stamp
Dark grey to black exterior; black interior; both surfaces scraped, with traces of burnishing
Fabric 1b, containing abundant quartz sand (2419.4)
- 6 Globular bowl with folded rim and slightly offset shoulder
Very dark brown exterior, with traces of burnishing; black interior, wiped smooth, then burnished
Fabric 1b (2419.5)
- 7 Splay-sided bowl
Dark red-grey exterior; grey interior; surfaces unevenly smoothed
Fabric 1b (2419.3)
- 8 Splay-sided bowl; cf 7 in form, fabric, and finish
Dark grey, crudely finished exterior; light red-brown, smoothed interior
Fabric 1b (2419.11)
- 9 Rim
Brown to black, carefully smoothed exterior; black, smoothed interior
Fabric 1b, lightly grass-tempered (2422.1)
- 10 Rim
Dark grey throughout with reddish margin; surfaces abraded, but appear to have been evenly smoothed
Fabric 2, containing abundant quartz sand and moderate, sub-angular flint (average 1.5mm) (2420.5)
- 11 Plate
Underside black and smoothed, with traces of burnishing; upper surface red-brown and carefully smoothed; no carbonised deposits or signs of secondary burning
Fabric 2 (2420.7)
- 12 Globular jar
Black throughout; traces of burnishing on both surfaces
Fabric 1b, exceptionally hard (2420.8)
- 13 Rim, flat-topped
Black throughout; both surfaces evenly burnished
Fabric 2, exceptionally hard (2420.11)
- 14 Two rim sherds, flat-topped
Light brown to black, carefully smoothed exterior; black, smoothed interior
Fabric 1b (2420.1)
- 15 Biconical bowl
Dark grey exterior; light brown interior; both surfaces smoothed
Fabric 1c (2420.17)
- 16 Flat-topped rim with upright lug
Black throughout; exterior smoothed with traces of burnishing; interior scraped smooth
Fabric 1b (2422.2)

- 17 Rim of perforated vessel
Surfaces heavily abraded; red-grey throughout
Fabric 1c (2422.3)
- 18 Rim
Dark brown to black exterior; black interior; both surfaces burnished
Fabric 1b (2420.3)
- 19 Inturned rim
Red-brown, smoothed exterior; black interior, scraped smooth
Fabric 3 (2422.11)
- 20 Body sherd, lightly scored
Dark grey throughout; traces of burnishing on both surfaces
Fabric 1a (2422.12)
- 21 Body sherd
Black throughout; both surfaces lightly burnished
Fabric 3 (2422.13)
- 22 Body sherd, decorated with ?D2a stamp
Black throughout; both surfaces carefully smoothed
Fabric 3 (2423.1)
- 23 Biconical vessel, decorated with A4a stamp
Red-brown exterior; black interior; surfaces smoothed, with traces of burnishing
Fabric 2, exceptionally hard (2423.2)
- 24 Body sherd
Dark grey throughout; surfaces smoothed, with traces of external burnishing
Fabric 4 (2423.4)
- 25 Body sherd; exceptionally well-made and decorated with evenly cut grooves and A1b stamps
Black throughout; exterior evenly burnished to a high lustre; interior carefully smoothed and lightly burnished
Fabric 1a, exceptionally hard (2425.5)
- 26 Body sherd, decorated with A1b stamp
Brown-grey exterior, evenly burnished; black interior, smoothed; internal carbonised deposits
Fabric 1a, exceptionally hard (2425.6)
- 27 Biconical vessel decorated with E2a stamp
Black throughout; traces of burnishing on both surfaces
Fabric 3 (2435.1)

GH 114

1210N 902E (Figs 64, 144)
3.73m×2.87m Site atlas plan 14

No finds

Illustrated pottery

- 1 Globular jar; approximately 40% complete
Dark red-brown smoothed exterior; black, smoothed interior
Fabric 1b, containing common quartz sand (1199.1)
- 2 Body sherd, perforated from the inside
Brown exterior; dark brown interior; surfaces smoothed
Fabric 2, densely grass-tempered (1202.1)
- 3 Handled dish
Exterior dark grey and carefully smoothed; interior red-grey and smoothed
Fabric 1b (1200.5)

GH 115

1325N 660E (Figs 64, 144)
4.17m×2.87m Site atlas plan 14

Finds, not illustrated

Copper alloy pin fragment, corroded; L. 9mm (Bronze 423/AML744733)
Iron nail

Illustrated pottery

- 1 Rim
Very dark brown to black throughout; surfaces lightly burnished; external carbonised deposits
Fabric 2 (2721.1)
- 2 Rim
Dark brown exterior; dark grey interior; surfaces scraped smooth
Fabric 1b (2722.2)
- 3 Globular bowl
Outer surface very dark brown to black, and smoothed below the shoulder with traces of burnishing and soot near the rim; interior black and smoothed, with carbonised deposits
Fabric 1b (2725.1)

GH 116

180S 280E (Figs 64, 145)
2.82m×2.74m Site atlas plan 1

Illustrated finds

- 1 Iron strip, perforated (Iron 553)
- 2 Iron strip, perforated, originally cross-joined with 1 (Iron 552)

Illustrated pottery

- 3 Body sherd, decorated with A4a stamp
Black throughout; exterior highly burnished; interior lightly burnished
Fabric 3, fine (2442.1)
- 4 Splay-sided bowl
Exterior light brown; interior black; surfaces smoothed
Fabric 1b, lightly grass-tempered (2442.2)
- 5 Rim
Exterior light red-brown; interior dark grey; surfaces scraped smooth
Fabric 1b (2443.1)
- 6 Straight-sided ovoid
Very dark brown to black throughout; both surfaces smoothed
Fabric 2, coarse (2444.4)
- 7 Body sherd, perforated from the outside
Exterior heavily abraded with none of the original surface remaining; interior black with a reddish margin, and smoothed
Fabric 1c (2443.5)
- 8 Shouldered jar, unevenly formed
Red-brown exterior; dark grey interior; surfaces wiped smooth
Fabric 1b, heavily grass-tempered (2444.1)
- 9 Rim
Black throughout; both surfaces lightly burnished
Fabric 1b (2444.7)
- 10 Rim with partial upright lug
Very dark brown to black throughout; both surfaces scraped smooth
Fabric 1b (2453.1)

GH 117

1457N 821E (Figs 65, 145)
5.18m×3.25m Site atlas plan 18

Finds, not illustrated

Copper alloy fragment, corroded (Bronze 533/AML820868)
Two iron nails

Illustrated pottery

- 1 Body sherd, dimpled
Dark grey throughout with lightly, evenly burnished surfaces
Fabric 4 (2455.1)

- 2 Rim
Dark brown exterior; black interior; carefully smoothed surfaces with traces of burnishing
Fabric 1b (2454.2)
- 3 Hemispherical bowl
Very dark brown to black throughout; both surfaces unevenly burnished
Fabric 3, containing sparse grass temper (2458.2)
- 4 Inturned-rim bowl, perforated from outside
Brown, smoothed surfaces, marked by grass temper; black core
Fabric 2, densely grass-tempered (2460.1)
- 5 Globular vessel with unevenly 'rolled' rim
Brown to black exterior with traces of burnishing; black interior, wiped smooth
Fabric 2, coarse and hard, with abundant grass temper (2460.2)

GH 118

1528N 820E (Figs 65, 146)
3.65m×2.56m Site atlas plan 18

Illustrated finds

- 1 Fired clay spindlewhorl, Type 2c; grass-tempered fabric, with brown to dark grey smoothed surfaces (SPW19)
- 2 Fired clay spindlewhorl, Type 2a; grass-tempered, with brown-red smoothed surfaces and black core (SPW35)

Not illustrated

Copper alloy coin, Roman; HADRIAN FELICITAS (Coin 115)
Copper alloy fragment; L 21mm (Bronze 425/AML744735)

Illustrated pottery

- 3 Sub-biconical bowl
Black exterior; dark brown interior with carbonised deposits; both surfaces scraped smooth
Fabric 3, containing sparse grass temper (2007.1)

GH 119

1485N 693E (Fig 65)
3.60m×3.18m Site atlas plan 17

No finds

GH 120

1593N 726E (Figs 65, 146, 147)
4.39m×2.76m Site atlas plan 17

Illustrated finds

- 1 Fired clay spindlewhorl, Type 3b; grass-tempered fabric, red-brown smoothed surfaces, and black core (SPW20)

Not illustrated

Copper alloy sheet fragment with two rivet holes; L 15mm (Bronze 424/AML74434)

Copper alloy sheet, numerous scraps (unnumbered)

Iron nail

Illustrated pottery

- 2 Body sherd, perforated
Exterior grey and smoothed; interior black and unfinished
Fabric 1b, lightly grass-tempered (2474.2)
- 3 Applied pierced lug
Light red-brown, smoothed exterior; dark grey abraded interior
Fabric 2 (2474.5)
- 4 Everted rim
Black throughout; both surfaces evenly burnished
Fabric 1b (2475.2)
- 5 Rim
Black throughout with traces of burnishing on both surfaces, and internal carbonised deposits
Fabric 2 (2475.4)

- 6 Globular jar
Black throughout; both surfaces smoothed with traces of external burnishing
Fabric 2, coarse and sandy, containing moderate grass temper (2476.8)

- 7 Rim with an upright lug
Dark brown, carefully smoothed surfaces, with traces of burnishing on the rim; black core
Fabric 1b (2475.7)

- 8 Globular bowl
Very dark brown to black throughout; both surfaces smoothed by hand
Fabric 2 (2476.1)

- 9 Globular jar; approximately 60% complete
Light red-brown to black exterior, smoothed with traces of burnishing; black, evenly burnished interior with carbonised deposits
Fabric 1b, lightly grass-tempered (2476.6)

- 10 Straight-sided bowl
Black throughout; surfaces carefully scraped smooth, with traces of burnishing
Fabric 1b, lightly grass-tempered (2476.3)

- 11 Straight-sided ovoid
Exterior red-brown, smoothed with traces of burnishing on the rim; interior dark grey, scraped smooth with traces of burnishing
Fabric 1b (2478.7)

GH 121

1562N 739E (Figs 65, 147)
4.01m×2.49m Site atlas plan 17

Finds, not illustrated

Copper alloy binding (Bronze 439/AML750404)

Fired clay spindlewhorl fragment, Type 3a; grass-tempered fabric, dark grey throughout (SPW32)

Iron scraps

Illustrated pottery

- 1 Hemispherical bowl
Very dark brown exterior; black interior; both surfaces smoothed
Fabric 2 (2485.3)
- 2 Inturned-rim bowl with flat-topped rim, perforated; well-made
Dark grey, carefully smoothed exterior; light red-brown, smoothed interior with traces of burnishing
Fabric 1b, lightly grass-tempered (2487.1)
- 3 Rim
Brown, smoothed exterior; black, scraped interior
Fabric 1b, containing moderate quartz sand (2487.2)

GH 122 = pit 7888 Site atlas plan 17

GH 123

1827N 668E (Figs 65, 147)
3.30m×2.36m Site atlas plan 20

No finds

Illustrated pottery

- 1 Perforated base or colander; perforated from the outside with a round, pointed tool, with a maximum diameter of approximately 3mm
Exterior red to brown; interior red-brown to dark grey; black core; both surfaces smoothed
Fabric 3, fine (2013.2)
- 2 Globular or shouldered jar
Dark brown exterior; black interior; both surfaces carefully smoothed with traces of burnishing
Fabric 1b (2013.1)

- 3 Rim, with slight external thickening
Dark grey-brown, smoothed surfaces; black core
Fabric 2, densely grass-tempered (2012.3)
- 4 Rim
Red-brown, smoothed surfaces; black core
Fabric 2, containing moderate quartz sand (2011.1)

GH 124

1782N 565E (Fig 65)
4.14m×3.78m Site atlas plan 17

No finds

GH 125

1530N 405E (Figs 65, 147)
4.57m×3.51m Site atlas plan 16

Finds, not illustrated

Iron scraps

Illustrated pottery

- 1 Globular vessel with footring base; base approximately 80% complete
Body black throughout; both surfaces smoothed, with traces of burnishing, also under base; red-brown inside base
Fabric 2, densely grass-tempered (2510.1)

GH 126

1690N 470E (Figs 65, 148)
4.42m×3.96m Site atlas plan 16

Illustrated finds

- 1 Fired clay spindlewhorl, Type 2a; lightly grass-tempered fabric, with red-grey to grey surfaces (SPW34)

Not illustrated

Iron pin; L 117mm (Iron 564)

Illustrated pottery

- 2 Globular jar
Exterior black to shoulder, light red-brown below, with a light, even burnish; interior black and evenly scraped
Fabric 2 (2520.1)

GH 127

1890N 886E (Figs 65, 148)
3.37m×3.56m Site atlas plan 21

Finds, not illustrated

Iron pin, curved (Iron 566)

Iron nail shank

Illustrated pottery

- 1 Flat-angled base
Red-grey combed exterior; dark grey, smoothed interior
Fabric 3 (2528.1)
- 2 Globular bowl with slightly flaring rim and splayed base; approximately 80% complete
Red-brown smoothed surfaces; brown-red core
Fabric 3, containing abundant fine quartz sand (2531.2)
- 3 Straight-sided ovoid with slightly thickened rim and splayed base; approximately 30% complete
Brown to black surfaces, scraped smooth and lightly burnished; black core
Fabric 1b, densely grass-tempered (2529.1)
- 4 Two body sherds; well-made
Black throughout; exterior highly burnished; interior carefully smoothed
Fabric 3 (2530.5)
- 5 Rim
Black throughout; surfaces scraped smooth and lightly burnished
Fabric 3 (2532.3)

- 6 Rim; well-made
Exterior very dark brown, carefully smoothed and pinched below the shoulder; interior black and burnished, with carbonised deposits
Fabric 1b, containing common quartz sand (2533.2)
- 7 Hemispherical bowl; approximately 20% complete; well-made
Exterior brown to black and carefully smoothed; interior black and smoothed with traces of burnishing
Fabric 1b (2533.5)
- 8 Splay-sided dish; approximately 25% complete
Red-grey smoothed surfaces; black core
Fabric 1c, containing sparse cereal grains (2533.3)
- 9 Splay-sided dish; approximately 20% complete
Red-brown, weathered exterior; grey smoothed interior
Fabric 2, containing common quartz sand (2534.2)

GH 128

1875N 903E Unplanned Site atlas plan 21
A truncated pit complex cutting the North Enclosure

No finds

GH 129

1900N 970E (Figs 65, 148, 149)
3.51m×2.64m Site atlas plan 21

Illustrated finds

- 1 Copper alloy sheet, three cut pieces (1 illustrated) (Bronze 472/AML820802)
- 2 Iron knife (Iron 573)
- 3 Iron fitting with rivet hole (Iron 585)

Not illustrated

Copper alloy sheet fragment; L 18mm (Bronze 477/AML820812)
Copper alloy strip, ?binding; L 23mm (Bronze 507/AML820842)
Glass vessel rim, blue with horizontal trails; identified by Evison as a possible cone beaker fragment; unlocated (Glass 255)
Glass vessel fragment, light green with horizontal trails; identified by Evison as likely to be Anglo-Saxon in date; unlocated (Glass 283)
Lead pin fragment, L 13mm (Lead 127)
Iron knife tip (Iron 570)
Iron strip; L 83mm (Iron 575)
Iron ?gimlet fragment, unlocated; described by Morris as having a square cross-sectioned shank tapering slightly towards a square cross-sectioned tang which could have fitted into a straight or transverse handle; blade end circular in cross-section and appears to be twisted; L 57mm (Iron 583)
Iron pins, three fragmentary (Iron 572, 578, 582)
Iron pin, possibly from a heckle; L 68mm (Iron 579)
Seven iron nails, fragmentary

Illustrated pottery

- 4a-e Five body sherds decorated with A1b and A4a stamps
Dark grey surfaces and red-grey core; exterior smoothed; interior crudely finished
Fabric 3, coarse (2540.1)
- 5 Body sherd, perforated
Reddened, weathered surfaces; black core
Fabric 2, very fine and friable, containing common quartz sand (2544.1)
- 6 Rim
Exterior red-brown; interior dark grey; both surfaces smoothed
Fabric 3 (2541.3)
- 7 Rim
Yellow-red smoothed surfaces; black core
Fabric 1b (2543.1)
- 8 Rim
Dark red-grey throughout; smoothed surfaces
Fabric 1a (2544.2)

- 9 Body sherd decorated with a composite stamp consisting of an A1b stamp within an A5d stamp
Black throughout; exterior burnished; interior smoothed
Fabric 1c, exceptionally hard (2545.1)
- 10 Shoulder, decorated with A1b stamps
Dark grey throughout; some oxidised patches on exterior surface; both surfaces smoothed
Fabric 1b, lightly grass-tempered (2545.2)
- 11 Shoulder
Black throughout; smoothed surfaces
Fabric 1a (2545.7)
- 12 Perforated applied lug, crudely formed
Black throughout; unfinished surfaces
Fabric 3, coarse (2547.1)
- 13 Rim from splay-sided bowl
Core black throughout; a red-brown layer of clay has been smoothed over the core and into the body of the pot; a second layer has also been smoothed into the body of the vessel, and lightly and evenly burnished; the interior surface of this last layer is red-brown, and the exterior is black; it appears that the vessel was refired at least once; the clay appliqué may have formed an upright lug
Fabric unclassified, containing moderate well-sorted quartz sand, sparse flint, and grass temper (2547.3)
- 14 Body sherd
Dark grey throughout; exterior pinched; interior smoothed
Fabric 3 (2548.3)
- 15 Body sherd with small hollow boss
Dark grey, lightly burnished exterior; grey, unfinished interior
Fabric 1a (2545.8)
- 16 Inturned-rim bowl
Black throughout; smoothed surfaces
Fabric 1b (2548.5)
- 17 Straight-sided bowl
Black throughout; exterior smoothed; interior unfinished
Fabric 3, coarse (2550.2)

GH 130

1853N 873E (not illustrated, plan incomplete; finds Fig 149)
3.43m×2.79m Site atlas plan 21

Finds, not illustrated

Iron nail, fragmentary

Illustrated pottery

- 1 Rim, with external thickening
Black throughout; both surfaces carefully smoothed
Fabric 1b, lightly grass-tempered (2558.2)
- 2 Rim
Red-brown, smoothed exterior; dark grey, scraped interior
Fabric 2 (2559.1)
- 3 Rim with upright lug
Dark grey throughout with red margin; exterior wiped; interior scraped smooth
Fabric 2, coarse (2559.3)
- 4 Body sherd
Exterior light brown, smoothed and lightly pinched; interior black and smoothed
Fabric 1b, densely grass-tempered (2559.2)
- 5 Body sherd
Black throughout, wiped with a coarse fibre, then lightly burnished; interior dark brown and smoothed
Fabric 1b (2559.4)

- 6 Rim, everted and flat-topped
Red-brown to dark grey throughout; surfaces smoothed and lightly, randomly scored
Fabric 1b (2562.2)
- 7 Splay-sided bowl; approximately 50% complete
Exterior light red-brown; interior dark grey; surfaces crudely finished
Fabric 2 (2562.1)
- 8 Rim, everted
Dark brown, smoothed surfaces; black core
Fabric 1b (2559.6)
- 9 Hemispherical bowl; approximately 40% complete
Black throughout; exterior unevenly burnished, interior smoothed
Fabric 1b, containing moderate quartz sand (2564.1)

GH 131

1875N 934E (Figs 65, 149)
3.51m×2.84m Site atlas plan 21

Illustrated finds

- 1 Jet disc bead (Jet 26)

Not illustrated

Copper alloy sheet, two scraps (Bronze 474/AML820804)
Two iron nails

Illustrated pottery

- 2 Body sherd with broad, shallow grooves
Black throughout; exterior smoothed; interior abraded
Fabric 3 (2580.1)
- 3 Rim
Black to red-brown smoothed exterior with carbonised deposits; black interior with traces of burnishing
Fabric 1c, containing sparse grass temper (2574.2)
- 4 Two body sherds
Light red-brown to black exterior, pinched; black, evenly burnished interior with carbonised deposits
Fabric 1c (2577.1)
- 5 Small biconical bowl
Dark grey exterior; red-brown interior; weathered surfaces
Fabric 1a (2576.1)
- 6 Rim, folded to outside
Dark grey throughout; traces of burnishing on both surfaces
Fabric 5 (2574.3)
- 7 Pedestal base, rather crudely formed
Brown, smoothed surfaces; black core
Fabric 2 (2574.4)
- 8 Carinated bowl, with diagonally slashed carination
Black throughout; exterior burnished; interior smoothed
Fabric 3 (2574.10)
- 9 Rim
Brown-red, weathered exterior; dark grey, smoothed interior
Fabric 1c, containing sparse grass temper (2576.2)
- 10 Carination, diagonally slashed
Brown-red surfaces; black core; surfaces weathered but appear to have been smoothed
Fabric 3 (2577.2)
- 11 Rim
Brown to black exterior, with traces of burnishing; red-grey, carefully smoothed interior; partly oxidised core
Fabric 1c (2583.1)

GH 132

1782N 928E (Figs 65, 150)
3.33m×2.64m Site atlas plan 18

Illustrated finds

- 1 Copper alloy strip, perforated (Bronze 459/AML820789)
- 2 Iron hooked fitting, broken (Iron 594)

Not illustrated

Iron rod, looped, described as a possible chain link; unlocated (Iron 591)

Iron diamond-shaped rove; unlocated (Iron 595)

Illustrated pottery

- 3 Rim
Black throughout; surfaces smoothed
Fabric 2 (2589.1)
- 4 Biconical jar, crudely formed; profile reconstructed
Brown exterior; grey to black interior; surfaces crudely finished
Fabric 2, densely grass-tempered (2589.2)
- 5 Two body sherds; well-made, with evenly cut grooves
Black, burnished exterior; brown smoothed interior
Fabric 1b, lightly grass-tempered (2589.3)
- 6 Body sherd, decorated with ?B1b stamp, partly obscured by weathering, grass temper, and the crudeness of the finish
Light brown throughout; surfaces crudely finished
Fabric 2, densely grass-tempered (2590.1)
- 7 Rim, crudely formed
Red-brown exterior; dark grey interior; surfaces wiped smooth
Fabric 2 (2591.1)
- 8 Body sherd, perforated; one edge appears to have been ground down to form a flat, even surface
Dark grey throughout with reddish margin; smoothed on both surfaces
Fabric 2, containing common quartz sand (2591.2)
- 9 Rim
Brown exterior, with a trace of burnishing; dark grey interior, scraped smooth, then lightly burnished
Fabric 1b (2595.1)
- 10 Rim; orientation uncertain; either a short, vertical rim, as illustrated, or a flat-topped everted rim
Grey throughout; exterior smoothed; interior wiped with a coarse fibre
Fabric 2, coarse, containing moderate grass temper and abundant quartz sand (2597.1)
- 11 Globular jar
Dark grey to red-brown exterior, carefully smoothed then unevenly burnished; black interior, lightly and evenly burnished
Fabric 1b (2596.1)

GH 133

19837N 983E (Figs 65, 150)

4.12m x 3.10m Site atlas plan 21

Illustrated finds

- 1 Opaque glass cylinder bead; white core with red-brown looped trail enclosing green dots (Glass 524)
- 2 Jet disc fragment, ?perforated (Shale 20)
- 3 Shale counter (Shale 10)

Not illustrated

Lead strip, curved; L 40mm (Lead 128)

Iron nail

Illustrated pottery

- 4 Inturned rim
Dark brown surfaces, evenly scraped smooth; black core
Fabric 1c (2601.1)

- 5 Splay-sided bowl
Brown exterior; dark grey interior; smoothed surfaces with traces of internal burnishing
Fabric 1b, containing common quartz sand (2602.2)
- 6 Rim
Light red-brown throughout; surfaces smoothed
Fabric 1c, containing sparse grass temper (2602.5)
- 7 Three body sherds, decorated with grooves and dimples; from the same vessel as GH 145.4
Light red-brown throughout with light grey margins; weathered, but surfaces carefully smoothed with traces of burnishing
Fabric 4 (2602.3)
- 8 Hemispherical bowl
Dark brown to black throughout; surfaces scraped smooth
Fabric 3 (2602.4)
- 9 Body sherd
Black throughout; exterior pinched; interior smooth
Fabric 2, lightly grass-tempered (2602.6)
- 10 Rim, flat-topped
Black throughout; surfaces scraped smooth
Fabric 1b (2603.1)
- 11 Globular jar
Dark brown to black exterior, with traces of burnishing; dark grey interior, scraped smooth
Fabric 1b, containing common quartz sand (2607.1)

GH 134

1809N 969E (Figs 65, 151)

2.92m x 2.59m Site atlas plan 21

Illustrated finds

- 1 Copper alloy sheet, rolled fragment (Bronze 475/AML820805)
- 2 Lead pin (Lead 129)
- 3 Iron fitting with rivet (Iron 607)
- 4 Iron key, originally with hooked terminals (Iron 612)

Not illustrated

Copper alloy sheet fragment; L 34mm (Bronze 513/AML820848)

Iron sheet fragment; L 66mm (Iron 606)

Iron sheet fragment, curved and perforated; L 40mm (Iron 614)

Iron strip, twisted; L 50mm; unlocated (Iron 615)

Iron pin fragment; L 37mm (Iron 616)

c six iron nails, fragmentary

Illustrated pottery

- 5 Straight-sided bowl
Very dark brown; surfaces smoothed with traces of external burnishing
Fabric 2, containing common quartz sand (2610.4)
- 6 Three body sherds, decorated with A5a and B3b stamps and a single dimple
Dark grey throughout; exterior carefully smoothed with traces of burnishing; interior wiped smoothed, then burnished
Fabric 1b (2611.12)
- 7 Rim and shoulder
Black and smoothed near the rim, brown and roughened on the shoulder, perhaps with an applied slip
Fabric 2, coarse, containing abundant quartz sand and common whole seeds which have left burnt-out impressions in the exterior surface (2612.2)
- 8 Biconical bowl, decorated with A2a and E2a stamps
Black throughout; both surfaces highly burnished
Fabric 1b, exceptionally hard and containing moderate quartz sand (2612.5)

- 9 Body sherd, decorated with an unidentified stamp
Exterior black; interior dark brown; both surfaces burnished
Fabric 1c, exceptionally hard (2613.2)
- 10 Body sherd
Black throughout; both surfaces highly burnished
Fabric 1c, exceptionally hard and containing sparse grass temper
(2613.3)
- 11 Straight-sided bowl
Dark brown to black throughout; exterior burnished; interior
wiped
Fabric 1c (2615.1)
- 12 Globular vessel
Brown to black; both surfaces lightly burnished
Fabric 1b (2616.1)
- 13 Body sherd
Dark brown surfaces wiped smooth with a coarse fibre; exterior
lightly pinched
Fabric 1b, lightly grass-tempered and containing moderate quartz
sand (2617.2)

GH 135

1737N 1000E (Figs 66, 151, 152)
3.65m×3.28m Site atlas plan 18

Illustrated finds

- 1 Bronze 'Bifrons' type brooch (EDXRF) with semicircular head
(Bronze 540/AML820875)

Not illustrated

Lead fragment, 20g (Lead 130)
Iron nail shank

Illustrated pottery

- 2 Body sherd, unlocated; recorded as decorated with A5d stamp
and burnished on both surfaces; fabric recorded as 1c (2623.1)
- 3 Shoulder decorated with C1c stamp, made with a double-pointed
tool, and ?A4a stamp
Grey exterior, lightly burnished; grey-red interior, scraped
smooth
Fabric 3 (2625.2)
- 4 Body sherd with an applied pierced lug
Red-brown throughout; both surfaces smoothed
Fabric 3, containing sparse grass temper (2625.3)
- 5 Rim
Black throughout; both surfaces scraped smooth
Fabric 3 (2625.4)
- 6 Rim
Brown exterior; black interior; both surfaces carefully scraped
smooth
Fabric 1b (2625.5)
- 7 Straight-sided bowl with short, sharply everted rim
Dark brown exterior; black interior; both surfaces smoothed and
unevenly burnished; rim carefully burnished
Fabric 3, coarse (2625.6)
- 8 Two body sherds decorated with B2a stamp
Light brown-grey, carefully smoothed exterior with traces of bur-
nishing; dark grey, smoothed interior
Fabric 3 (2626.1)
- 9 Globular jar with short, sharply flaring rim; approximately 25%
complete
Dark brown-red exterior; black interior; surfaces smoothed
Fabric 2 (2627.3)
- 10 Flat-rounded base
Light brown exterior, lightly burnished and pinched above base;
black interior, scraped smooth
Fabric 3 (2628.1)

- 11 Shoulder decorated with G2b stamp and unidentified ?G2a stamp;
may belong to the same vessel as GH 140.5
Black throughout; exterior evenly burnished; interior carefully
smoothed
Fabric 3, fine and hard (2626.2)
- 12 Body sherd, decorated with H2 stamp
Black throughout; exterior burnished; interior smoothed
Fabric 4 (2626.3)
- 13 Body sherd
Black throughout and smoothed, with a light even external bur-
nish
Fabric 1b, lightly grass-tempered (2628.2)
- 14 Body sherd decorated with B1c stamp
Black throughout; surfaces burnished
Fabric 1b, densely grass-tempered (2630.1)

GH 136

1888N 760E (Figs 66, 152)
4.67m×2.74m Site atlas plan 20

Finds, not illustrated

Iron scraps

Illustrated pottery

- 1 Rim, flat-topped
Exterior light brown and wiped smooth with a fine fibre; interior
black and scraped smooth
Fabric 1b, lightly grass-tempered and containing common quartz
sand (2633.4)
- 2 Rim
Black throughout; surfaces wiped smooth
Fabric 2 (2635.1)

GH 137

1761N 981E (Figs 66, 152)
4.32m×3.05m Site atlas plan 18

Illustrated finds

- 1 Fired clay loomweight; grass-tempered fabric with orange sur-
faces (FC2095)

Not illustrated

four iron nails, fragmentary

Illustrated pottery

- 2 Hemispherical bowl
Brown, unevenly burnished exterior; black, smoothed interior
Fabric 2, densely grass-tempered (2020.1)
- 3 Hemispherical bowl with slightly flaring rim
Light red-brown throughout, with a partly reduced core; surfaces
scraped smooth
Fabric 3, fine (2026.1)
- 4 Rim
Dark grey-brown exterior; black interior; both surfaces smoothed
Fabric 1c (2020.2)
- 5 Body sherd
Light red-brown throughout; both surfaces carefully smoothed
and exterior pinched
Fabric 1c (2020.4)
- 6 Upright lug
Exterior red-brown; interior black; both surfaces smoothed
Fabric 3, containing abundant relatively well-sorted quartz sand
and sparse haematite (2021.1)
- 7 Jar with a blind applied lug on a splayed base; approximately 25%
complete
Black throughout; exterior burnished; interior smoothed
Fabric 2, containing moderate grass temper and abundant quartz
sand (2023.3)

- 8 Flat-topped rim from a perforated vessel
Red to red-grey smoothed surfaces; black core
Fabric 2 (2021.2)
- 9 Rim
Red-brown to grey surfaces, carefully smoothed with traces of
internal burnishing
Fabric 1b (2026.2)

GH 138 = pit 11387 (n) Site atlas plan 18

GH 139

1663N 1013E (Figs 66, 153)
3.35m×3.28m Site atlas plan 18

Illustrated finds

- 1 Opaque annular glass bead, 'black' with off-white inlaid dots
(Glass 474)
- 2 Iron round shave, now badly corroded; described by Morris based
on earlier examination and sketches: 'small curved semi-circular
blade whose edge is sharpened on one side only; both short tangs
are at right angles to the blade but also in the same direction as the
blade edge; tangs now bent and distorted; both tangs may have
been fixed in a single wooden handle which could be gripped and
used in one hand' (Iron 624)

Not illustrated

Iron knife, unlocated (Iron 625)

Illustrated pottery

- 3 Hemispherical bowl, well-made
Red-grey throughout; surfaces smoothed
Fabric 1c (2649.1)
- 4 Globular bowl
Exterior black and smoothed; interior red-brown to black, wiped
with a coarse fibre
Fabric 1a (2650.4)
- 5 Carinated bowl
Black throughout; surfaces lightly burnished
Fabric 3, fine (2656.1)

GH 140

1690N 1014E (Figs 66, 153)
73.35m×72.90m Site atlas plan 18

Illustrated finds

- 1 Iron knife (Iron 627)

Not illustrated

Iron nail fragments

Illustrated pottery

- 2 Rim, flat-topped
Light brown, smoothed surfaces; grey core
Fabric 1c (2659.1)
- 3 Rim
Black throughout; both surfaces lightly burnished
Fabric 3, fine (2660.1)
- 4 Splay-sided bowl
Black surfaces, smoothed and unevenly burnished; red-grey core
Fabric 3 (2661.2)
- 5 Rim, exceptionally well-made; decorated with G2b stamp visually
identical to GH 135.11 (may belong to the same vessel)
Black throughout; both surfaces highly burnished
Fabric 3, exceptionally hard (2662.1)

GH 141 = pit 11365 (m) Site atlas plan 18

GH 142

1890N 1000E (Figs 66, 153)
6.07m×3.89m Site atlas plan 21

Illustrated finds

- 1 Iron knife (Iron 634)
2 Iron awl (Iron 633)

Illustrated pottery

- 3 ?Basal sherd decorated with crudely scratched cross
Brown to black exterior; black interior; surfaces smoothed with
traces of external burnishing
Fabric 2, lightly grass-tempered (2716.1)

GH 143

1873N 1019E (Figs 66, 153)
3.51m×3.28m Site atlas plan 21

Illustrated finds

- 1 Copper alloy strip, ends broken; possible clip for the rim of a
wooden vessel (Bronze 501 / AML820836)
- 2 Iron ring fragment, possibly from an annular brooch (Iron 636)

Not illustrated

Iron sheet, two fragments; L 21mm, 24mm (Iron 637)

Illustrated pottery

- 3 Complete, unevenly formed, splay-sided bowl on a splayed base
with three blind pinched-out lugs
Smoothed red-brown surfaces; black core
Fabric 2 (2729.1)
- 4 Splay-sided bowl
Dark brown exterior; black interior; smoothed surfaces
Fabric 2 (2730.1)

GH 144

1911N 903E (Figs 66, 154)
3.05m×2.59m Site atlas plan 21

Illustrated finds

- 1 Fired clay spindlewhorl, Type 2a; grass-tempered fabric, with
brown surfaces and black core (SPW45)

Illustrated pottery

- 2 Rim
Dark brown exterior; black interior; burnished surfaces
Fabric 1b, exceptionally hard (2744.1)
- 3 Straight-sided bowl, crudely made; ?with an upright lug
Dark grey-brown, unevenly smoothed exterior; brown interior,
scraped smooth; both surfaces show traces of burnishing
Fabric 3, coarse (2745.1)
- 4 Rim
Red-brown surfaces, wiped smooth; black core
Fabric 1b (2746.1)

GH 145

1958N 980E (Figs 66, 154)
3.86m×3.15m Site atlas plan 21

Illustrated finds

- 1 Bone spindlewhorl, turned (Bone 13)

Not illustrated

Copper alloy sheet, two scraps

Illustrated pottery

- 2 Handled cup; approximately 75% complete
Light brown, crudely finished surfaces; black core
Fabric 1b, densely grass-tempered and containing sparse red clay
pellets (2033.1)
- 3 Hemispherical bowl
Dark grey exterior; black interior; smoothed surfaces
Fabric 3 (2033.3)

- 4 Body sherd, dimpled and grooved; from same vessel as GH 133.7
Light red-brown weathered exterior; grey, smoothed interior
Fabric 4 (2602.3)
- 5 Hemispherical bowl
Dark brown to black throughout; surfaces smoothed with traces
of burnishing
Fabric 3, fine (2033.5)
- 6 Rim
Dark grey throughout; surfaces smoothed with traces of burnish-
ing
Fabric 1a (2033.6)
- 7 Splayed base
Dark grey-brown smoothed surfaces; black core
Fabric 1b (2034.1)
- 8 Rim
Brown-red surfaces, scraped smooth; black core
Fabric 1c (2034.8)
- 9 Rim, well-made
Black throughout; both surfaces lightly burnished
Fabric 1c, exceptionally hard (2034.9)

GH 146

1934N 1067E (Figs 66, 154, 155)
3.91m×3.43m Site atlas plan 21

Illustrated finds

- 1 Iron ?key (Iron 642)

Not illustrated

Iron bar with square section; L 45mm; probable nail shank (Iron 639)
Four iron nails, fragmentary

Illustrated pottery

- 2 Body sherd decorated with A1b stamp and lightly grooved
Brown-grey to grey; both surfaces smoothed
Fabric 1b (2749.1)
- 3 Body sherd
Red-brown exterior; black interior; surfaces lightly burnished
Fabric 1b (2750.2)
- 4 Rim, flat-topped
Black throughout; surfaces scraped smooth with traces of burnish-
ing
Fabric 3, containing sparse grass temper (2750.9)
- 5 Two body sherds
Dark brown-red surfaces; black core; exterior carefully smoothed
then combed or scored; interior smoothed
Fabric 1b (2750.13)
- 6 Body sherd
Exterior brown, smoothed and evenly pinched; interior black and
flaking but evenly burnished where original surface preserved
Fabric 2 (2750.1)
- 7 Body sherd with blind applied lug
Brown-red exterior; black interior; both surfaces smoothed
Fabric 3, containing sparse grass temper (2751.1)
- 8 Body sherd with pierced applied lug; may belong to the same
vessel as 9
Red-brown, smoothed exterior; black unevenly burnished interior
Fabric 1b (2752.3)
- 9 Globular bowl with flat-topped rim; may belong to the same vessel
as 8
Exterior light red-brown to grey, smoothed, with traces of uneven
burnishing; interior black, scraped smooth and lightly burnished
Fabric 1b (2753.7)

- 10 Rim
Black throughout; both surfaces carefully smoothed with light,
even, external burnishing
Fabric 3, containing sparse grass temper (2753.2)
- 11 ?Hollow boss; may belong to same vessel as 3
Light brown exterior with traces of burnishing; grey, smoothed
interior
Fabric 1b, lightly grass-tempered (2756.1)

GH 147 = pit 10606 Site atlas plan 21

GH 148

2007N 931E (Figs 66, 155)
3.81m×3.38m Site atlas plan 21

Illustrated finds

- 1 Iron knife (Iron 647)
- 2 Iron tool, ?hand gouge or engraving tool; short, square cross-
sectioned tang; curved blade or shank which is flat and rectangu-
lar in cross-section and does not have a sharpened blade edge;
although the tip of the shank is broken and corroded, it is possible
that it is hollowed and had an open gouge-like cutting edge (Iron
648)

Not illustrated

Copper alloy scraps (Bronze 518/AML820853)

Illustrated pottery

- 3 Body sherd, decorated with G2 stamp
Black exterior; grey interior; surfaces smoothed
Fabric 3 (2777.1)

GH 149

2082N 1090E (Figs 66, 155, 156)
4.27m×3.51m Site atlas plan 21

Illustrated finds

- 1 Iron bar, hooked at both ends (Iron 649)

Not illustrated

Iron disc, diam c 20mm (Iron 650)

Illustrated pottery

- 2 Straight-sided bowl
Black throughout; surfaces smoothed with traces of burnishing;
internal carbonised deposits
Fabric 3, fine (3306.3)
- 3 Sub-biconical bowl; rim and shoulder approximately 50% com-
plete
Brown to black, unevenly burnished exterior; black, smoothed
interior
Fabric 1b (3300.2)
- 4 Globular bowl
Brown to dark grey, smoothed exterior; black, crudely wiped
interior
Fabric 2, rather coarse and lightly grass-tempered (3304.1)
- 5 Inturned-rim bowl
Brown exterior; dark grey interior; both surfaces carefully scraped
smooth and burnished
Fabric 1b, lightly grass-tempered and hard (3305.1)
- 6 Biconical bowl decorated with stab marks and impressed,
rounded facets on the carination; skilfully made with thin, even
walls, although decoration unevenly executed
Exterior dark grey to dark brown and burnished; interior black,
scraped smooth and unevenly burnished
Fabric 2, hard (3306.1)
- 7 Body sherd
Exterior brown and lightly, unevenly pinched; interior black and
smoothed
Fabric 1b (2054.1)

- 8 Shoulder, decorated with A5d stamps
Very dark brown, evenly burnished exterior; dark grey, smoothed interior
Fabric 1b (3306.2)
- 9 Straight-sided bowl with slightly flaring rim
Black throughout; exterior smoothed and unevenly burnished; interior wiped smooth
Fabric 3 (3306.6)
- 10 Globular vessel with short, sharply everted rim
Grey throughout; both surfaces wiped smooth
Fabric 1b, hard (3306.7)
- 11 Rim, flat-topped and carefully made
Black throughout; both surfaces burnished
Fabric 1c (3306.9)
- 12 Neck, decorated with A5a stamps
Black throughout; both surfaces smoothed
Fabric 1b (3307.1)
- 13 ?Biconical bowl, decorated with B1d stamp
Black throughout; surfaces carefully smoothed and lightly burnished
Fabric 1b (3309.1)
- 14 Rim and shoulder, well-made; approximately 40% complete
Black throughout; surfaces evenly smoothed
Fabric 2, hard (3309.6)
- 15 Splay-sided bowl
Black throughout; surfaces smoothed with traces of burnishing
Fabric 2 (3312.1)
- 16 Body sherd
Dark brown, evenly burnished exterior; black, smoothed interior
Fabric 3, hard and fine (3455.1)

GH 150

1962N 790E (Figs 67, 156)
5.00m×3.89m Site atlas plan 20

No finds

Illustrated pottery

- 1 Low-bulbous jar; approximately 30% complete
Dark brown to dark grey throughout; surfaces scraped smooth
Fabric 1b (2781.1)
- 2 Biconical vessel
Black exterior; dark brown interior; smoothed surfaces
Fabric 1c (2781.2)
- 3 Body sherd decorated with a composite stamp (A9c) consisting of an A4a within an A5d stamp, and an A4a stamp
Exterior brown; interior black; surfaces crudely finished
Fabric 2, densely grass-tempered (2783.1)
- 4 Body sherd, decorated with A1b and A4a stamps
Grey, heavily weathered exterior; dark grey smoothed interior
Fabric 1b, overfired (2784.1)
- 5 Neck of a Frankish, wheel-thrown bottle, unlocated; after Evison 1979, 84, fig 131: 'Sherd of neck of bottle with girth grooves, sandy, red core, grey surfaces' (2788.1)
- 6 Pierced upright lug
Red-grey smoothed surfaces; grey-red margin; black core
Fabric 2, containing common quartz sand (2788.2)
- 7 Rim
Black throughout; both surfaces unevenly burnished
Fabric 3 (2786.2)

GH 151

1995N 857E (Figs 67, 156)
5.21m×3.86m Site atlas plan 21

No finds

Illustrated pottery

- 1 Rim
Dark brown to black throughout; surfaces smoothed
Fabric 1b, densely grass-tempered, including moderate whole grains, marring the surfaces (2791.4)

GH 152

2045N 954E (Figs 67, 157)
3.76m×3.43m Site atlas plan 21

Illustrated finds

- 1 Fired clay spindlewhorl, decorated, Type 3b; sandy fabric, dark grey-brown throughout with carefully smoothed surfaces (SPW48)
- 2 Fired clay spindlewhorl fragment, Type 3a; sandy fabric, black throughout (SPW40)
- 3 Iron round-headed pin (Iron 652)

Not illustrated

Copper alloy Roman coin, unidentified (Coin 130)
Iron nail

Illustrated pottery

- 4 Rim
Dark grey exterior with reddish margin, smoothed and flaking; dark grey, smoothed interior
Fabric 1c (2799.3)
- 5 Splayed base
Black throughout body, red-brown beneath base; surfaces smoothed
Fabric 1b (2801.4)
- 6 Rim and base of a ?shouldered jar; base approximately 40% complete
Brown exterior; brown-black interior; surfaces smoothed, with traces of uneven internal burnishing
Fabric 2, lightly grass-tempered and containing abundant coarse quartz sand (2802.2)
- 7 Foot-ring base
Black throughout; both surfaces carefully smoothed
Fabric 1c (2802.4)
- 8 Body sherd
Exterior red-brown, smoothed and pinched; interior black, carefully smoothed, with traces of burnishing
Fabric 1c (2803.1)
- 9 Flat-rounded base
Exterior red-grey, with a fine, gritty slip; interior black, carefully smoothed, and lightly burnished
Fabric 1b (2803.8)
- 10 Rim, flat-topped
Dark brown exterior, smoothed with traces of burnishing; black interior, smoothed
Fabric 2, lightly grass-tempered and containing abundant coarse quartz sand (2804.3)
- 11 Hemispherical bowl
Dark brown to black, with evenly burnished surfaces
Fabric 1a, exceptionally hard (2805.1)
- 12 Rim
Black throughout; crudely finished with traces of burnishing
Fabric 3, containing sparse grass temper (2807.2)
- 13 Hemispherical bowl with flaring rim
Dark brown to black surfaces, smoothed and unevenly burnished
Fabric 2, densely grass-tempered (2807.3)

GH 153

2036N 923E (Figs 67, 158)
3.45m×3.05m Site atlas plan 21

Illustrated finds

- 1 Iron knife (Iron 654)

Illustrated pottery

- 2 Body sherd decorated with C1 stamp; heavily weathered and abraded; appears to have been subjected to secondary firing. Outer surface and core predominantly grey; interior light red-brown. Fabric 1c, coarse (2811.1)
- 3 Rim. Black throughout; both surfaces smoothed. Fabric 2, lightly grass-tempered (2815.4)
- 4 Globular bowl; rim and shoulder approximately 40% complete. Dark brown to black, carefully smoothed exterior; dark brown, smoothed interior. Fabric 1b (2815.2)

GH 154

2057N 975E (Figs 67, 158)

4.42m x 3.35m Site atlas plan 21

Illustrated finds

- 1 Copper alloy object (Bronze 502/AML820837)
- 2 Fired clay spindlewhorl fragment, Type 3a; grass-tempered fabric, with dark grey-brown surfaces and black core (SPW90)

Not illustrated

Copper alloy fragment with rivet, distorted by heat; L 22mm (Bronze 522/AML820857)

Iron knife blade; L 55mm (Iron 656)

Iron blade fragment, probably from a knife; L 76mm (Iron 657)

Iron nail

Illustrated pottery

- 3 Rim, emphasised with a groove. Brown to dark grey throughout; both surfaces smoothed with traces of external burnishing. Fabric 2 (2817.5)
- 4 Splay-sided bowl; approximately 50% complete. Brown to grey exterior; dark grey interior; signs of secondary firing; smoothed surfaces. Fabric 1b, lightly grass-tempered, containing common sand (2819.1)
- 5 Rim, flat-topped. Rim lip burnished; exterior brown to black and smoothed; interior light brown and smoothed. Fabric 2, moderately grass-tempered and containing abundant quartz sand (2819.3)
- 6 Rim. Light red-brown throughout; weathered surfaces. Fabric 1b (2819.4)
- 7 Vertical boss. Exterior partially vitrified; grey throughout; interior smoothed. Fabric 1b, overfired (2821.2)
- 8 'Bar-lip' lug. Body surfaces red-grey; black core; a thin layer of clay has been applied to the body of the vessel around the projection and burnished to provide additional support. Fabric 3 (2822.2)
- 9 Straight-sided bowl. Black throughout; surfaces smoothed with external burnishing. Fabric 3, fine (2822.3)

GH 155

2130N 1032E (Figs 67, 158)

3.91m x 3.35m Site atlas plan 23

Illustrated finds

- 1 Copper alloy rod, ends broken (Bronze 505/AML820840)
- 2 Translucent drawn glass bead, colourless (Glass 477)
- 3 Iron diamond-shaped rove (Iron 659)
- 4 Iron rod (Iron 660)

Not illustrated

Glass beaker, green, basal fragment with tubular base ring and partial pontil mark, mid second/early third century (Glass 254)

Translucent glass bead, dark brown, fragmentary (Glass 478)

Translucent cylindrical glass bead, Prussian blue, fragmentary (Glass 479)

Iron strip fragment; L 40mm (Iron 658)

Iron bar fragment; L 46mm (Iron 661)

Iron knife blade, straight-backed; L 88mm (Iron 663)

Iron ?pin fragment; L 33mm (Iron 665)

Two iron nails

Illustrated pottery

- 5 Three body sherds, from a ?biconical vessel, decorated with A1 stamps; two different dies may have been used, one an A1a motif, the other A1b. Grey-brown, carefully smoothed exterior with traces of burnishing; dark grey, smoothed interior. Fabric 3 (2827.1)
- 6 Body sherd, decorated with an unidentified stamp, possibly a H1a motif. Black throughout; both surfaces smoothed with a light external burnish. Fabric 1b, exceptionally hard (2827.2)
- 7 ?Hollow boss, rather crudely formed. Dark brown to dark grey throughout; both surfaces smoothed. Fabric 1b (2832.1)
- 8 Body sherd from a ?biconical vessel, decorated with N1 (?roulette) stamps, which also fill the pendent triangle; N1 stamp and fabric compare closely with GH 169.3. Very dark brown to black throughout; both surfaces lightly, evenly burnished. Fabric 1b (2826.1)
- 9 Straight-sided bowl. Red-grey, crudely finished exterior, with signs of secondary firing; brown-grey, smoothed interior. Fabric 2 (2827.5)
- 10 Globular vessel. Dark grey throughout; both surfaces smoothed by hand. Fabric 2 (2827.8)

GH 156

2086N 1012E (Figs 67, 159)

3.37m x 2.74m Site atlas plan 21

Illustrated finds

- 1 Spindlewhorl, Type 1; black burnished ware (SPW110)

Not illustrated

Copper alloy pin fragment; L 22mm (Bronze 481/AML820816)

Iron sheet fragment; L 35mm (Iron 669)

c four iron nails, fragmentary

Illustrated pottery

- 2 Straight-sided bowl with 3 blind applied lugs, on a low foot-ring base; found complete lying on the floor of the hut. Predominantly red-grey; both surfaces smoothed. Fabric unclassified; extremely friable, containing an exceptionally abundant quantity of unsorted quartz sand and sparse grass temper (2842.1)

- 3 Globular vessel
Black throughout; both surfaces wiped smooth
Fabric 2 (2837.2)

GH 157

2037N 830E (Figs 67, 159)
4.72m×3.89m Site atlas plan 21

Illustrated finds

- 1 Shale spindlewhorl (unnumbered)

Not illustrated

Copper alloy strip; L 18mm (Bronze 506/AML820841)
Iron pin, curved and broken at both ends; L 75mm (Iron 651)

Illustrated pottery

- 2 Globular vessel
Black throughout; both surfaces smoothed with light external burnishing
Fabric 1b (2848.1)
- 3 Rim
Black throughout; both surfaces smoothed with a light, even, external burnish
Fabric 1b (2850.1)
- 4 Splay-sided bowl
Light grey, crudely finished surfaces; black core
Fabric 1c, containing sparse grass temper (2851.1)
- 5 Rim
Brown to black throughout; both surfaces lightly burnished
Fabric 1b (2848.5)

GH 158

2048N 852E (Figs 67, 160)
4.15m×3.35m Site atlas plan 21

No finds

Illustrated pottery

- 1 Shoulder, decorated with A1b stamps
Black, lightly burnished surfaces; red-grey core
Fabric 4 (2861.1)
- 2 Rim
Red-brown to dark brown exterior; black interior; both surfaces smoothed
Fabric 2 (2861.6)
- 3 Rim
Grey to light red-brown exterior; grey interior; both surfaces smoothed
Fabric 1b (2862.4)
- 4 Globular vessel
Light brown to black exterior with carbonised deposits on the shoulder; black interior; both surfaces smoothed
Fabric 2 (2862.8)
- 5 Rim
Black throughout; surfaces smoothed with uneven external burnishing
Fabric 2 (2862.9)
- 6 Body sherd, decorated with A1a stamps
Dark brown to black exterior, smoothed then unevenly burnished; black interior, wiped with a coarse fibre
Fabric 1b, densely grass-tempered (2863.2)
- 7 Bowl
Black throughout; both surfaces smoothed
Fabric 3, fine (2867.1)

GH 159

2105N 914E (Figs 67, 160)
3.51m×3.10m Site atlas plan 23

Finds, not illustrated

Iron knife tip (Iron 674)
Iron nail fragment

Illustrated pottery

- 1 Body sherd with applied perforated lug
Light brown to black exterior; black interior; both surfaces smoothed
Fabric 2, densely grass-tempered and containing common quartz sand (2868.1)
- 2 Rim
Black throughout; both surfaces smoothed
Fabric 3, fine (2864.4)
- 3 Rim
Light brown-red, smoothed surfaces; black core
Fabric 1b (2870.1)

GH 160

2110N 1038E (Figs 67, 160)
3.65m×2.95m Site atlas plan 23

Illustrated finds

- 1 Iron diamond-shaped rove (Iron 673)

Not illustrated

Iron sheet fragment; L 24mm (Iron 672)

Illustrated pottery

- 2 Rim
Dark grey-brown surfaces, wiped smooth
Fabric 1b (2875.1)
- 3 Inturned rim
Black throughout; both surfaces smoothed
Fabric 3, fine, containing sparse grass temper (2878.1)
- 4 Body sherd with blind applied lug
Red-grey, unfinished exterior; black, smoothed interior
Fabric 2, containing common quartz sand (2878.2)
- 5 Rim and shoulder; reconstructed profile
Grey-brown, carefully smoothed surfaces; black core
Fabric 1b, containing common quartz sand (2879.3)

GH 161

2220N 1075E (Figs 67, 160)
3.96m×3.66m Site atlas plan 23

No finds

Illustrated pottery

- 1 Body sherd
Light red-brown exterior; black interior; smoothed surfaces
Fabric 3 (2056.1)
- 2 Splay-sided bowl with squared-off rim
Dark grey-brown throughout; surfaces scraped smooth
Fabric 2 (2056.4)
- 3 Rim, crudely made
Red-grey exterior; grey-brown interior; smoothed surfaces
Fabric 2 (3457.1)
- 4 Hemispherical bowl with ?upright lug
Black throughout; surfaces carefully smoothed; exterior has a fine gritty slip applied below the shoulder
Fabric 3, fine, containing sparse grass temper (3457.2)
- 5 Biconical bowl; approximately 50% complete; exceptionally well-made, with thin, even walls
Uniform dark grey-brown throughout; surfaces lightly, evenly burnished
Fabric 1c (2058.1)

- 6 Rim
Black exterior, crudely finished, but with traces of burnishing; dark grey, smoothed interior
Fabric 1b, containing common quartz sand (2061.2)
- 7 Globular bowl; rim and shoulder approximately 25% complete; very well-made
Surfaces uniform brown, scraped smooth and lightly burnished; black core
Fabric 1c, containing sparse grass temper (2059.4)
- 8 Body sherd
Light red-brown to dark grey, smoothed surfaces
Fabric 1b, lightly grass-tempered (2064.1)

GH 162

2180N 1080E (Figs 68, 161)
3.65m x 2.29m Site atlas plan 23

Illustrated finds

- 1 Fired clay spindlewhorl, Type 2a; grass-tempered fabric, black throughout and unevenly smoothed (SPW43)

Not illustrated

Two iron nails

Illustrated pottery

- 2 Shoulder decorated with H2a, G2a, and B1b stamps
Dark brown surfaces, lightly and evenly burnished; black core
Fabric 1b, containing common quartz sand (2885.1)
- 3 Rim, flat-topped
Light brown exterior; black interior; both surfaces smoothed
Fabric 1b (2886.1)
- 4 Hemispherical bowl with short, flaring rim
Brown exterior; black interior; both surfaces smoothed
Fabric 2 (2886.2)
- 5 Straight-sided bowl; approximately 40% complete
Dark brown exterior; black interior; both surfaces smoothed and lightly burnished
Fabric 1b, containing common quartz sand (2890.1)
- 6 Rim
Dark brown, smoothed exterior; black, scraped interior
Fabric 2 (2886.4)
- 7 Globular jar
Dark grey, smoothed exterior with traces of uneven burnishing; grey interior, scraped smoothed
Fabric 3, coarse, containing a moderate quantity of red clay pellets (2886.6)

GH 163

2247N 1027E (Figs 68, 162)
3.81m x 2.77m Site atlas plan 23

No finds

Illustrated pottery

- 1 Globular jar; rim approximately 50% complete
Dark grey to dark brown, carefully smoothed exterior; black, smoothed interior
Fabric 1b (2893.3)
- 2 Rim
Dark grey throughout; both surfaces smoothed
Fabric 3, containing sparse grass temper (2893.4)

GH 164

2225N 1000E (Figs 68, 162)
3.60m x 3.20m Site atlas plan 23

Finds, not illustrated

Foot of a copper alloy bow brooch, Roman (Bronze 536/AML820871)

Illustrated pottery

- 1 Inturned-rim vessel
Dark grey throughout; both surfaces smoothed
Fabric 2 (2899.1)
- 2 Splayed base
Light brown exterior; black interior; both surfaces smoothed
Fabric 3, fine (2905.1)
- 3 Straight-sided ovoid; approximately 80% complete
Brown-red to dark grey exterior, scraped smooth, with traces of uneven burnishing; red-brown to dark grey interior, smoothed; black core
Fabric 1b, densely grass-tempered, containing common quartz sand and sparse flint chips (2901.3)

GH 165

2215N 1135E (Figs 68, 162, 163)
4.03m x 3.12m Site atlas plan 23

Illustrated finds

- 1 Spindlewhorl, Type 1; grey ware (SPW23)

Not illustrated

Iron knife with broken tip and slightly concave back; L 95mm (Iron 680)

Illustrated pottery

- 2 Body sherd
Brown exterior, smoothed and pinched; black interior, smoothed
Fabric 1b (3467.1)
- 3 Biconical vessel decorated with A5a stamps; may belong to same vessel as 4
Black throughout; both surfaces carefully smoothed with a light external burnish
Fabric 1b (3468.2)
- 4 Shoulder; may belong to same vessel as 3
Black throughout; surfaces lightly, evenly burnished
Fabric 1b (3469.1)
- 5 Globular jar with short, sharply flaring, and trimmed rim
Light brown to dark grey; surfaces hand-wiped
Fabric 3, coarse (3468.1)
- 6 Rim
Black throughout; both surfaces carefully smoothed with traces of external burnishing
Fabric 1b (3470.1)
- 7 Globular vessel
Light red-brown throughout; both surfaces carefully smoothed with traces of uneven burnishing
Fabric 1b (3470.4)
- 8 Rim
Very dark brown to black throughout; surfaces smoothed
Fabric 1b, containing abundant quartz sand (3471.4)
- 9 Splay-sided bowl
Black exterior; dark brown interior; hand-wiped, then lightly and unevenly burnished
Fabric 1c (3472.2)
- 10 Perforated body sherd
Dark grey throughout; both surfaces smoothed
Fabric 3, fine and hard (3471.5)
- 11 ?Lid
Dark grey throughout; scraped smooth, then lightly and evenly burnished on both surfaces
Fabric 1b, exceptionally hard (3472.4)
- 12 Body sherd
Dark brown to black, carefully smoothed exterior with traces of burnishing; black interior, wiped smooth
Fabric 1b (3472.8)

- 13 Swallow's nest lug
Dark grey throughout; reddish margin
Fabric 3, containing sparse grass temper (3474.1)

GH 166

2302N 1067E (Figs 68, 163, 164)
3.81m×3.66m Site atlas plan 23

Illustrated finds

- 1 Gilt copper alloy button brooch, pin missing (Bronze 546/AML820883)
2 Brown glass claw fragment from a claw beaker, unlocated; described by Evison 1982, 64: 'Middle fragment of dark brown claw, fully hollow, with marks of drawing and vertical notched trail'; illustration after Evison 1982, fig 10.f, cat no 25 (Glass 285)

Not illustrated

Copper alloy scrap (Bronze 523/AML820858)
Iron scraps

Illustrated pottery

- 3 Body sherd decorated with B2b, H2a, and unclassified rectangular stamps; the H2a stamp is identical to that on GH 169.3; the sherds may come from the same vessel
Black throughout; exterior burnished; interior smoothed
Fabric 1b (3453.1)
4 Faceted carinated bowl
Exterior red-brown above the carination, black below, and smoothed; interior black and burnished
Fabric 3 (3453.2)
5 Hemispherical bowl
Black throughout; both surfaces smoothed
Fabric 1b (3454.5)
6 Straight-sided bowl
Dark grey-brown exterior; black interior; both surfaces wiped
Fabric 2, heavily grass-tempered and containing common quartz sand (2055.15)
7 Shoulder
Light brown exterior; brown to black interior; black core; both surfaces lightly burnished
Fabric 2, heavily grass-tempered (2055.8)
8 Rim and shoulder of vessel with alternating round and vertical hollow bosses
Red-brown exterior, with traces of burnishing
Fabric lightly grass-tempered and containing pink and white grits (3456.3)
9 Inturned-rim jar
Black throughout; red-brown patches on exterior; surfaces scraped smooth
Fabric 2, containing abundant quartz sand (2055.7)
10 Rim with faint horizontal grooves
Red-brown to black throughout; both surfaces lightly burnished
Fabric 1b (2057.9)
11 Rim, flat-topped
Dark brown exterior; black interior; both surfaces smoothed
Fabric 2 (2057.11)
12 Foot-ring base
Black throughout; both surfaces smoothed
Fabric 1b (3454.1)
13 Globular jar
Dark brown to dark grey throughout; both surfaces smoothed
Fabric 2, heavily grass-tempered and containing common quartz sand (3454.14)

- 14 Globular jar with crudely formed applied pierced lug and splayed base
Dark grey, evenly smoothed exterior; red-brown, smoothed interior
Fabric 2, densely grass-tempered and containing common quartz sand (2057.1)

- 15 Globular bowl with applied blind lug
Brown to black exterior; black interior; both surfaces lightly burnished
Fabric unclassified: hard and dense, containing common unsorted quartz sand and moderate haematite (2057.8)

- 16 Body sherd
Black throughout; exterior marked with random finger-tip impressions; interior unfinished
Fabric unclassified: coarse, containing abundant quartz sand, common white mica flecks, and moderate feldspar (3459.5)

- 17 Bowl with slightly incurving rim
Black throughout; both surfaces crudely finished
Fabric 2, coarse, containing common quartz sand (2057.12)

- 18 Large globular jar; approximately 60% complete
Exterior evenly smoothed and predominantly red-brown; dark grey on shoulder and rim; core predominantly black, although oxidised in some areas; interior predominantly grey-brown and scraped smooth
Fabric 1b, heavily grass-tempered (3459.1)

GH 167

2271N 1083E (Figs 68, 165)
3.20m×3.05m Site atlas plan 23

Finds, not illustrated

Copper alloy fragment, roughly spherical, diam 12mm (Bronze 590/AML820919)

Iron nail

Illustrated pottery

- 1 Globular jar
Dark brown surfaces wiped smooth with a coarse fibre; black core
Fabric 1b (2907.1)
2 Body sherd, decorated with A1a stamps
Black exterior, carefully smoothed with traces of even burnishing; brown, carefully smoothed interior
Fabric 1b (2908.1)
3 Rim
Dark grey-brown to dark grey throughout; both surfaces smoothed
Fabric 2, lightly grass-tempered and containing abundant quartz sand (2908.2)
4 Globular vessel; rim approximately 50% complete
Light brown to dark grey exterior, scraped smooth and lightly, unevenly burnished; dark grey interior, wiped with a coarse fibre which has left distinct scratches
Fabric 1b, lightly grass-tempered (2909.1)
5 Straight-sided bowl
Brown exterior; black interior; both surfaces smoothed
Fabric 1a (2909.2)
6 Globular bowl
Black throughout; surfaces scraped smooth and evenly burnished
Fabric 1a (2909.3)

GH 168

2085N 795E (Figs 68, 165)
5.21m×3.89m Site atlas plan 20/21

Illustrated finds

- 1-3 Three silver coins, type BX primary *scottas* (coins 118, 119, 120)

- 4 Opaque glass cylinder bead; green and yellow 'reticella' cable marvered on to a red-brown core (Glass 513)
- 5 Iron tool for dressing leather; straight blade with triangular cross-section; blade edge slightly flattened, not sharpened to a point; a square cross-sectioned tang extends from each end and curves away from the blade (Iron 684)

Illustrated pottery

- 6 Body sherd
Dark grey, combed exterior; black, carefully smoothed interior
Fabric 3, fine and hard (2920.1)
- 7 Shoulder, decorated with A7b stamp
Black throughout; exterior burnished, but marred by grass temper; interior carefully smoothed
Fabric 2, densely grass-tempered (2917.1)

GH 169

2219N 927E (Figs 68, 165)
7.47m x 5.18m Site atlas plan 23

Illustrated finds

- 1 Iron hooked terminal, ?girdle hanger (Iron 687)

Not illustrated

Copper alloy ring-key, Roman (Bronze 547 / AML820882)
Iron nail fragments

Illustrated pottery

- 2 Rim
Black throughout; both surfaces smoothed with traces of external burnishing
Fabric 2, coarse and containing abundant quartz sand (2930.3)
- 3 Shoulder, decorated with 'roulette' and H2a stamps; stamps and fabric are similar to GH 166.3, and these sherds may belong to the same vessel
Black throughout, with a carefully smoothed, lightly burnished exterior; interior surface completely abraded
Fabric 1b (2931.1)
- 4 Splayed base
Light red-brown, carefully smoothed surfaces; black core
Fabric 1b (2931.3)
- 5 Applied pierced lug
Red-brown smoothed exterior; black core; interior surface abraded
Fabric 1b (2932.1)
- 6 Flat-angled base
Light red-brown smoothed exterior; black, scraped interior
Fabric 2 (2932.4)
- 7 Rim, rather crudely made
Dark grey exterior, scraped smooth; dark grey-brown interior, scraped and wiped smooth
Fabric 1b, containing abundant quartz sand (2931.7)
- 8 Straight-sided bowl, rather crudely made
Black, smoothed exterior; grey-brown, scraped interior
Fabric 3 (2932.5)
- 9 Splayed base
Light red-brown exterior; black interior; surfaces carefully smoothed
Fabric 1b (2933.1)
- 10 Globular vessel, with slightly offset shoulder
Light red-brown to black exterior, wiped smooth, with traces of burnishing and carbonised deposits; dark grey-brown, smoothed interior
Fabric 2 (2935.1)
- 11 Dish
Light brown, smoothed surfaces; black core
Fabric 1c (2931.6)

GH 170

2085N 828E (Figs 68, 166)
approx 3.78m x 3.05m Site atlas plan 21

No finds

Illustrated pottery

- 1 Rim
Dark grey-brown exterior; dark grey interior; both surfaces smoothed
Fabric 2, containing quartz sand (3481.1)
- 2 Globular bowl with flat-topped rim, perforated from the outside
Dark grey to dark red-grey throughout with reddish margins; exterior carefully smoothed; interior smoothed
Fabric 2 (3481.2)
- 3 Rim, flat-topped
Black throughout; both surfaces smoothed
Fabric 1b (3484.1)

GH 171

2085N 989E (Figs 68, 166)
3.30m x 2.59m Site atlas plan 21

Finds, not illustrated

Iron rod, hooked terminal, badly corroded; L 33mm (Iron 688)

Illustrated pottery

- 1 Rim, crudely made
Black throughout; both surfaces smoothed
Fabric 2, containing common quartz sand (2942.1)
- 2 Globular bowl; reconstructed profile
Black exterior; brown interior; surfaces scraped smooth
Fabric 1b, containing abundant quartz sand (2945.1)

GH 172

2185N 968E (Plan not illustrated; pottery Fig 166; cut by ditch, leaving a shallow depression and two postholes c 7ft apart)
3.20m x 2.51m Site atlas plan 23

No finds

Illustrated pottery

- 1 Body sherd, decorated with C3a stamp and shallow diagonal grooves; possibly from the same vessel as 2
Grey, smoothed surfaces; traces of burnishing and red external margin; grey core
Fabric 1b, lightly grass-tempered (2952.1)
- 2 Body sherd decorated with A3a stamps; from the same vessel as GH 177.6, and possibly from the same vessel as 1
Red-grey exterior; grey interior; both surfaces smoothed
Fabric 1b, lightly grass-tempered (2952.2)
- 3 Rim
Brown exterior; black interior; both surfaces smoothed
Fabric 3 (2953.2)
- 4 Rim, flat-topped
Black throughout; both surfaces smoothed
Fabric 2 (2953.3)
- 5 Rim
Dark grey throughout; both surfaces smoothed
Fabric 1b (2953.8)
- 6 Globular jar
Brown to black throughout; exterior smoothed and unevenly burnished with carbonised deposits near the rim; interior scraped smooth and burnished near the rim
Fabric 1b, lightly grass-tempered and containing abundant fine well-sorted quartz sand (2954.3)

- 7 Straight-sided bowl, carefully made; approximately 60% complete
Dark grey-brown smoothed surfaces; traces of burnishing near the rim; black core
Fabric 1b, containing abundant quartz sand (2953.5)
- 8 Dish
Grey-brown throughout; both surfaces lightly, evenly burnished
Fabric 3 (2955.1)

GH 173

2100N 770E (Fig 68)
6.73m×4.37m Site atlas plan 20/22

Finds, not illustrated

Copper alloy pin fragment; L 24mm (Bronze 504/AML820839)

Fragments of an iron nail

Illustrated pottery

- 1 Rim
Black throughout; both surfaces smoothed
Fabric 1b (2964.1)
- 2 Body sherd, wheel-thrown; ?Frankish; uniform dark blue-grey throughout, in a fine, hard sandy fabric (2980.1)
- 3 Flat-angled base
Grey-brown exterior, lightly and evenly burnished under the base as well as on the body; interior black and carefully smoothed
Fabric 2, densely grass-tempered (2973.1)
- 4 Rim
Brown exterior; black interior; both smoothed
Fabric 2, densely grass-tempered (2966.1)
- 5 Upright lug, crudely made
Black throughout; both surfaces smoothed
Fabric 2, lightly grass-tempered and containing abundant quartz sand (2965.1)

GH 174

2235N 980E (Figs 69, 166)
3.81m×3.05m Site atlas plan 23

Finds, not illustrated

Iron ?strip, badly corroded; L 23mm (unnumbered)

Illustrated pottery

- 1 Straight-sided bowl
Black throughout; both surfaces smoothed by hand
Fabric 2, densely grass-tempered and containing abundant quartz sand (2986.6)
- 2 Rim
Dark grey-brown exterior; black interior; both surfaces smoothed
Fabric 1b (2988.1)
- 3 Globular bowl
Red-brown to black exterior; black interior; both surfaces smoothed
Fabric 2, densely grass-tempered (2990.1)

GH 175/185

2258N 946E/2251N 941E (Figs 69, 167)
4.42m×3.66m Site atlas plan 23

Illustrated finds

- 1 Bronze penannular brooch with hooked terminals (EDXRF)
(Bronze 542/AML820877)
- 2 Opaque glass triple disc bead, turquoise (Glass 515)

Not illustrated

Iron knife tip; L 42mm (Iron 691)

Illustrated pottery

- 3 Rim
Light brown exterior; black interior; both evenly smoothed
Fabric 1b, containing moderate quartz sand (2993.2)
- 4 Rim
Dark grey, carefully smoothed surfaces; red-grey core
Fabric 1b, containing common quartz sand (2994.5)
- 5 Hemispherical bowl, with partial upright lug
Light brown, smoothed surfaces; black core
Fabric 2, densely grass-tempered (2994.3)
- 6 Body sherd
Dark grey, weathered surfaces; red-grey core
Fabric 4 (2995.1)
- 7 Rim, flat-topped
Dark grey-brown, crudely finished surfaces; black core
Fabric 2, lightly grass-tempered (2997.1)
- 8 Rim, decorated with A1b stamp
Black throughout; surfaces lightly, evenly burnished
Fabric 1b (2998.1)
- 9 Rim, crudely folded to the outside
Brown to black throughout; both surfaces smoothed
Fabric 1b, containing common quartz sand (2998.5)

GH 176

2244N 904E (Figs 69, 167)
5.49m×4.72m Site atlas plan 23

No finds

Illustrated pottery

- 1 Rim, flat-topped
Brown exterior; black interior; both surfaces carefully smoothed with traces of burnishing
Fabric 1c (3008.1)
- 2 Rim
Brown surfaces, scraped smooth; black core
Fabric 1a (3010.1)

GH 177

2261N 894E (Figs 69, 168, 169)
4.03m×3.30m Site atlas plan 23

Illustrated finds

- 1 Copper alloy sheet, two fragments; rivet hole and repoussé dots along finished edge; possible mount (Bronze 478/AML820813)
- 2a, b Copper alloy annular brooch with notch and double-ridged catch; iron pin, possibly associated (Bronze 482/AML820817)

Not illustrated

Copper alloy sheet fragment; L 13mm (Bronze 479)
Copper alloy sheet with rivet hole, two fragments; L 18mm (Bronze 503)
Lead fragment, 11g (Lead 131)
Four iron scraps

Illustrated pottery

- 3 Splay-sided bowl
Dark brown, carefully smoothed surfaces; black core
Fabric 1c (3012.1)
- 4 Shoulder
Dark red-grey, smoothed surfaces; traces of internal burnishing; black core
Fabric 1a (3012.5)
- 5 Rim, exceptionally well-made
Black throughout; both surfaces evenly burnished
Fabric 4 (3012.6)

- 6 Body sherd (?hollow boss), decorated with A3a stamps; orientation of sherd uncertain; from the same vessel as GH 172.2
Red-grey exterior; dark grey interior; both surfaces smoothed
Fabric 1b (3015.1)
- 7 Hemispherical bowl with upright lug
Brown to dark grey, carefully smoothed exterior; dark grey smoothed interior
Fabric 2, containing common quartz sand (3014.1)
- 8 Rim
Dark red-grey exterior, smoothed; light brown interior, wiped smooth
Fabric 3 (3015.3)
- 9 Globular jar
Exterior black and evenly smoothed, with traces of burnishing; interior brown-grey and smoothed
Fabric 1b (3017.2)
- 10 Hemispherical bowl
Red-brown to black exterior; black interior; both surfaces carefully smoothed; traces of internal burnishing; carbonised deposits on both surfaces
Fabric 1b (3018.8)
- 11 Inturned rim; a second rim has been built up with clay appliqué
Red-brown exterior; red-brown to black interior; both surfaces smoothed; 'original' rim black throughout
Fabric 1b, containing common quartz sand (3017.6)
- 12 Rim, flat-topped
Brown exterior; black interior; both surfaces smoothed
Fabric 1b (3017.4)
- 13 Shoulder
Black throughout; weathered surfaces
Fabric 4 (3018.1)
- 14 Rim
Black exterior with reddish margin and traces of uneven burnishing; light brown, smoothed interior; black core
Fabric 1c, containing sparse grass temper (3018.3)
- 15 Hemispherical bowl with slightly flaring rim
Red-brown to dark grey exterior; dark grey interior; both surfaces smoothed
Fabric 1c, containing sparse grass temper (3019.2)
- 16 Hemispherical bowl with flat-topped rim; carefully made
Dark brown to black surfaces with a light, even burnish
Fabric 1b, containing moderate quartz sand (3019.3)
- 17 Body sherd, decorated with H2c stamps
Black exterior, smoothed, with traces of burnishing; grey interior, smoothed
Fabric 4, dense and exceptionally hard (3024.3)

GH 178

2287N 1147E (Figs 69, 169)
3.28m×2.13m Site atlas plan 23

 Finds, not illustrated

Copper alloy scraps, eight (Bronze 496, 500, 531)
Iron spike, ?modern; L 180mm (Iron 697)
c three iron nails, fragmentary

 Illustrated pottery

- 1 Rim
Dark grey surfaces with external red margin, evenly scraped smooth; black core
Fabric 1b, containing abundant quartz sand (3026.2)
- 2 Body sherd
Dark grey-brown throughout; weathered surfaces
Fabric 3, fine (3026.1)

- 3 Globular bowl
Black throughout; both surfaces evenly burnished
Fabric 1b, exceptionally hard (3027.1)
- 4 Sub-biconical bowl
Brown-grey exterior; black interior; both surfaces carefully smoothed
Fabric 1b (3030.2)
- 5 Inturned-rim bowl
Brown to black exterior; black interior; both surfaces evenly and lightly burnished
Fabric 1c (3030.3)
- 6 Shoulder
Black throughout; exterior burnished above the shoulder and scored below; interior evenly burnished
Fabric 1b, exceptionally hard (3030.7)
- 7 Body and basal sherds
Light brown-grey exterior, smoothed and neatly pinched; black, evenly burnished interior
Fabric 1b, exceptionally hard (3029.1)
- 8 Rim
Black throughout; both surfaces carefully smoothed
Fabric 1b (3029.3)
- 9 Flat-rounded base
Black throughout; both surfaces evenly burnished; exterior lightly pinched
Fabric 1a, exceptionally hard (3031.1)

GH 179

2150N 780E (Figs 69, 170)
6.65m×4.34m Site atlas plan 22

 Illustrated finds

- 1 Opaque glass disc bead; red-brown with white spiral trail (Glass 480)
- 2 Opaque glass cylinder bead, green (Glass 515)
- 3 Fired clay spindlewhorl, Type 2a; grass-tempered fabric with red-brown, smoothed surfaces; black core (SPW38)
- 4 Iron diamond-shaped rove (Iron 700)
- 5 Iron figure '8' chain link, badly corroded, drawn from x-ray (Iron 703)

 Not illustrated

Copper alloy sheet fragment with one finished edge; L 31mm (Bronze 489/AML820824)
Copper alloy disc, diam 5mm; ?rivet head (Bronze 511/AML820846)
Iron ring, diam 24mm (Iron 698)
Three iron nails, fragmentary

 Illustrated pottery

- 6 Splay-sided bowl
Black exterior; brown interior; both surfaces lightly, evenly burnished
Fabric 1b (3033.1)
- 7 Rim
Black throughout; both surfaces smoothed
Fabric 3, fine (3034.1)

GH 180

2270N 930E (Figs 69, 170)
3.20m×2.92m Site atlas plan 23

No finds

 Illustrated pottery

- 1 Rim
Dark brown exterior; black interior; both evenly burnished
Fabric 1b (3046.3)

- 2 Straight-sided ovoid, lightly grooved
Brown exterior, lightly and evenly burnished; dark grey-brown interior, evenly smoothed
Fabric 1c, containing sparse grass temper (3047.1)
- 3 Rim, crudely formed
Dark red-grey exterior with reddish margin; black interior; both surfaces smoothed
Fabric 2 (3047.3)
- 4 Globular bowl; approximately 20% complete
Dark brown to black exterior, with traces of carbonised deposits; black interior; both surfaces smoothed
Fabric 2, fine and lightly grass-tempered, containing abundant quartz sand (3048.3)
- 5 Rim
Black throughout; both surfaces smoothed
Fabric 1b (3048.5)

GH 181

2250N 1125E (Figs 69, 170)

3.65m×3.56m Site atlas plan 23

Illustrated finds

- 1 Shale counter or spindlewhorl fragment; outer edge decorated with ring and dot design (Shale 15)

Not illustrated

Iron nail fragments

Illustrated pottery

- 2 Splayed base
Light red-brown to grey throughout; weathered surfaces
Fabric 1b (3055.1)
- 3 Rim
Black throughout; carefully smoothed surfaces, burnished
Fabric 1c (3055.2)
- 4 Shoulder
Dark brown; exterior smoothed; interior weathered
Fabric 1b (3053.1)
- 5 Rim
Dark brown exterior; black interior; surfaces smoothed by hand
Fabric 1b, hard, containing common quartz sand (3058.1)

GH 182

29S 431E (not illustrated, plan inadequate; finds Fig 171)

Incompletely excavated Site atlas plan 1

Illustrated finds

- 1 Copper alloy ?ingot, tapered (Bronze 514/AML820849)
- 2 Lead disc, perforated (Lead 132)
- 3 Lead sheet fragment, scored (Lead 133)
- 4 Lead ?ingot (Lead 134)

Not illustrated

Copper alloy scraps (Bronze 519/AML820854)

Iron nail fragments

Illustrated pottery

- 5 Body sherd
Black throughout; surfaces carefully smoothed
Fabric 4 (3062.1)
- 6 Rim
Black throughout; surfaces lightly, evenly burnished
Fabric 1c (3066.2)
- 7 Body sherd, perforated
Dark grey to black throughout; surfaces smoothed
Fabric 1b, hard and lightly grass-tempered (3064.1)

- 8 Plate
Dark brown to black throughout; both surfaces smoothed
Fabric 1b, containing common quartz sand (3063.1)
- 9 Globular jar, well-made
Black throughout; both surfaces evenly smoothed with traces of light, even, internal burnishing
Fabric 1c (3066.1)
- 10 Pedestal base, well-made
Black throughout; surfaces evenly smoothed with traces of external burnishing
Fabric 1c (3066.3)
- 11 Rim, well-made
Black throughout; surfaces evenly smoothed with traces of internal burnishing
Fabric 1c (3066.4)
- 12 Rim, flat-topped and trimmed; well-made
Black throughout; surfaces carefully smoothed with traces of light, even burnishing
Fabric 1c (3066.6)
- 13 Rim, folded to the outside and flat-topped
Black throughout; both surfaces evenly smoothed; rim burnished
Fabric 1c, containing an exceptionally abundant quantity of quartz sand (3066.9)
- 14 Flat-angled base; approximately 40% complete
Brown, smoothed exterior, with four irregular and probably accidental impressions; black, smoothed interior with carbonised deposits
Fabric 1b, containing common quartz sand (3066.8)
- 15 Shouldered vessel with flat-topped rim
Black throughout; both surfaces smoothed
Fabric 3, containing sparse grass temper (3066.10)
- 16 Body sherd
Light brown, carefully smoothed and pinched exterior; grey, carefully smoothed interior
Fabric 1c, hard (3066.13)
- 17 Rim
Black throughout; carefully smoothed exterior with traces of uneven burnishing; smoothed interior
Fabric 1c, containing an exceptionally abundant quantity of quartz sand (3066.14)

GH 183 = ditch 25622 Site atlas plan 22**GH 184**

2396N 974E (Figs 69, 172)

3.65m×3.20m Site atlas plan 23

No finds

Illustrated pottery

- 1 Body sherd
Dark grey throughout with a red-grey external margin; both surfaces smoothed
Fabric 1c, containing moderate dull white flecks and sparse grass temper (3069.1)
- 2 Rim
Very dark brown, carefully smoothed surfaces; thick external carbonised deposits
Fabric 1a (3076.1)
- 3 Globular vessel
Black throughout; traces of burnishing on exterior; light, even burnish on interior
Fabric 1b, containing abundant quartz sand (3076.3)
- 4 Globular vessel
Light brown to black exterior; black interior; both surfaces wiped smooth
Fabric 1b (3068.1)

- 5 Body sherd
Dark brown to dark grey throughout; both surfaces smoothed
Fabric 1b (3077.1)
- 6 Rim
Dark red-grey exterior; black interior; both surfaces lightly and evenly burnished
Fabric 1b, containing common quartz sand (3077.2)

GH 185 see GH 175/185*Illustrated pottery*

- 1 Biconical jar with flat-angled base; approximately 50% complete
Exterior predominantly black with light red-brown patches, and evenly and lightly burnished; interior dark grey and evenly scraped smooth
Fabric 1b, densely grass-tempered (3084.1)

GH 186

2360N 980E (Figs 69, 172)
4.22m×3.05m Site atlas plan 23

No finds

Illustrated pottery

- 1 Hemispherical bowl with a slightly flaring rim; rather crudely formed
Very dark brown to black throughout; both surfaces smoothed; traces of external carbonised deposits
Fabric 2, containing abundant quartz sand (3087.1)

GH 187

2289N 899E (Figs 69, 172, 173)
4.04m×3.20m Site atlas plan 23

Illustrated finds

- 1 Copper alloy sheet fragment attached to iron ring (Bronze 492/AML820827)
- 2 Bronze saucer brooch with Style I decoration, mercury gilded (EDXRF); hole bored through face of brooch in order to fix a secondary pin holder (Dickinson, pers comm, 1986) (Bronze 555/AML793154)
- 3 Iron diamond-shaped rove (Iron 769)

Not illustrated

Copper alloy pin with conical head; from Iron Age pit cut by GH 187; Iron Age (Bronze 586)
Iron pin fragment; L 52mm (Iron 707)
Iron strip fragment; L 22mm (Iron 708)
Iron pin fragment; L 32mm (Iron 709)

Illustrated pottery

- 4 Globular jar
Dark grey exterior; black interior; both surfaces scraped smooth
Fabric 1b (3096.1)
- 5 Rim
Light red-brown to black exterior; predominantly black interior; both surfaces smoothed; traces of internal burnishing
Fabric 1b (3096.3)
- 6 Hemispherical bowl
Red-grey throughout; surfaces smoothed
Fabric 2, coarse, containing abundant quartz sand (3099.1)
- 7 Globular bowl; approximately 40% complete
Brown to black exterior, smoothed with traces of uneven burnishing; black interior with carbonised deposits
Fabric 2 (3099.3)
- 8 Rim
Black throughout; both surfaces lightly, evenly burnished; internal carbonised deposits
Fabric 3 (3099.5)

- 9 Body sherd, perforated
Grey, smoothed surfaces with red margins
Fabric 3 (3099.6)
- 10 ?Straight-sided ovoid; base complete
Light red-brown to dark brown, smoothed, spalled exterior; black, smoothed interior
Fabric 2, containing abundant quartz sand (3102.1)

GH 188

2430N 930E (Figs 70, 173; Plate 3)
5.26m×4.09m Site atlas plan 25

No finds

Illustrated pottery

- 1 Globular bowl
Brown to dark grey smoothed surfaces; black core
Fabric 1b (3109.2)
- 2 Straight-sided bowl
Red-brown smoothed surfaces; black core
Fabric 1b (3110.1)
- 3 Frankish wheel-thrown biconical bowl, decorated with roulette and square grid stamps; unlocated; light red-brown surfaces; grey core; thin-sectioned by Williams; published in Evison 1979, fig 19c (3110.3)

GH 189

2042N 622E (Figs 70, 173)
4.11m×3.30m Site atlas plan 20

Finds, not illustrated

Copper alloy sheet, two fragments; L 11mm (Bronze 551/AML820886)
Iron sheet fragment; L 19mm (Iron 710)
Iron pin, broken; L 90mm (Iron 711)

Illustrated pottery

- 1 Globular bowl with two pierced applied lugs
Light brown exterior; dark grey interior; both surfaces smoothed
Fabric 1b, containing common ill-sorted quartz sand (3119.1)
- 2 Rim
Black throughout; weathered surfaces
Fabric 2, densely grass-tempered (3119.2)

GH 190

2300N 920E (Figs 70, 173, 174)
3.73m×3.05m Site atlas plan 23

Illustrated finds

- 1 Gilt copper alloy equal-armed brooch with red enamel on roundels (Bronze 485/AML820820)
- 2 Copper alloy twisted wire fragment (Bronze 491/AML820826)

Not illustrated

Copper alloy sheet fragment, corroded on to iron fragments (Bronze 543/AML820878)
Corroded iron lump, diam c 50mm (Iron 713)
Iron 7knife, now badly fragmented; originally recorded L 49mm (Iron 714)
Iron sheet, originally two fragments riveted together, now badly corroded (Iron 715)

Illustrated pottery

- 3 Handled cup
Exterior brown to black and smoothed, with traces of burnishing; interior brown and smoothed
Fabric 1b, densely grass-tempered (2091.1)
- 4 Globular bowl
Dark red-grey exterior; black interior; both surfaces smoothed
Fabric 1b, densely grass-tempered (2095.1)

- 5 Rim
Dark red-brown throughout; smoothed exterior; unfinished interior
Fabric unclassified; containing abundant quartz sand, moderate feldspar, flint, and grass temper, and sparse magnetite (3487.3)
- 6 Plate
Dark grey throughout; surfaces smoothed
Fabric 3, coarse (3487.5)
- 7 Inturned-rim bowl
Red-yellow throughout; surfaces smoothed
Fabric 3, coarse (3488.2)
- 8 Body sherd
Dark brown, carefully smoothed exterior with traces of burnishing; black, smoothed interior with traces of carbonised deposits
Fabric 2, hard, containing abundant quartz sand (3489.2)
- 9 Body sherd with two hollow vertical bosses
Exterior dark red-grey and lightly burnished; interior dark grey and crudely finished
Fabric 1b, densely grass-tempered (3489.4)
- 10 Body sherd, decorated with C2c stamps
Black throughout; burnished exterior; smoothed interior
Fabric 1b (3489.1)
- 11 Rim, flat-topped
Exterior red-brown; interior dark red-brown; both surfaces smoothed; rim appears to have been trimmed
Fabric 4 (3493.2)
- 12 Inturned rim, crudely formed
Surfaces red-brown to dark red-grey and unfinished
Fabric unclassified; coarse, containing abundant quartz sand, moderate sub-rounded flint, feldspar, and grass temper, and sparse mica (3493.3)
- 13 Rim
Dark red-brown; lightly burnished exterior; red-brown, unfinished interior
Fabric 3 (3494.3)
- 14 Shoulder, decorated with A5d and H2a stamps
Dark red-grey throughout; smoothed exterior; wiped interior
Fabric unclassified; containing common quartz sand, haematite, and moderate calcareous material (3490.1)
- 15 Biconical bowl
Brown, smoothed exterior with traces of burnishing; dark grey interior, scraped smooth
Fabric 1b (3490.2)

GH 191

2315N 892E (Figs 70, 174)
3.60m x 2.97m Site atlas plan 23

Finds, not illustrated

Iron strip fragment; L 35mm (Iron 716)

Illustrated pottery

- Hemispherical bowl
Dark brown, smoothed exterior, with carbonised deposits; dark grey-brown, smoothed interior
Fabric 3 (3129.2)
- Globular vessel
Exterior dark brown to black, carefully smoothed with traces of burnishing; interior dark grey and smoothed; carbonised deposits on both surfaces
Fabric 3 (3127.1)

GH 192

2172N 761E (Figs 70, 174)
3.66m x 2.41m Site atlas plan 22

Finds, not illustrated

Copper alloy scrap (Bronze 524/AML820859)

Iron blade fragment, probably from a knife; L 111mm (Iron 717)

Illustrated pottery

- Upright pierced lug
Light red-brown throughout; surfaces smoothed
Fabric 2, containing abundant quartz sand (3137.5)
- Globular jar
Black exterior, lightly and evenly burnished; light brown interior, smoothed
Fabric 1b (3138.1)
- Hemispherical bowl
Red-brown to dark grey exterior; black interior; both surfaces smoothed, with internal carbonised deposits
Fabric 1c, containing sparse grass temper (3140.3)
- Straight-sided ovoid
Light brown-red to grey, smoothed surfaces; grey core
Fabric 1b, slightly overfired (3144.1)
- Vessel with inturned rim
Dark brown to black exterior, with light, uneven burnish; black interior, smoothed; external carbonised deposits
Fabric 1b, densely grass-tempered (3142.1)
- Straight-sided bowl
Black throughout; both surfaces smoothed
Fabric 1b, hard (3144.2)

GH 193

2254N 835E (Figs 70, 175)
4.27m x 3.78m Site atlas plan 23

Illustrated finds

- Copper alloy disc brooch with incised ring and dot decoration; very worn, originally fitted with an iron pin (unnumbered)

Not illustrated

Copper alloy fragment, melted, diam c 30mm (Bronze 483/AML820818)

Iron pin fragment; L 34mm (Iron 718)

Illustrated pottery

- Biconical bowl; approximately 40% complete
Brown to dark grey exterior; black interior; both surfaces smoothed
Fabric 1b (3153.1)

GH 194

2165N 745E (Figs 70, 175)
3.20m x 2.90m Site atlas plan 22

Finds, not illustrated

Copper alloy sheet fragment; L 19mm (Bronze 528/AML820863)
Iron strip; L 23mm (Iron 719)

Illustrated pottery

- Perforated bowl with flat-topped rim
Red-grey to grey, smoothed surfaces, with internal reddish margin
Fabric 1b (3162.1)
- Straight-sided bowl
Brown to black throughout; smoothed surfaces, both with carbonised deposits
Fabric 1c, containing sparse grass temper (3164.1)
- Globular jar
Black throughout; both surfaces smoothed
Fabric 1b (3163.1)
- Splay-sided bowl
Black throughout; both surfaces smoothed
Fabric 1c, containing sparse grass temper (3164.4)

GH 195

2210N 700E (Figs 70, 175)
3.76m×3.43m Site atlas plan 22

Illustrated finds

- 1 Copper alloy rim with rivet hole (Bronze 529/AML820864)

Not illustrated

Copper alloy strip fragment with one finished edge; possible rim fragment from Bronze 529 (Bronze 582)
Two copper alloy Roman coins, unidentified (coins 195, 196)
Iron sheet, triangular fragment with rivet; L 28mm (Iron 722)
Iron pin fragment; L 33mm (Iron 725)
c three iron nails, fragmentary

Illustrated pottery

- 2 Inturned rim
Brown to black throughout; both surfaces smoothed
Fabric 1b (3177.1)
- 3 Globular jar
Black throughout; surfaces evenly smoothed
Fabric 2, containing abundant quartz sand (3172.1)
- 4 Hemispherical bowl
Light red-brown exterior; interior black and covered with thick carbonised deposits; surfaces smoothed
Fabric 2, densely grass-tempered (3173.3)
- 5 Hemispherical bowl
Black throughout; both surfaces smoothed
Fabric 2 (3175.2)
- 6 Globular vessel
Red-brown exterior; grey-brown interior; black core; both surfaces smoothed
Fabric 1b, densely grass-tempered (3173.2)

GH 196

2450N 915E (Figs 70, 176)
4.88m×4.17m Site atlas plan 25

Illustrated finds

- 1 Iron knife blade (Iron 729)

Not illustrated

Iron knife fragment, tang; L 52mm (Iron 727)
Iron blade fragment, probably from a knife; L 57mm (Iron 728)

GH 197

2220N 565E (Figs 70, 176)
4.57m×3.51m Site atlas plan 22

Illustrated finds

- 1 Iron knife; L 98mm (Iron 732)

Not illustrated

Iron pin fragment, curved; L 13mm (Iron 730)
Iron blade fragment, probably from a knife; L 87mm (Iron 732)
Iron sheet fragment; L 60mm (Iron 733)

GH 198

2374N 773E (Figs 70, 176)
4.17m×3.51m Site atlas plan 22

Finds, not illustrated

Iron knife fragment, tang and part of blade; L 68mm (Iron 734)

Illustrated pottery

- 1 Splayed base
Red-grey throughout; weathered surfaces
Fabric 3 (3197.2)
- 2 Rim
Dark grey, weathered surfaces, with external red margin
Fabric 3 (3198.2)

3 Rim

Red-brown exterior; black interior; both surfaces smoothed
Fabric 3, fine and containing sparse grass temper (3200.1)

4 Body sherd, perforated

Red-brown to grey smoothed exterior; dark grey interior, wiped smooth
Fabric 2 (3200.2)

GH 199

2344N 650E (Figs 70, 176)
4.80m×3.68m Site atlas plan 22

Illustrated finds

- 1 Translucent glass disc bead, light green (Glass 481)

Illustrated pottery

- 2 Biconical bowl
Red-brown to very dark brown exterior; black interior; both surfaces smoothed
Fabric 1b (3207.1)

GH 200

2350N 570E (Fig 71)
4.27m×2.90m Site atlas plan 22

Finds, not illustrated

Iron sheet fragment; L 36mm (Iron 735)
Iron nail fragment

GH 201

2400N 650E (Figs 71, 176)
4.67m×3.33m Site atlas plan 24

No finds

Illustrated pottery

- 1 Rim
Light brown, smoothed surfaces; black core
Fabric 1a (2101.1)
- 2 Frankish wheel-thrown biconical bowl; rouletted on carination
Dark blue-grey exterior with traces of burnishing; red-grey interior; red-grey core
Fabric fine, hard, and sandy, containing moderate ?grog (2102.1)
- 3 Frankish wheel-thrown bottle, found on the floor of GH 201; decorated with roulette, grid, and rosette stamps
Blue-grey throughout with dark grey margins
Fabric hard, fine, and sandy (2102.2)

GH 202

2500N 975E (Figs 71, 176)
4.47m×4.14m Site atlas plan 25

Illustrated finds

- 1 Opaque glass short cylinder bead, green (Glass 512)
- 2 Spindlewhorl, Type 1, made from a sherd of grass-tempered pottery; brown-red to grey surfaces (SPW39)

Not illustrated

Iron knife tip; L 52mm (Iron 737)

Illustrated pottery

- 3 Rim
Dark grey throughout; carefully smoothed surfaces with traces of external burnishing and carbonised deposits
Fabric 1b (3214.2)
- 4 Rim, rather crudely made
Red-brown exterior; black interior; both surfaces smoothed
Fabric 1b, densely grass-tempered (3216.1)

- 5 Rim
Very dark brown exterior with carbonised deposits; black interior;
surfaces carefully smoothed
Fabric 1b (3216.2)

GH 203

2420N 530E (Figs 71, 177)
3.65m×3.40m Site atlas plan 24

Illustrated finds

- 1 Amethyst bead (Bead 24)

Illustrated pottery

- 2 Rim
Dark grey throughout; surfaces smoothed
Fabric 3, fine (3221.1)
- 3 Splayed base
Grey, weathered surfaces; black core
Fabric 1c (3221.2)
- 4 Rim, unevenly formed
Light red-brown, smoothed surfaces; black core
Fabric 1c (3222.1)
- 5 Flat-topped rim
Grey-brown, crudely finished surfaces; dark grey core
Fabric 3, fine, containing sparse grass temper (3222.3)

GH 204

2413N 486E (Fig 71)
4.27m×2.46m Site atlas plan 24

No finds

GH 205

2444N 1103E (Figs 71, 177)
5.13m×3.58m Site atlas plan 25

Illustrated finds

- 1 Copper alloy strip, with incised linear decoration (Bronze
574/AML820908)

Illustrated pottery

- 2 Base of a wheel-thrown Frankish bottle, found on the floor of GH
205; approximately 50% complete
Brown-red surfaces; grey core; there is an area of approximately
20×8mm of textile impression on the external angle of the base,
identified by Crowfoot as ?extended tabby weave
Fabric fine, hard, and sandy (3240.1)
- 3 Straight-sided ovoid with rounded base; approximately 50% com-
plete
Dark grey-brown exterior, lightly and unevenly burnished; grey-
brown, smoothed interior; black core
Fabric 2, containing abundant quartz sand (3237.1)
- 4 Body sherd
Black throughout, with an external red margin; exterior lightly
burnished; interior weathered
Fabric 1a (3235.1)
- 5 Rim
Black exterior with traces of carbonised deposits; brown interior;
both surfaces smoothed
Fabric 1c (3236.1)

GH 206

2420N 1093E (Figs 71, 177)
4.52m×2.74m Site atlas plan 25

Illustrated finds

- 1 Iron knife (Iron 3519/AML831360)

Illustrated pottery

- 2 Rim
Black throughout; exterior carefully smoothed with traces of bur-
nishing; interior smoothed
Fabric 1b (3247.1)
- 3 Rim
Black throughout; both surfaces smoothed
Fabric 3 (3247.3)
- 4 Body sherd with applied blind lug
Red-brown to grey throughout; both surfaces smoothed
Fabric 1b (3248.1)
- 5 Handle
Black throughout with a red-brown external margin; surfaces
smoothed; rust-coloured deposits on inner surface
Fabric 1b, containing common quartz sand (3250.1)

GH 207

2009N 1125E (Figs 71, 177)
3.73m×3.23m Site atlas plan 21

Illustrated finds

- 1 Opaque glass cylinder bead, yellow-green (Glass 482)

Illustrated pottery

- 2 Flat-rounded base; approximately 75% complete
Dark grey-brown, smoothed surfaces; black core
Fabric 1b (3255.1)
- 3 Body sherd
Exterior black and pinched; interior brown and smoothed
Fabric 1c (3256.1)
- 4 Globular bowl
Dark brown, smoothed surfaces with external carbonised depos-
its; black core
Fabric 1c (3256.2)
- 5 Rim
Red-brown to grey exterior; black interior; both surfaces smoothed
Fabric 1b (3257.1)
- 6 Straight-sided bowl
Brown-grey throughout; smoothed exterior; carefully smoothed
and unevenly burnished interior
Fabric 1b, exceptionally hard (3257.2)

GH 208

2064N 1189E (Figs 71, 178)
3.81m×3.05m Site atlas plan 21

Finds, not illustrated

Iron pin fragment; L 54mm (Iron 739)

Illustrated pottery

- 1 Globular vessel, well-made
Black throughout; carefully smoothed, with a light, even, external
burnish
Fabric 3, coarse (2018.2)
- 2 Hemispherical bowl
Dark grey-brown, smoothed surfaces; black core
Fabric 1b (2018.3)
- 3 Body sherd
Light red-brown, combed exterior; black, carefully smoothed inter-
ior
Fabric 1b, containing common quartz sand (2018.5)
- 4 Body sherd
Light red-brown, pinched exterior; black, carefully smoothed inter-
ior
Fabric 1b (2018.7)

- 5 Straight-sided bowl, complete
Brown to black throughout; smoothed surfaces marred by grass temper
Fabric 2, densely grass-tempered (3416.1)
- 6 Splayed base
Brown-red, smoothed surfaces; black core
Fabric 1b (3420.2)
- 7 Rim
Black exterior, lightly and evenly burnished; grey, smoothed interior with reddish margin
Fabric 1c (3420.6)
- 8 Handle
Brown to black smoothed surfaces; black core
Fabric 1a, containing sparse grass temper (3421.1)
- 9 Shoulder of a ?biconical vessel
Black throughout; both surfaces carefully smoothed
Fabric 1b (3421.2)

GH 209 see Bond 1988, 48–9, fig 30

GH 210 see Bond 1988, 48–9, fig 30

GH 211

69S 459E (Fig 178)

No feature plan; dimensions uncertain Site atlas plan 1

Illustrated finds

- 1 Perforated lead disc, distorted, ?failed casting (Lead 135)
- 2 Fired clay spindlewhorl, Type 3b; sandy fabric, dark grey throughout (SPW36)

Not illustrated

Iron pin fragment; L 44mm (Iron 741)

Illustrated pottery

- 3 Body sherd, decorated with shallow, crudely executed grooves
Light red-brown exterior; black interior; both surfaces smoothed
Fabric 1c (3276.1)

GH 212

100N 603E (Figs 71, 178)

3.10m×2.64m Site atlas plan 4

Illustrated finds

- 1 Antler comb, two fragments (Bone 21)

Not illustrated

Iron knife blade, four fragments (Iron 742)
Iron nail

Illustrated pottery

- 2 Body sherd
Black throughout; exterior roughly pinched; interior smoothed
Fabric 2, hard, in a coarse matrix (2027.2)
- 3 Body sherd, decorated with A4a stamps; well-made
Black throughout; lightly, evenly burnished exterior; carefully smoothed interior
Fabric 1c (2027.4)
- 4 Rim
Black throughout; both surfaces carefully smoothed
Fabric 1b (2027.7)
- 5 Rim, flat-topped
Black throughout; both surfaces evenly smoothed
Fabric 1b (2031.1)
- 6 Sub-biconical pot with oval impressions on the carination; complete and exceptionally well-made
Black throughout; traces of burnishing on both surfaces
Fabric 1b (3433.5)
- 7 Body sherd
Red-brown to brown-grey exterior, wiped horizontally then combed vertically; black interior, wiped with a coarse fibre
Fabric 1b (2027.3)
- 8 Hemispherical bowl
Dark grey throughout; weathered surfaces
Fabric 1c (2027.5)
- 9 Body sherd
Black throughout; exterior smoothed with reddish margin; interior weathered
Fabric 1c (3433.4)
- 10 Globular bowl, well-made
Red-brown to dark grey, carefully smoothed exterior; dark grey, smoothed interior
Fabric 1b (2034.1)

GH 213 = pit 1002 (aa) Site atlas plan 7

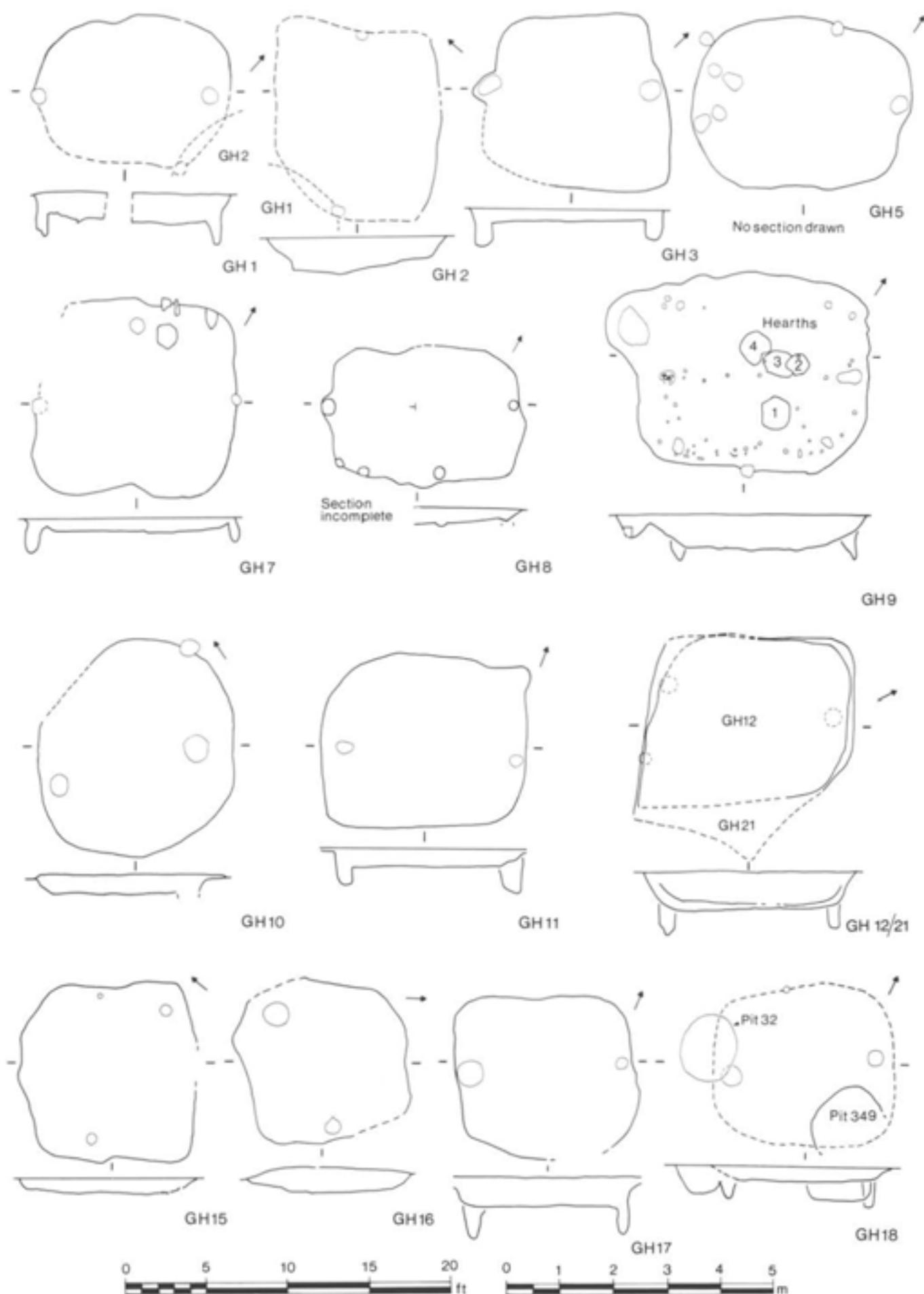


Fig 57 Plans of GH 1-18 (scale: 1:100)

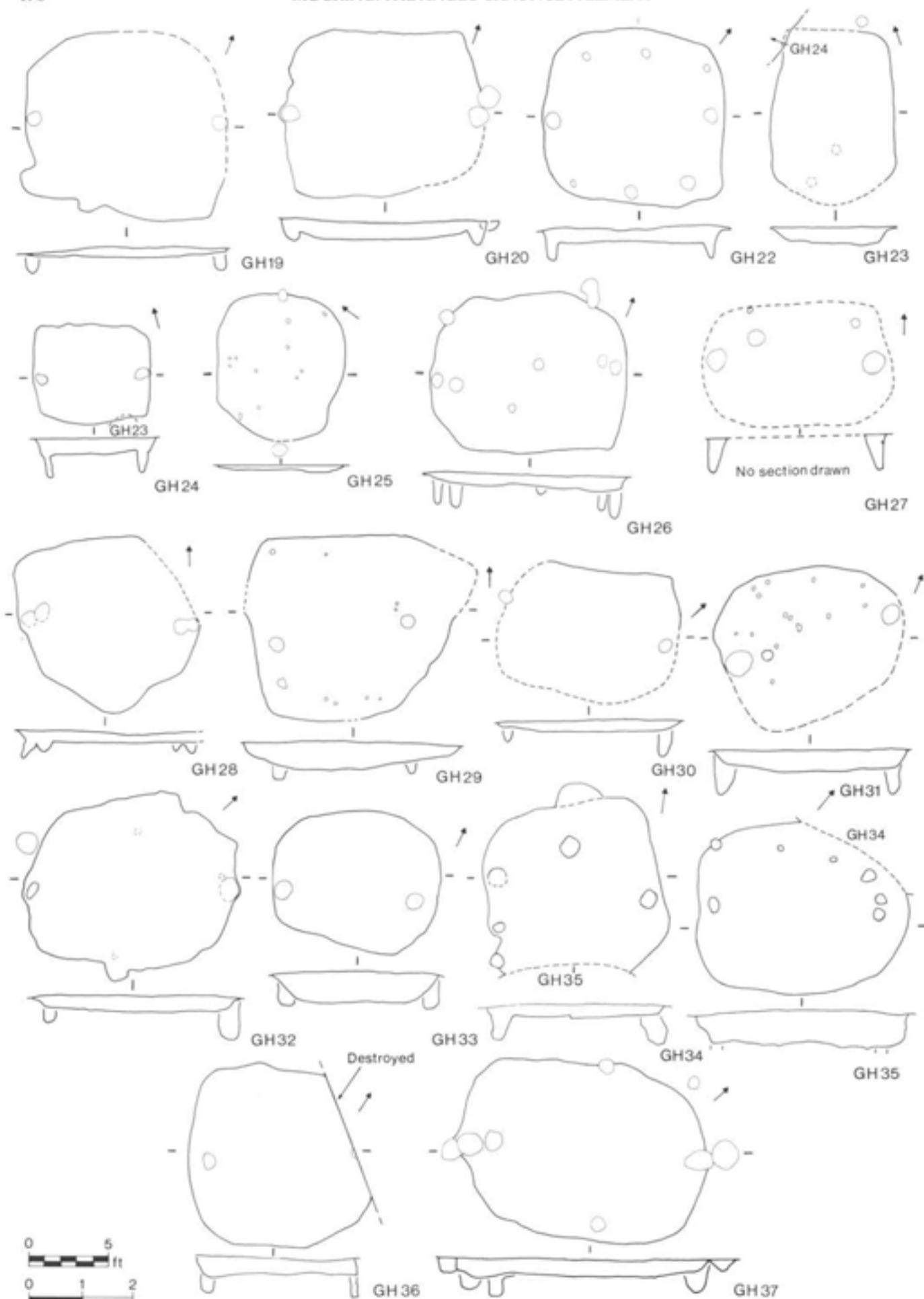


Fig 58 Plans of GH 19-37 (scale: 1:100)

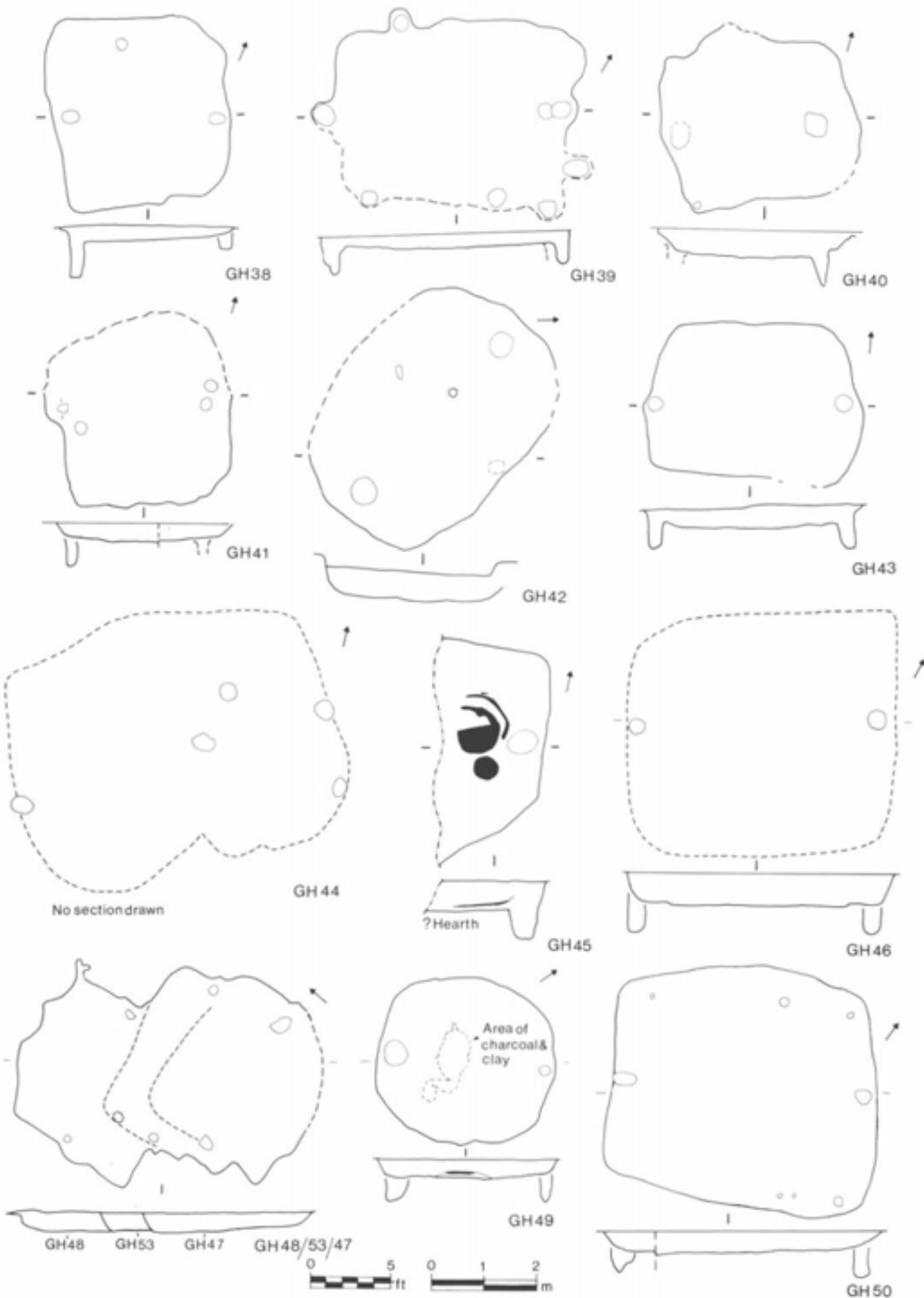


Fig 59 Plans of GH 38-50 (scale: 1:100)

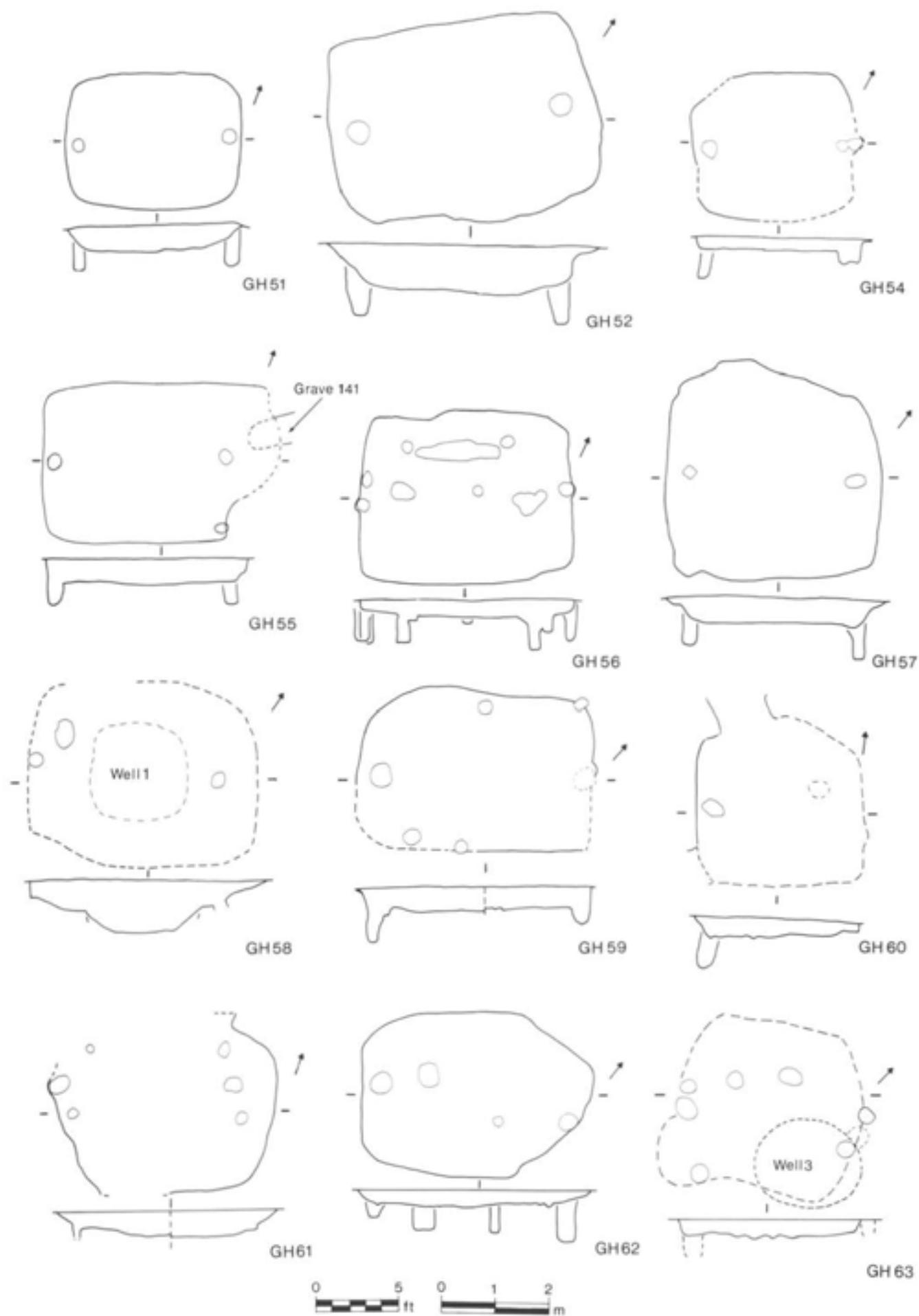


Fig 60 Plans of GH 51-63 (scale: 1:100)

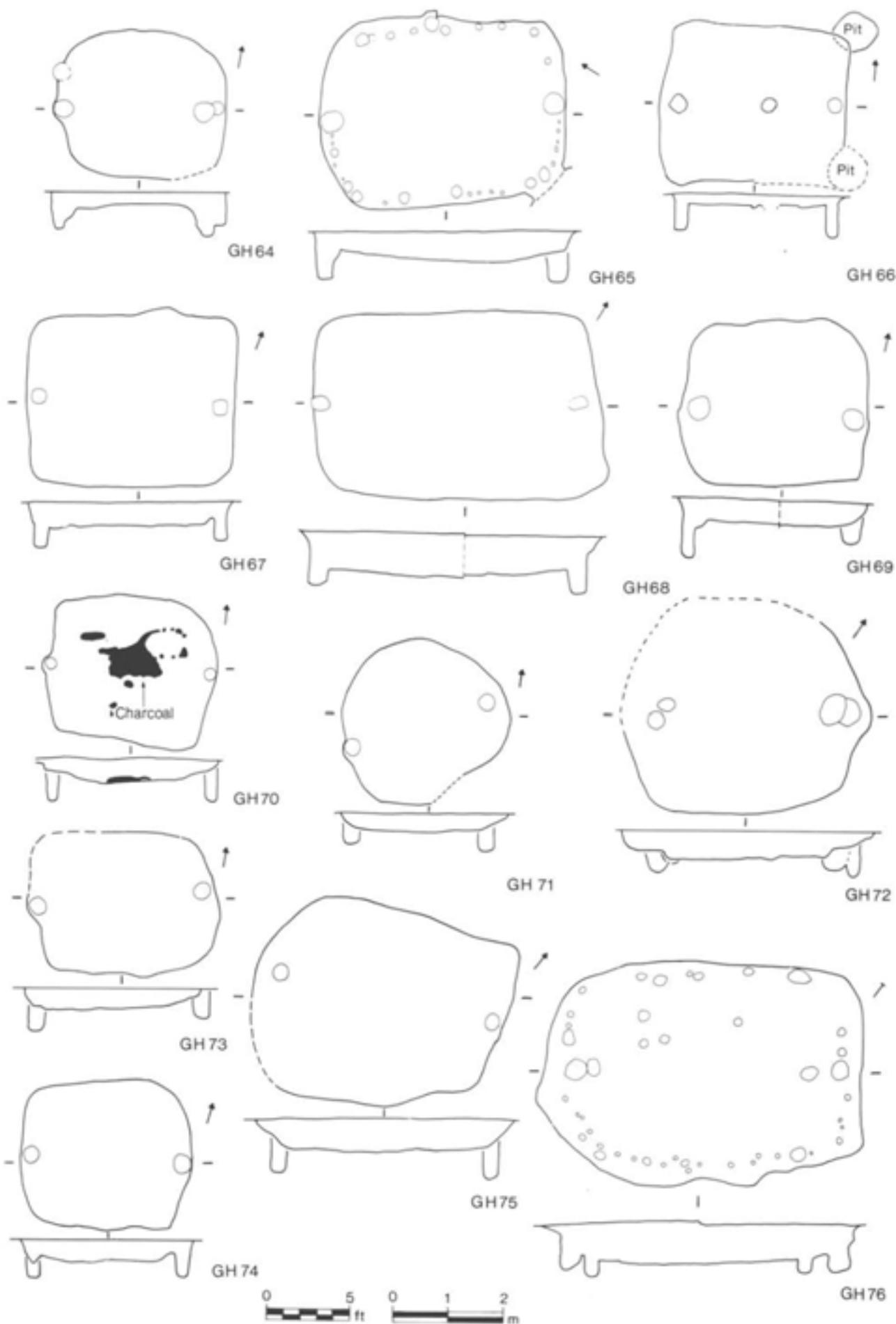


Fig 61 Plans of GH 64-76 (scale: 1:100)

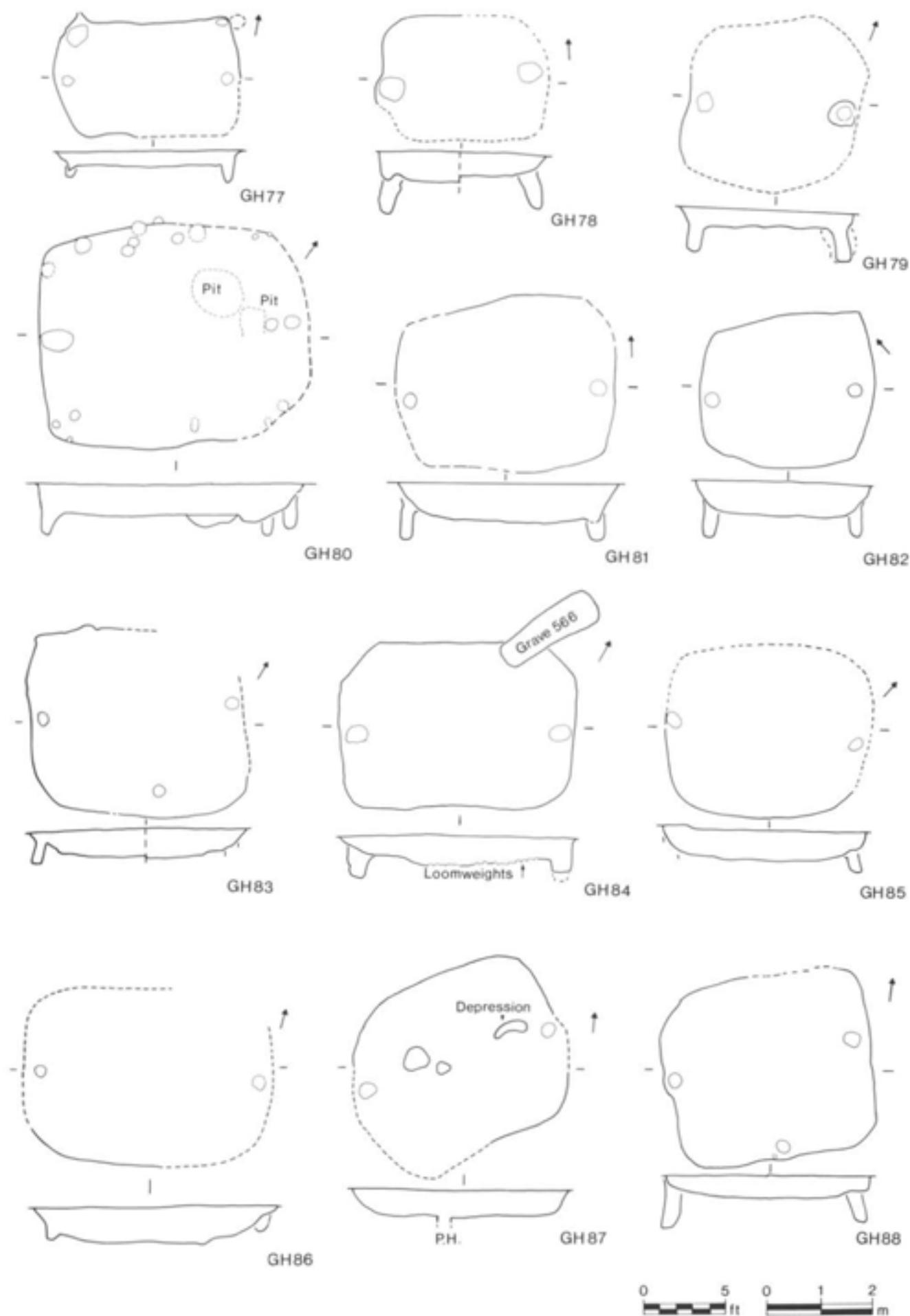


Fig 62 Plans of GH 77-88 (scale: 1:100)

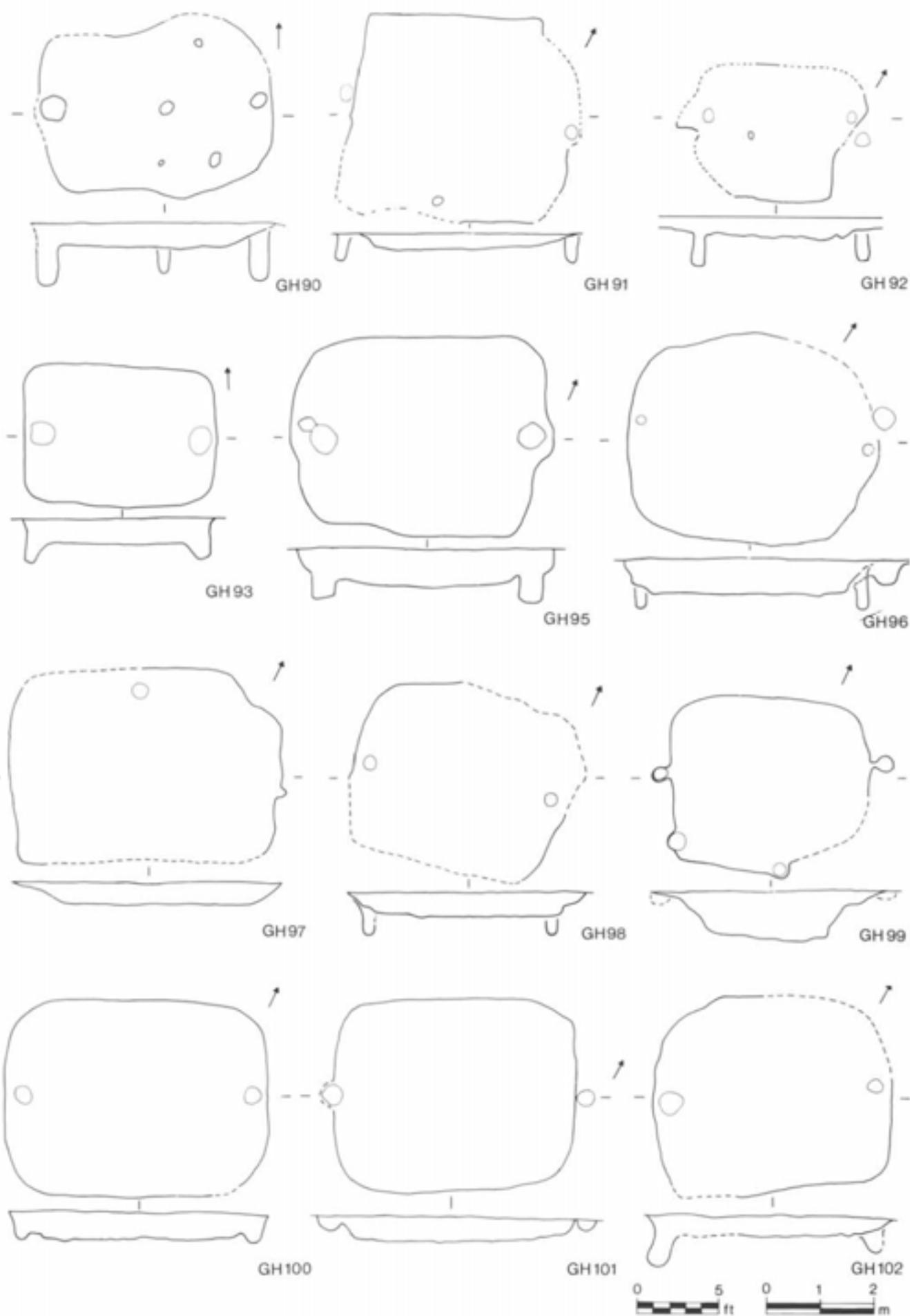


Fig 63 Plans of GH 90-102 (scale: 1:100)

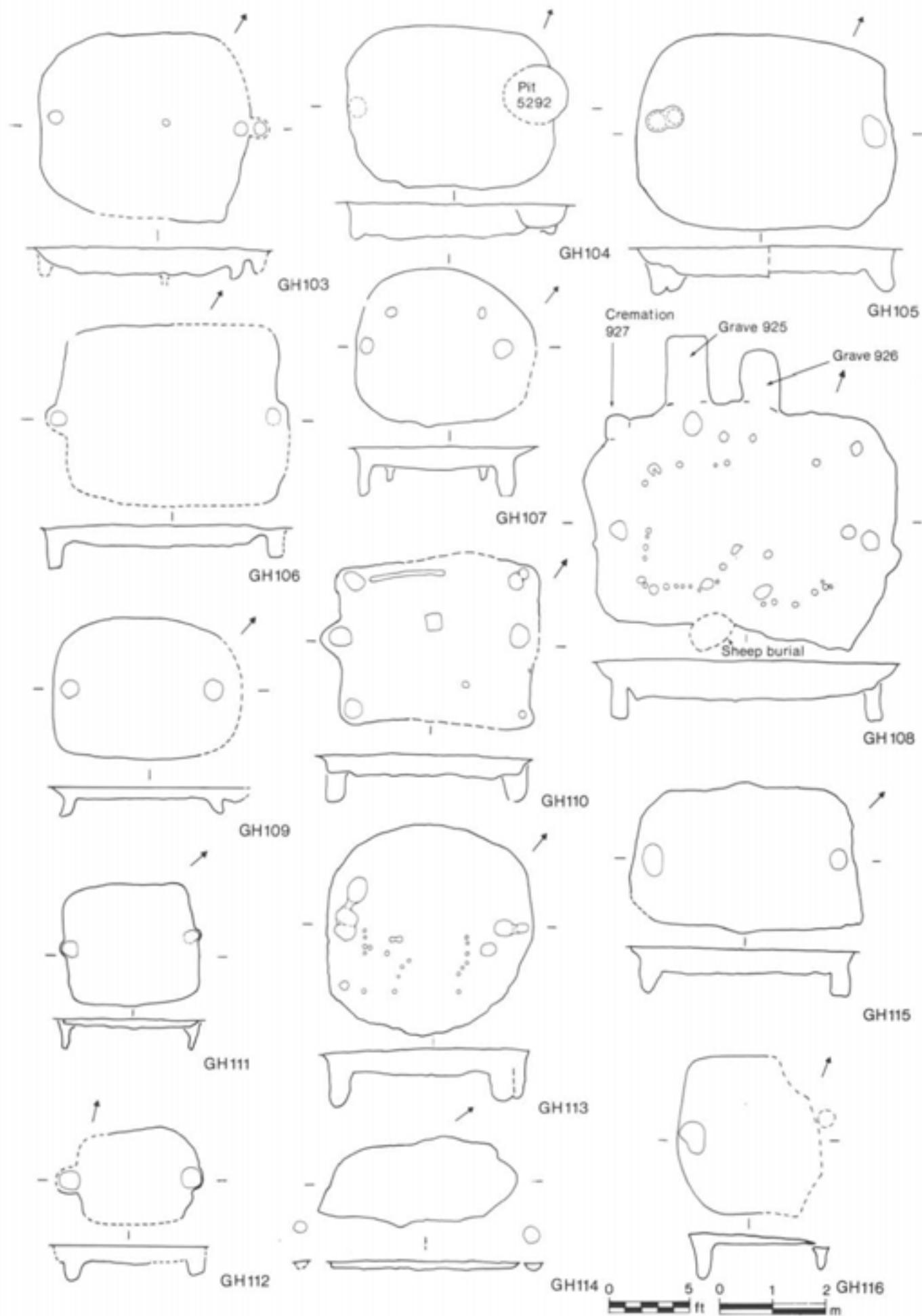


Fig 64 Plans of GH 103-116 (scale: 1:100)

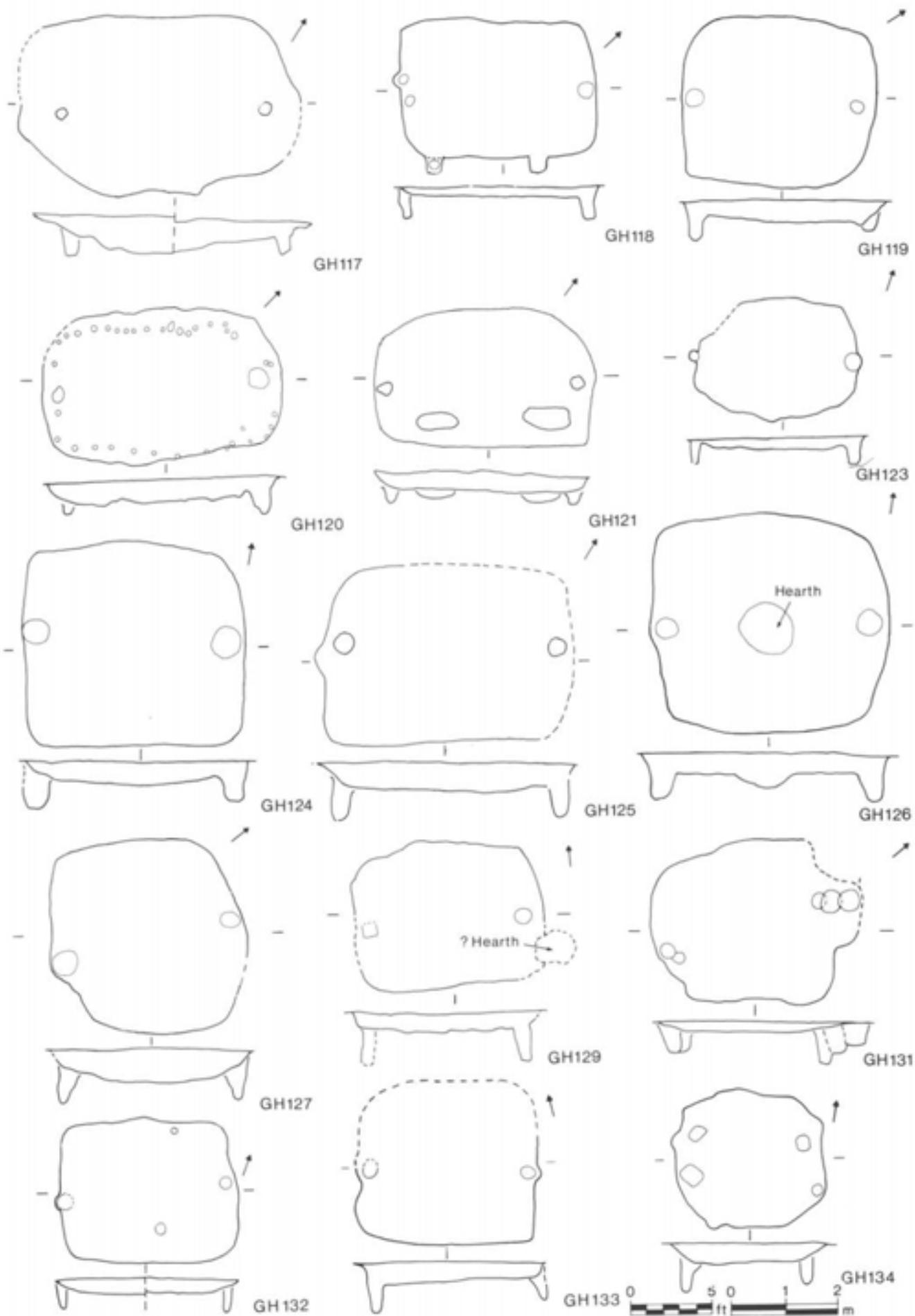


Fig 65 Plans of GH 117-134 (scale: 1:100)

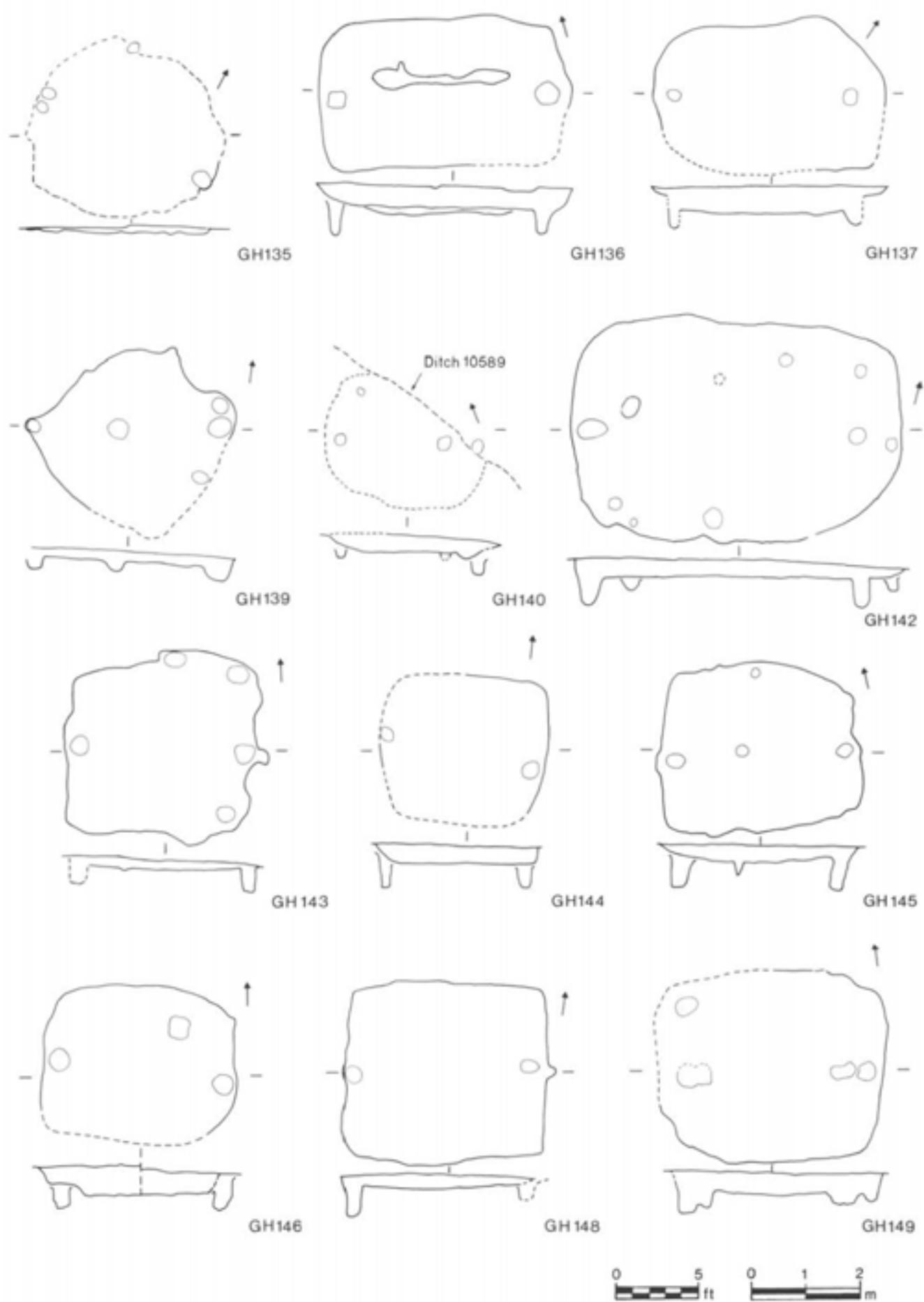


Fig 66 Plans of GH 135-149 (scale: 1:100)

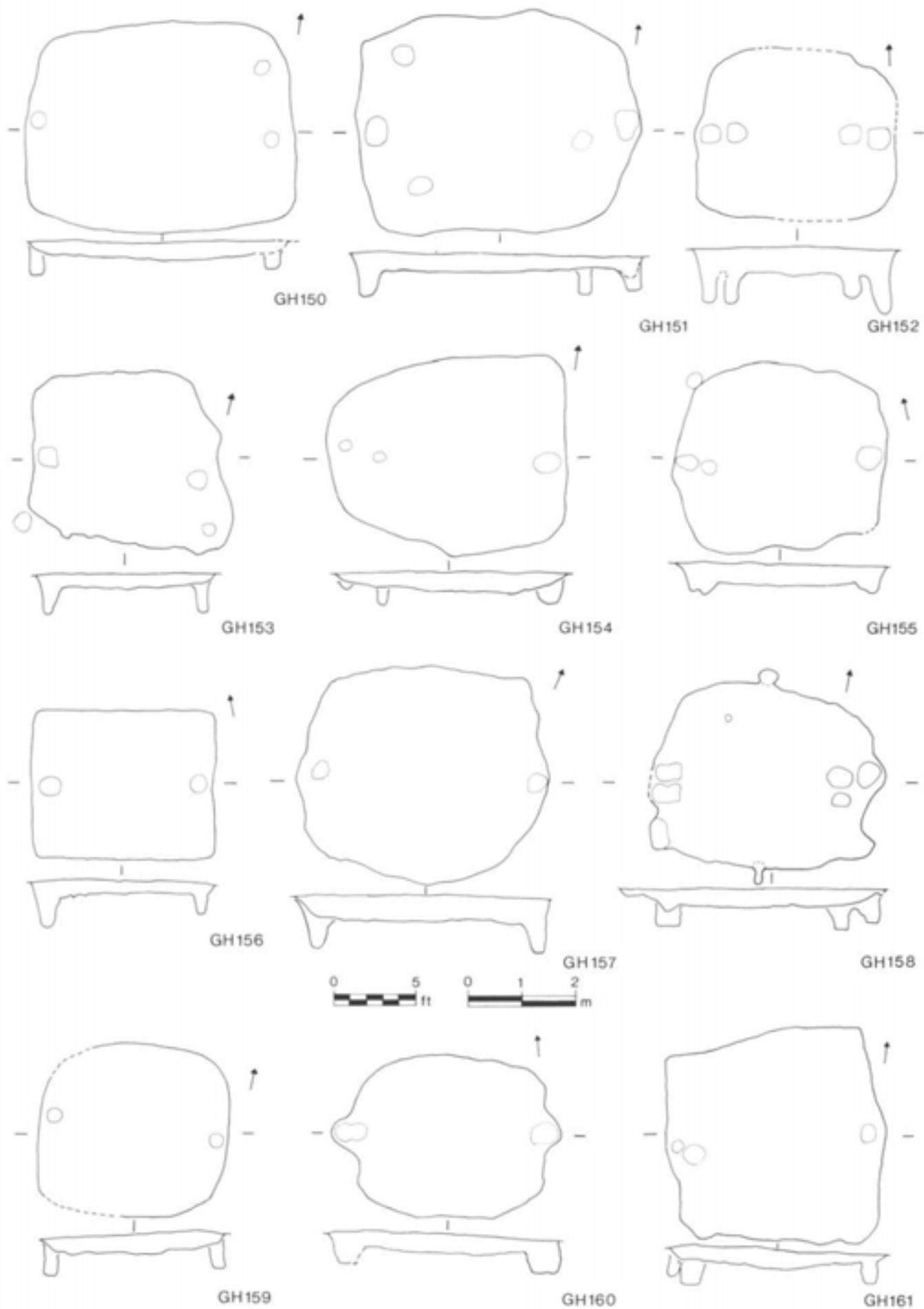


Fig 67 Plans of GH 150-161 (scale: 1:100)

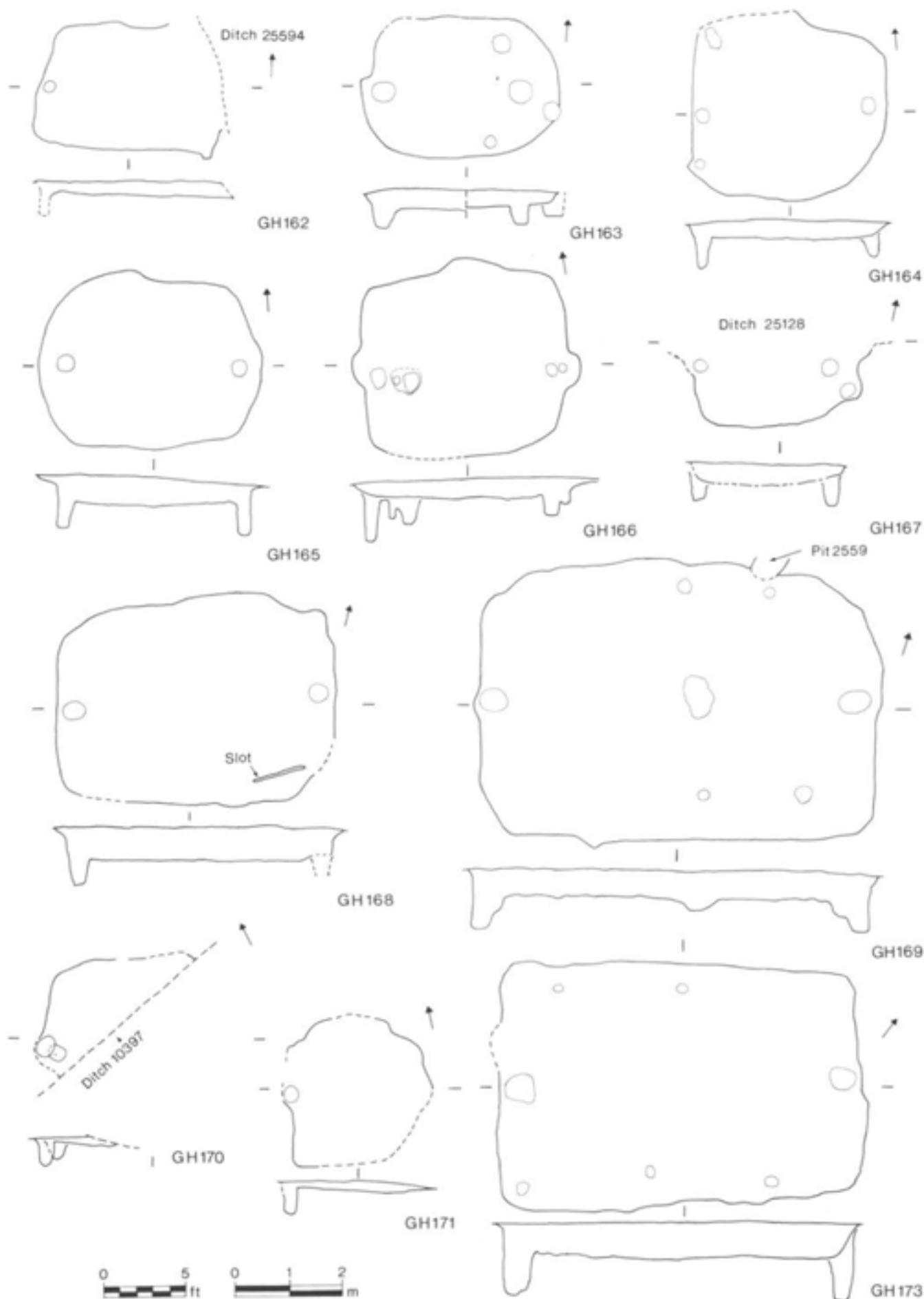


Fig 68 Plans of GH 162-173 (scale: 1:100)

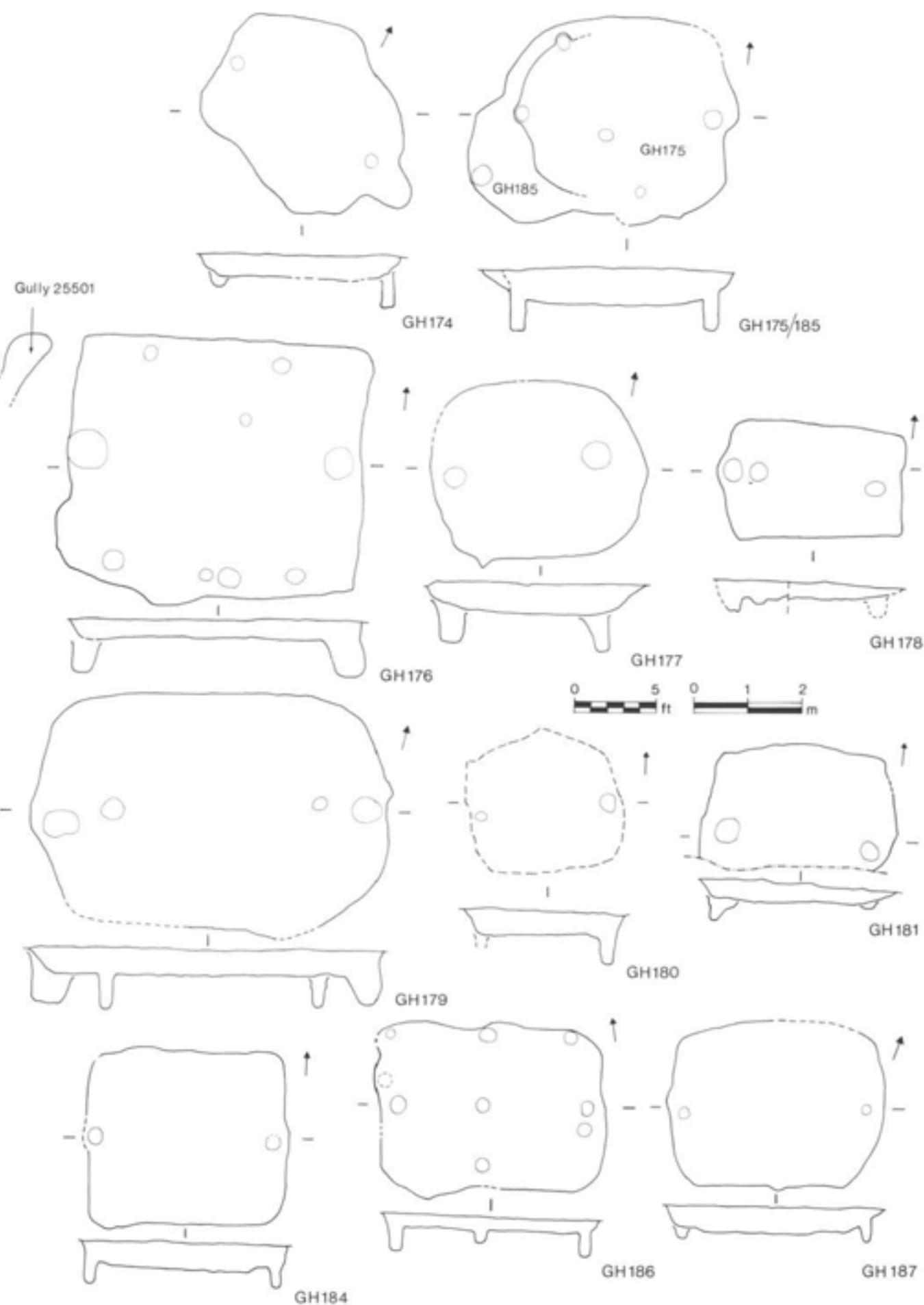


Fig 69 Plans of GH 174-187 (scale: 1:100)

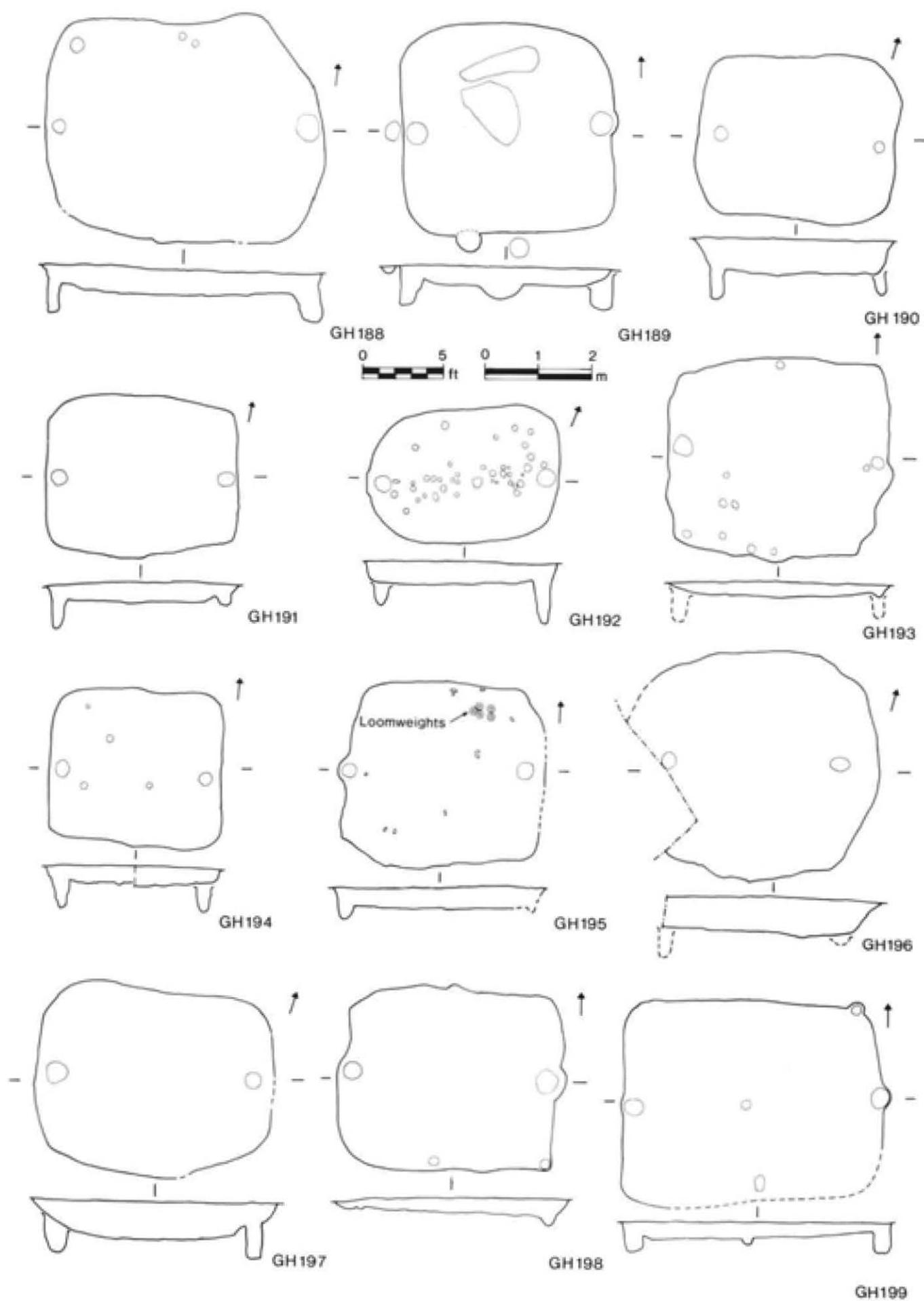


Fig 70 Plans of GH 188-199 (scale: 1:100)

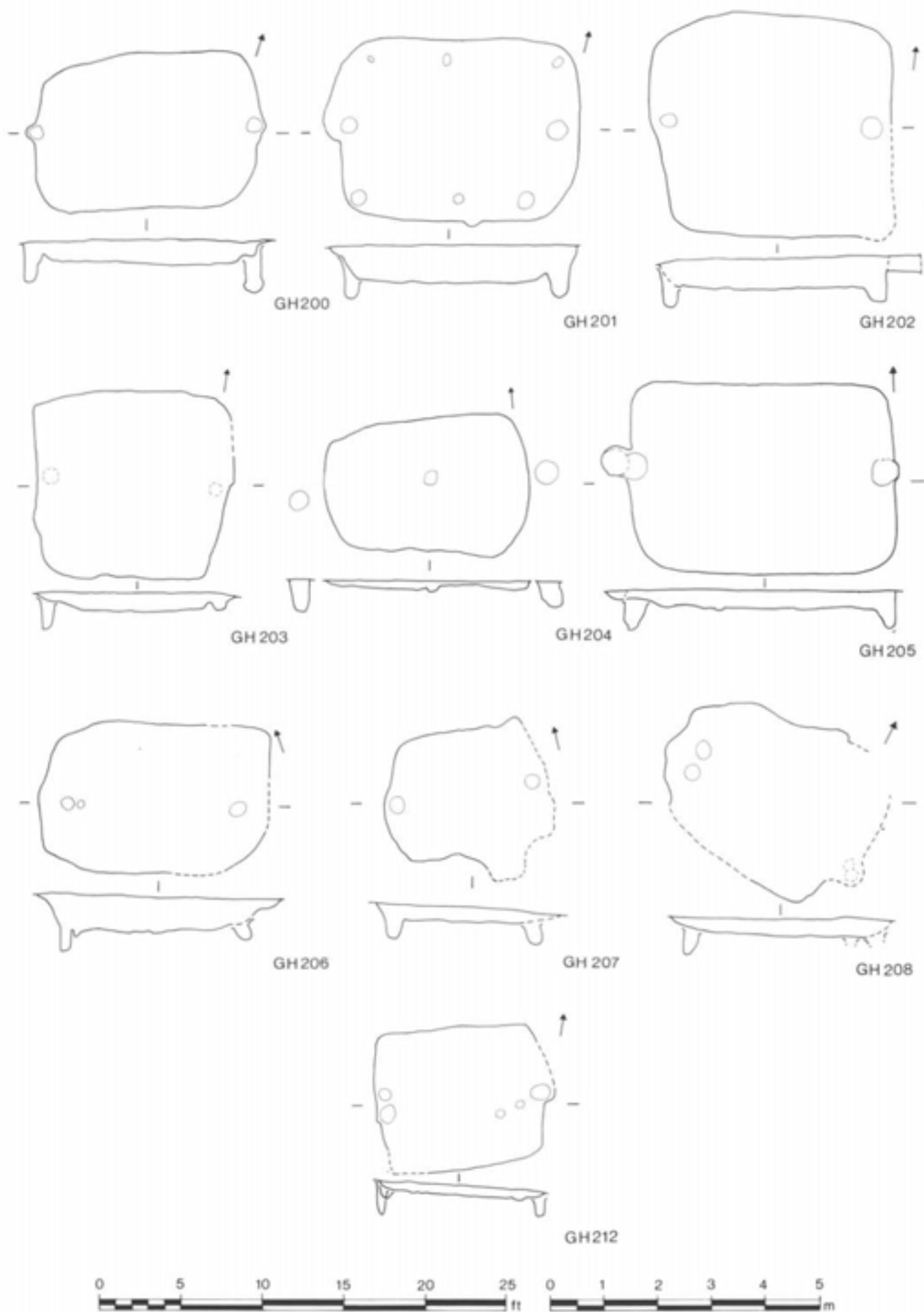


Fig 71 Plans of GH 200-212 (scale: 1:100)

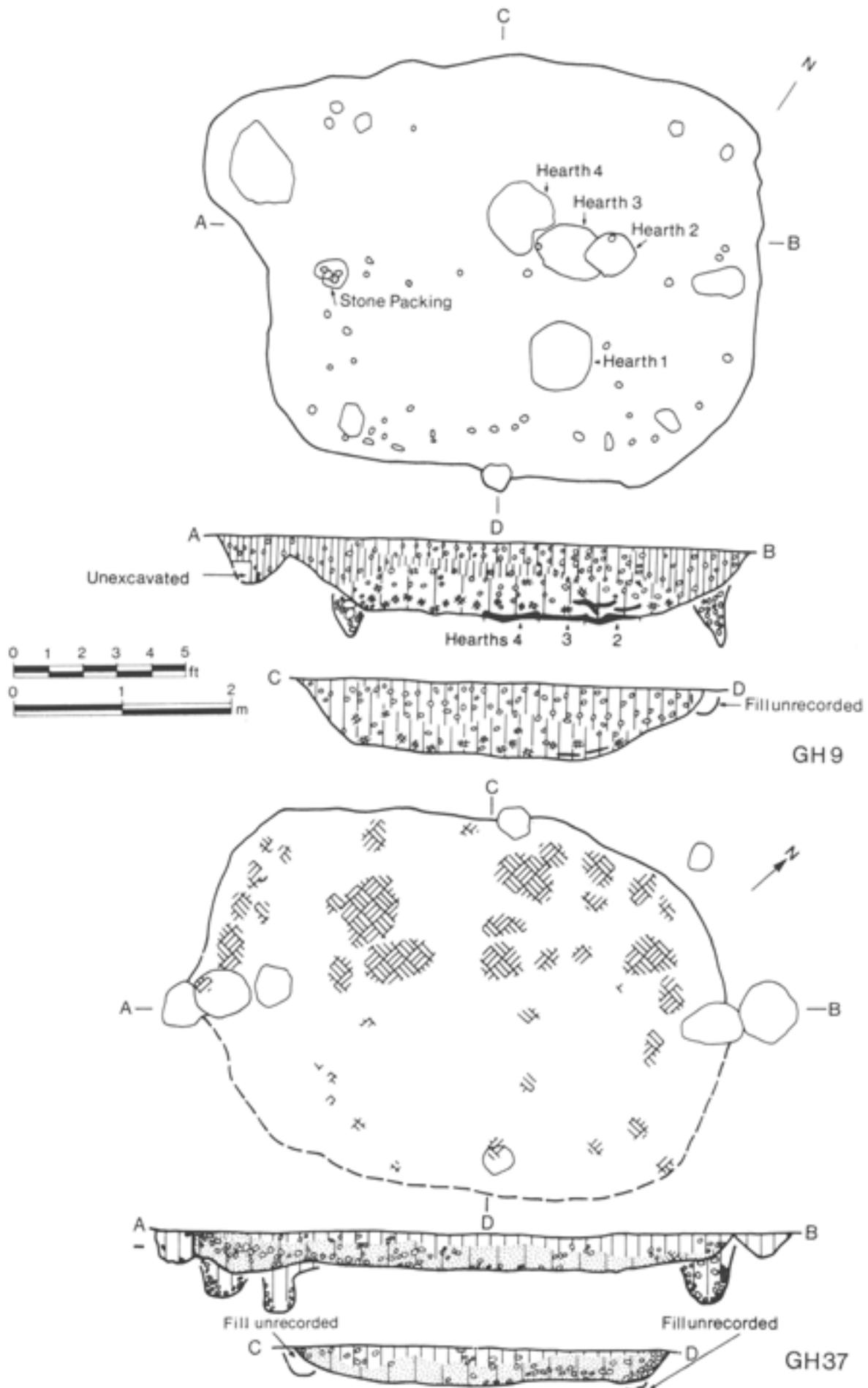


Fig 72 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

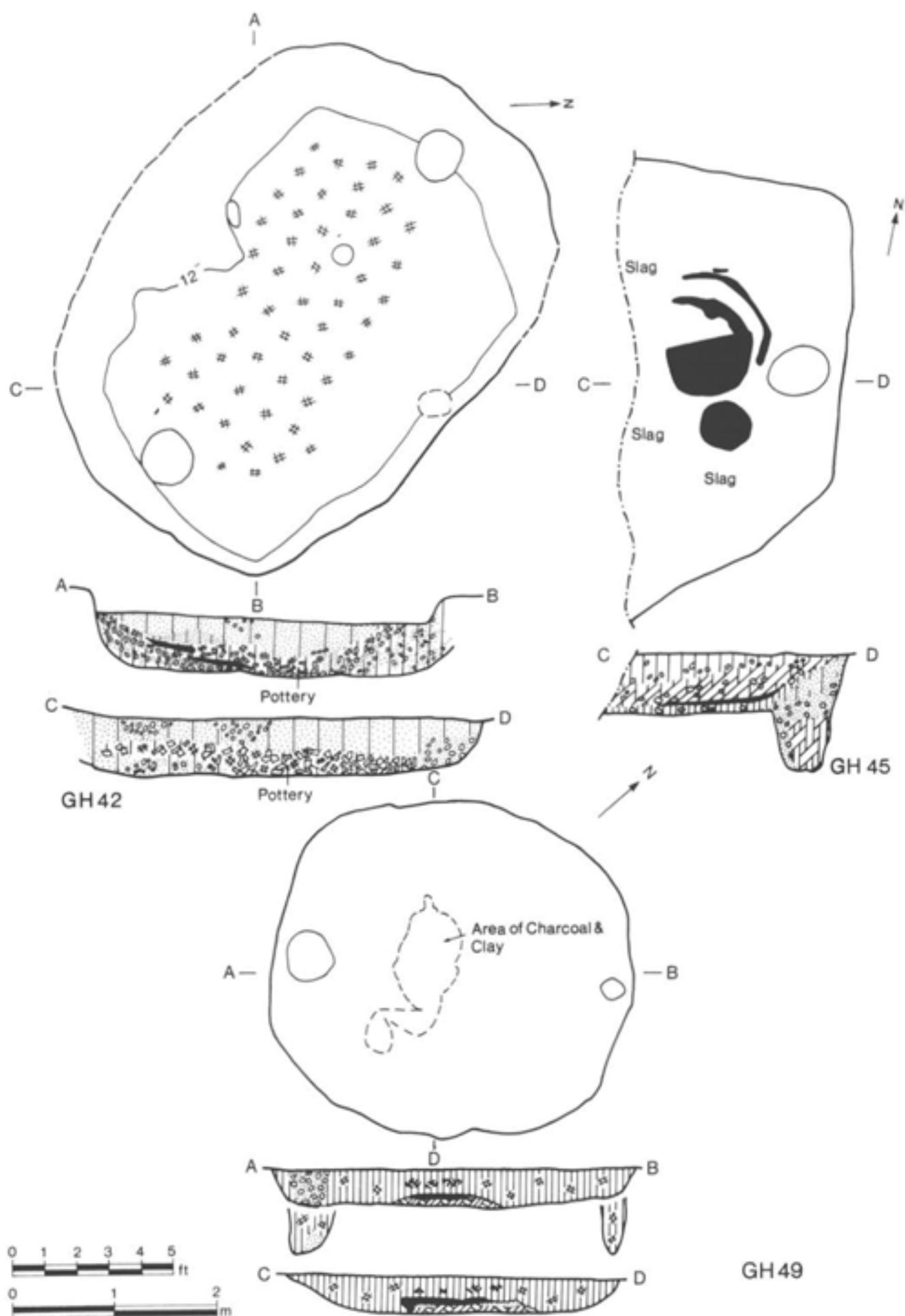


Fig 73 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

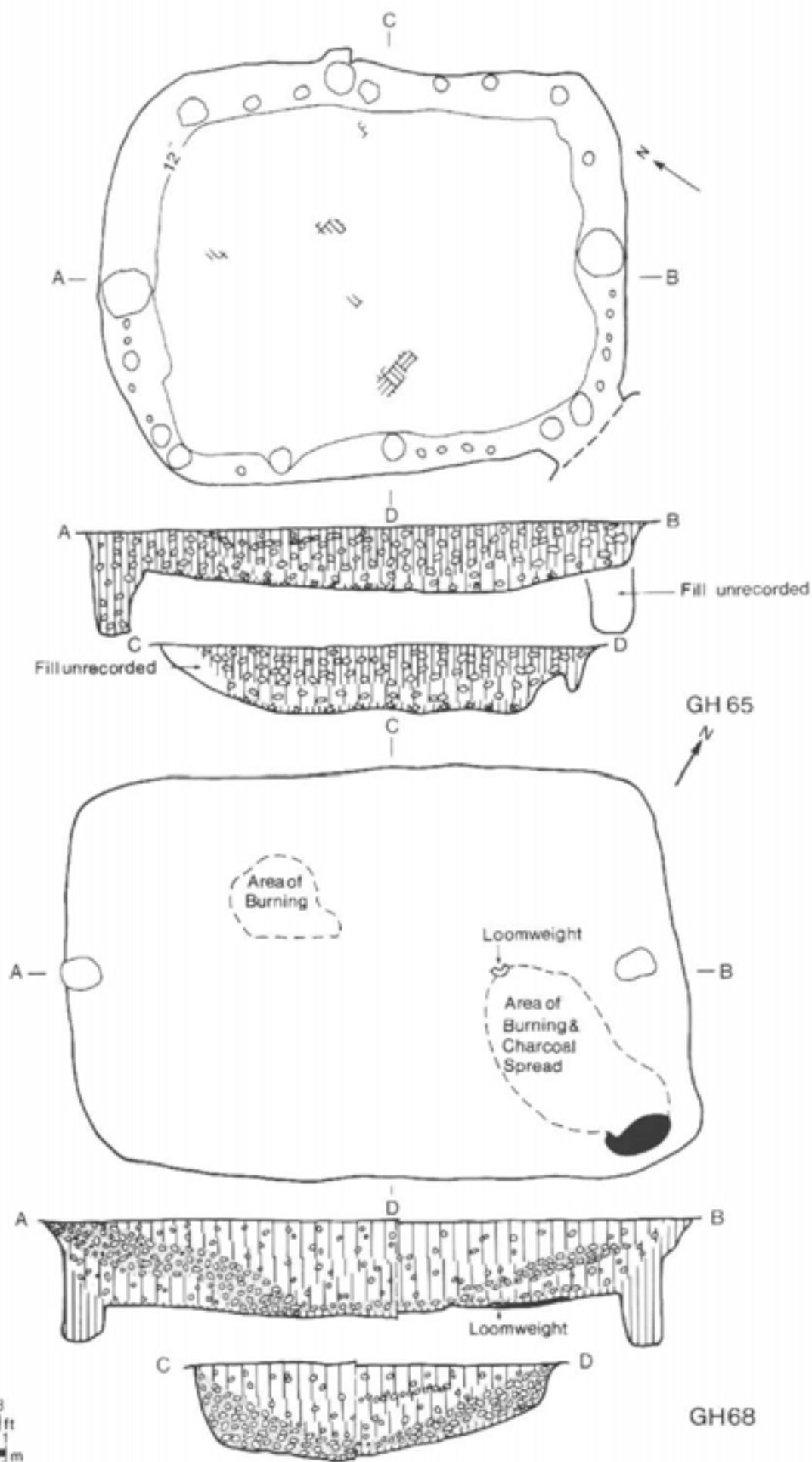


Fig 74 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

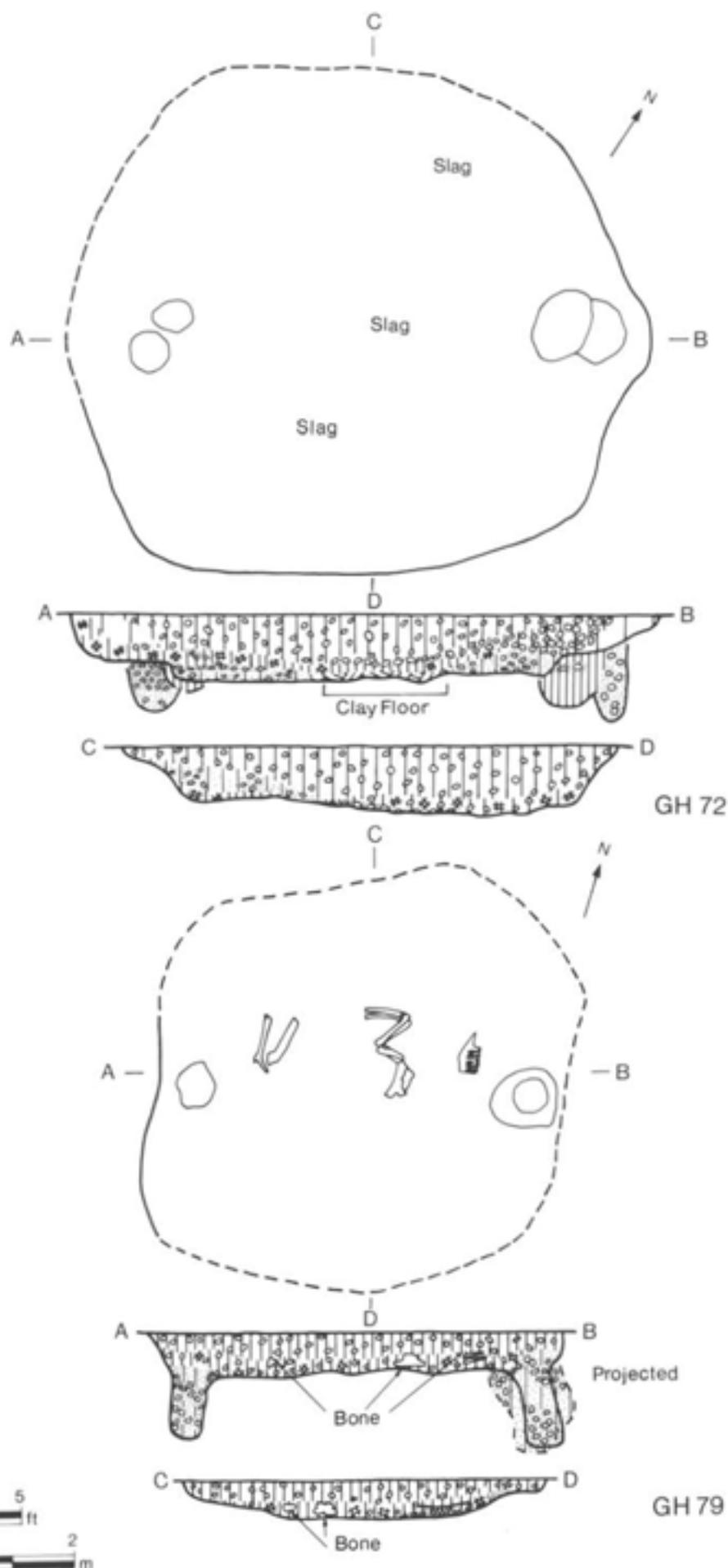


Fig 75 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

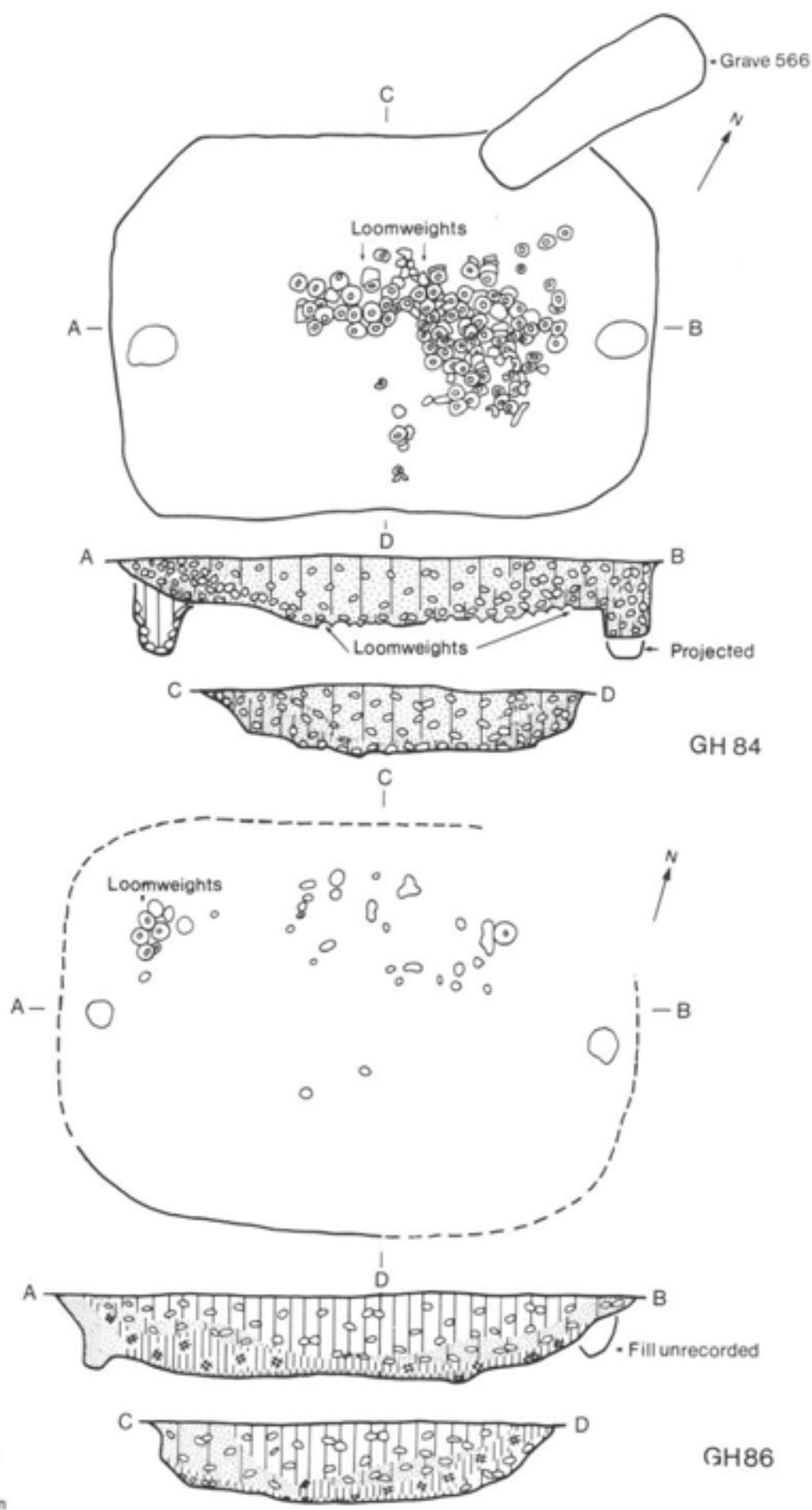


Fig 76 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

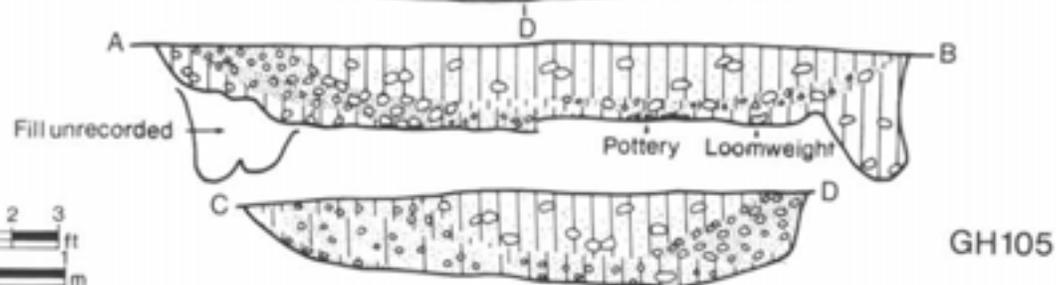
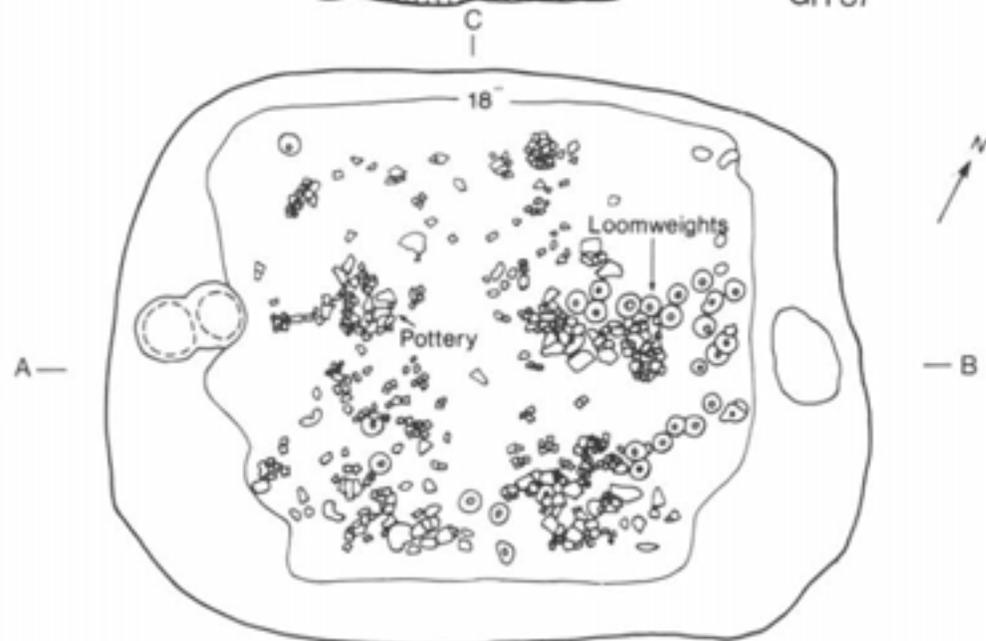
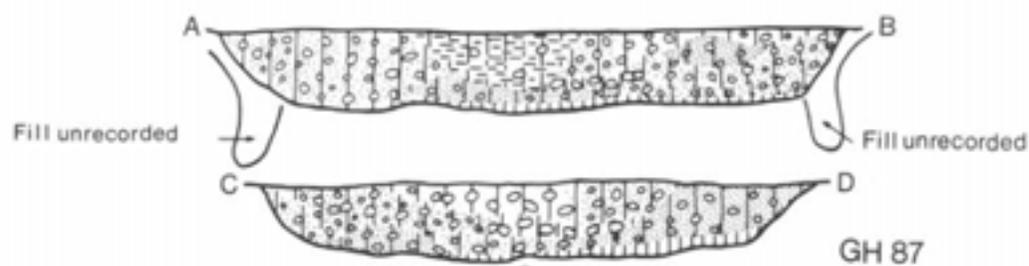
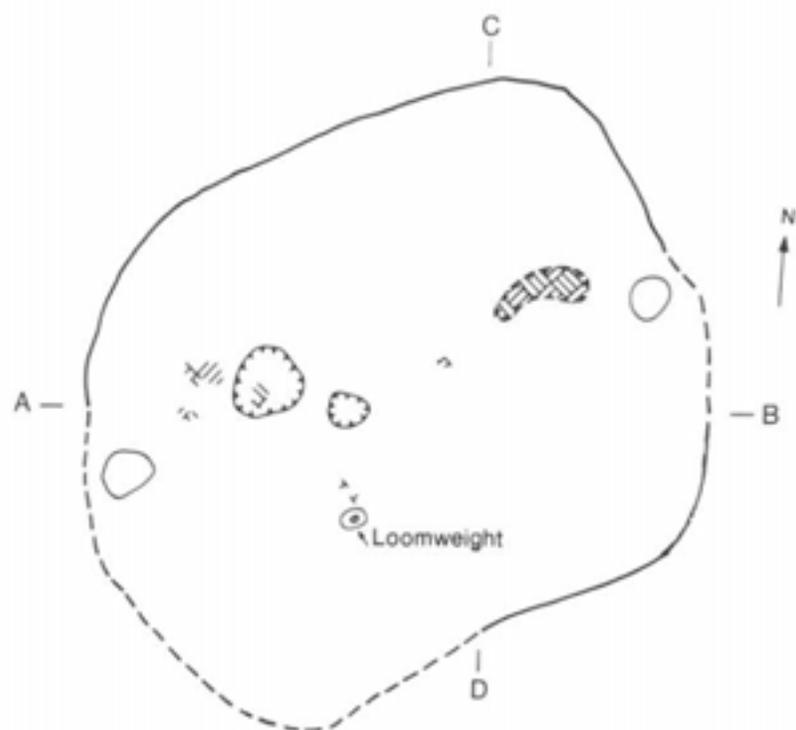


Fig 77 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

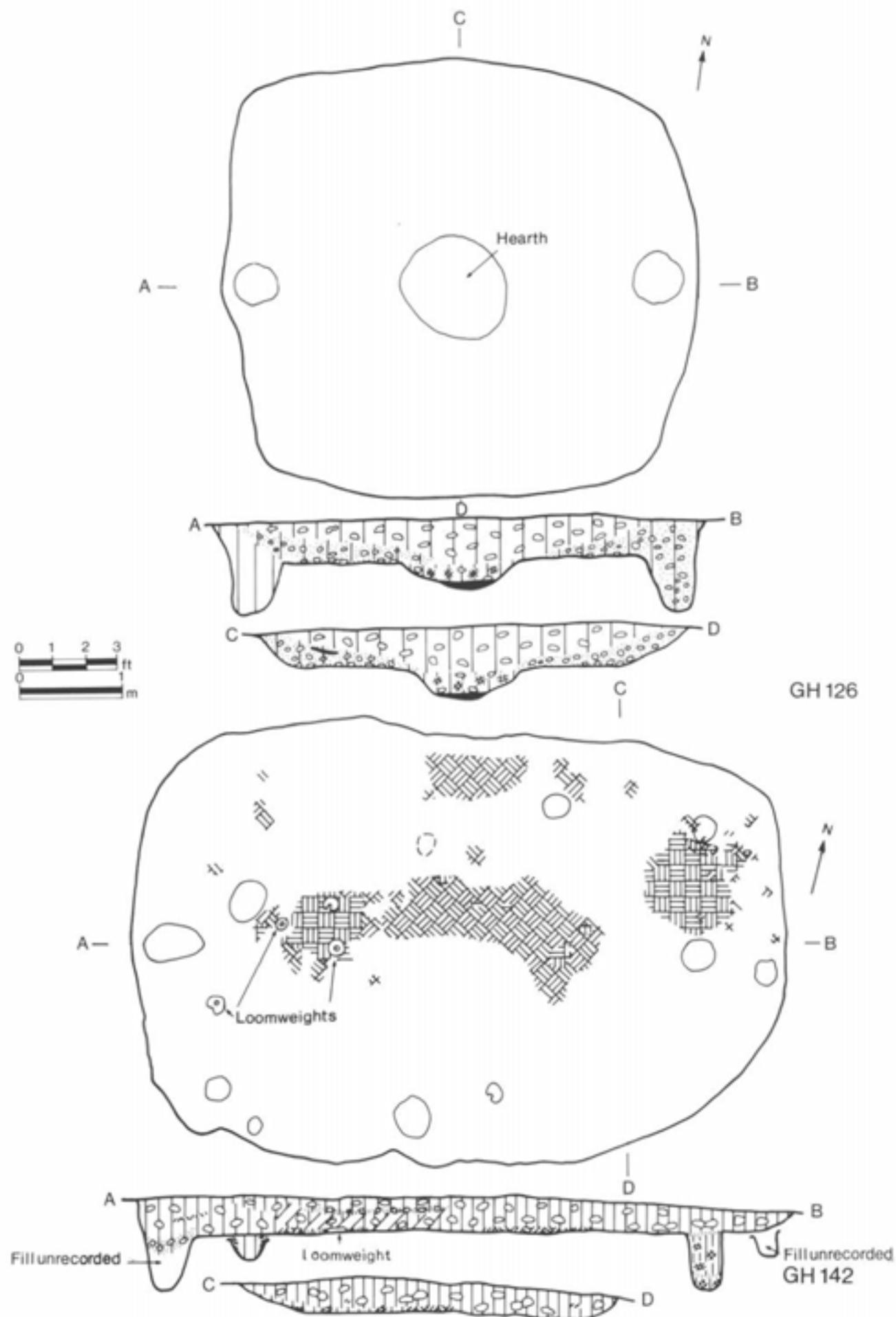


Fig 78 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

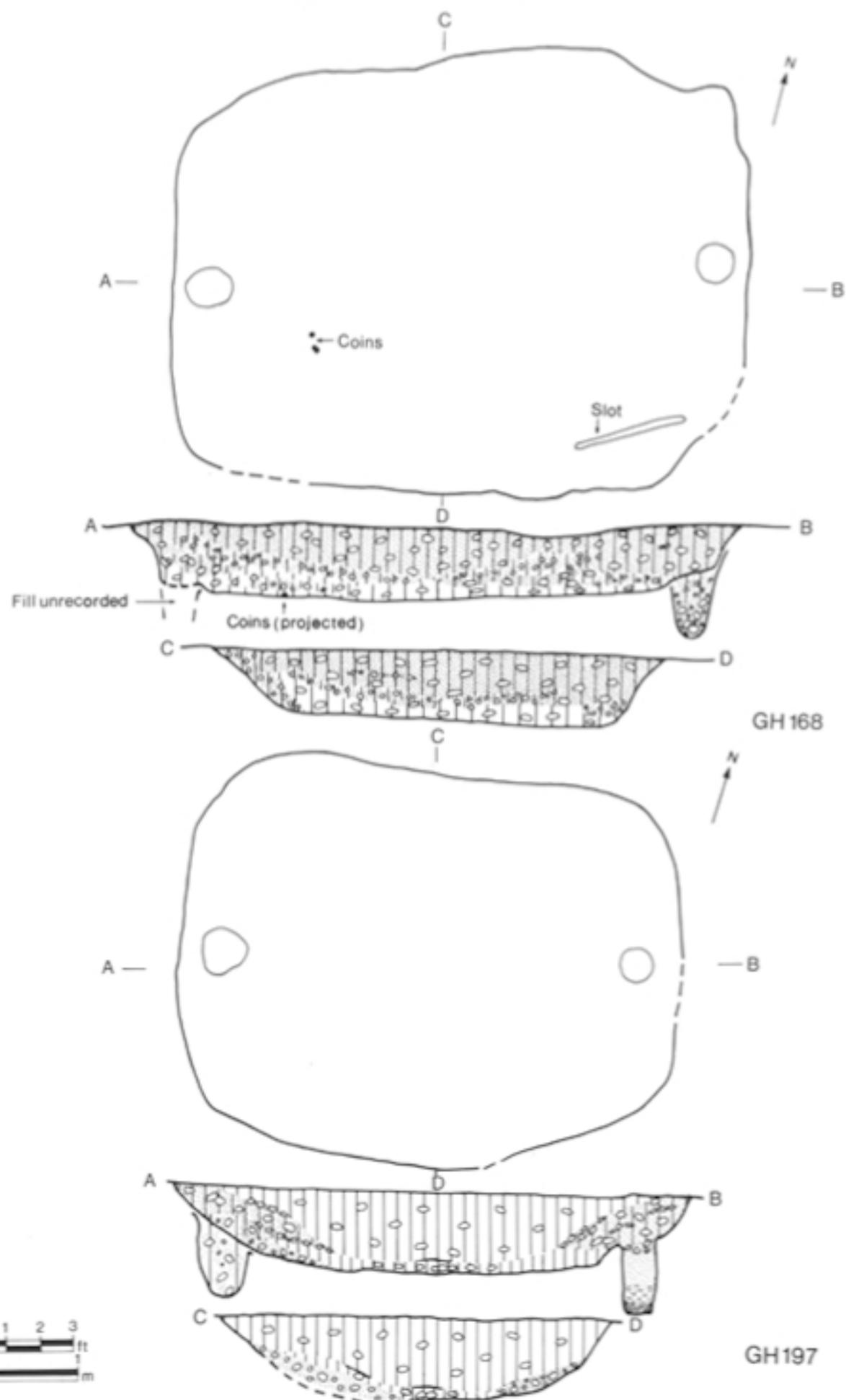


Fig 79 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)

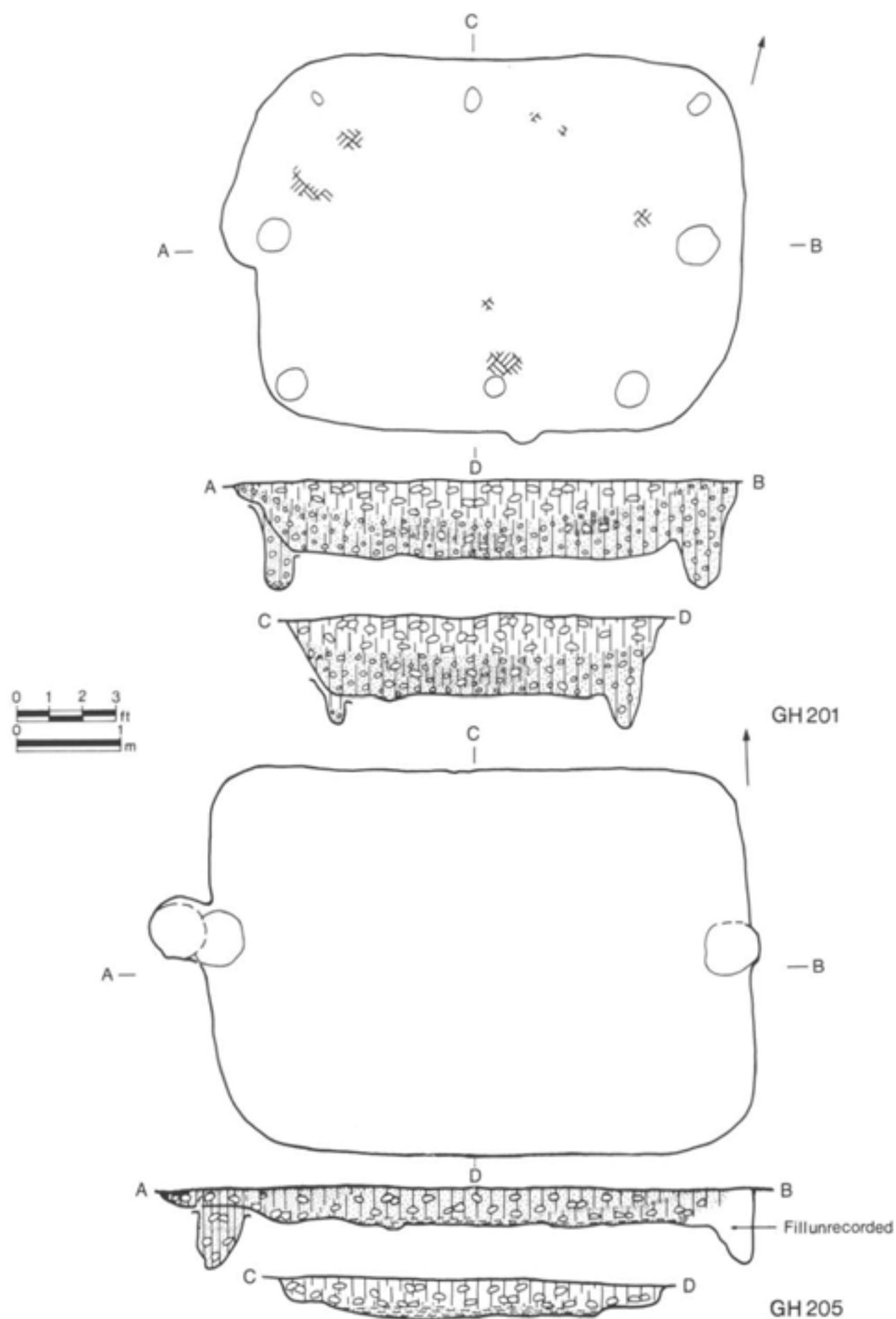
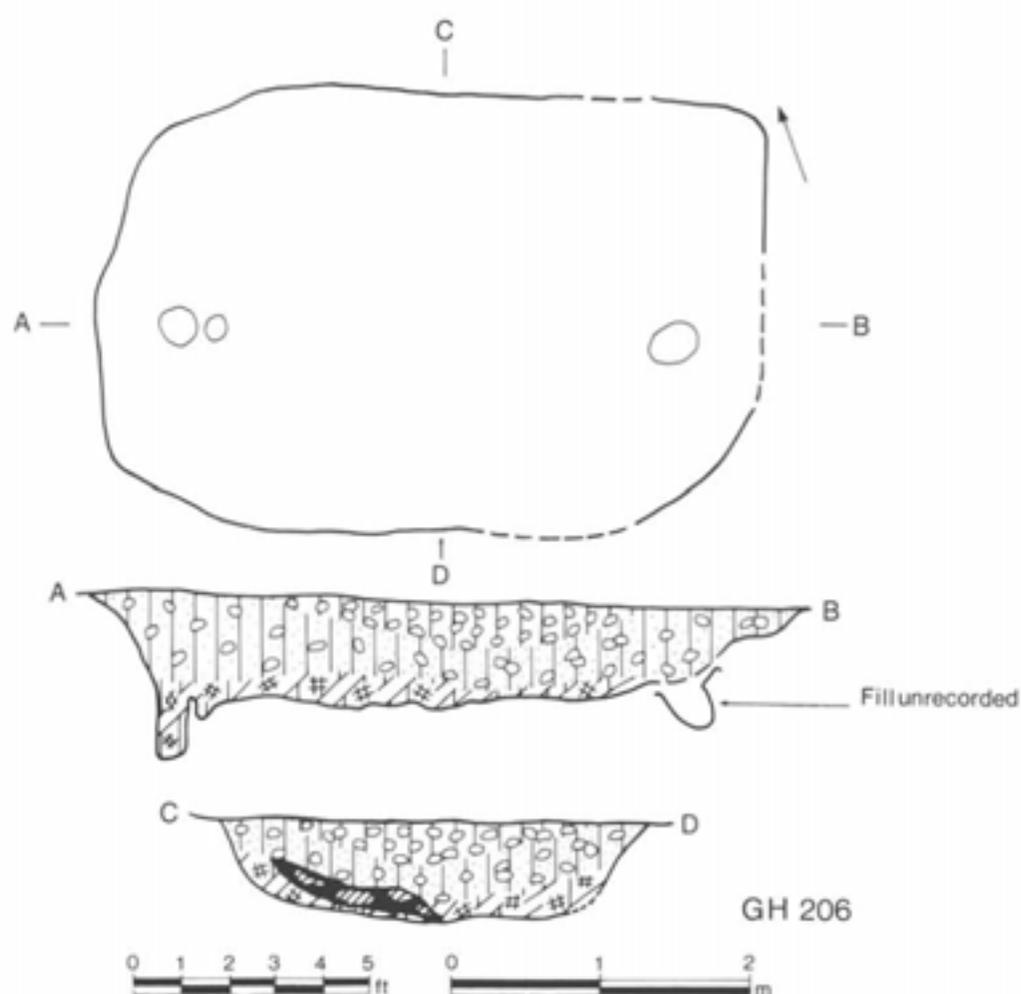


Fig 80 Plans and sections of Grubenhäuser (for key see Fig 81) (scale: 1:50)



Key

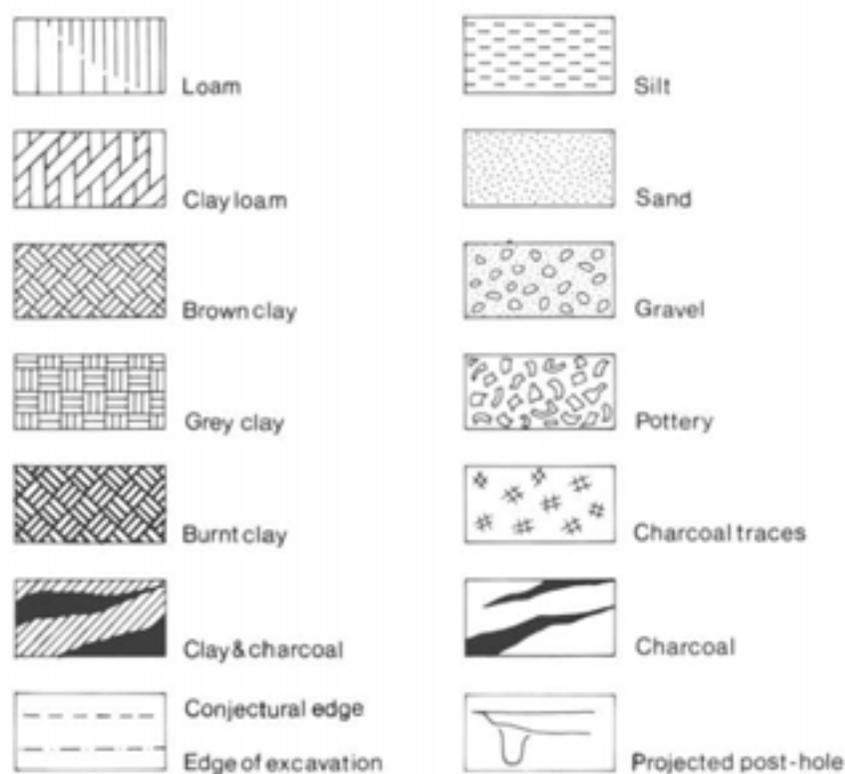


Fig 81 Plans and sections of Grubenhäuser (scale: 1:50)

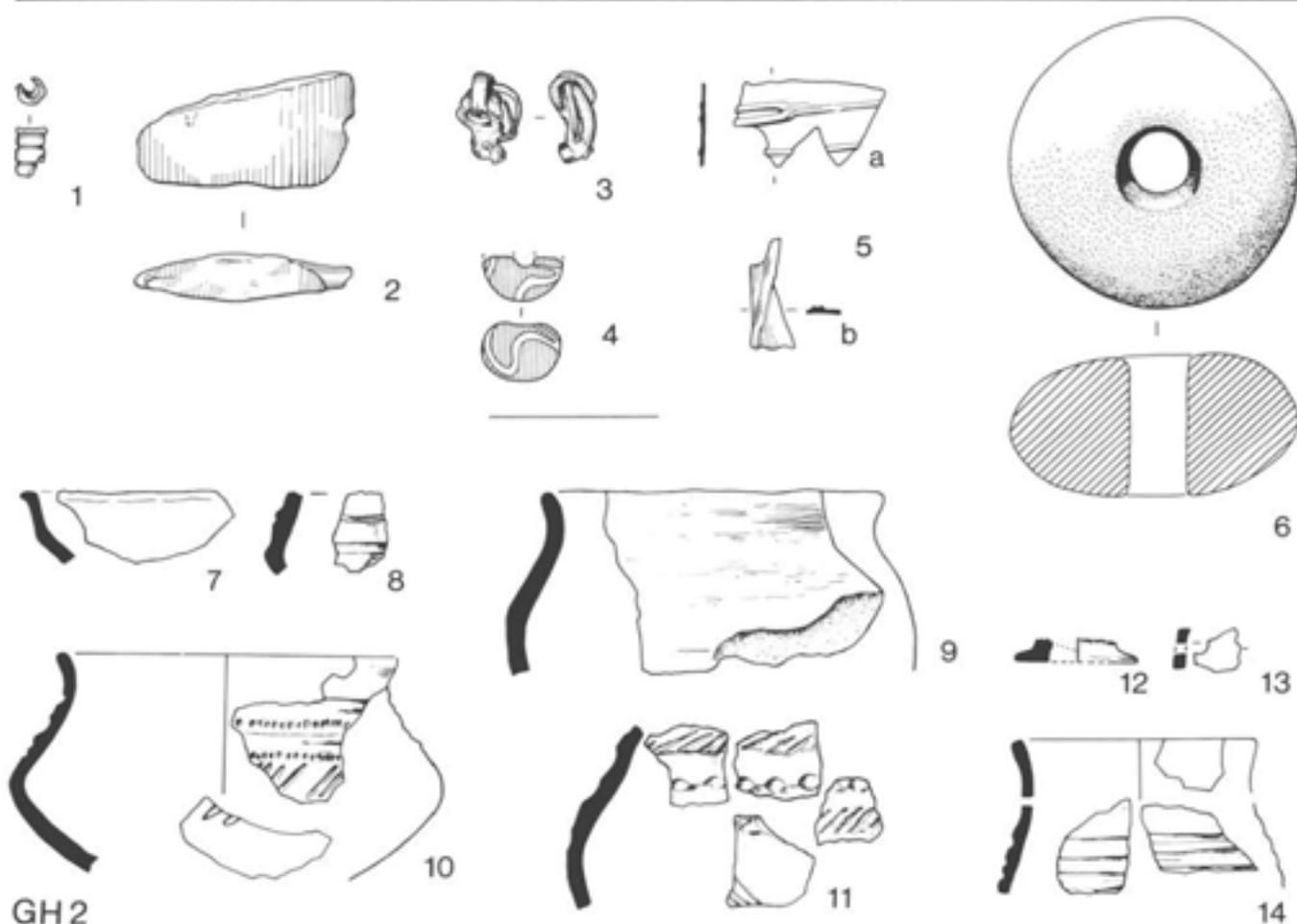
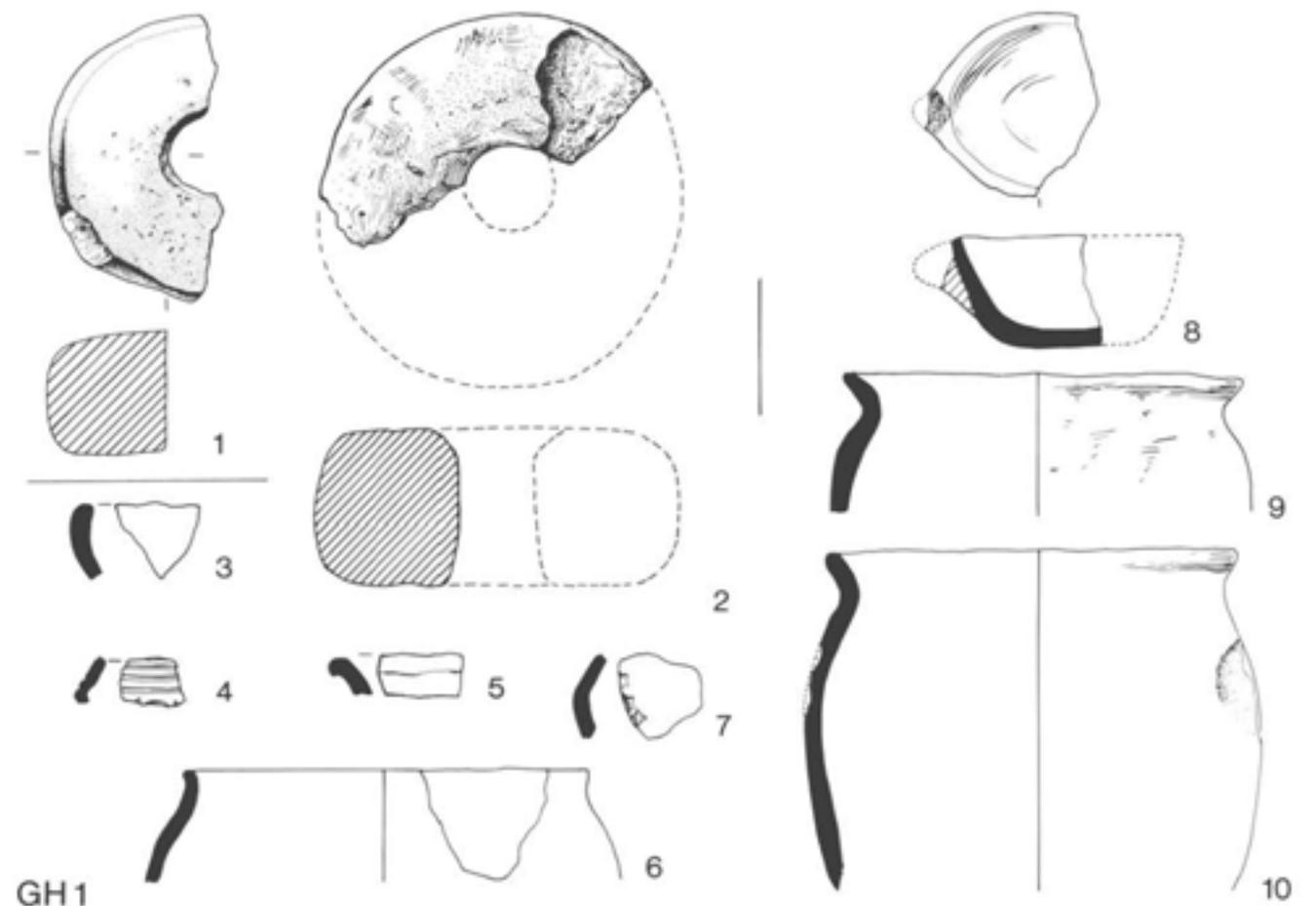


Fig 82 Finds and pottery from GH 1, 2 (for key to glass beads see Fig 53) (scales: GH 1.1-2, 1:1; 3-10, 1:3; GH 2.1-6, 1:1; 7-14, 1:3)

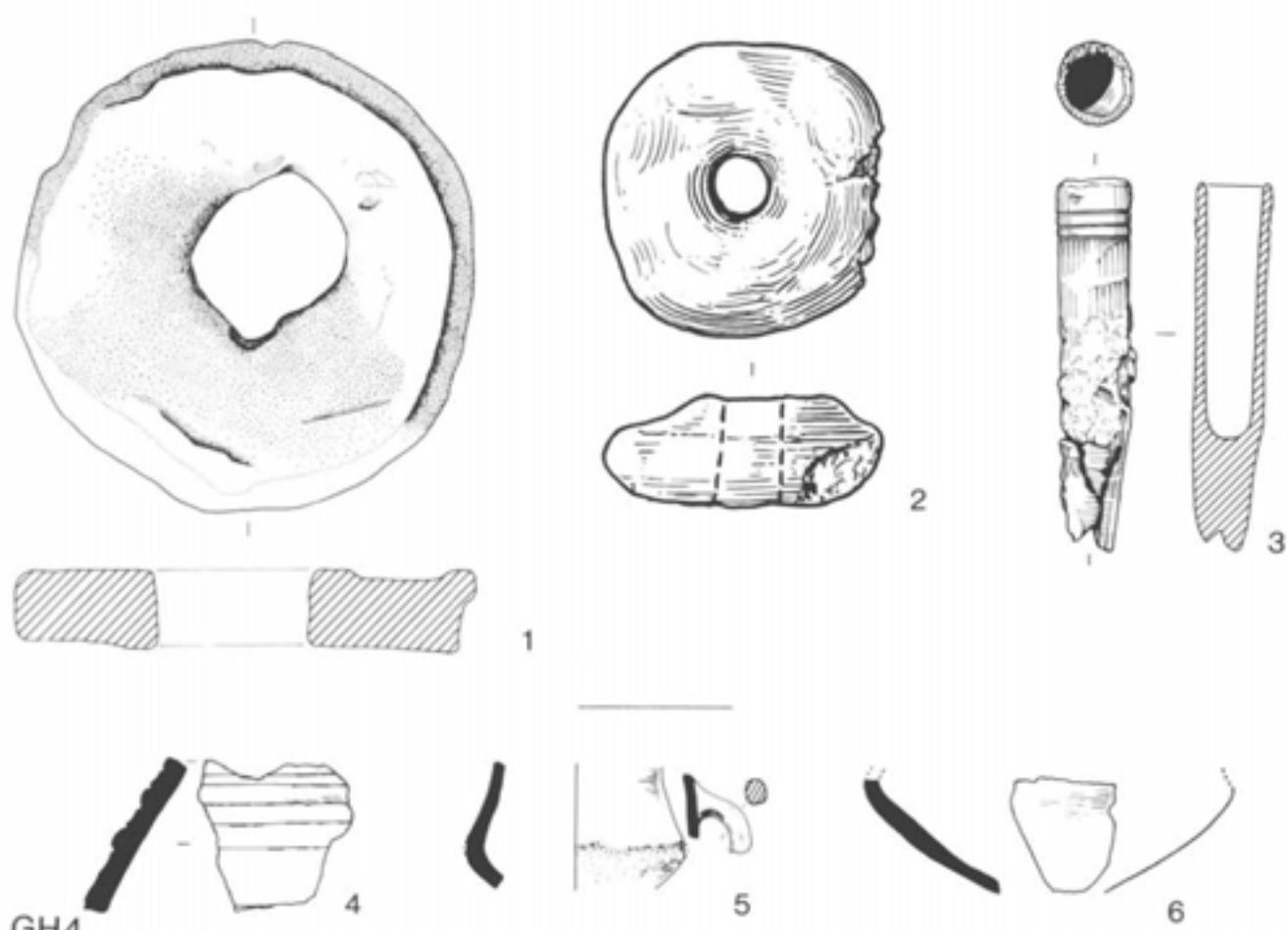
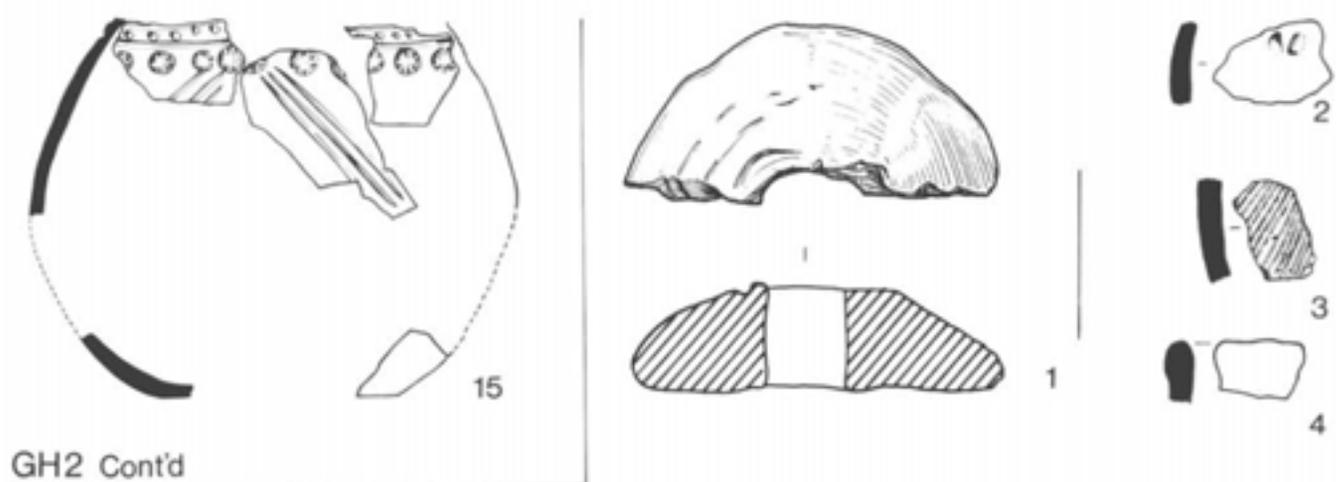
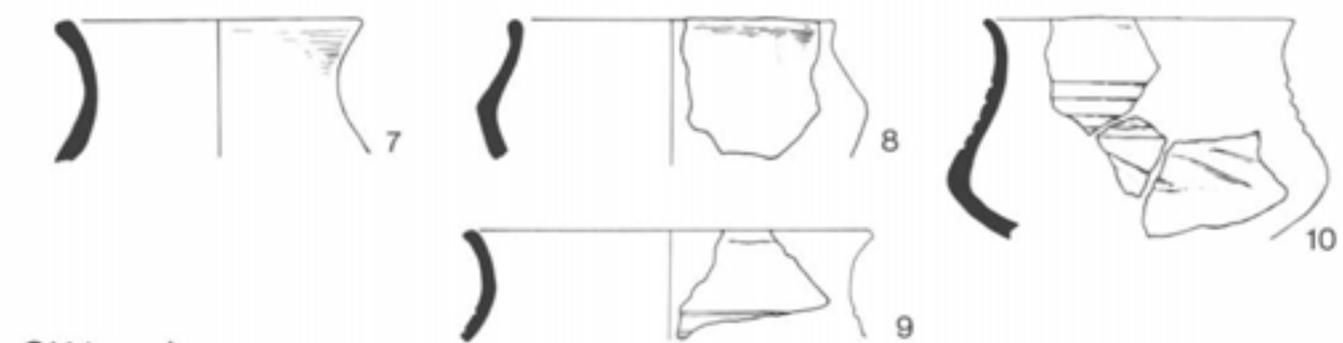
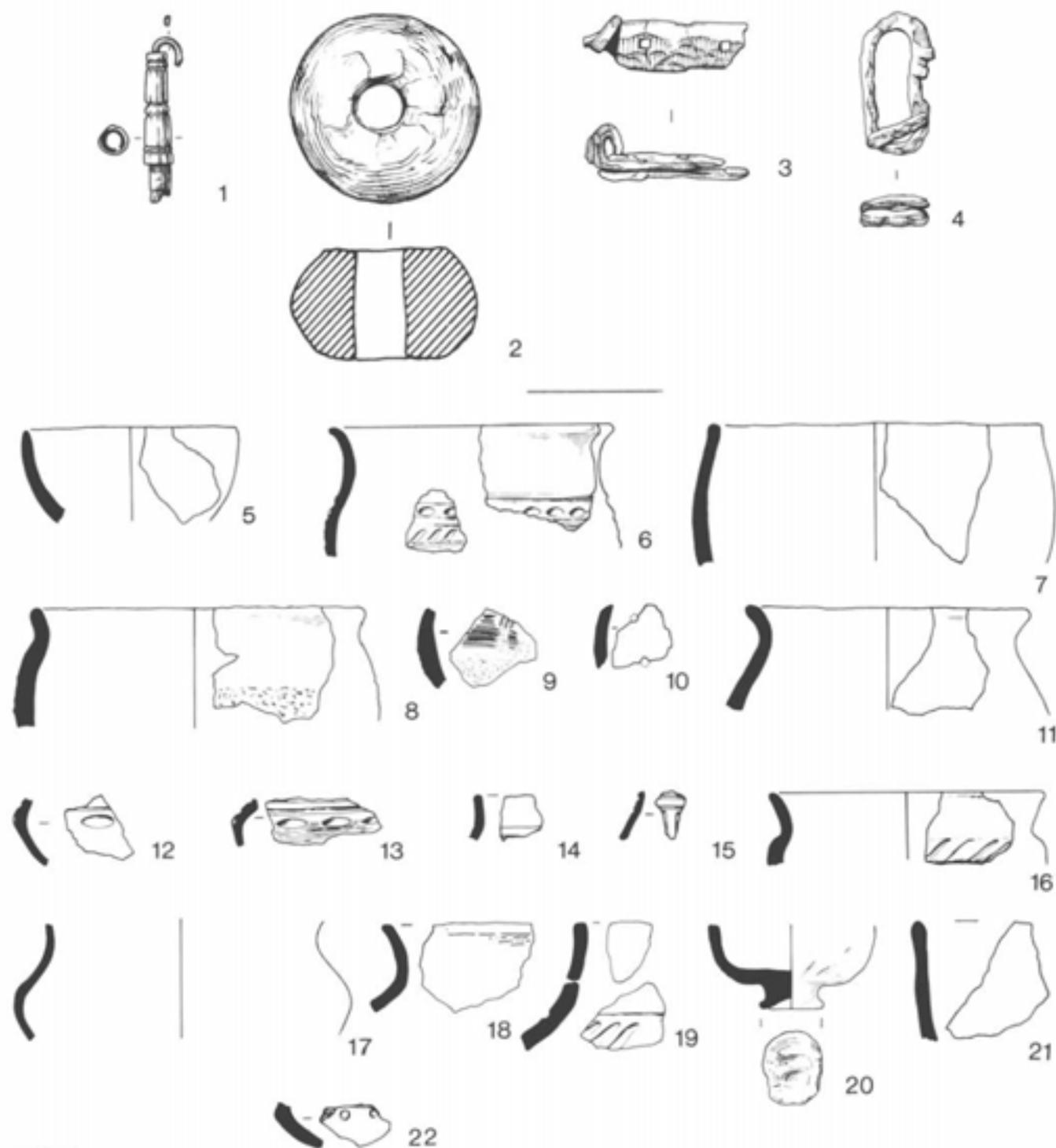


Fig 83 Finds and pottery from GH 2-4 (scales: GH 2.15, 1:3; GH 3.1, 1:1; 2-7, 1:3; GH 4.1-2, 1:1; 3, 1:2; 4-6, 1:3)



GH4 Cont'd



GH5

Fig 84 Finds and pottery from GH 4, 5 (scales: GH 4.7-10, 1:3; GH 5.1-2, 1:1; 3-4, 1:2; 5-22, 1:3)

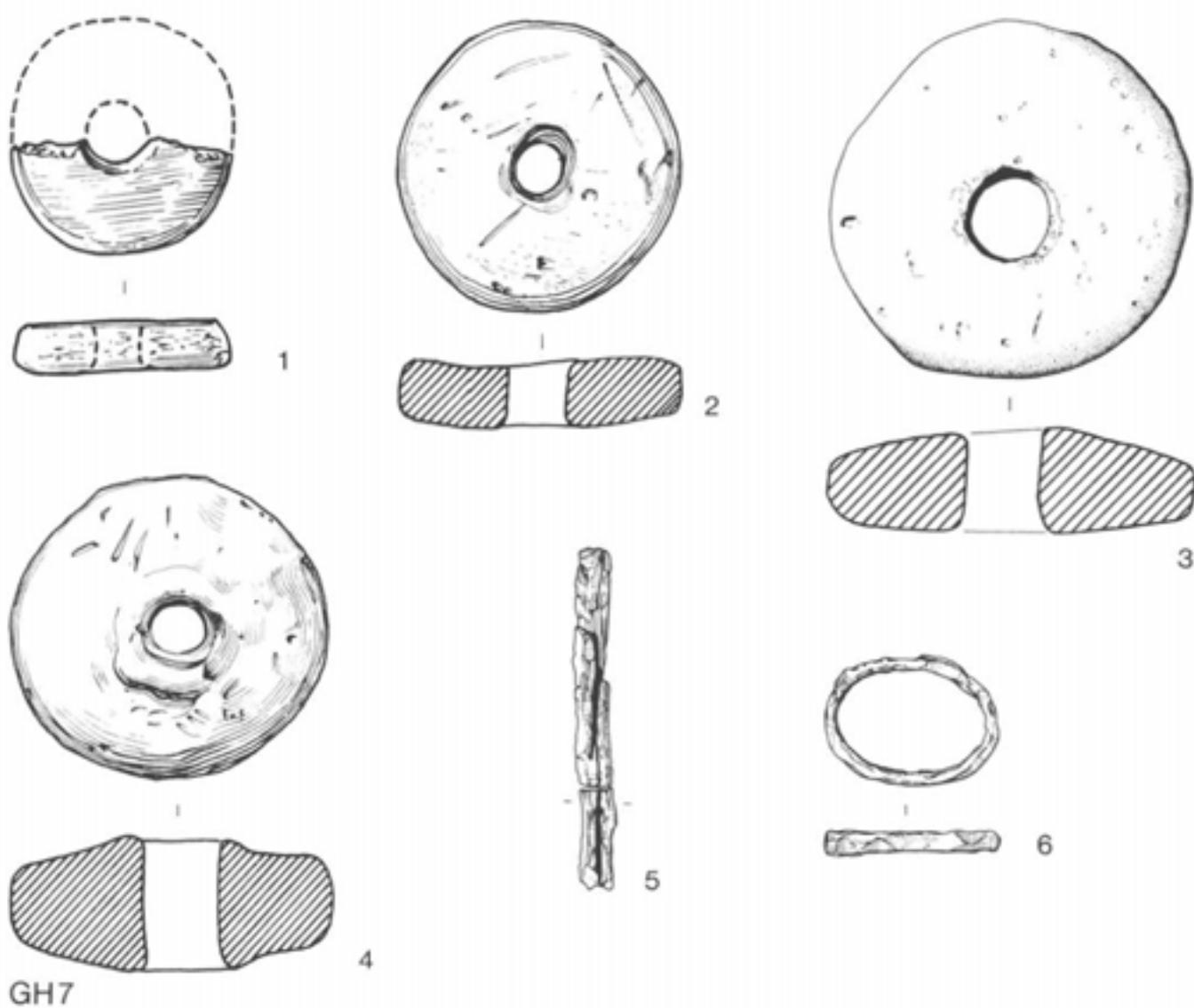
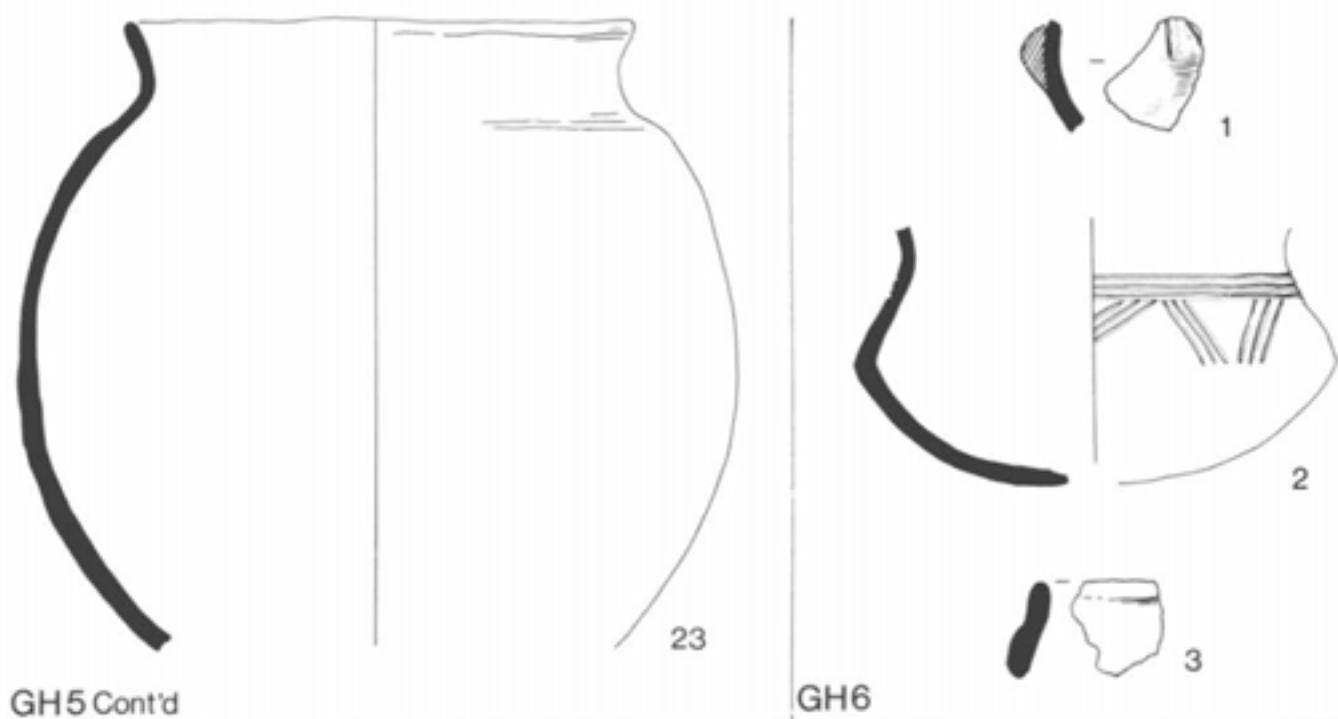


Fig 85 Finds and pottery from GH 5-7 (scales: GH 5.23, 1:3; GH 6.1-3, 1:3; GH 7.1-4, 1:1; 5-6, 1:2)

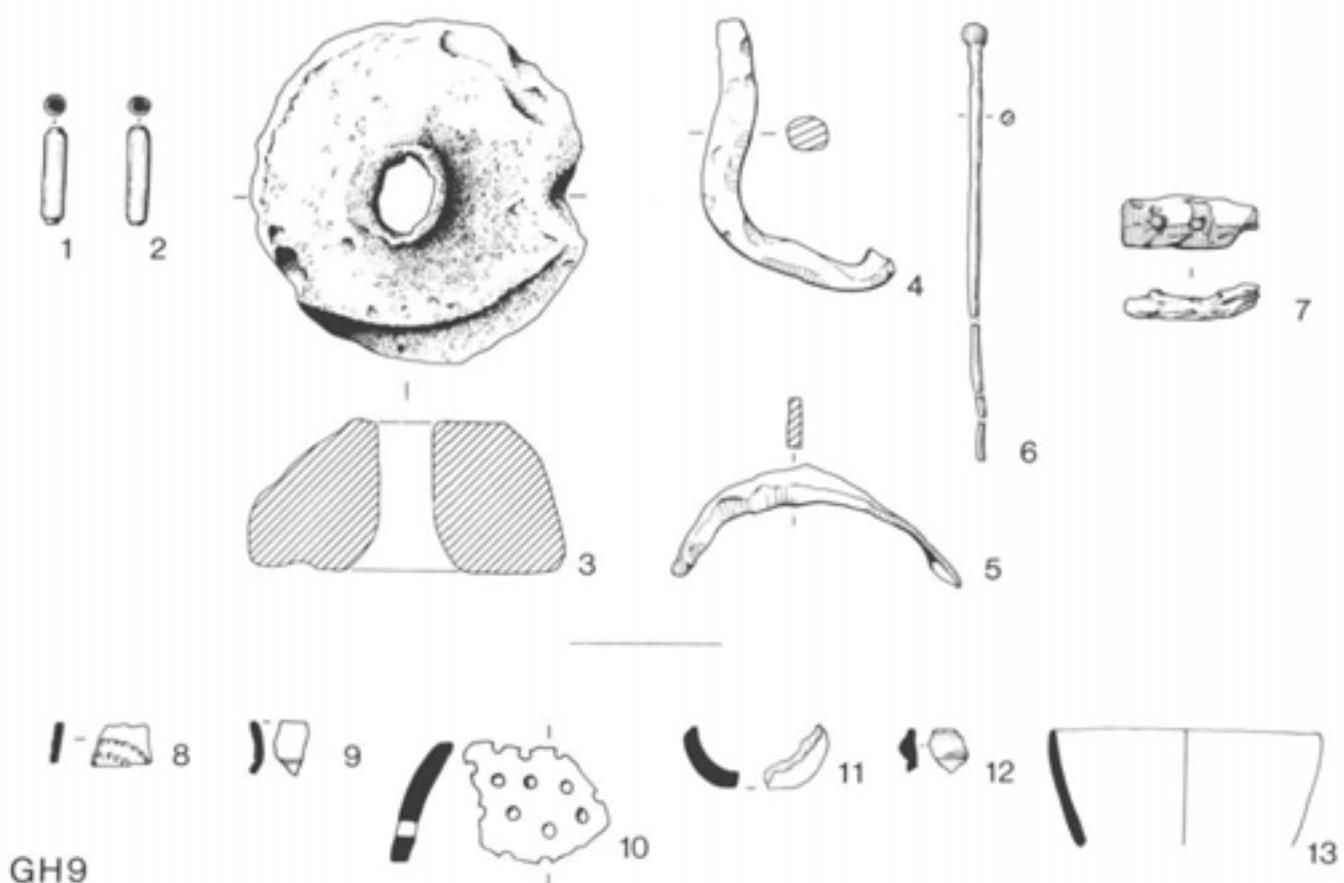
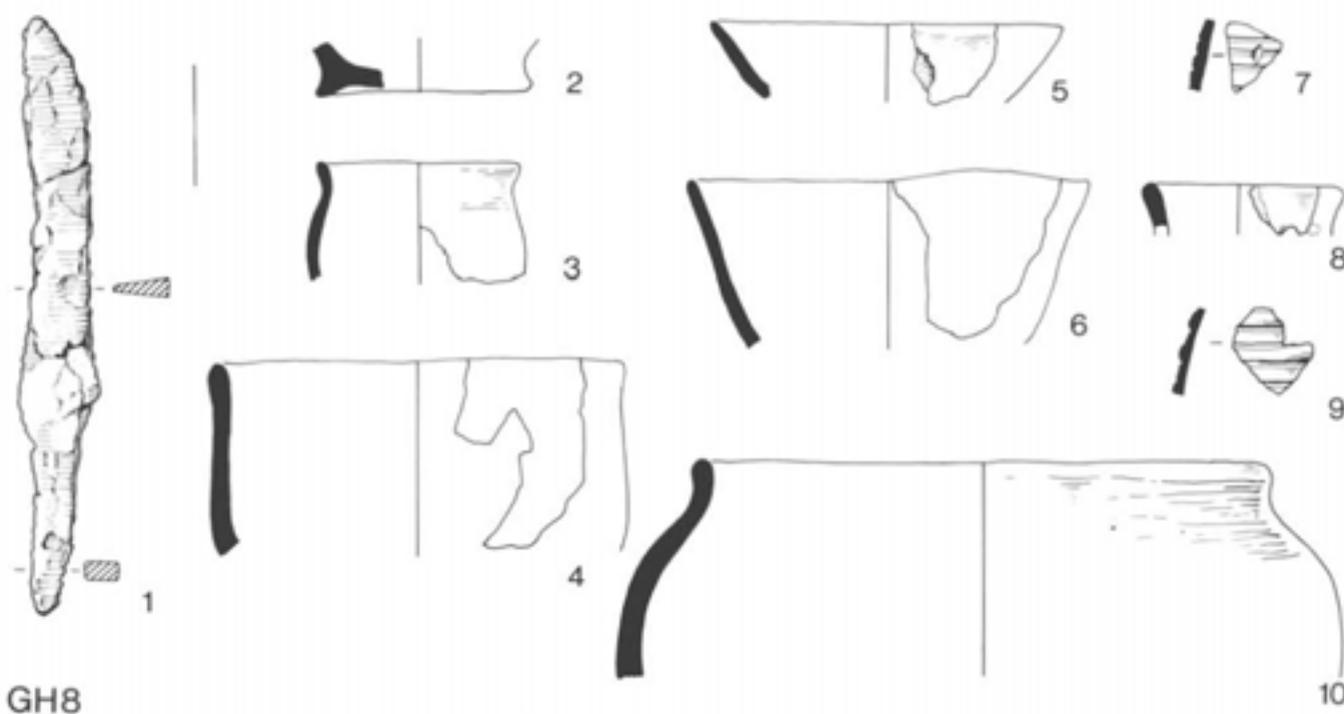
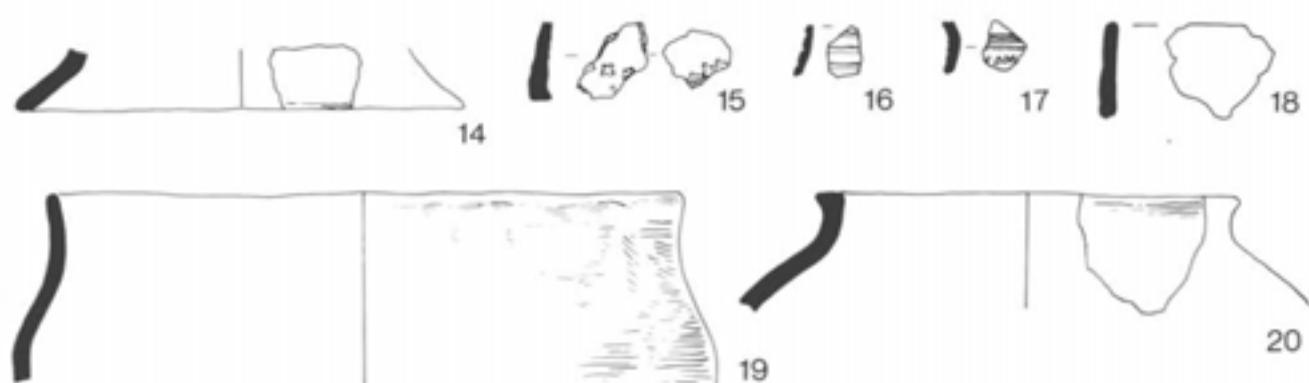
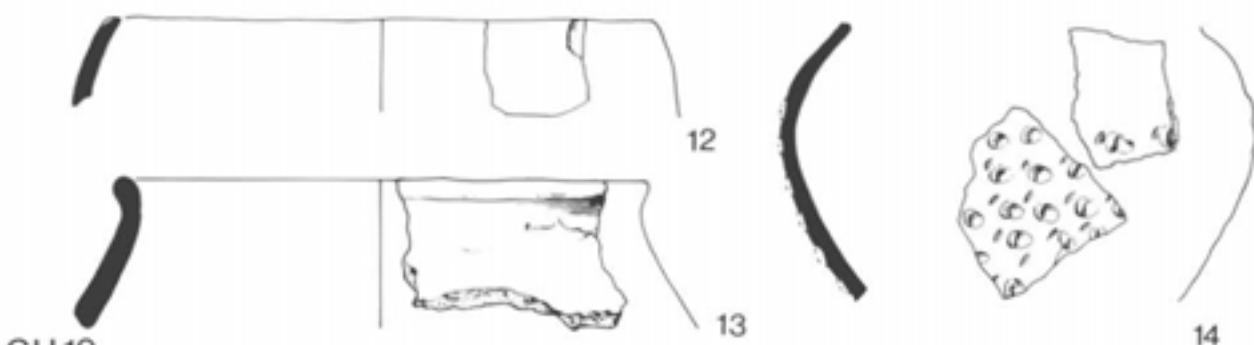
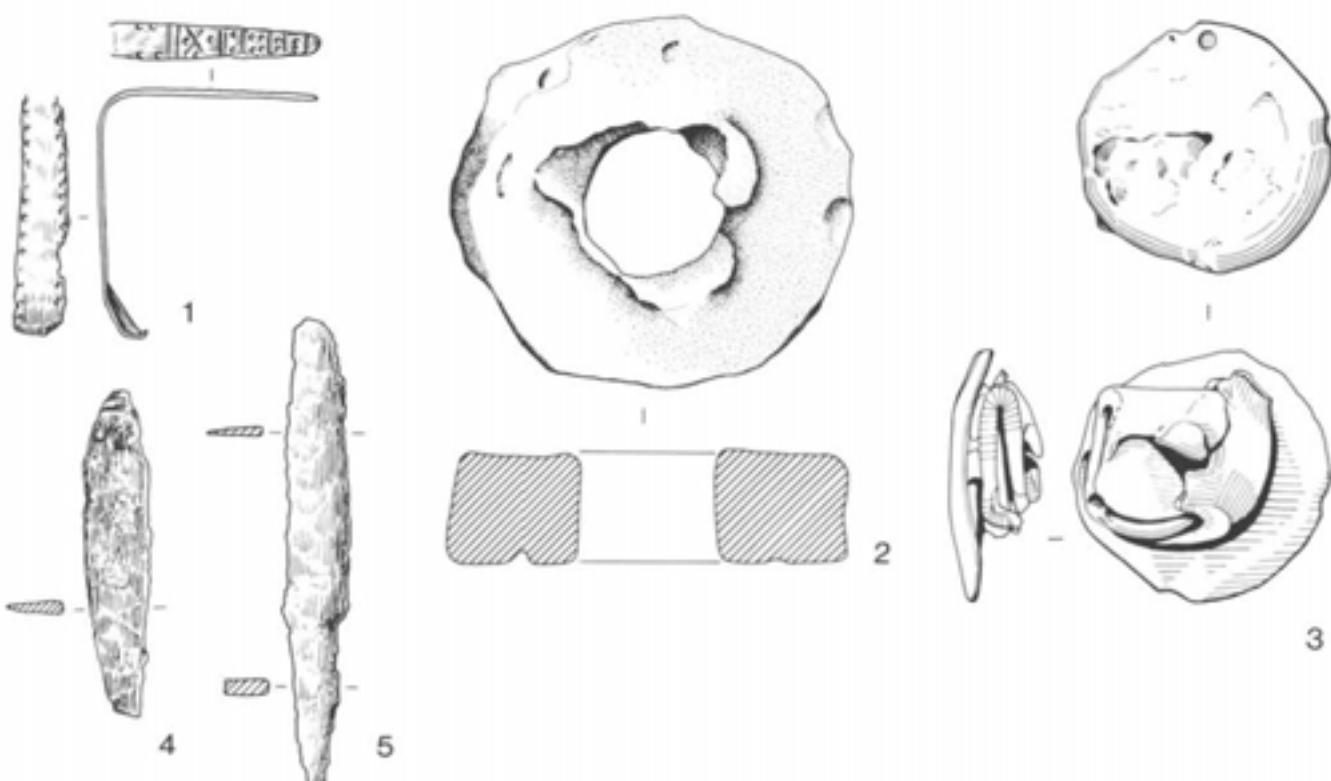


Fig 86 Finds and pottery from GH 7-9 (scales: GH 7.7-12, 1:3; GH 8.1, 1:2; 2-10, 1:3; GH 9.1-6, 1:1; 7, 1:2; 8-13, 1:3)

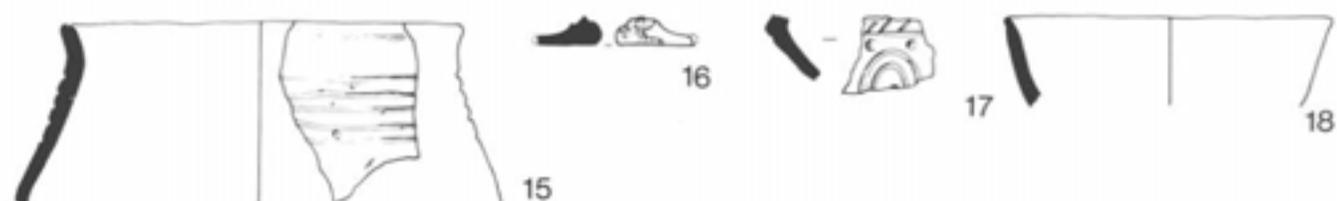


GH9 Cont'd

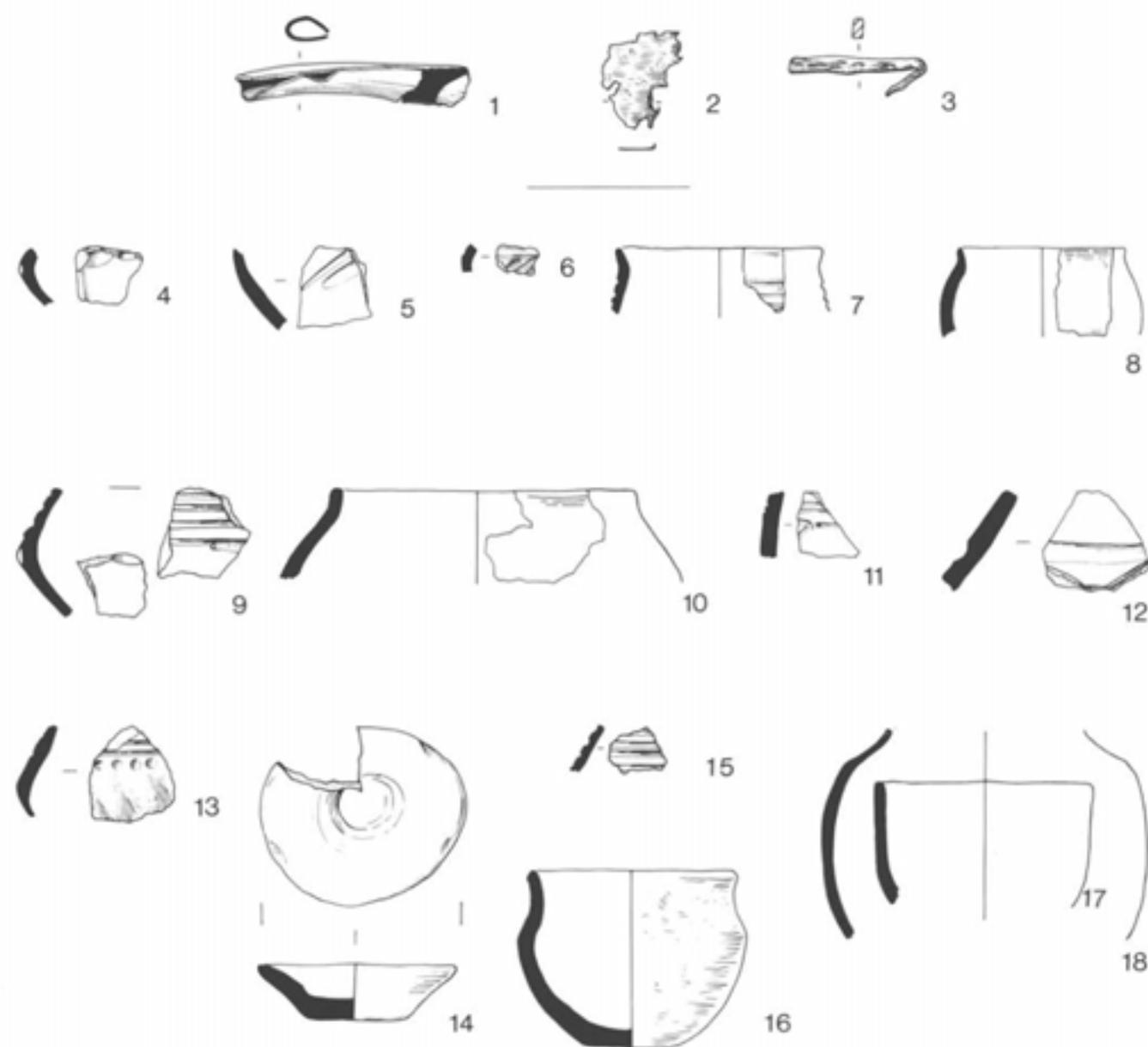


GH 10

Fig 87 Finds and pottery from GH 9-10 (scales: GH 9.14-20, 1:3; GH 10.1-3, 1:1; 4-5, 1:2; 6-14, 1:3)

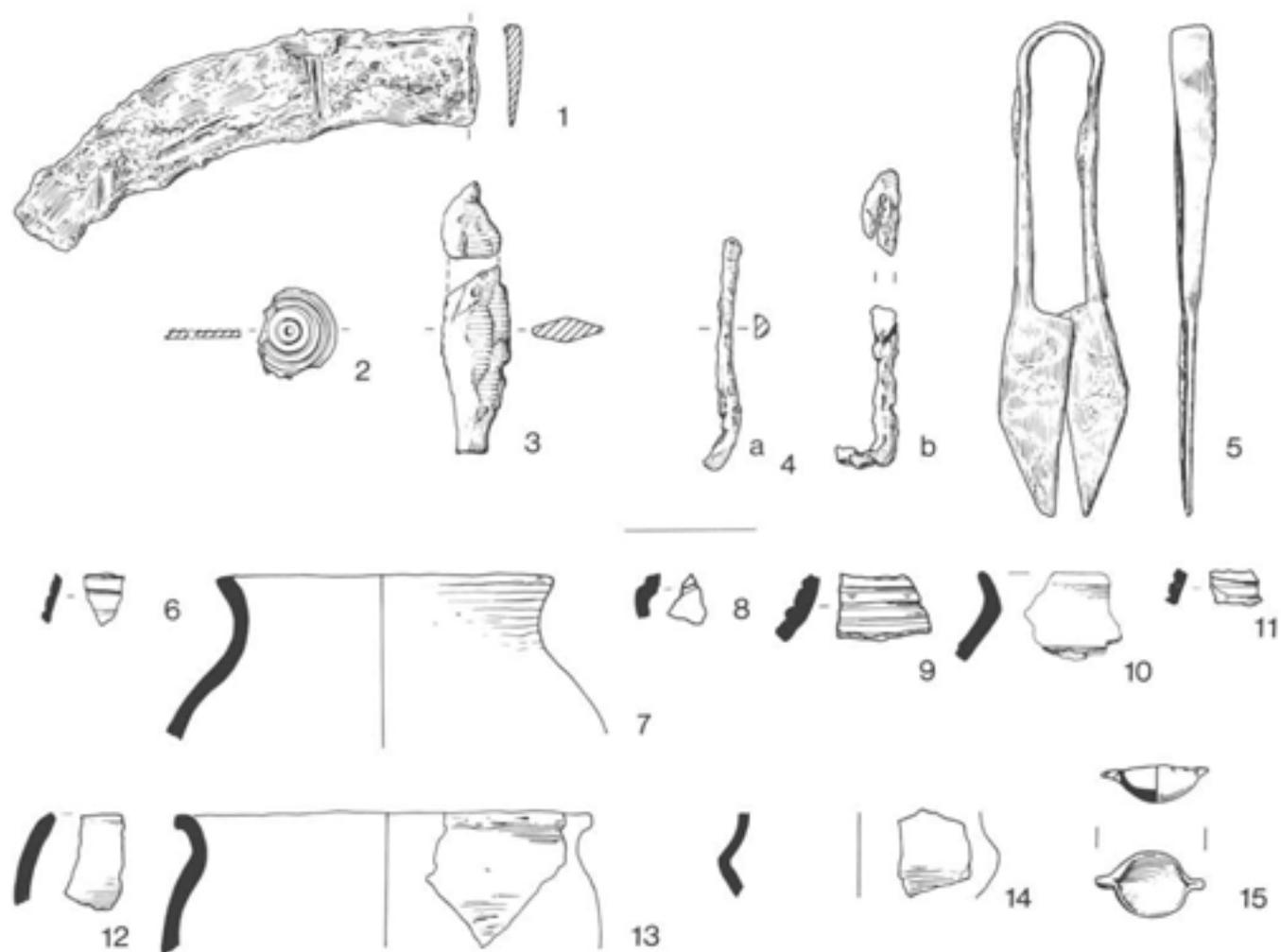


GH10 Cont'd

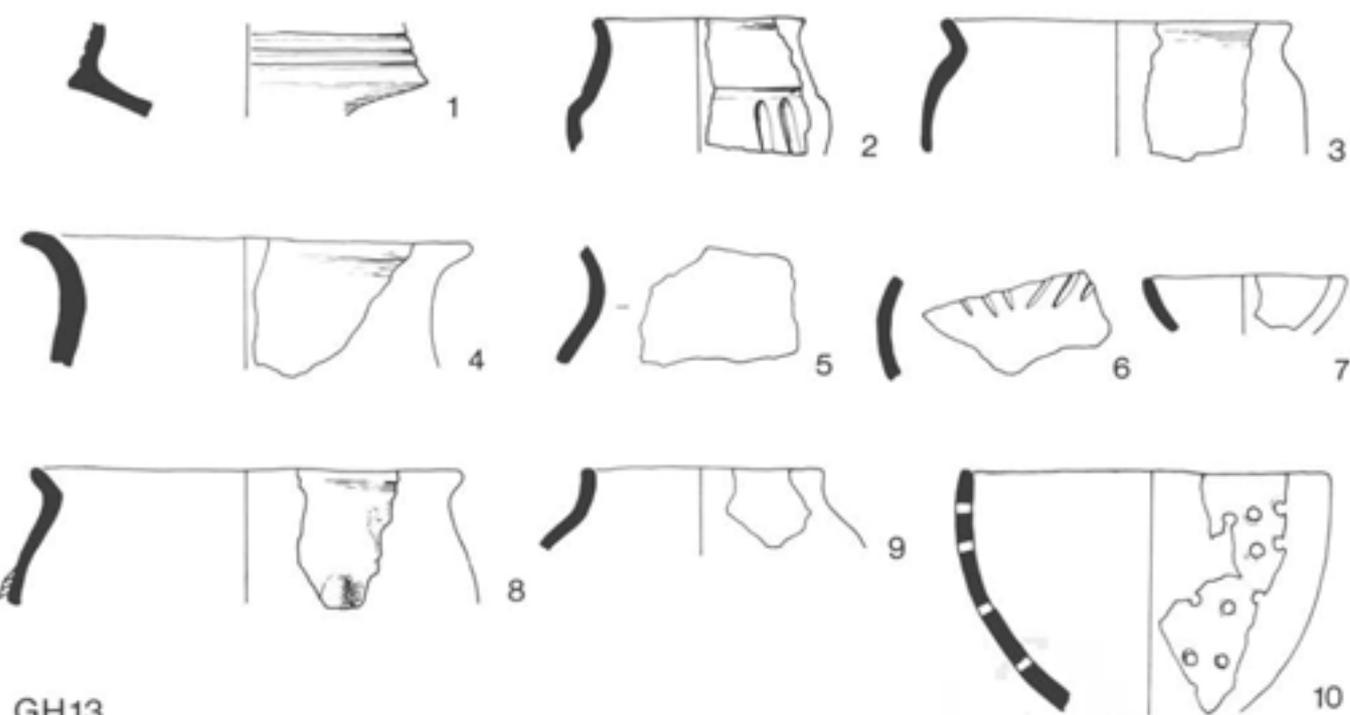


GH 11

Fig 88 Finds and pottery from GH 10, 11 (scales: GH 10.15-18, 1:3; GH 11.1-2, 1:1; 3, 1:2; 4-18, 1:3)

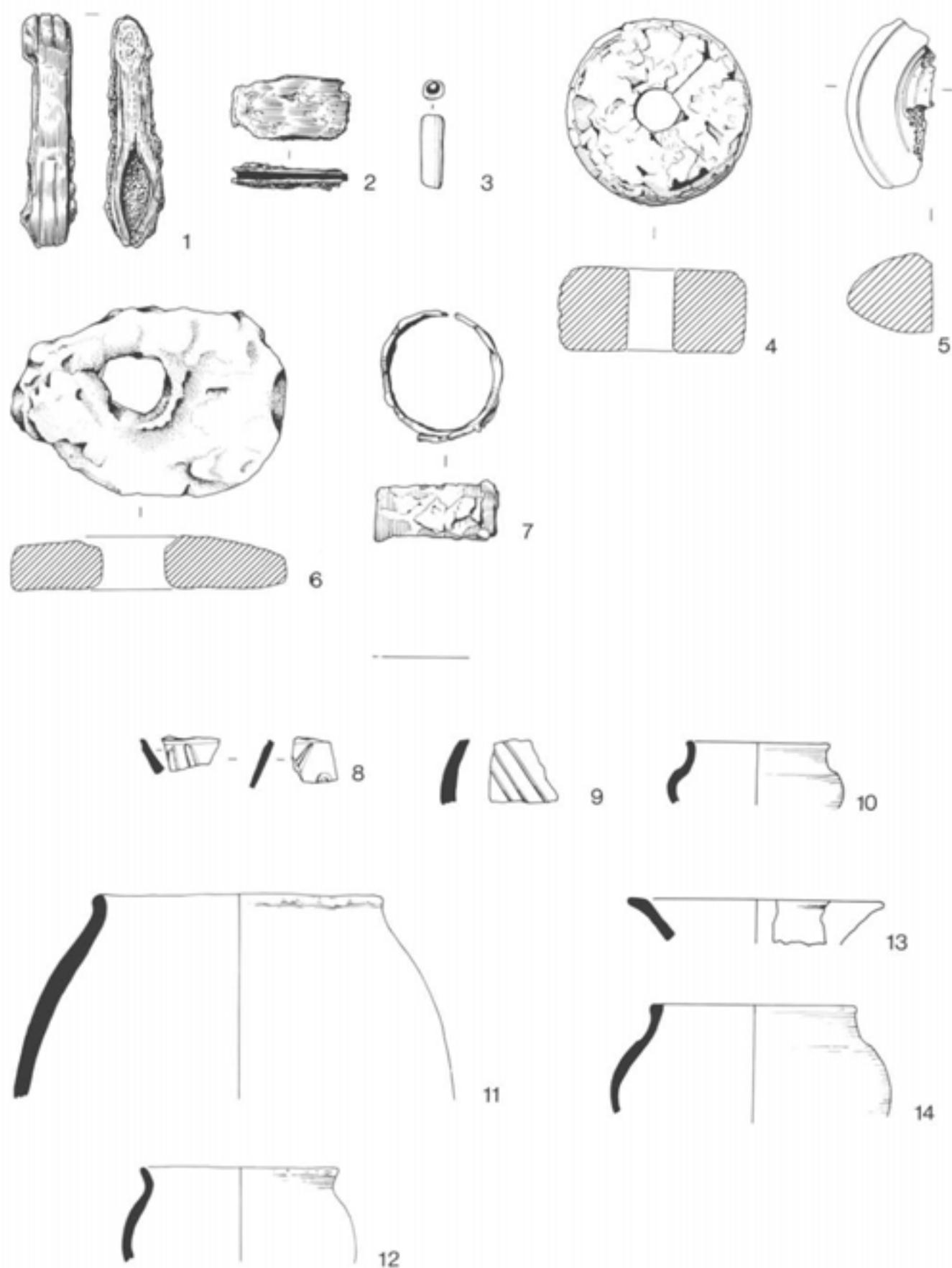


GH 12/21



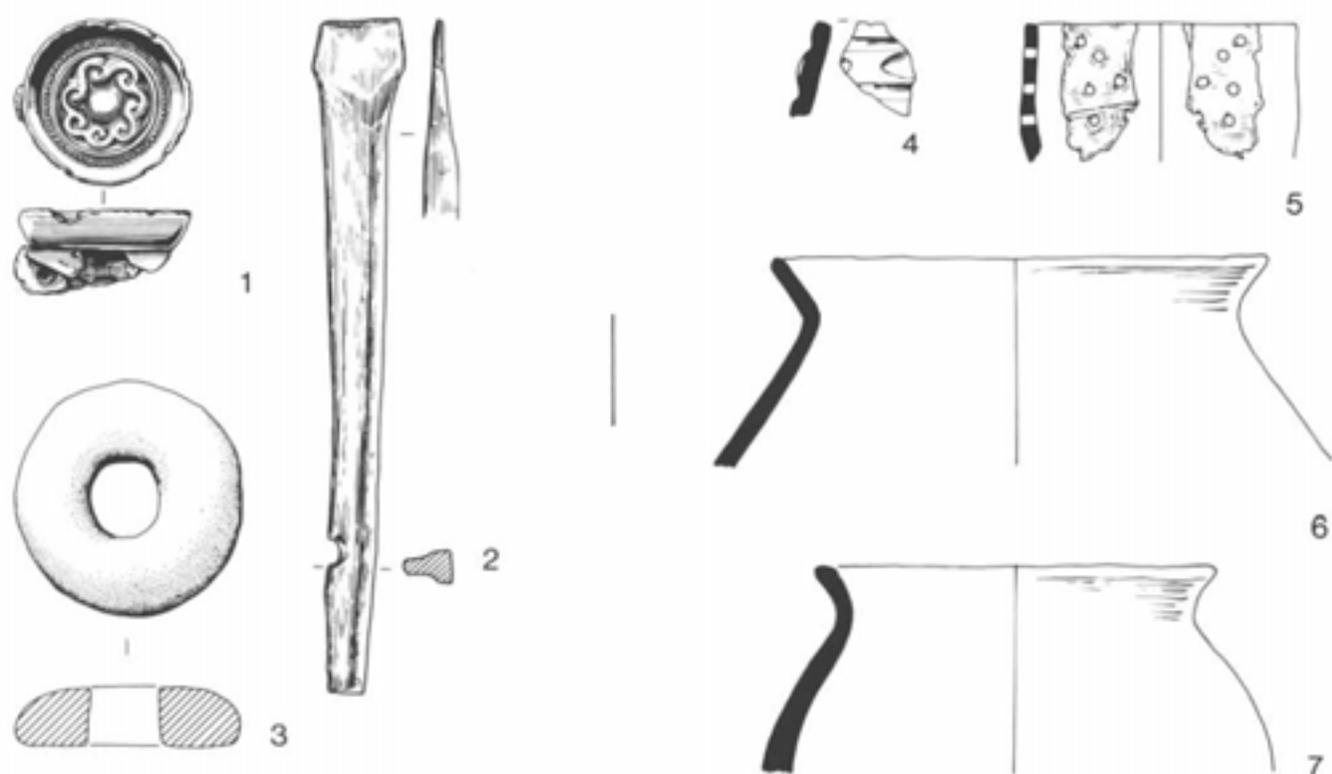
GH 13

Fig 89 Finds and pottery from GH 12/21, 13 (scales: GH 12/21.1-2, 1:1; 3-5, 1:2; 6-15, 1:3; GH 13.1-10, 1:3)

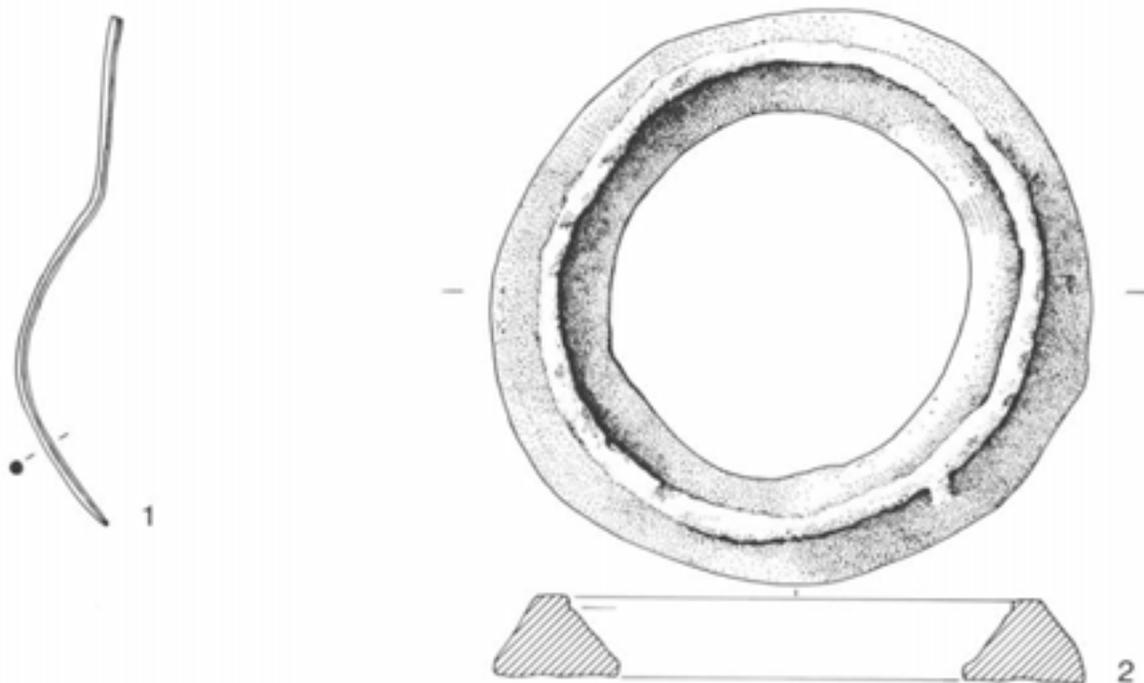


GH15

Fig 90 Finds and pottery from GH 15 (scales: 1-6, 1:1; 7, 1:2; 8-12, 1:3)

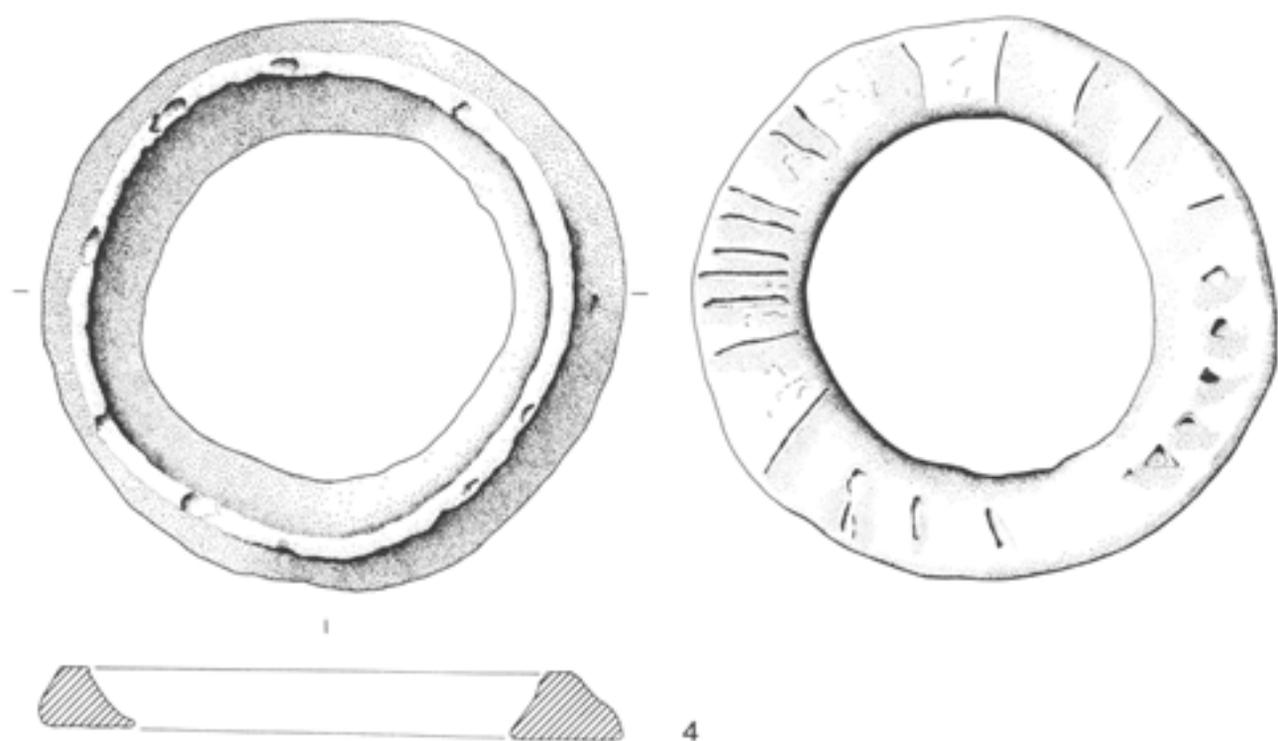
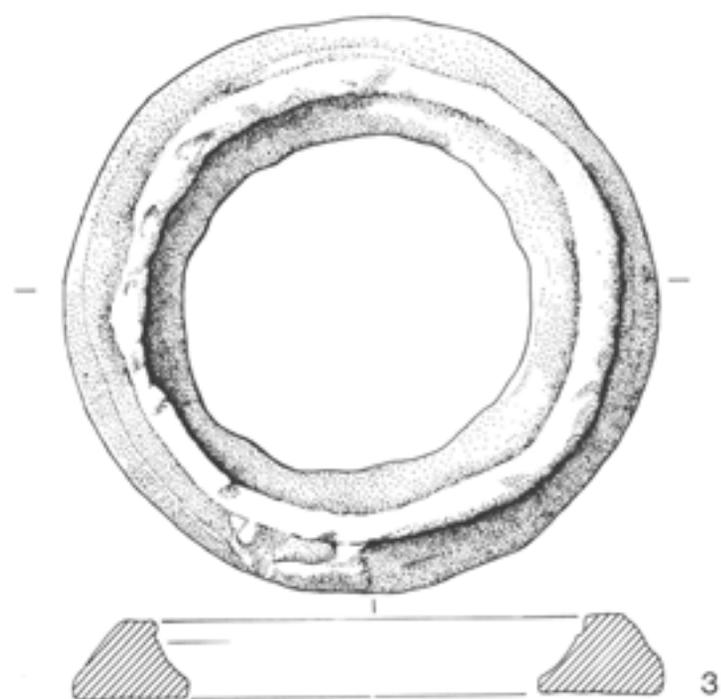


GH 16



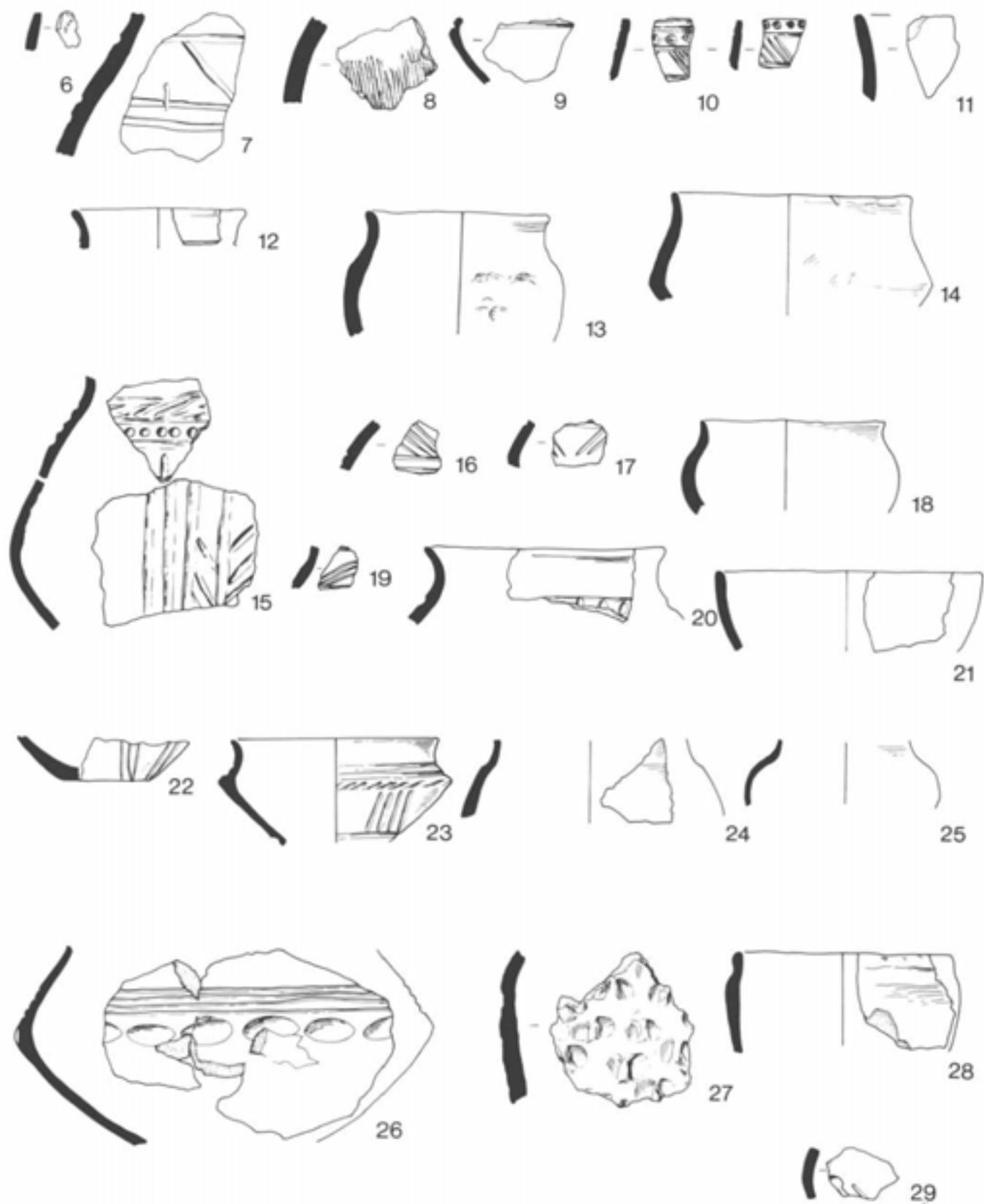
GH 17

Fig 91 Finds and pottery from GH 16, 17 (scales: GH 16.1-3, 1:1; 4-7, 1:3; GH 17.1-2, 1:1)



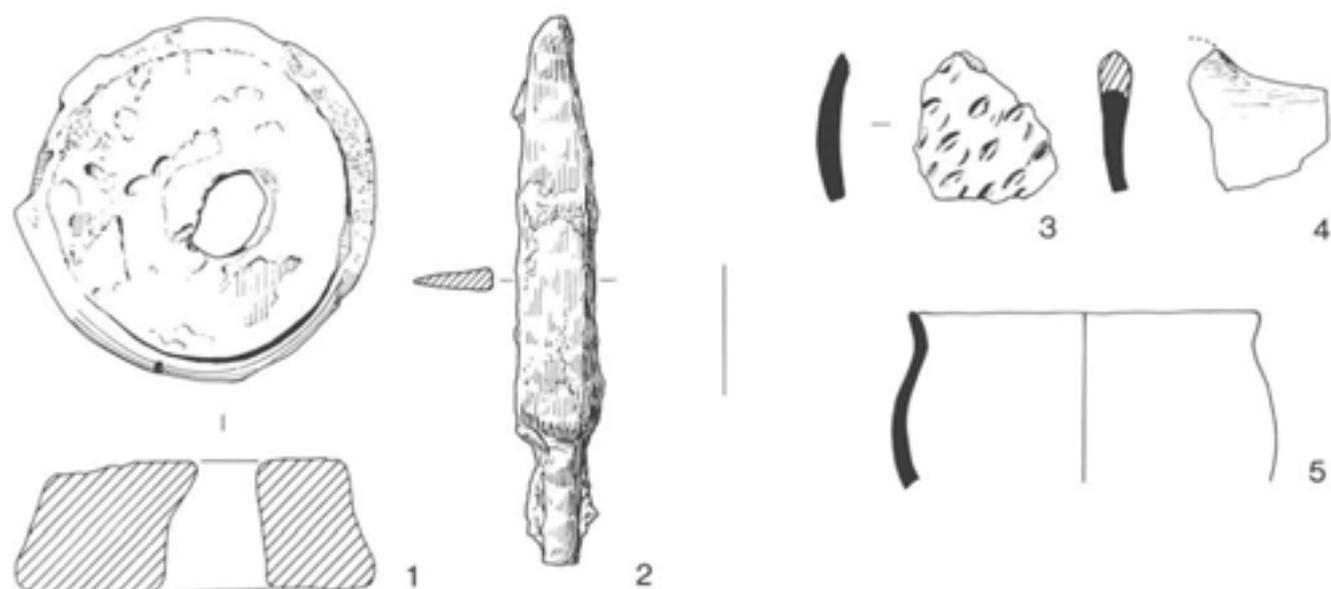
GH17Cont'd

Fig 92 Finds from GH 17 (scales: GH 17 3-4, 1:1; 5, 1:2)

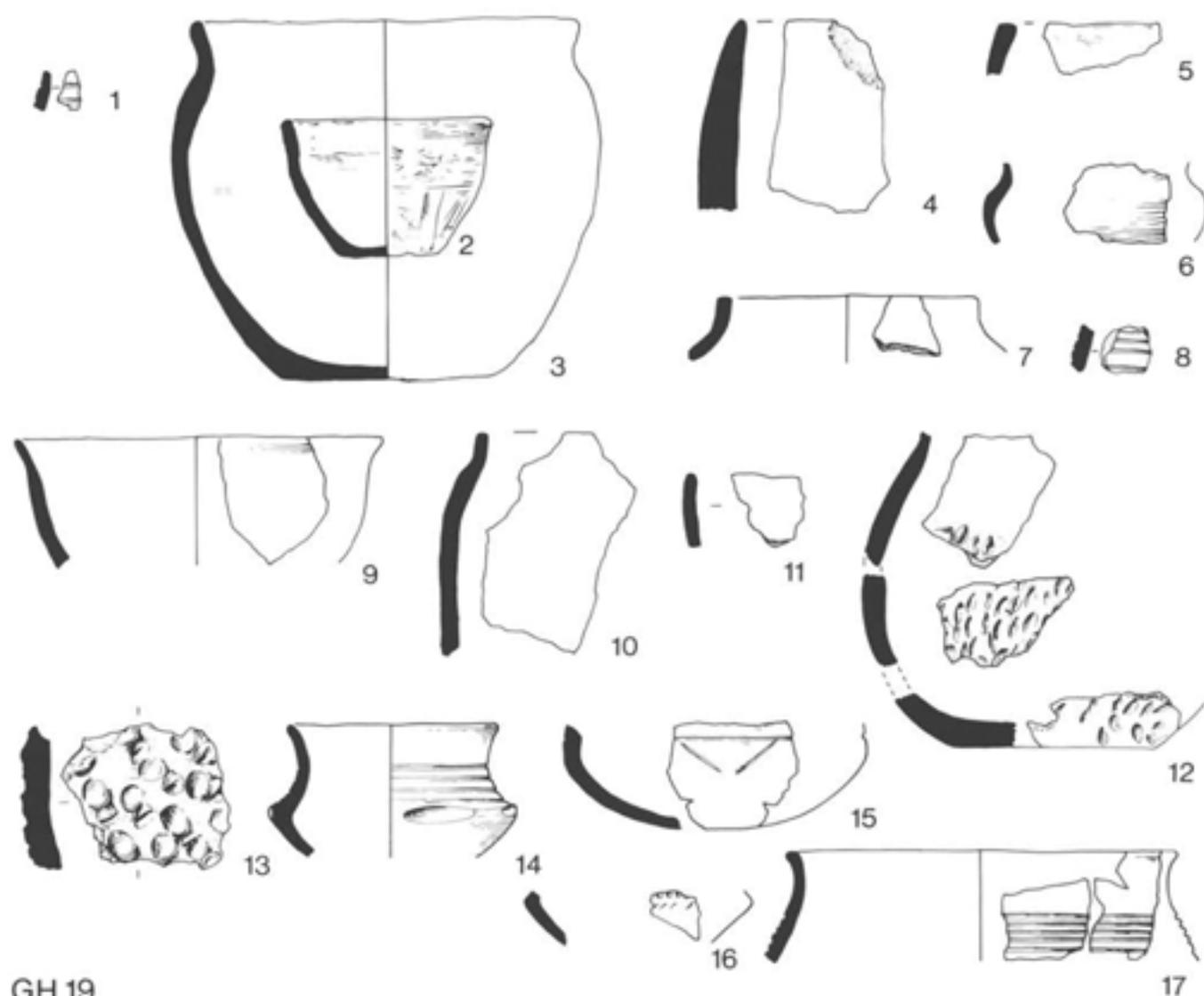


GH17 Cont'd

Fig 93 Pottery from GH 17 (scale: 1:3)

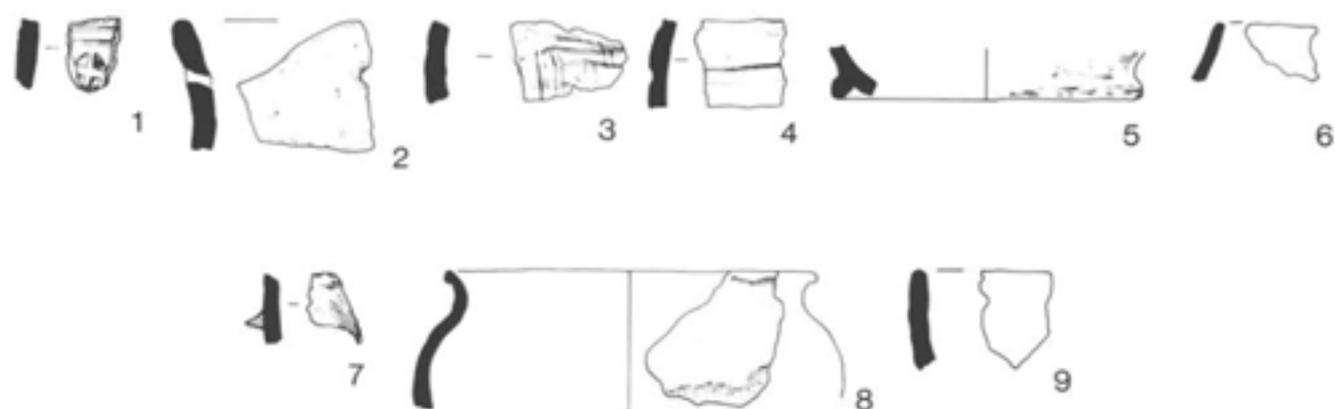


GH18

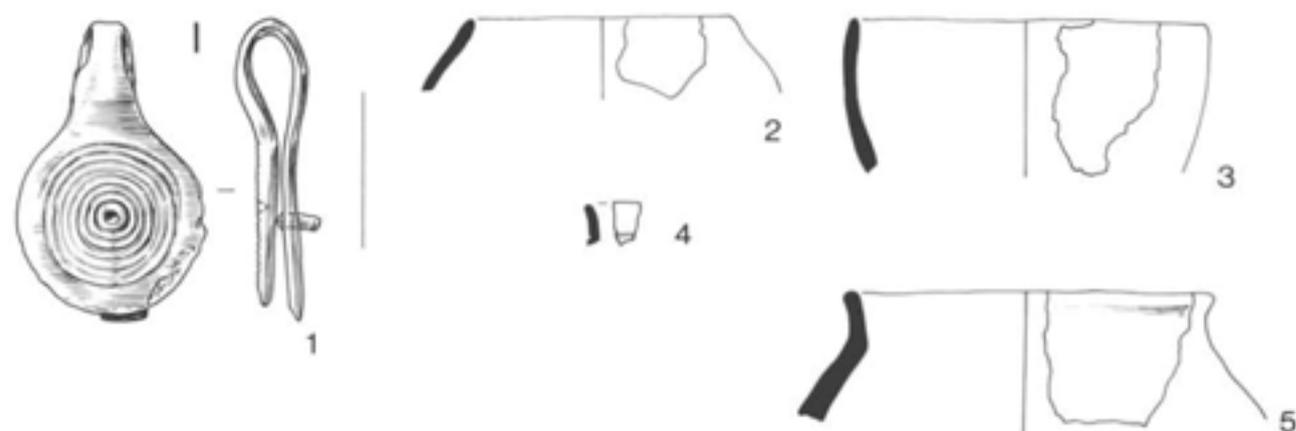


GH 19

Fig 94 Finds and pottery from GH 18, 19 (scales: GH 18.1, 1:1; 2, 1:2; 3-5, 1:3; GH 19.1-17, 1:3)



GH 20

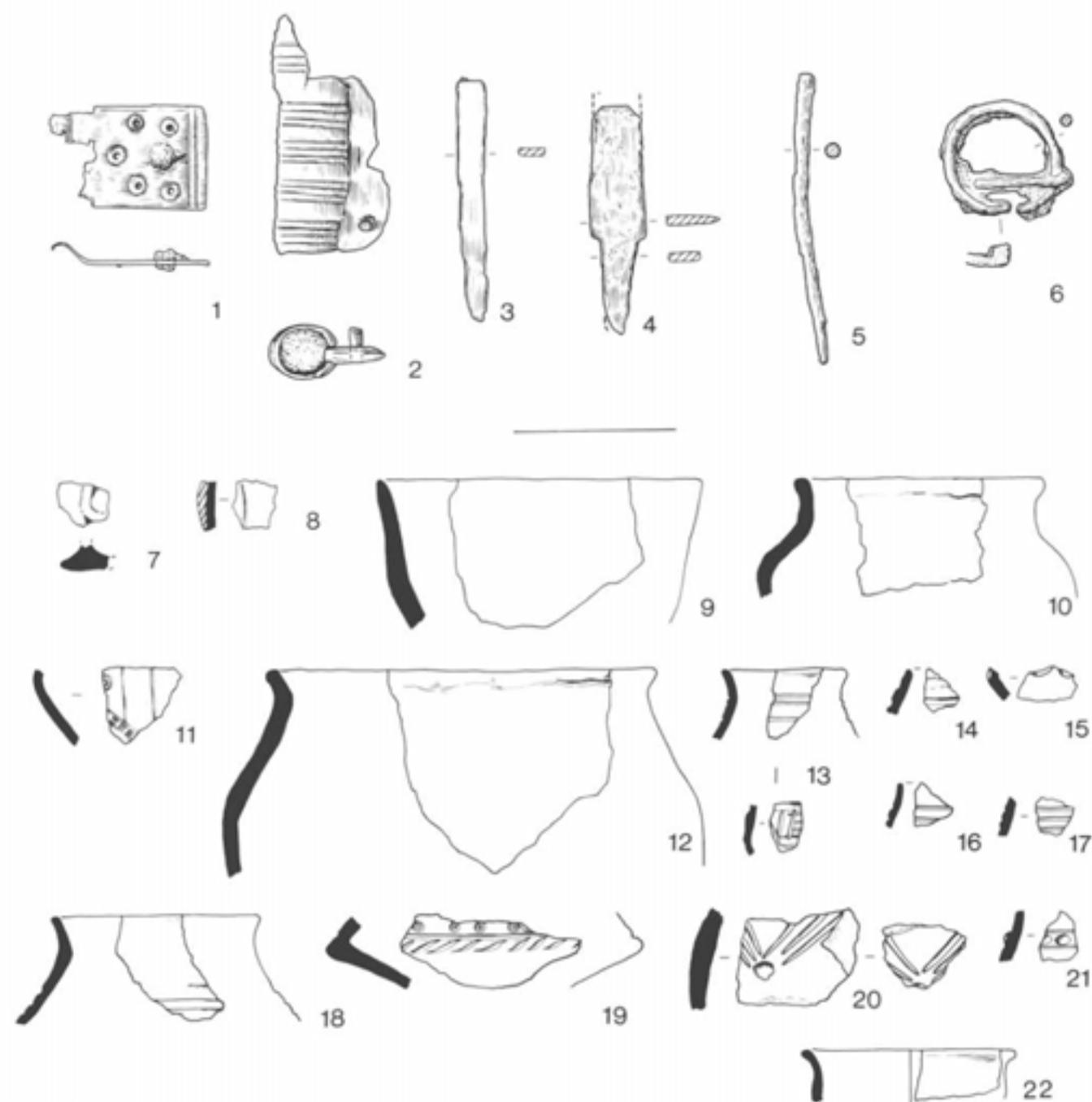


GH 22



GH 25

Fig 95 Finds and pottery from GH 20, 22, 25 (scales: GH 20.1-9, 1:3; GH 22.1, 1:1; 2-5, 1:3; GH 25.1-2, 1:3)



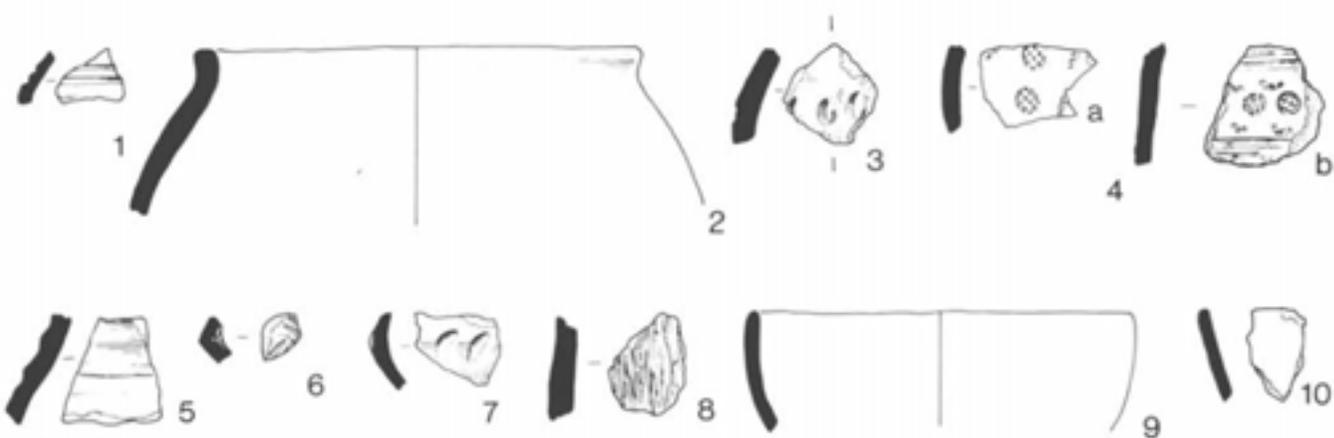
GH 26

GH 27

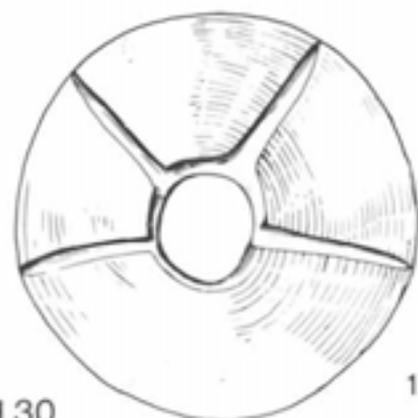
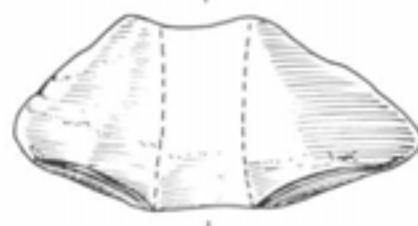
Fig 96 Finds and pottery from GH 26, 27 (scales: GH 26.1-3, 1:1; 4-6, 1:2; 7-22, 1:3; GH 27.1-2, 1:1)



GH28

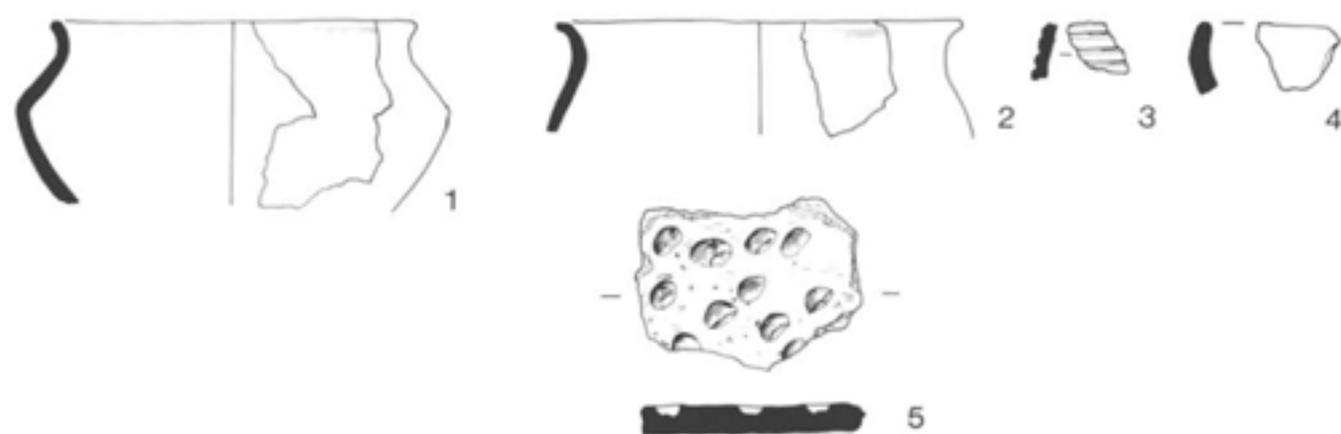


GH29



GH 30

Fig 97 Finds and pottery from GH 28–30 (scales: GH 28.1–5, 1:3; GH 29.1–10, 1:3; GH 30.1, 1:1; 2–4, 1:3)

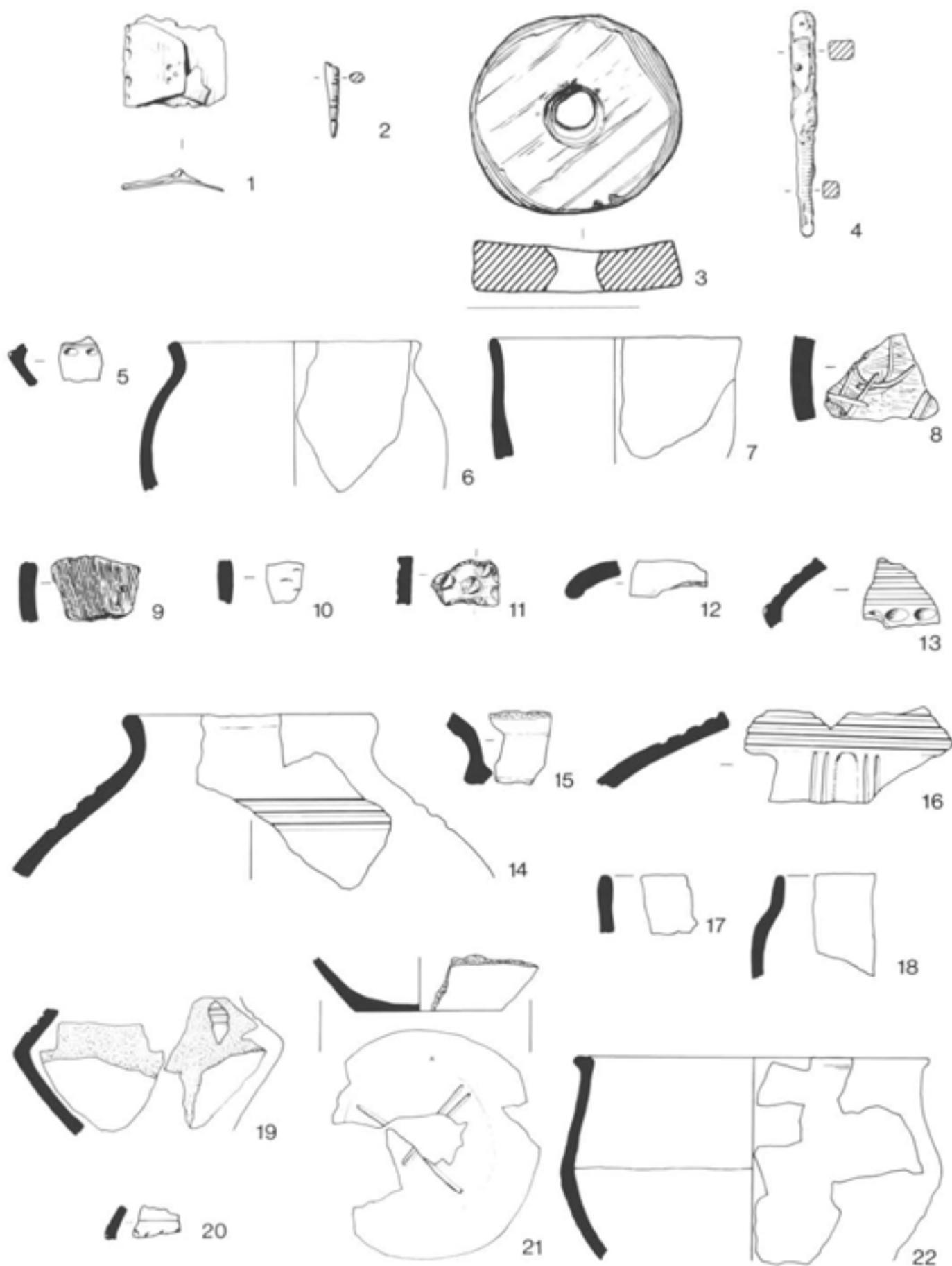


GH 31



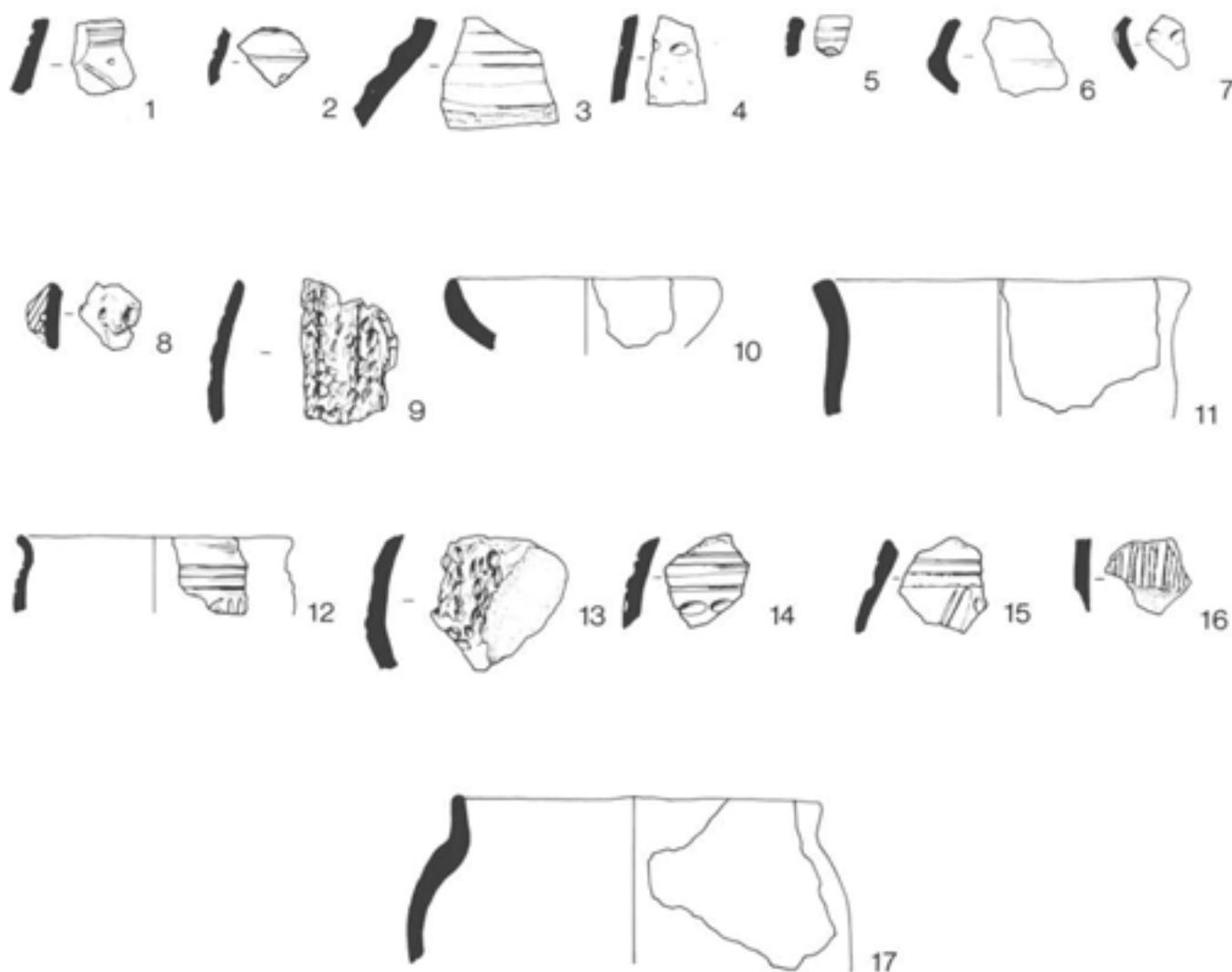
GH 32

Fig 98 Finds and pottery from GH 31, 32 (scales: GH 31.1-5, 1:3; GH 32.1-2, 1:2; 3-13, 1:3)



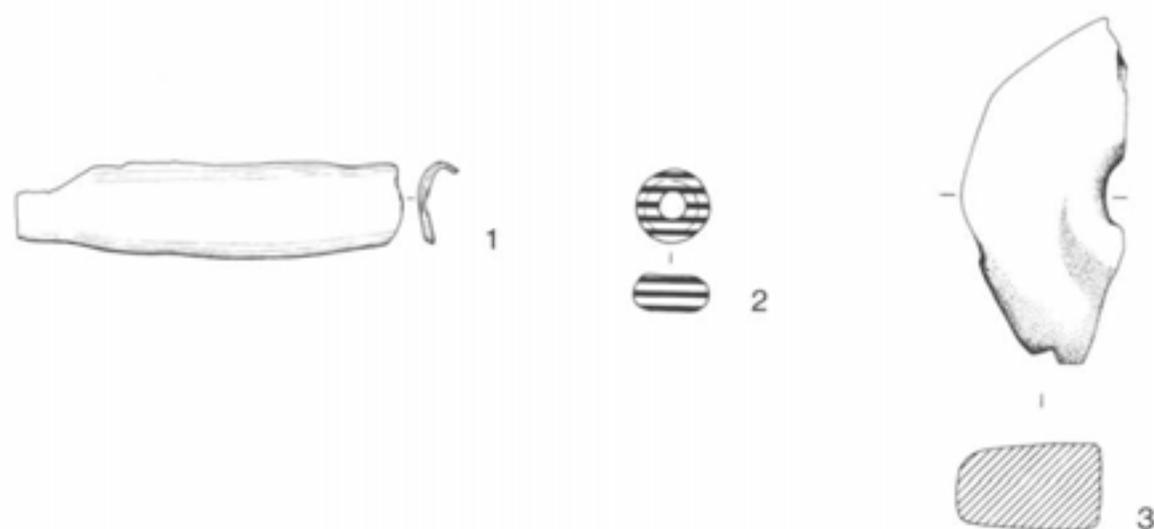
GH33

Fig 99 Finds and pottery from GH 33 (scales: 1-3, 1:1; 4, 1:2; 5-22, 1:3)



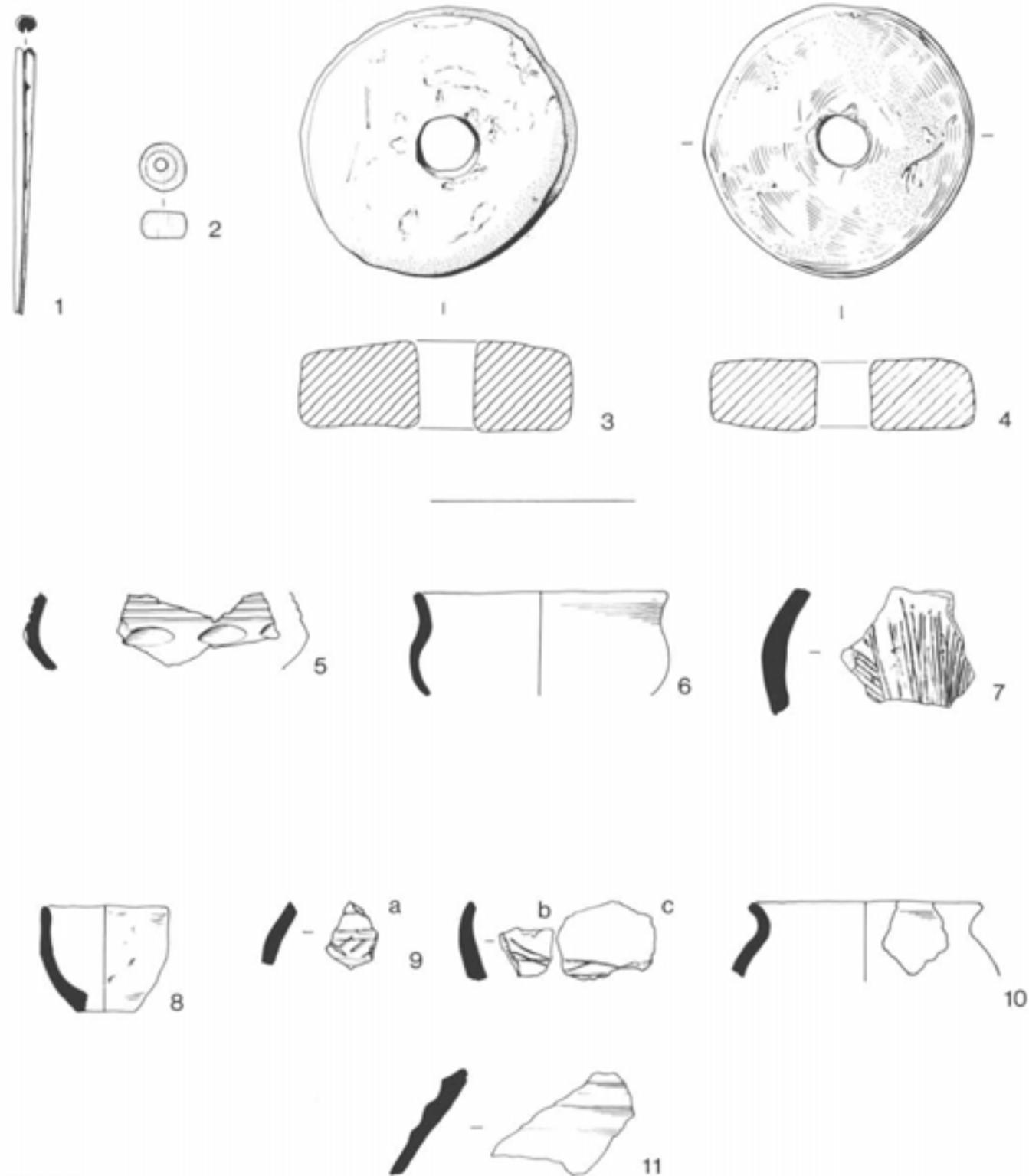
GH34

Fig 100 Pottery from GH 34 (scale: 1:3)



GH 35

Fig 101 Finds and pottery from GH 35 (for key to glass beads see Fig 53) (scales: 1-3, 1:1; 4-23, 1:3)

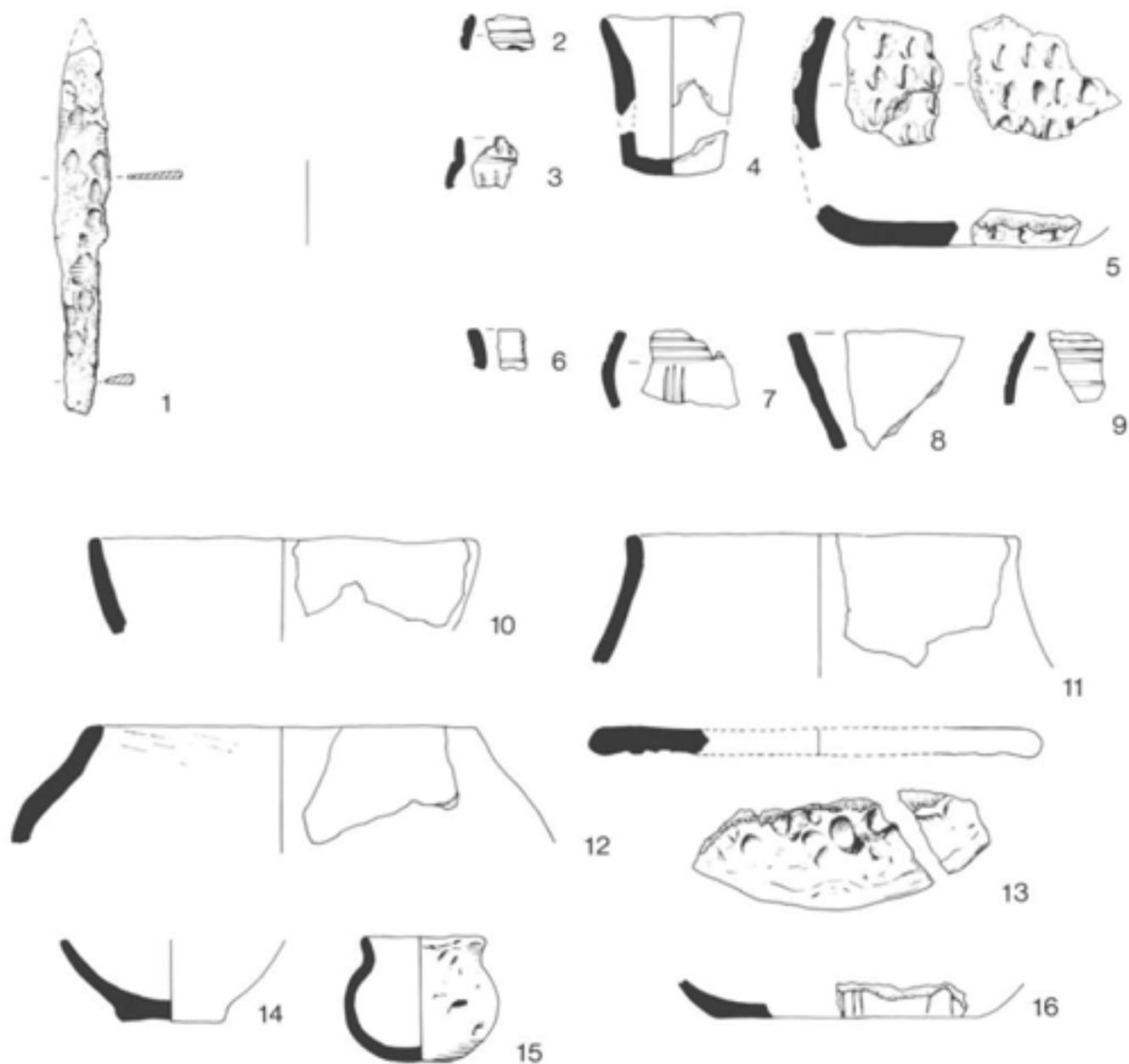


GH 36



GH 37

Fig 102 Finds and pottery from GH 36, 37 (for key to glass beads see Fig 53) (scales: GH 36.1-4, 1:1; 5-11, 1:3; GH 37.1-5, 1:3)

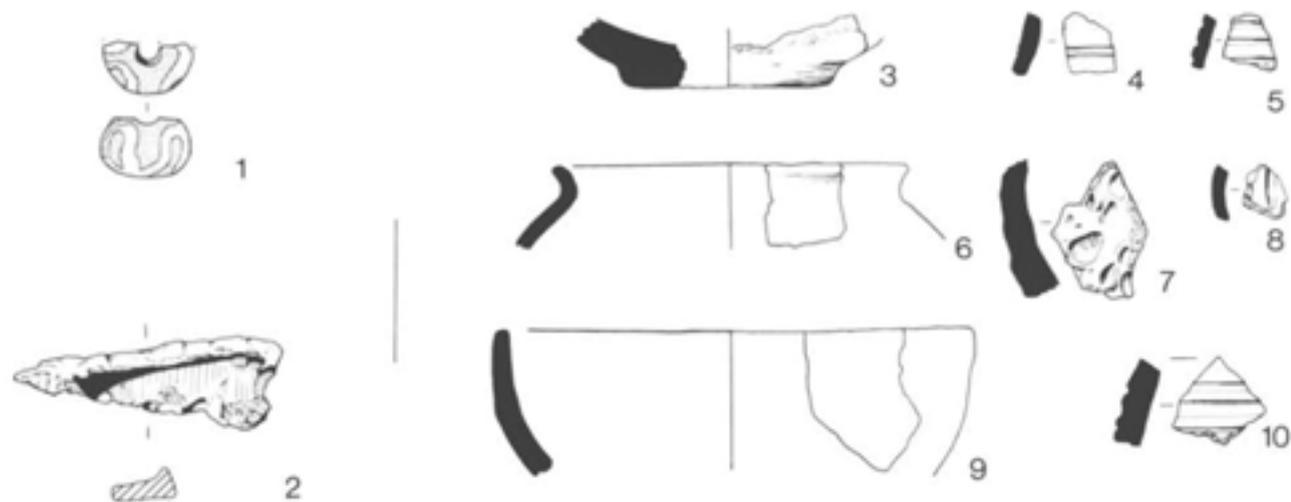


GH 38

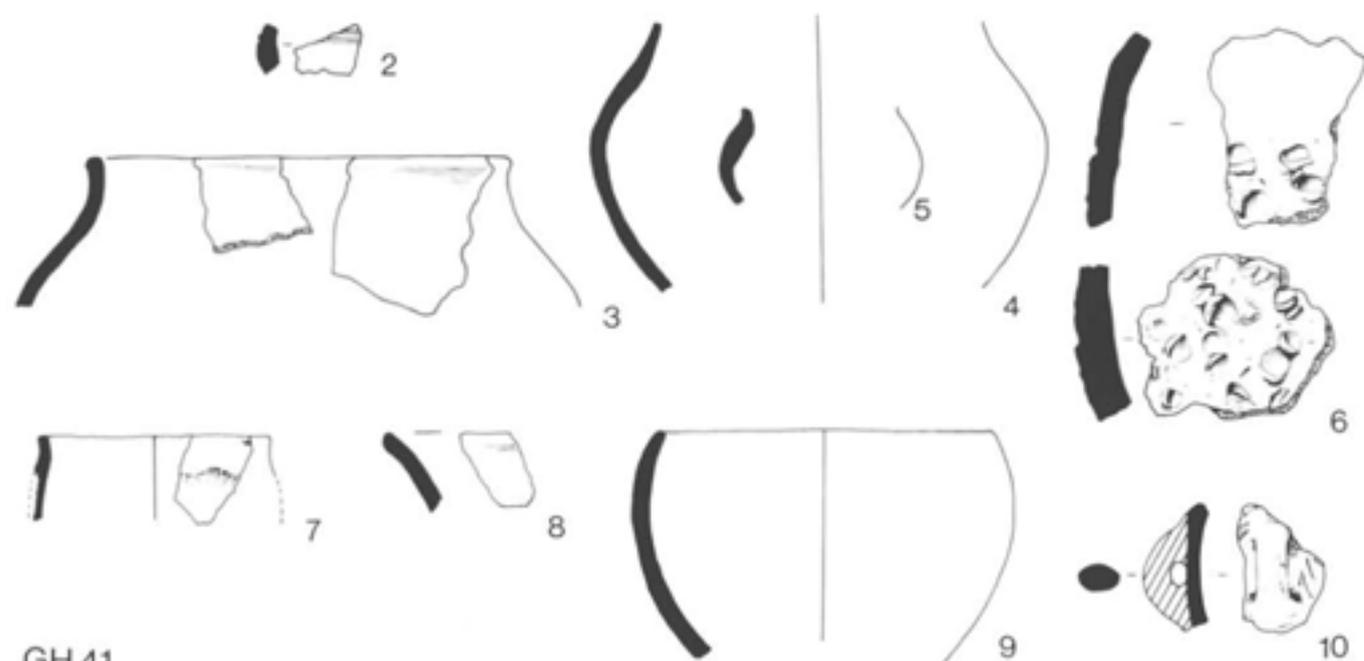


GH 39

Fig 103 Finds and pottery from GH 38, 39 (scales: GH 38.1, 1:2; 2-16, 1:3; GH 39.1, 1:2; 2-5, 1:3)



GH 40



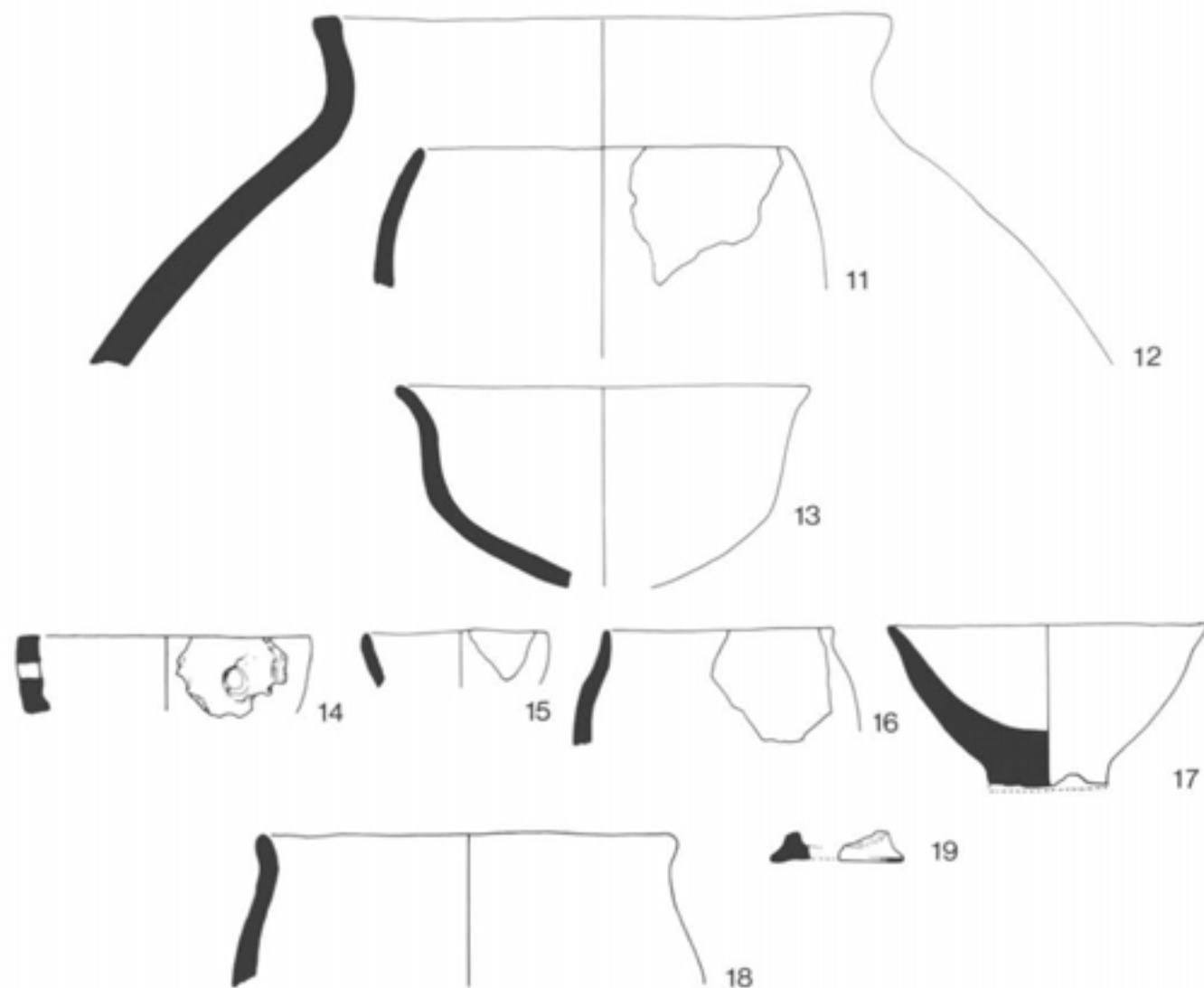
GH 41

Fig 104 Finds and pottery from GH 40, 41 (for key to glass beads see Fig 53) (scales: GH 40.1, 1:1; 2, 1:2; 3-10, 1:3; GH 41.1, 1:1; 2-10, 1:3)

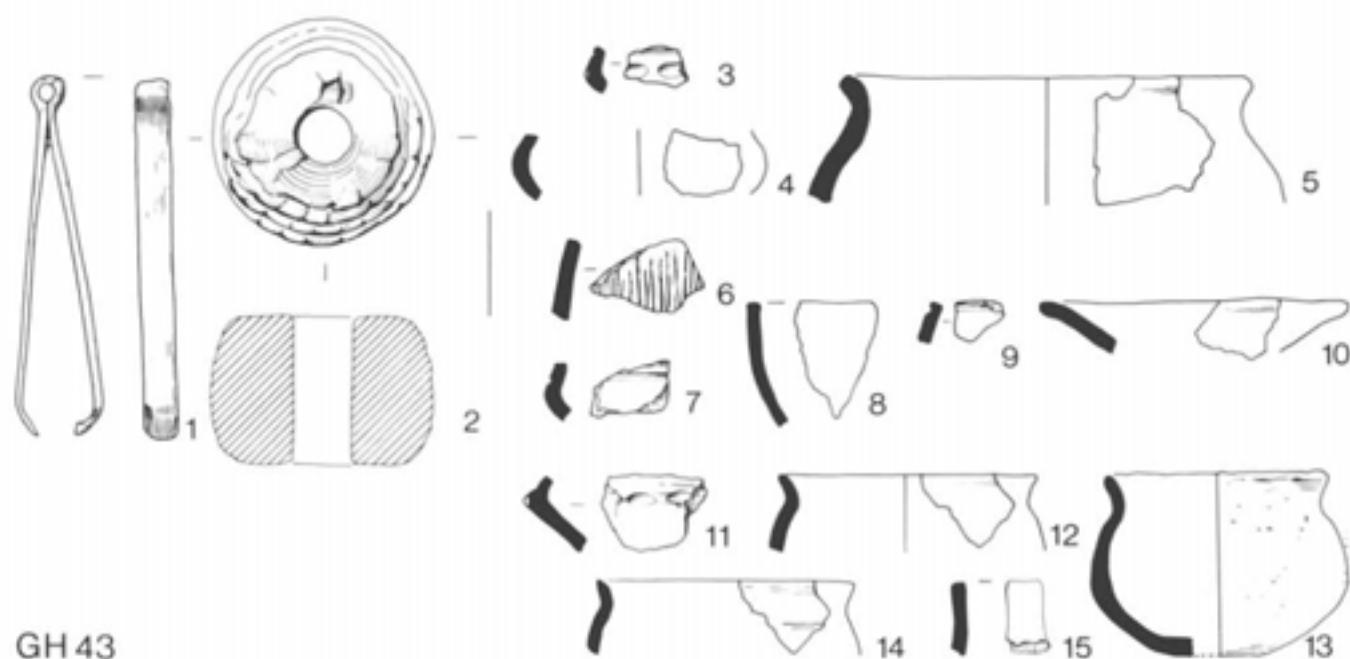


GH42

Fig 105 Finds and pottery from GH 42 (scales: 1-3, 1:1; 4-5, 1:2; 6-10, 1:3)

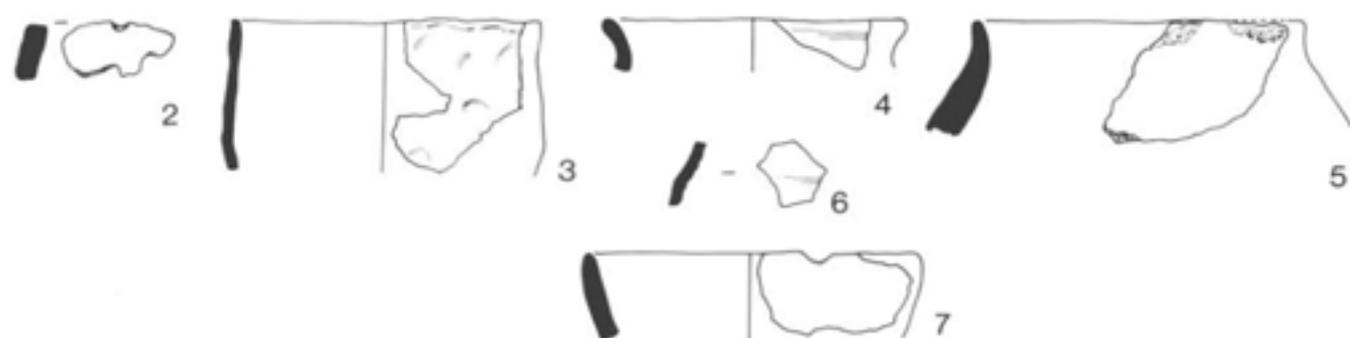
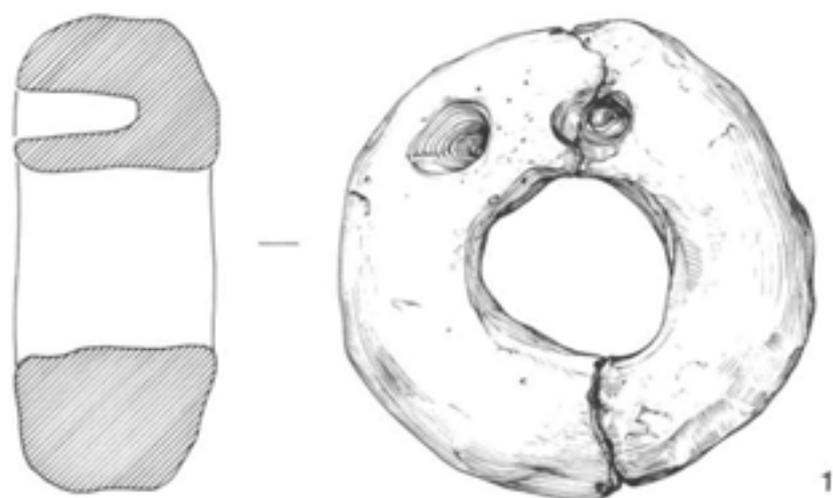


GH 42 Cont'd

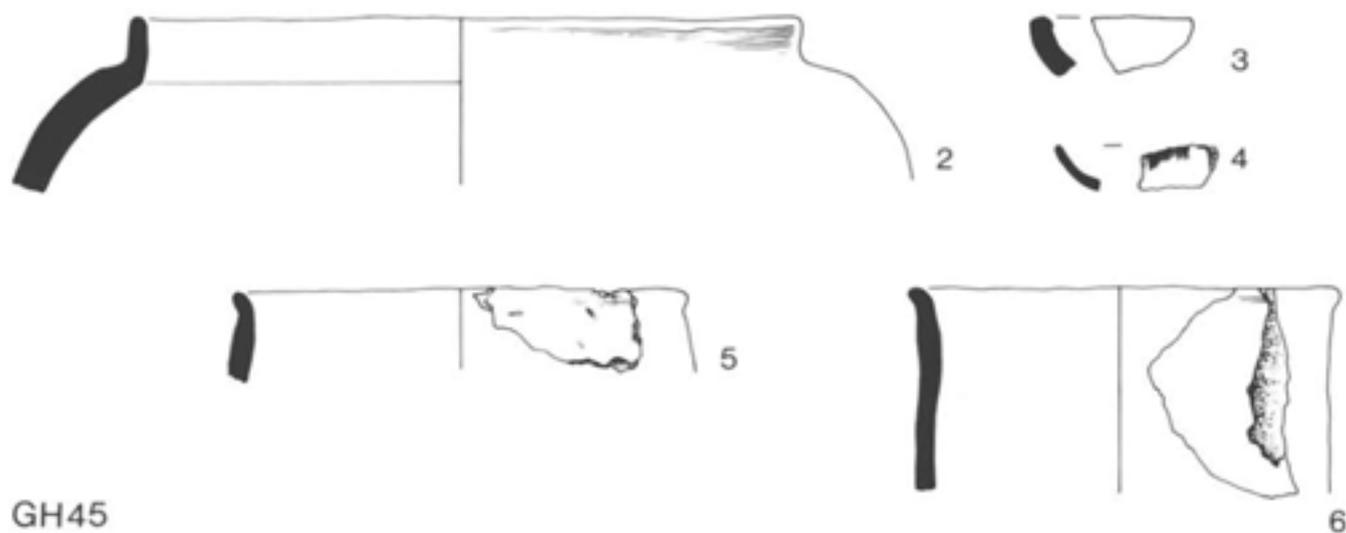


GH 43

Fig 106 Finds and pottery from GH 42, 43 (scales: GH 42.11-19, 1:3; GH 43.1-2, 1:1; 3-15, 1:3)

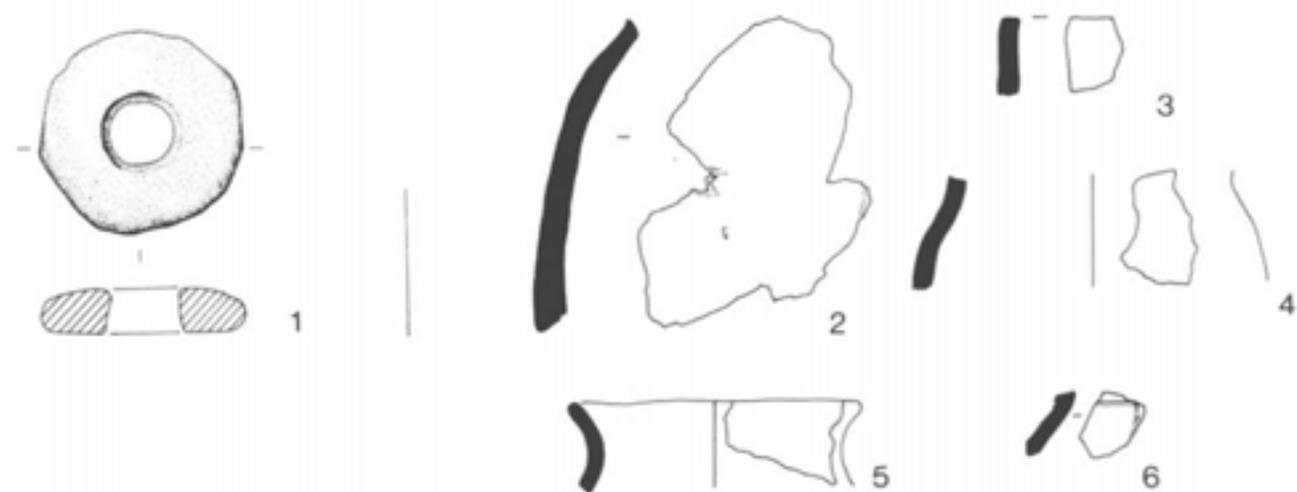


GH44

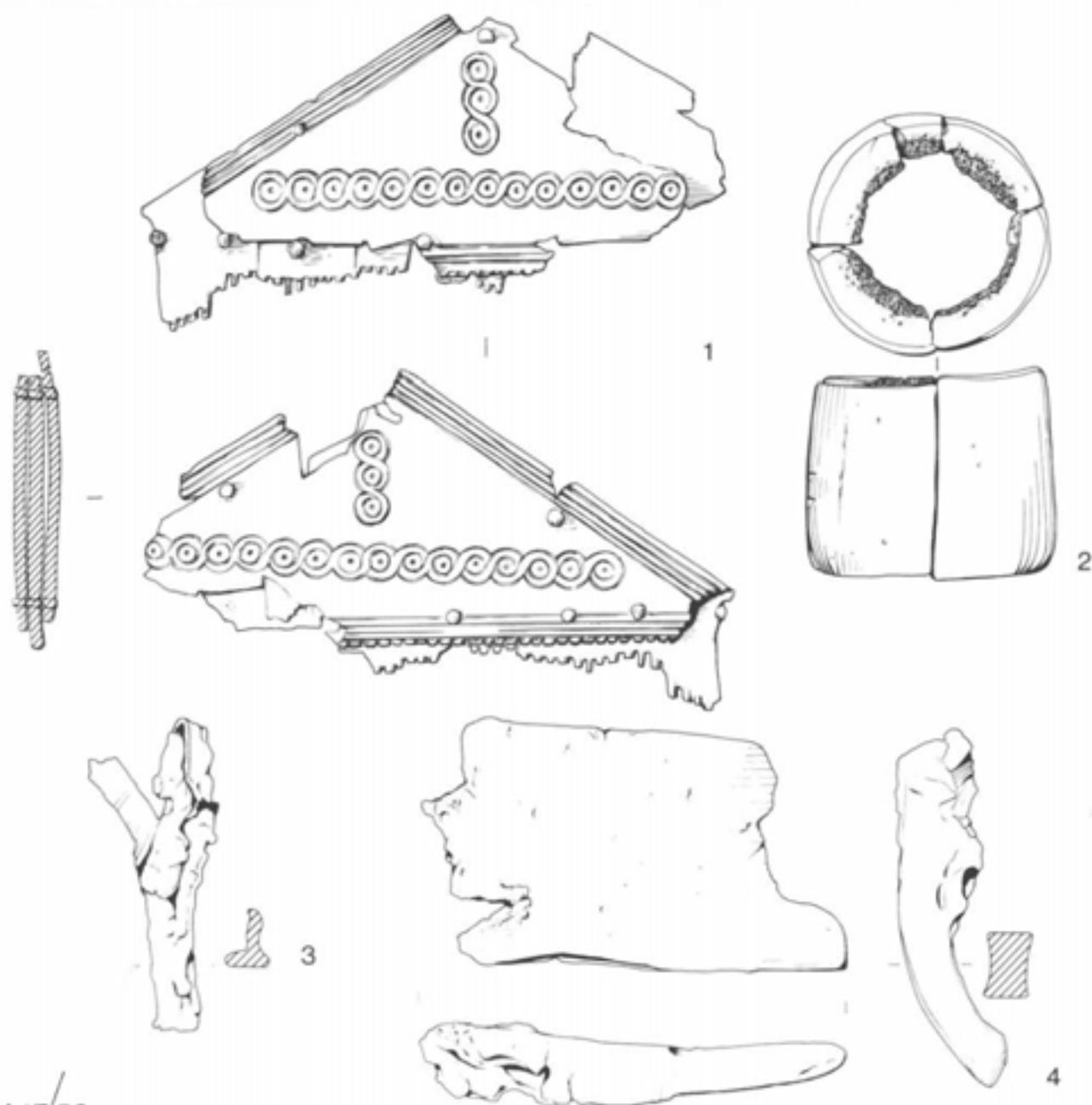


GH45

Fig 107 Finds and pottery from GH 44, 45 (scales: GH 44.1, 1:2; 2-7, 1:3; GH 45.1, 1:2; 2-6, 1:3)

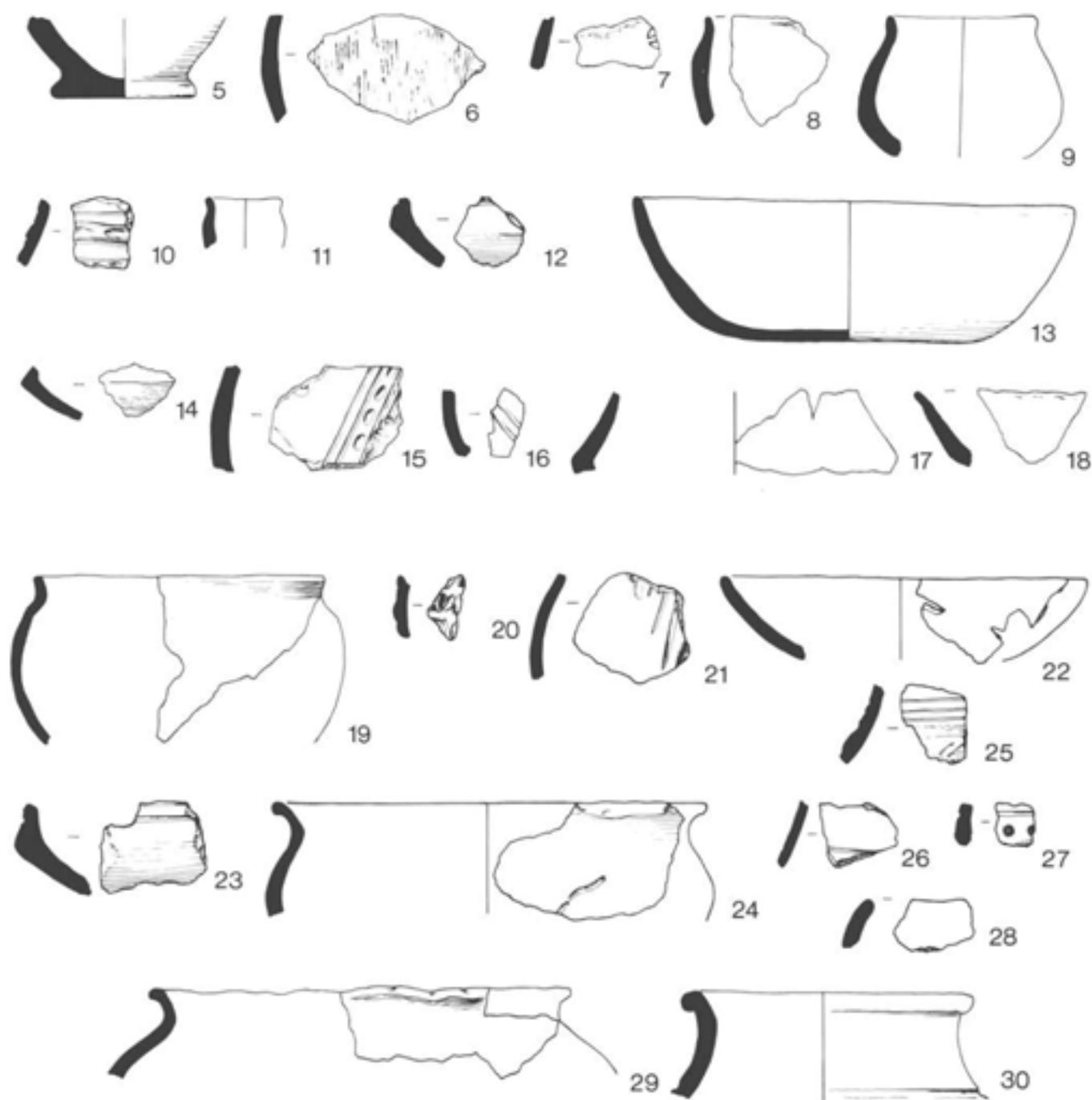


GH46



GH47/53

Fig 108 Finds and pottery from GH 46, 47/53 (scales: GH 46.1, 1:1; 2-6, 1:3; GH 47/53.1-4, 1:1)



GH 47/53 Cont'd



GH 48

Fig 109 Finds and pottery from GH 47/53, 48 (scales: GH 47/53.5-30, 1:3; GH 48.1, 1:2; 2-4, 1:3)



GH49

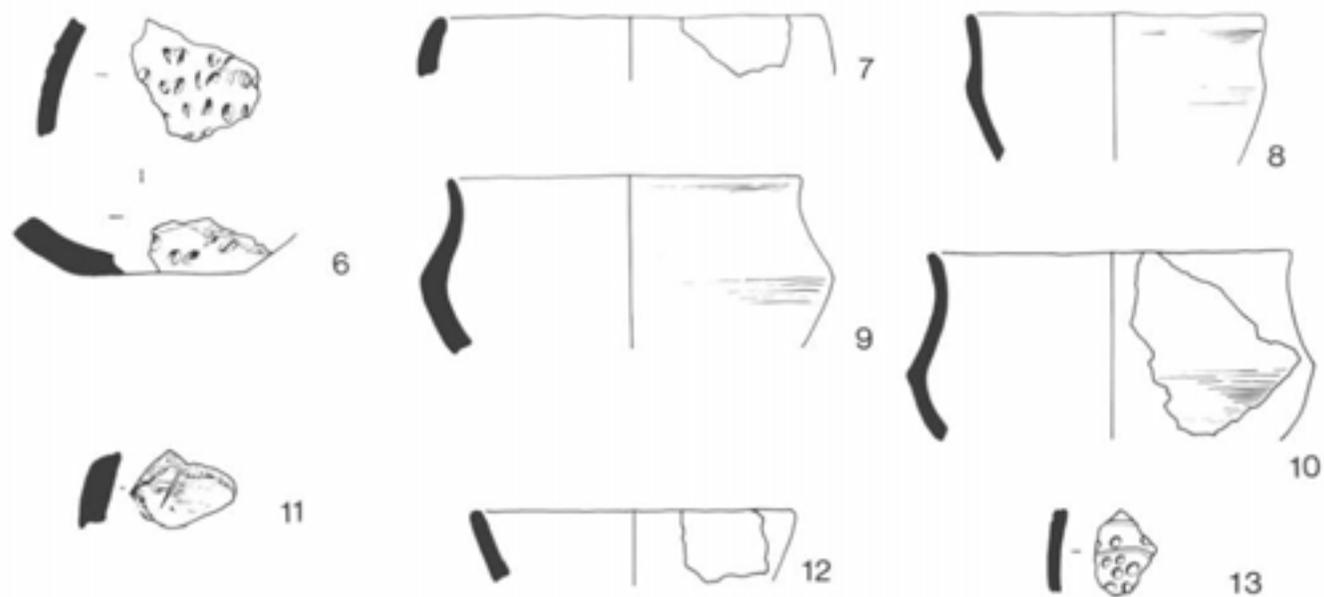


GH50

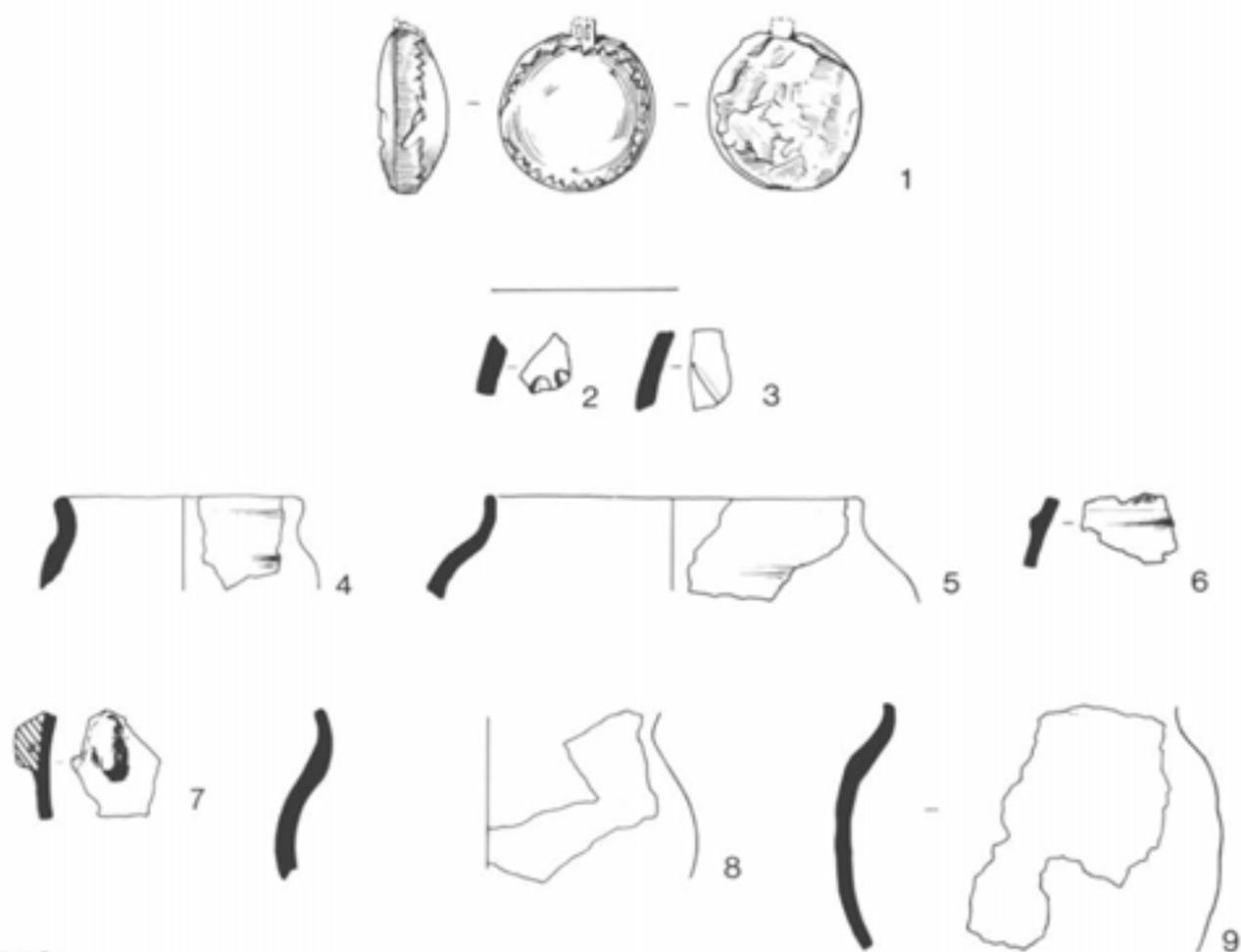


GH51

Fig 110 Finds and pottery from GH 49-51 (scales: GH 49.1-9, 1:3; GH 50.1, 1:1; 2, 1:2; 3-7, 1:3; GH 51.1-2, 1:1; 3-5, 1:3)

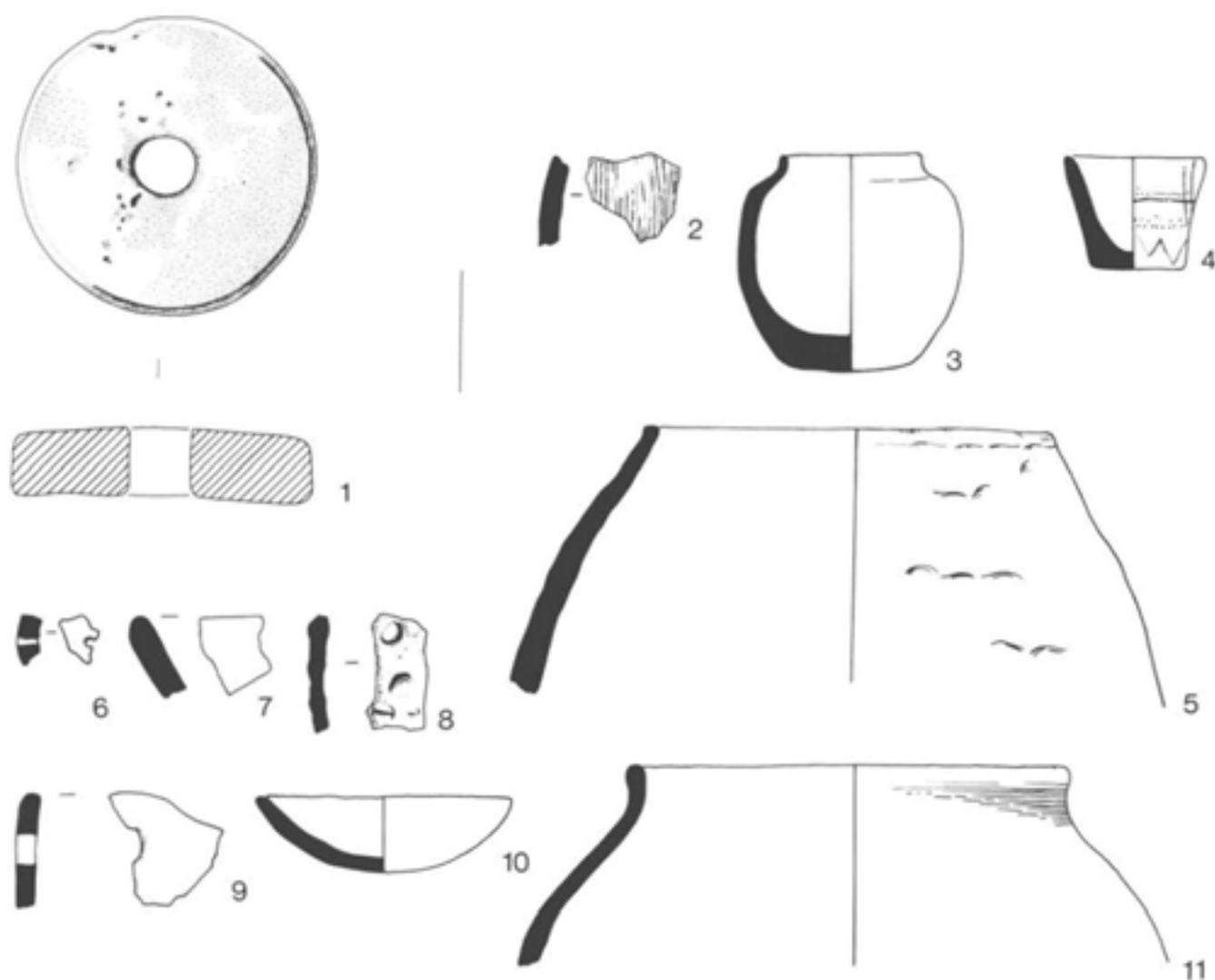


GH 51 Cont'd

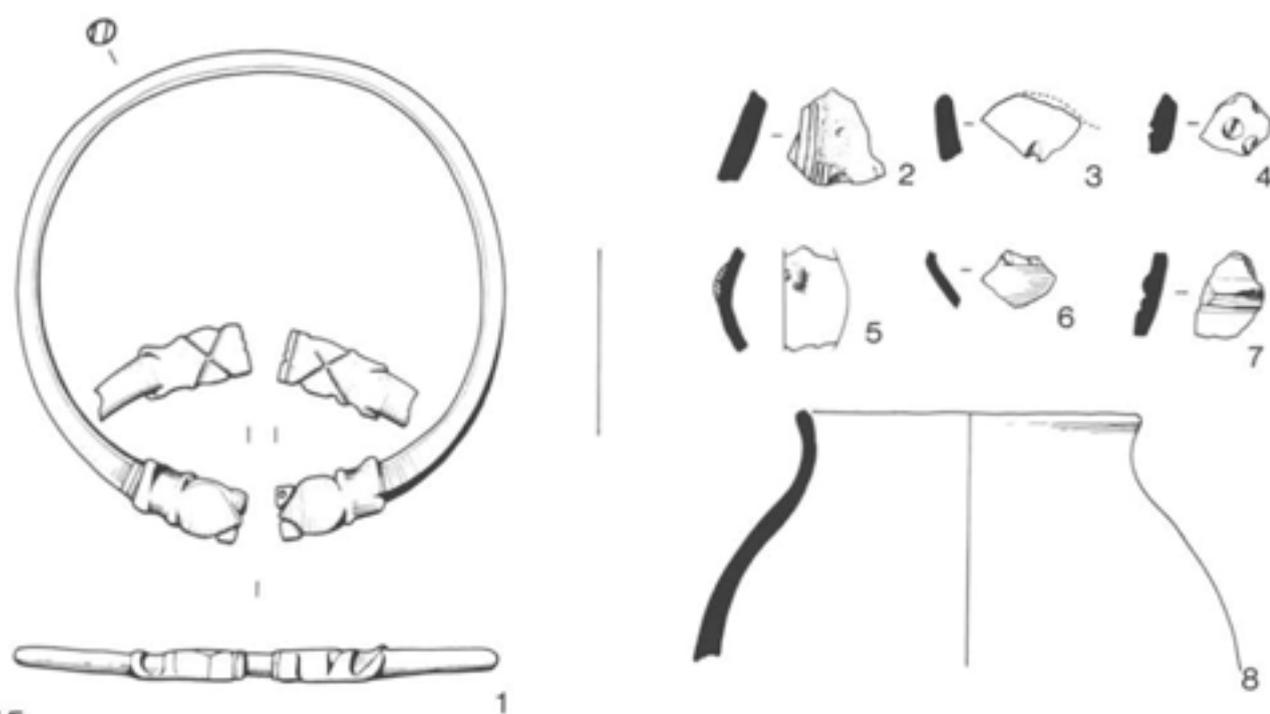


GH 52

Fig 111 Finds and pottery from GH 51, 52 (scales: GH 51.6-13, 1:3; GH 52.1, 1:1; 2-9, 1:3)



GH54

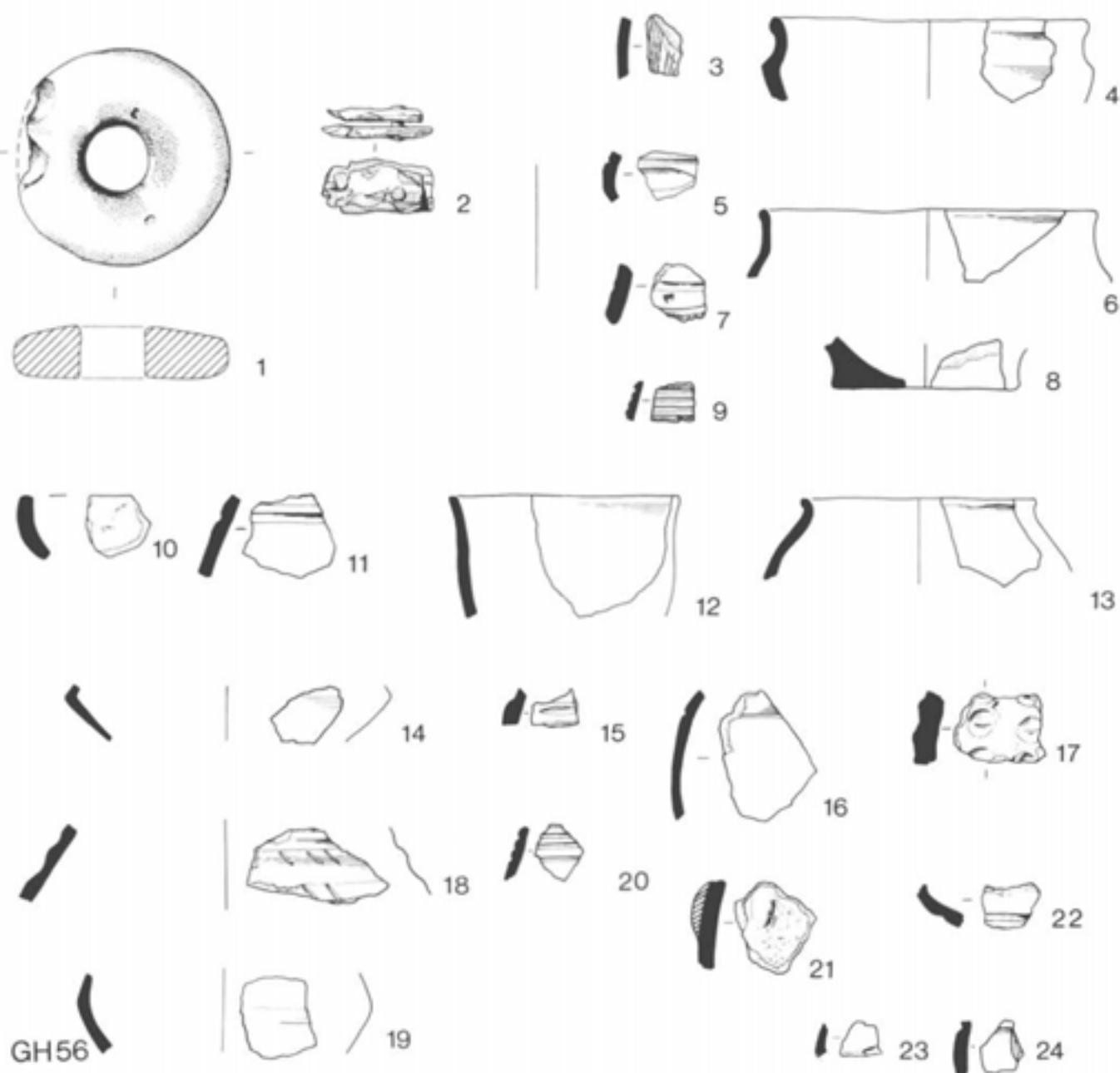


GH55

Fig 112 Finds and pottery from GH 54, 55 (scales: GH 54.1, 1:1; 2-11, 1:3; GH 55.1, 1:1; 2-8, 1:3)

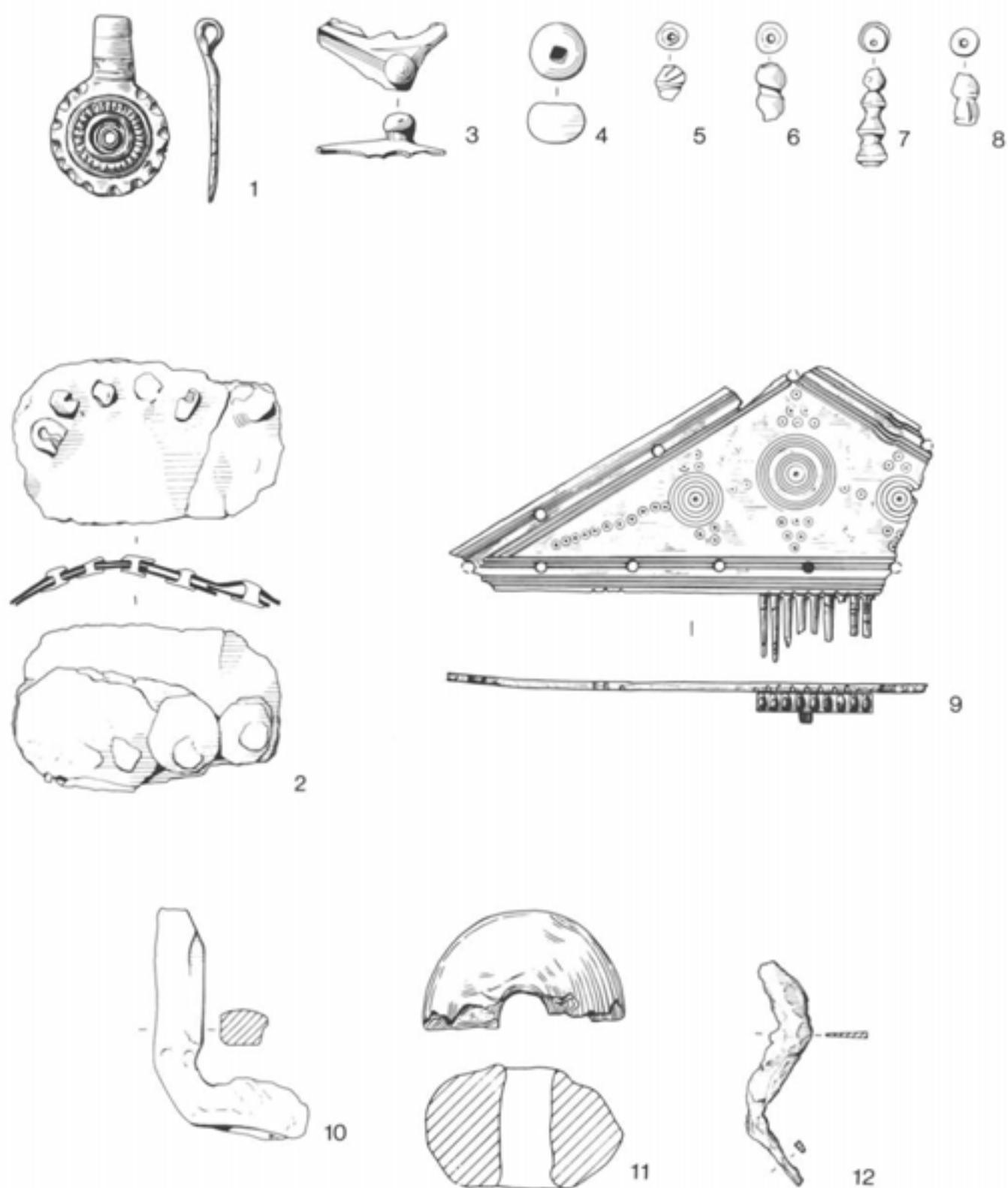


GH55 Cont'd



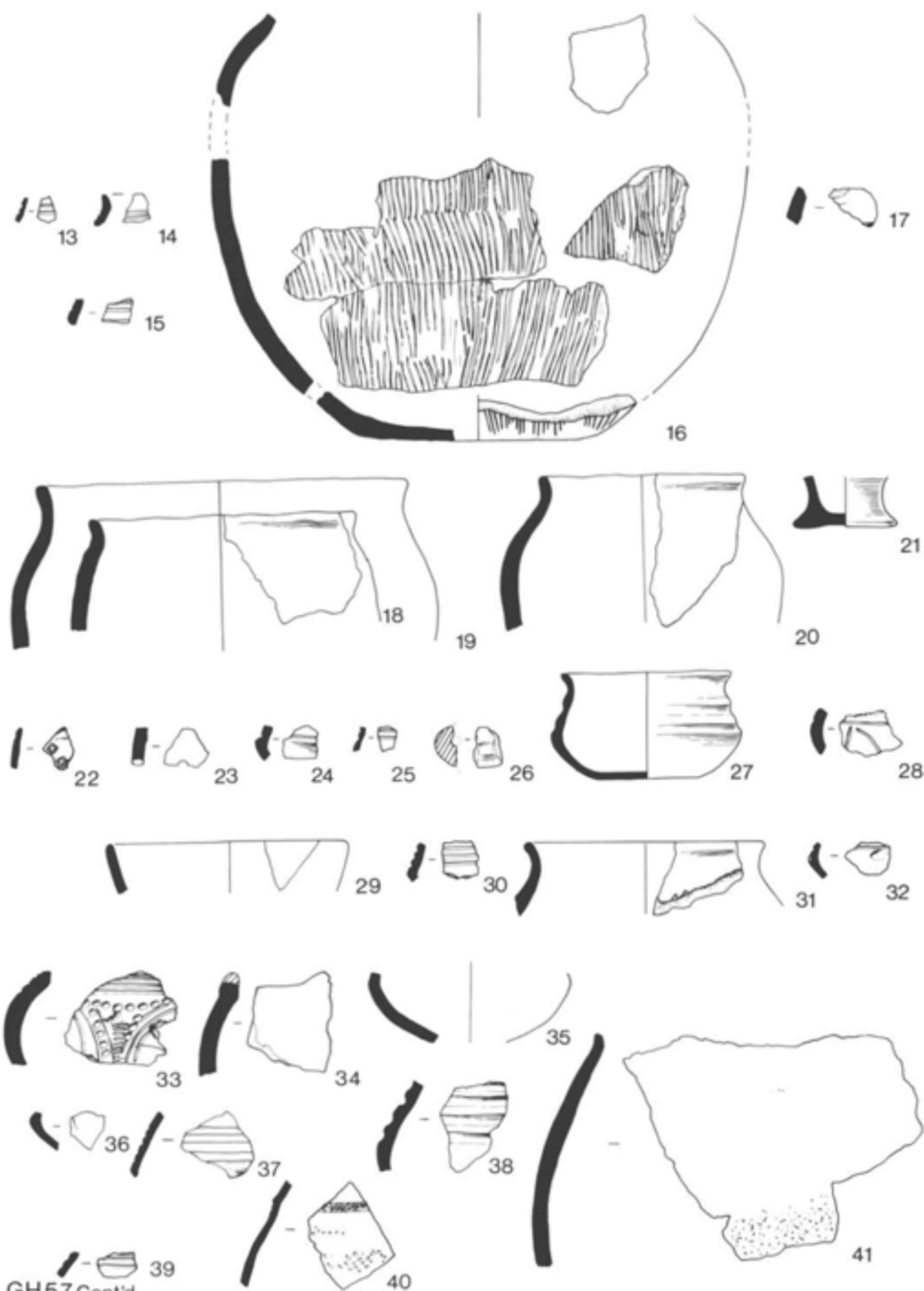
GH56

Fig 113 Finds and pottery from GH 55, 56 (scales: GH 55.9-15, 1:3; GH 56.1, 1:1; 2, 1:2; 3-24, 1:3)



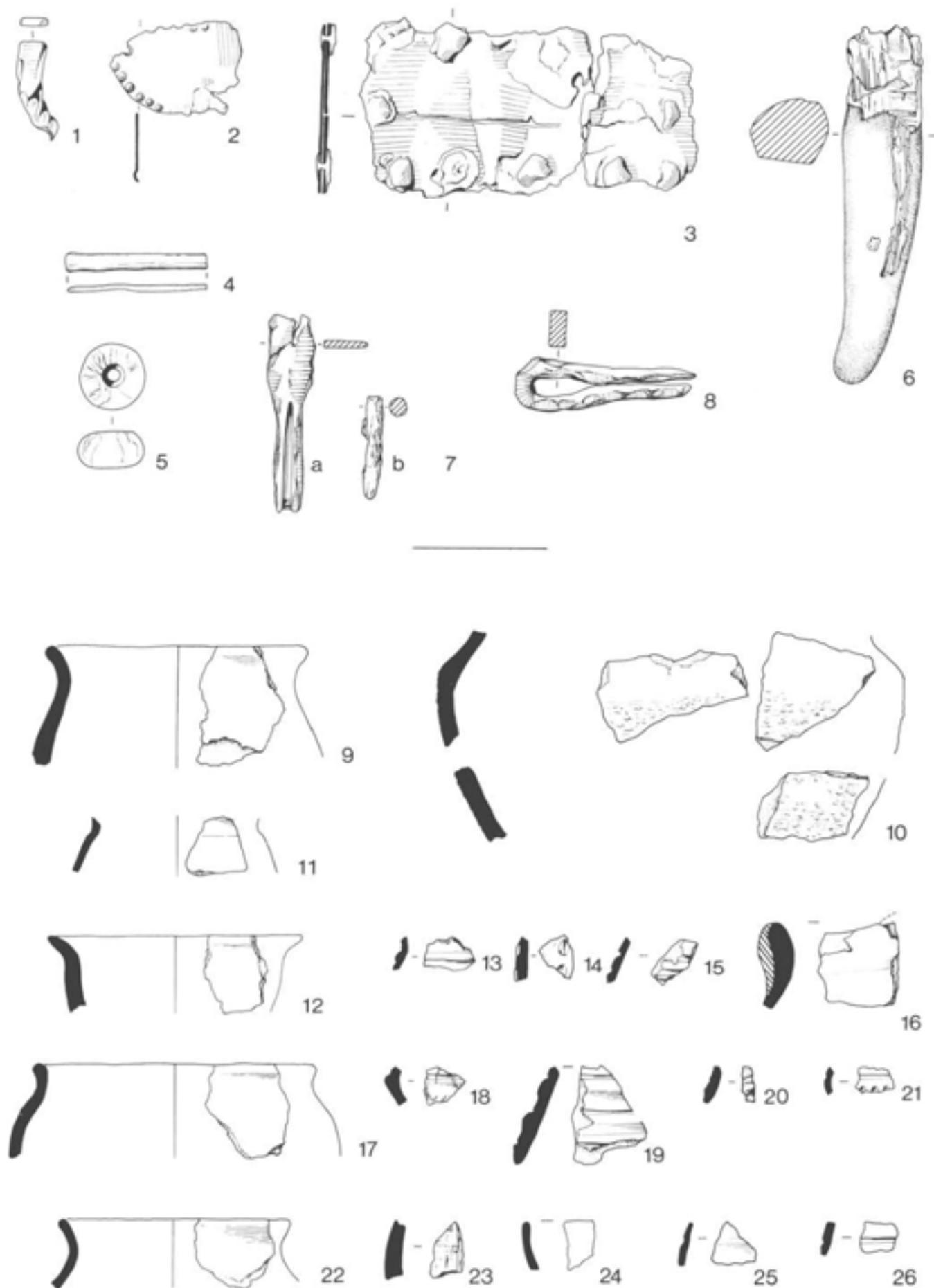
GH57

Fig 114 Finds from GH 57 (scales: 1-11, 1:1; 12, 1:2)



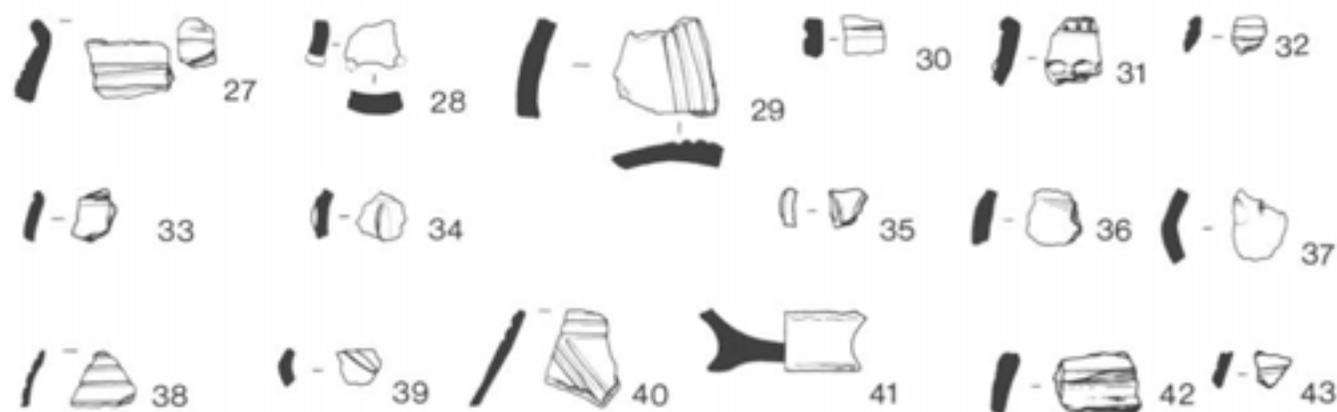
GH57 Cont'd

Fig 115 Pottery from GH 57 (scale: 1:3)

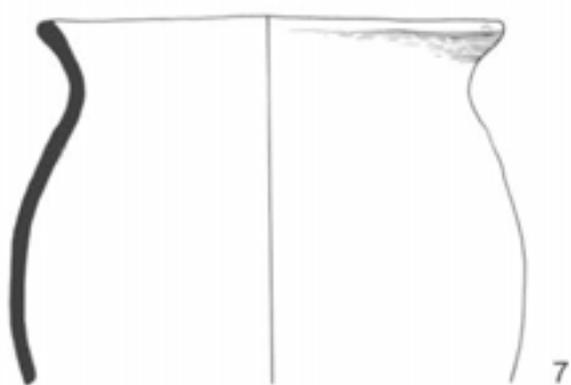


GH 58

Fig 116 Finds and pottery from GH 58 (scales: 1-6, 1:1; 7-8, 1:2; 9-26, 1:3)

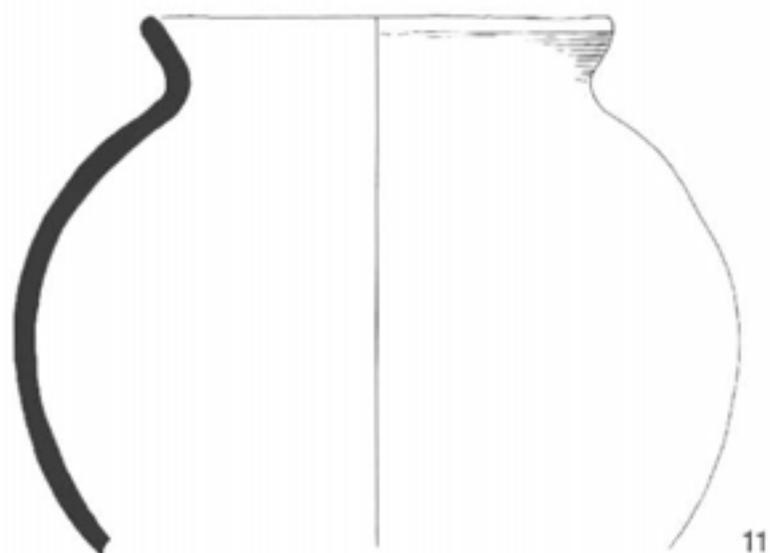
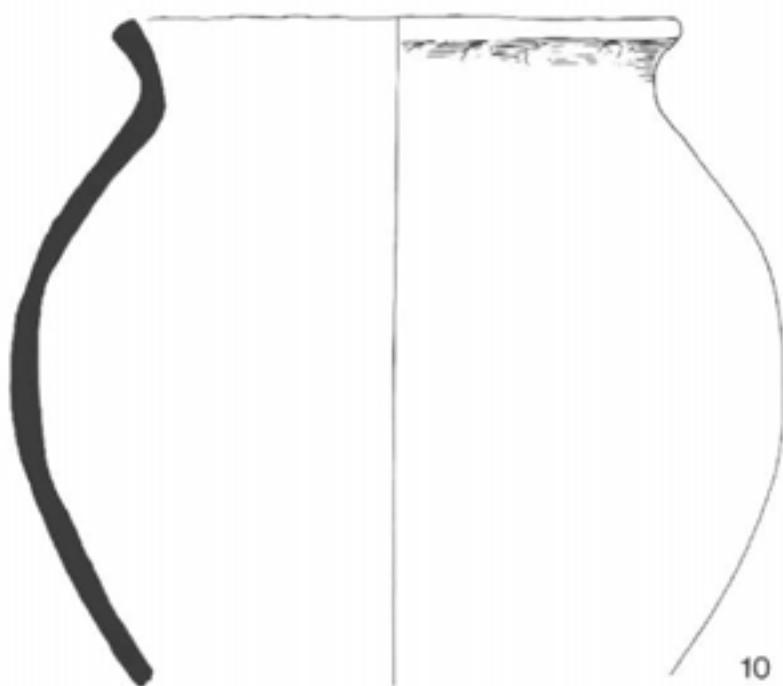


GH 58 Cont'd



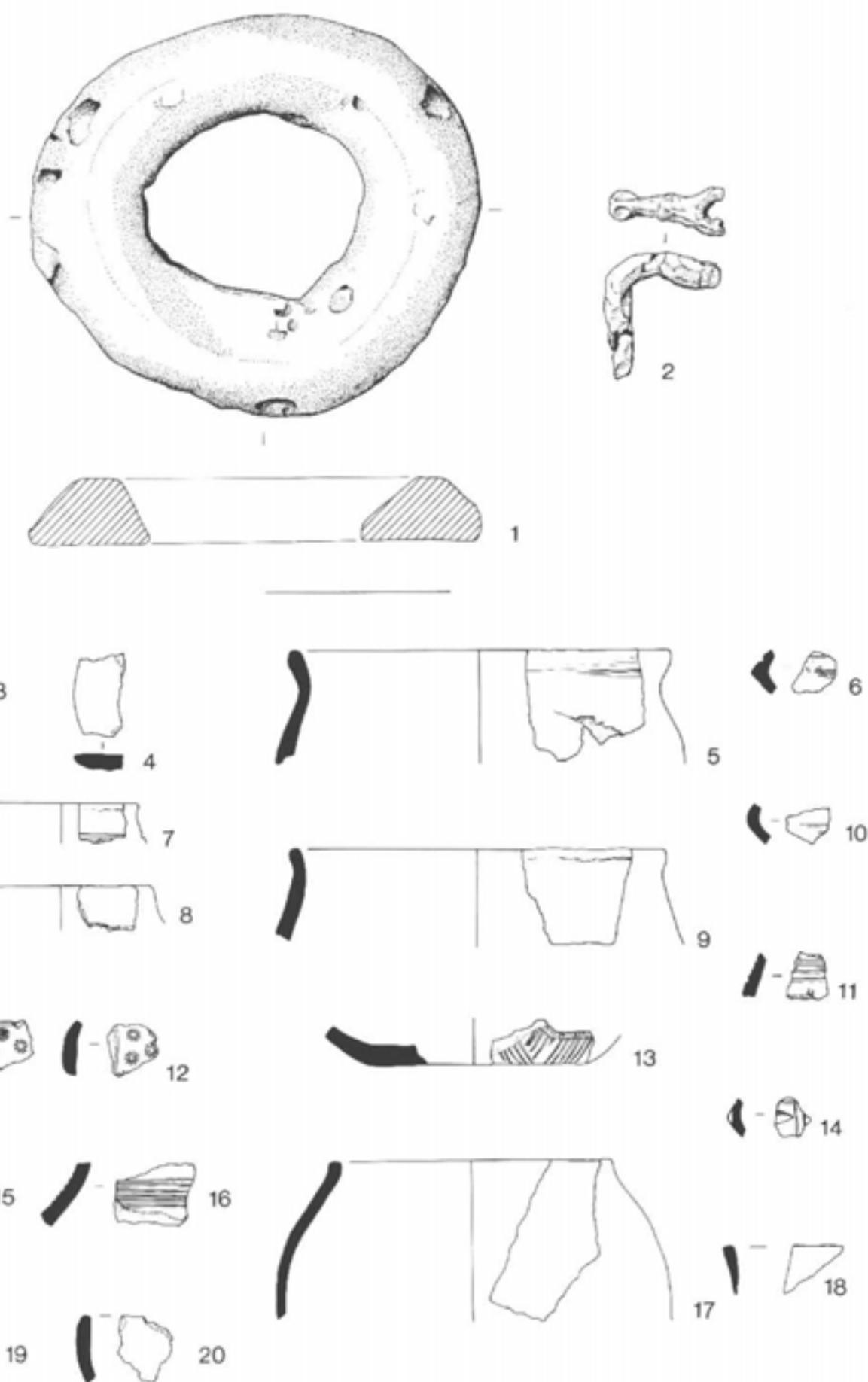
GH59

Fig 117 Finds and pottery from GH 58, 59 (for key to glass beads see Fig 53) (scales: GH 58.27-43, 1:3; GH 59.1-3, 1:1; 4-8, 1:3)



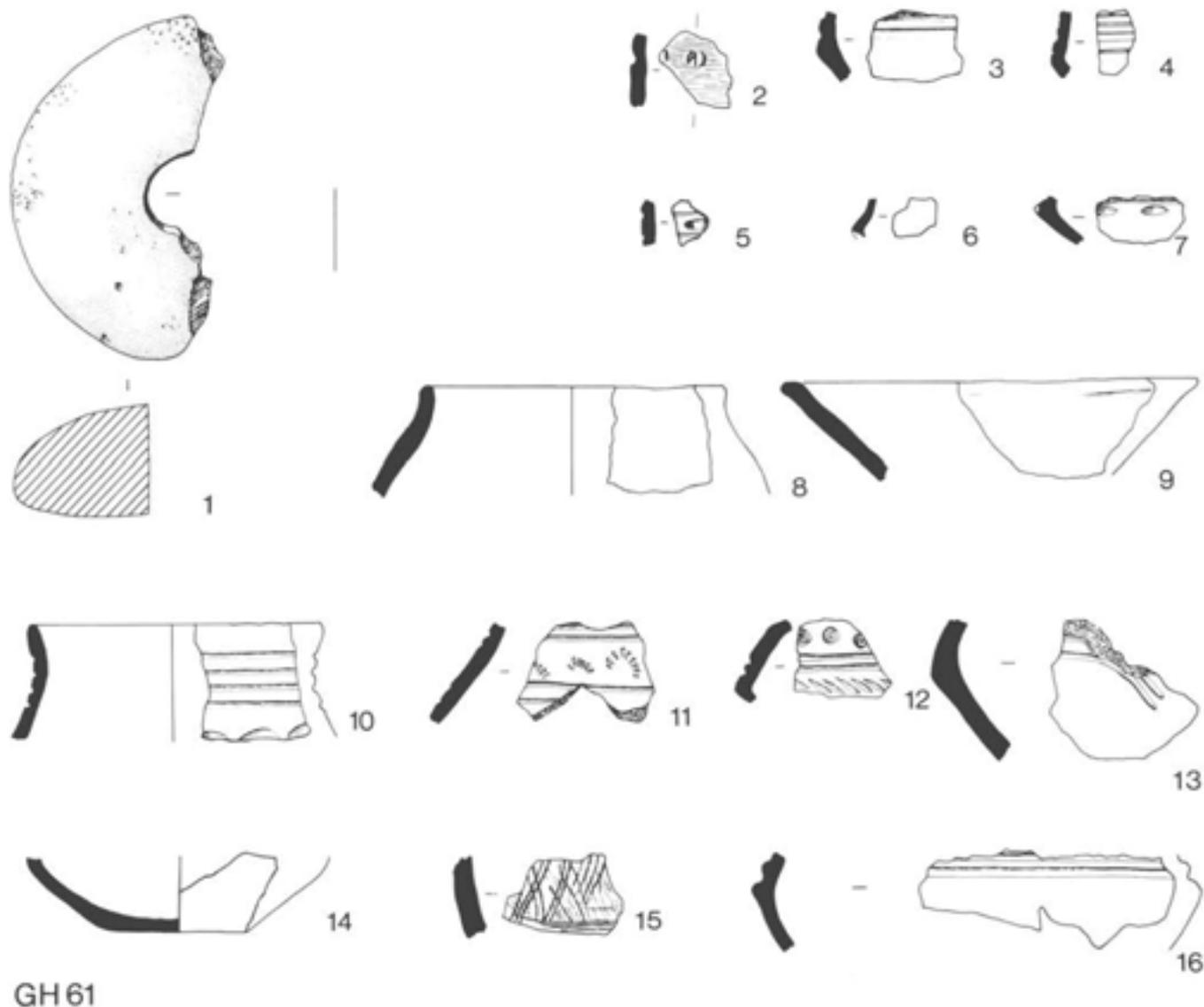
GH 59 Cont'd

Fig 118 Pottery from GH 59 (scale: 1:3)

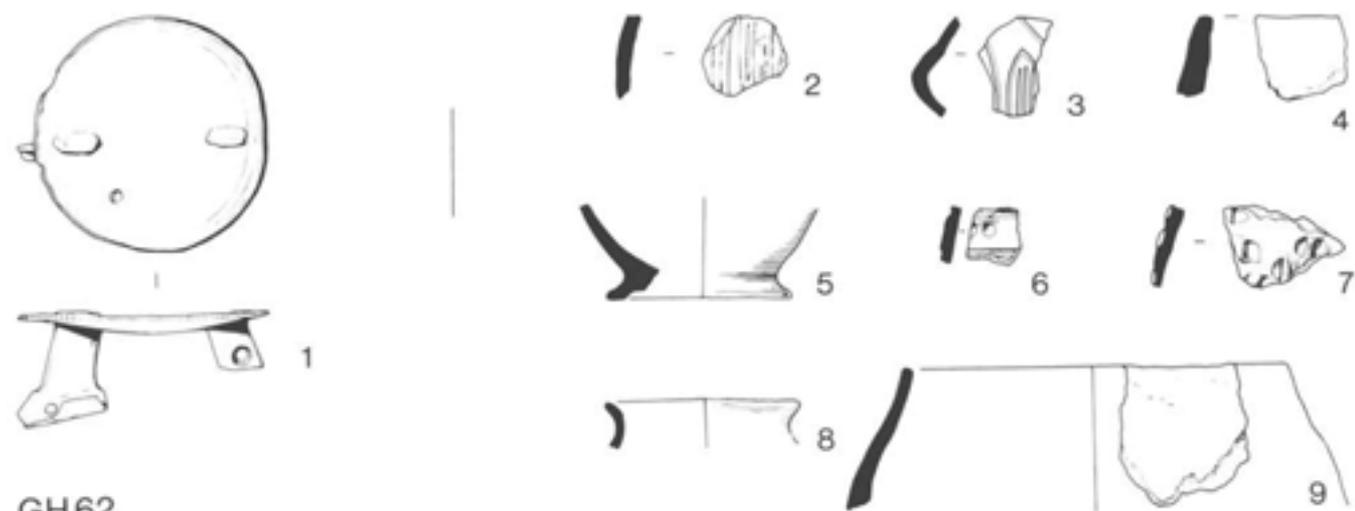


GH 60

Fig 119 Finds and pottery from GH 60 (scales: 1, 1:1; 2, 1:2; 3-20, 1:3)



GH 61

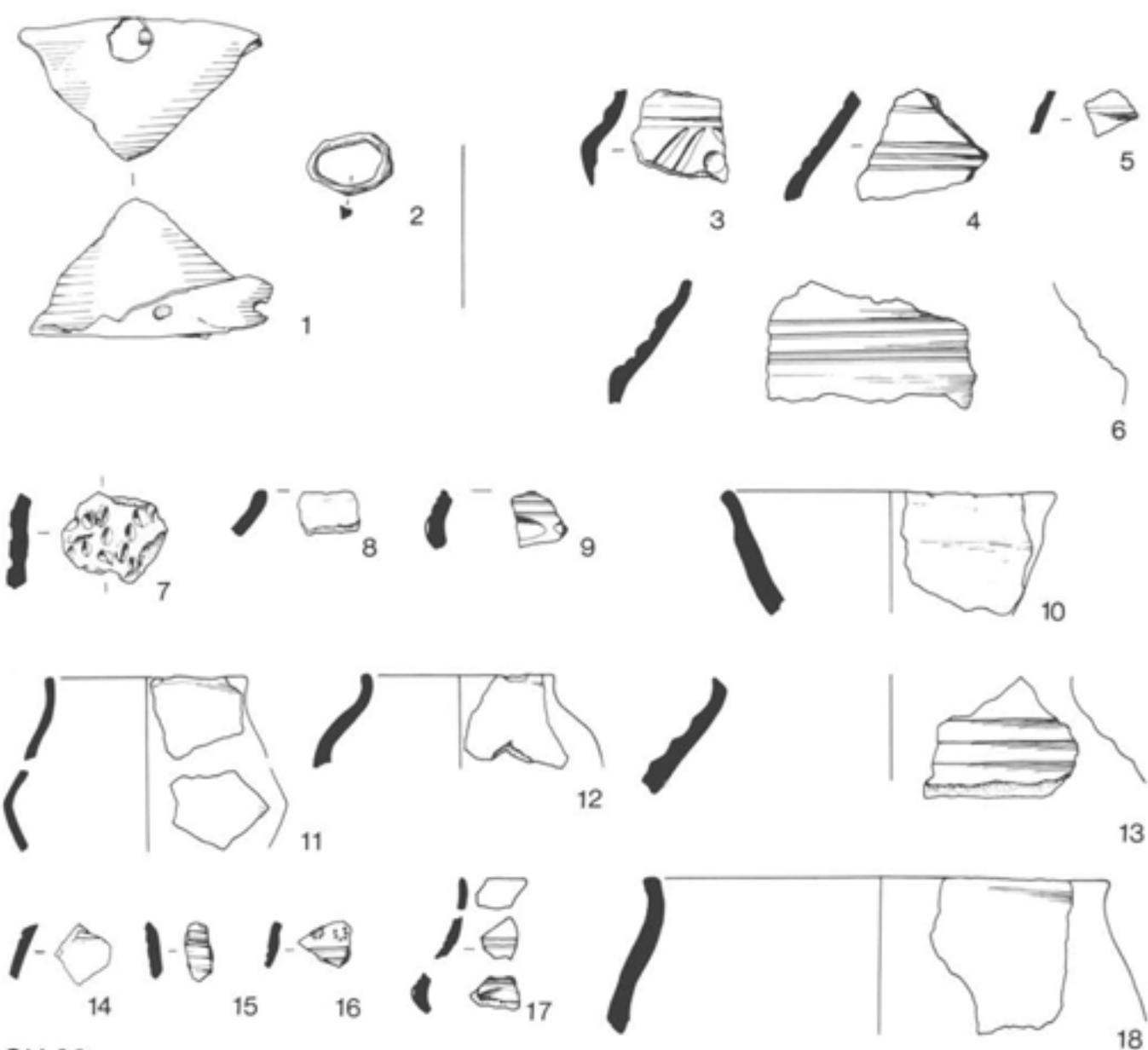


GH 62

Fig 120 Finds and pottery from GH 61, 62 (scale: GH 61.1, 1:1; 2-16, 1:3; GH 62.1, 1:1; 2-9, 1:3)

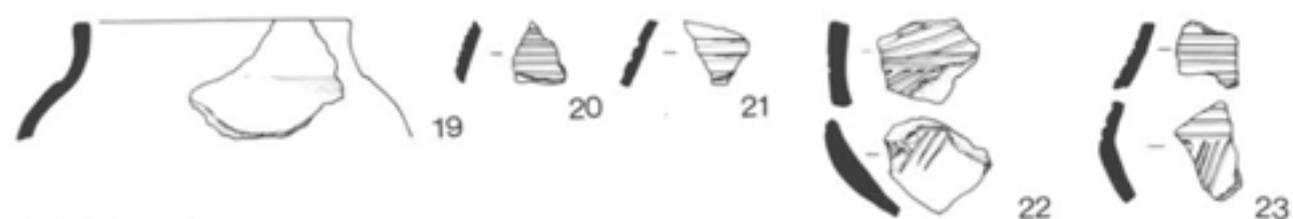


GH 62 Cont'd

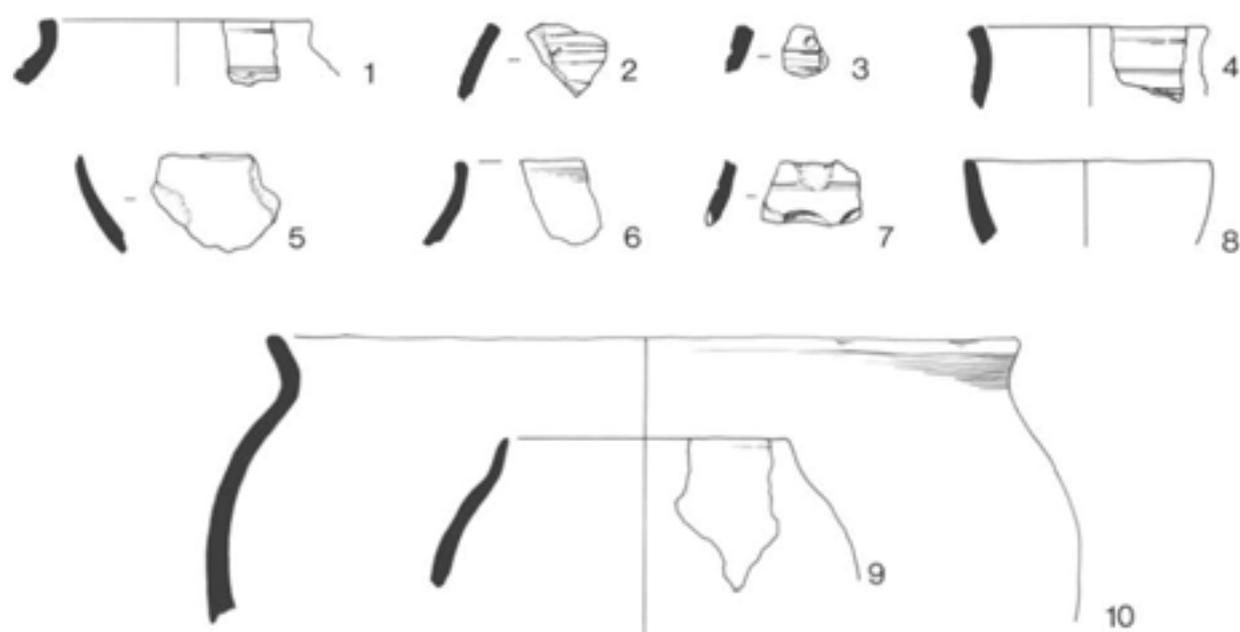


GH 63

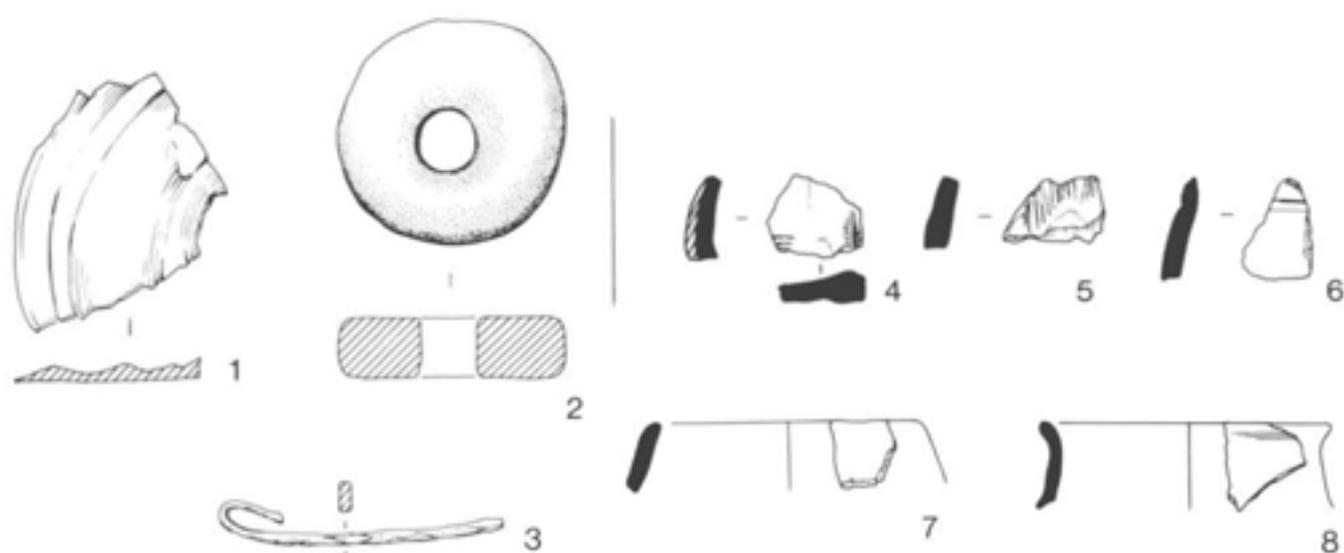
Fig 121 Finds and pottery from GH 62, 63 (scales: GH 62.10-15, 1:3; GH 63.1, 1:1; 2, 1:2; 3-18, 1:3)



GH63 Cont'd

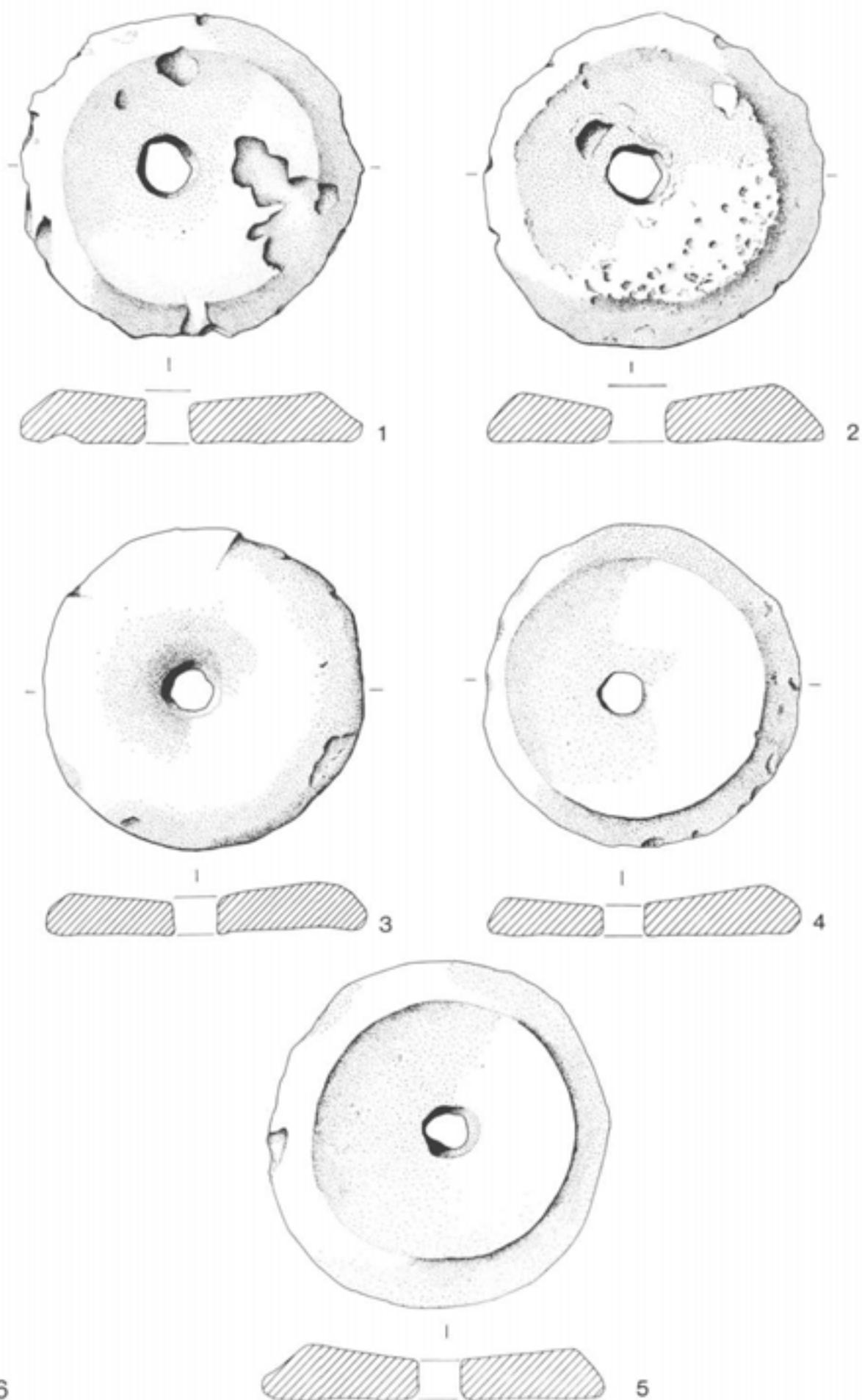


GH64



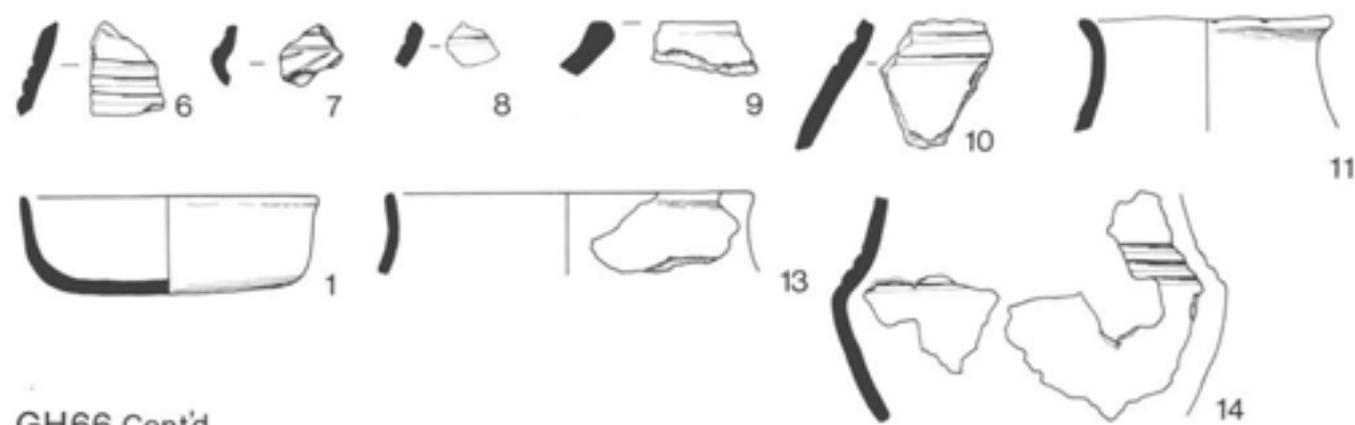
GH65

Fig 122 Finds and pottery from GH 63-65 (scales: GH 63.19-23, 1:3; GH 64, 1:3; GH 65.1-2, 1:1; 3, 1:2; 4-8, 1:3)

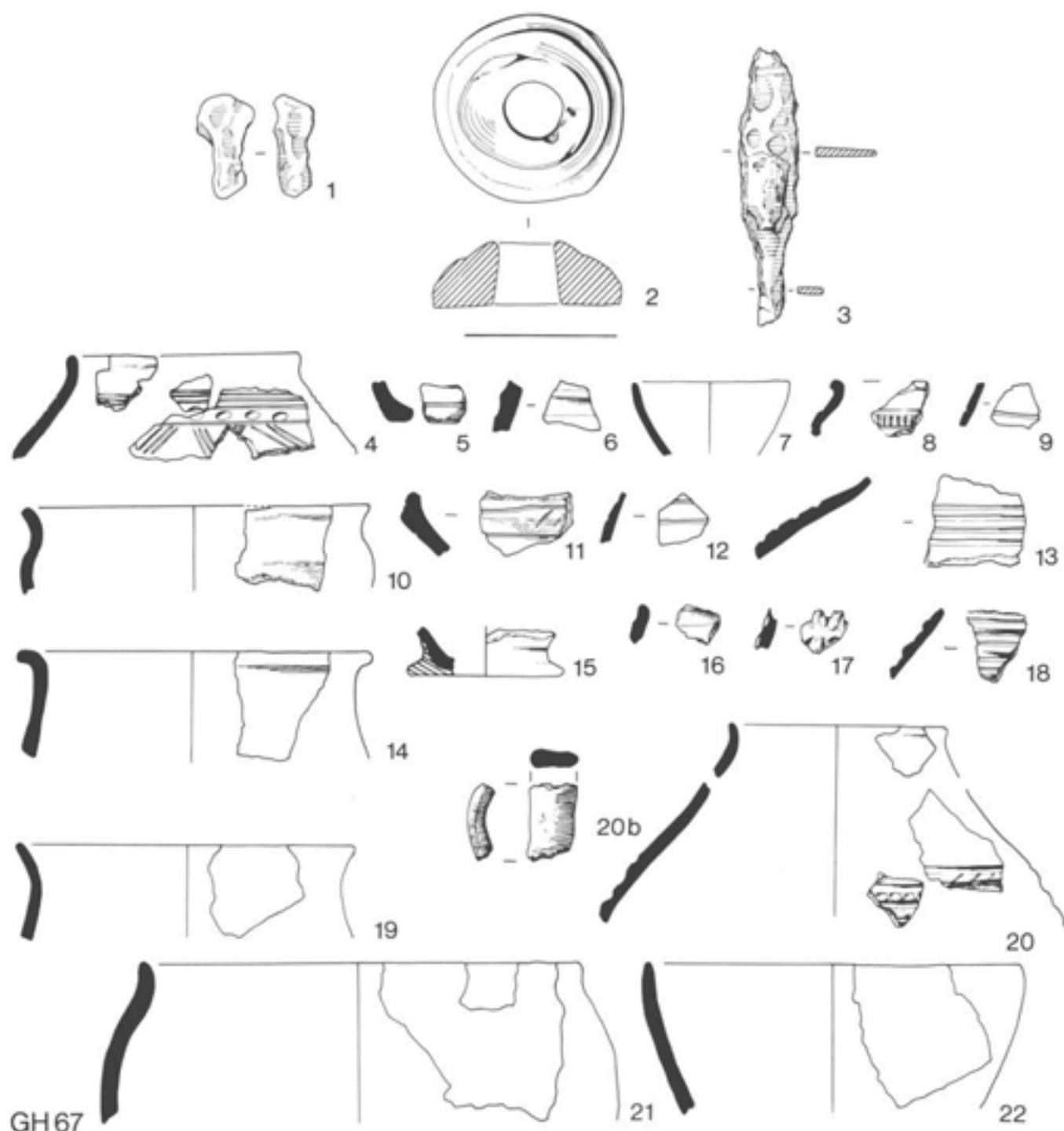


GH66

Fig 123 Finds from GH 66 (scale: 1:1)



GH66 Cont'd

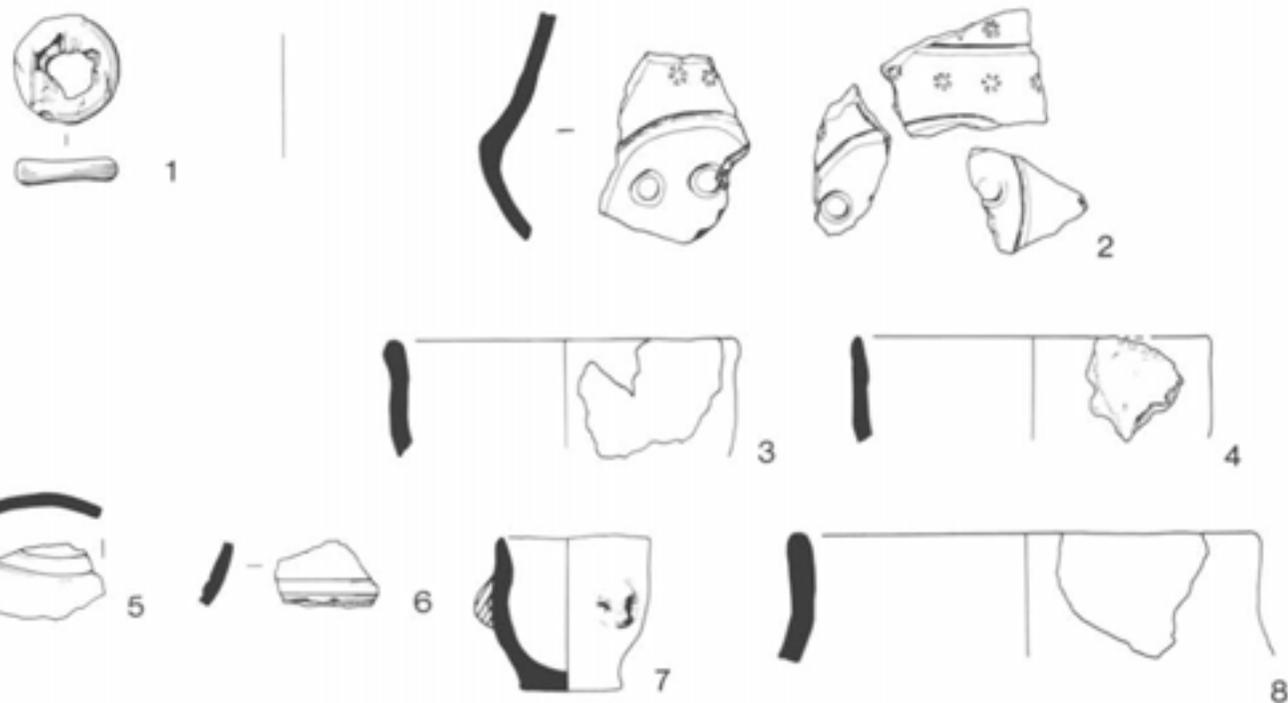


GH67

Fig 124 Finds and pottery from GH 66, 67 (scales: GH 66, 1:3; GH 67.1-2, 1:1; 3, 1:2; 4-22, 1:3)



GH68

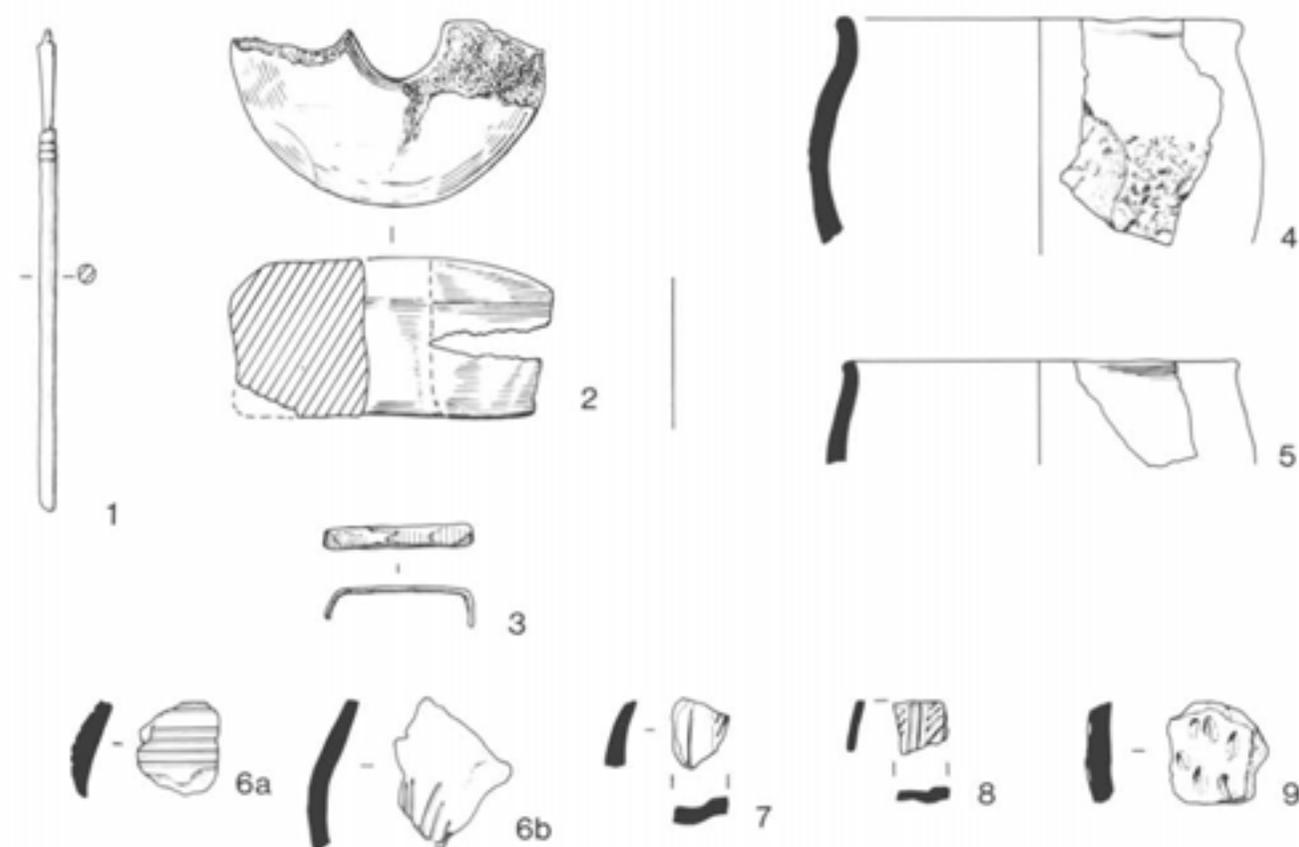


GH69



GH 70

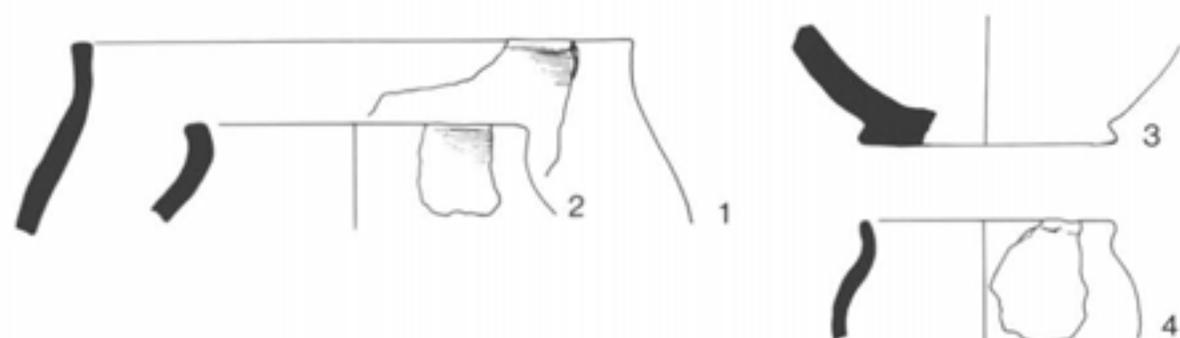
Fig 125 Finds and pottery from GH 68-70 (scales: GH 68, 1:3; GH 69.1, 1:2; 2-8, 1:3; GH 70.1, 1:2; 2-9, 1:3)



GH 71

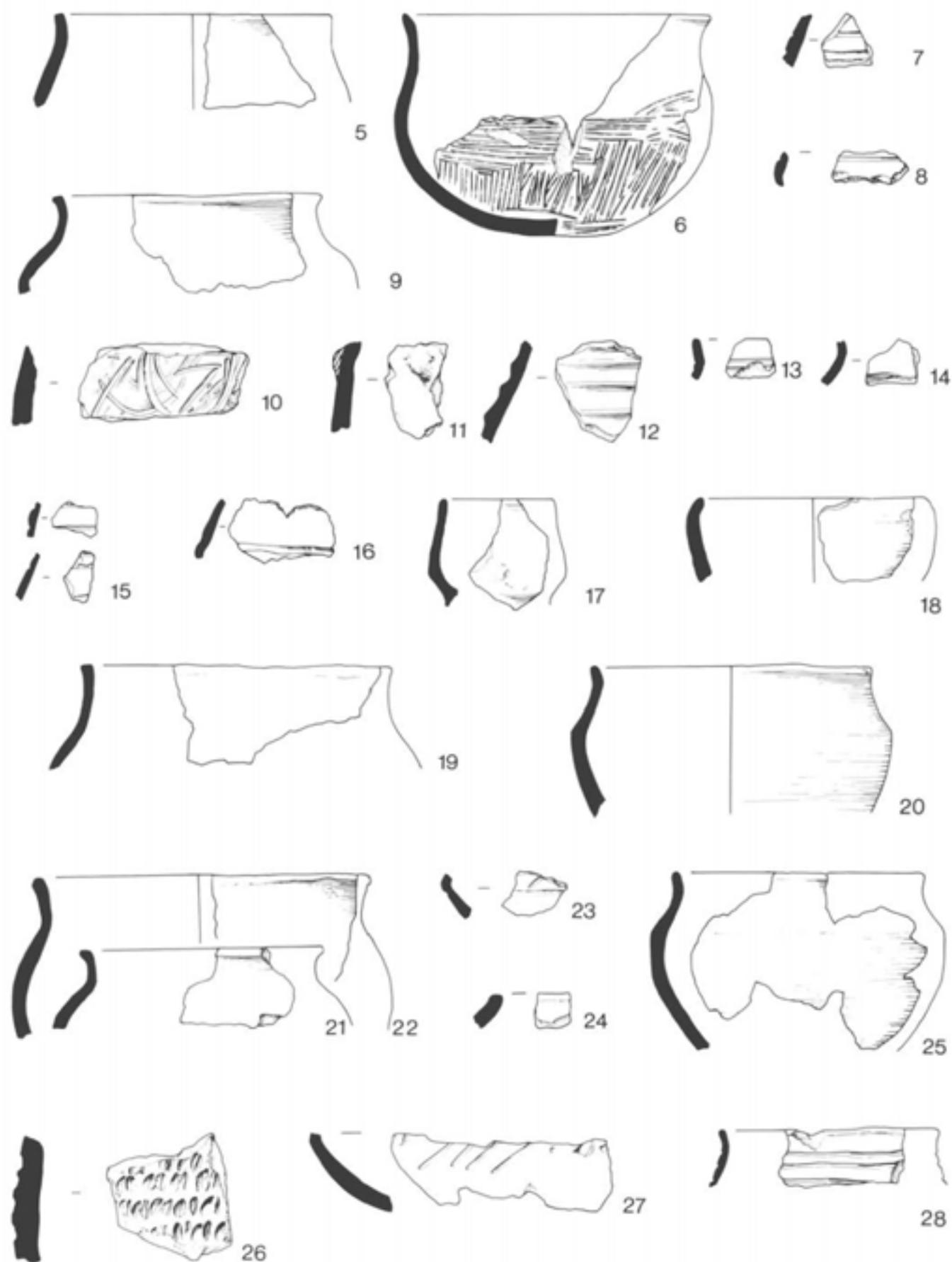


GH 72



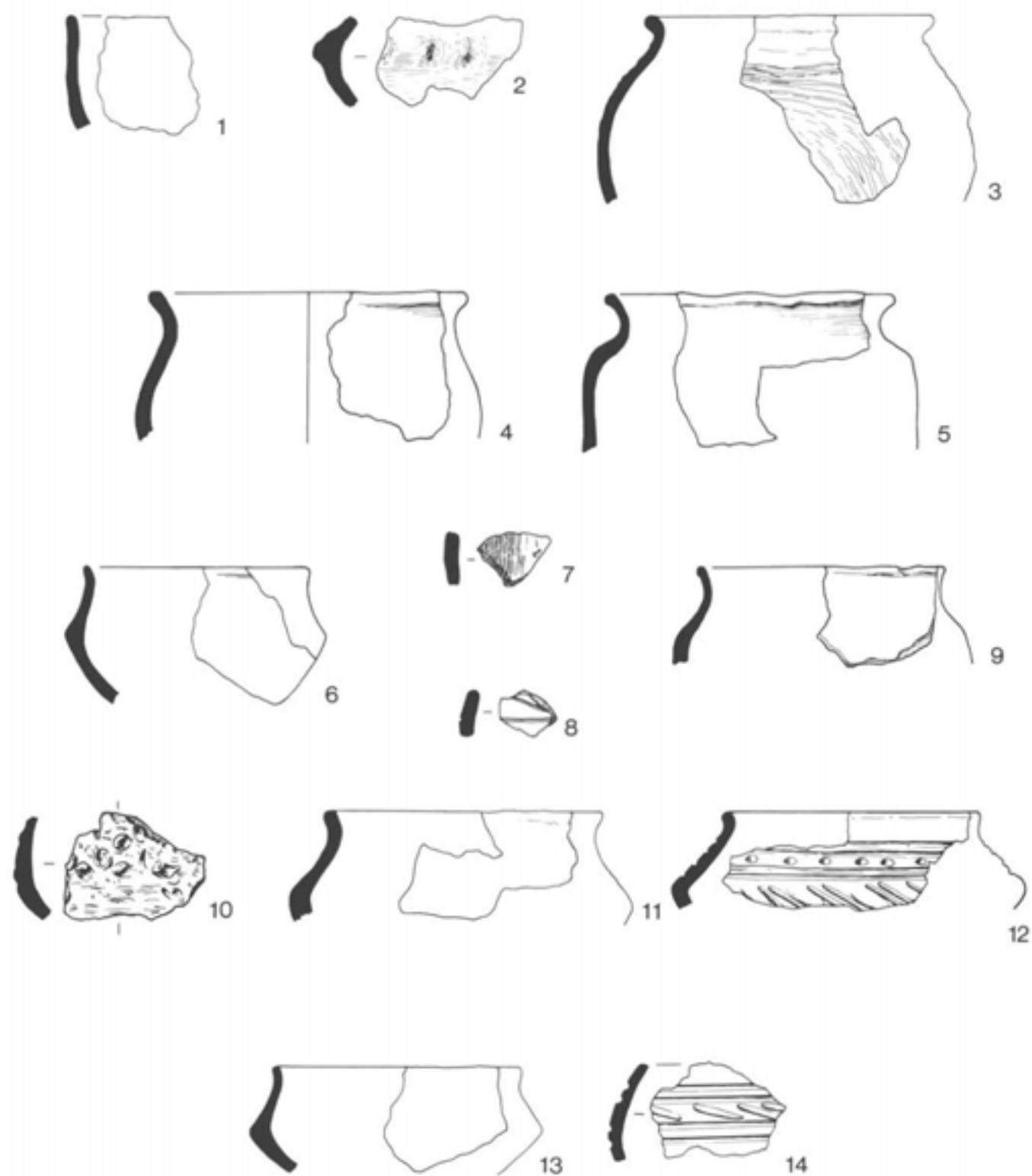
GH 73

Fig 126 Finds and pottery from GH 71-73 (scales: GH 71.1-3, 1:1; 4-9, 1:3; GH 72.1, 1:1; 2, 1:2; GH 73 1:3)



GH73 Cont'd

Fig 127 Pottery from GH 73 (scale: 1:3)

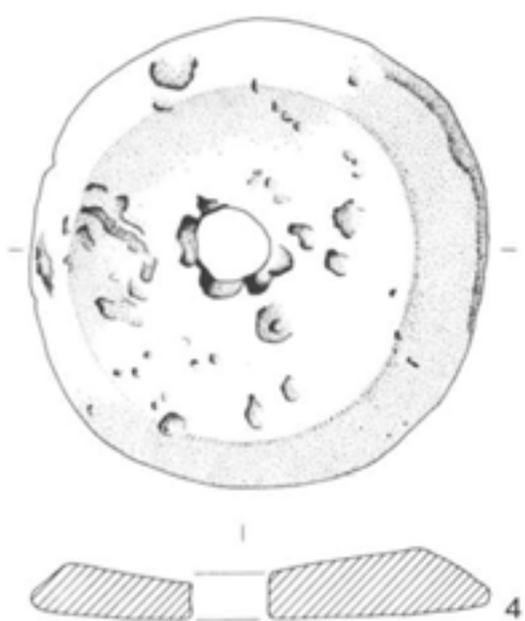
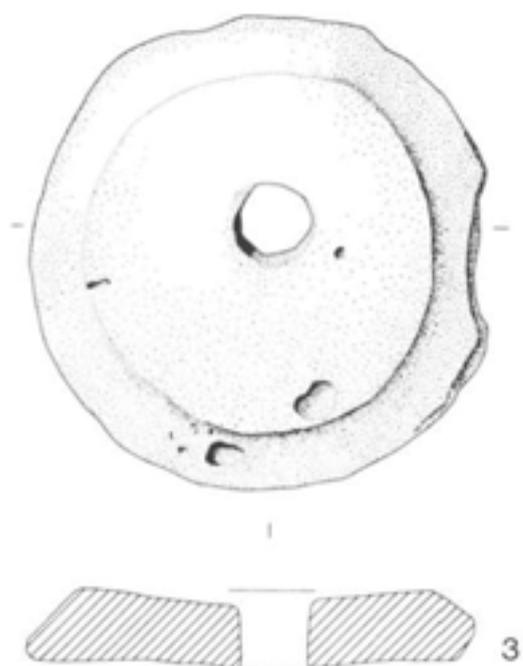
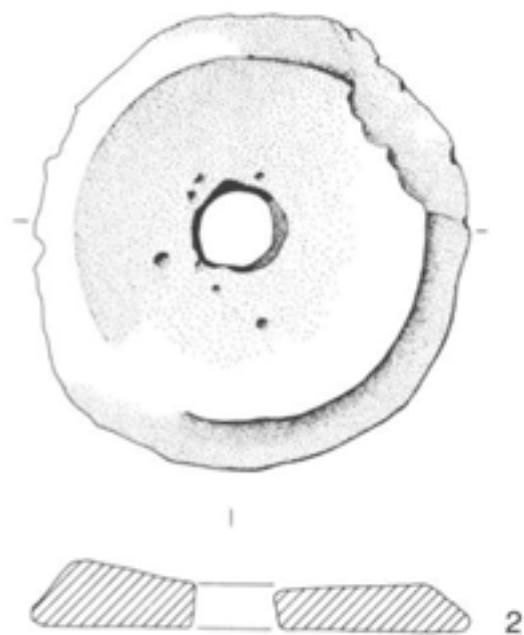
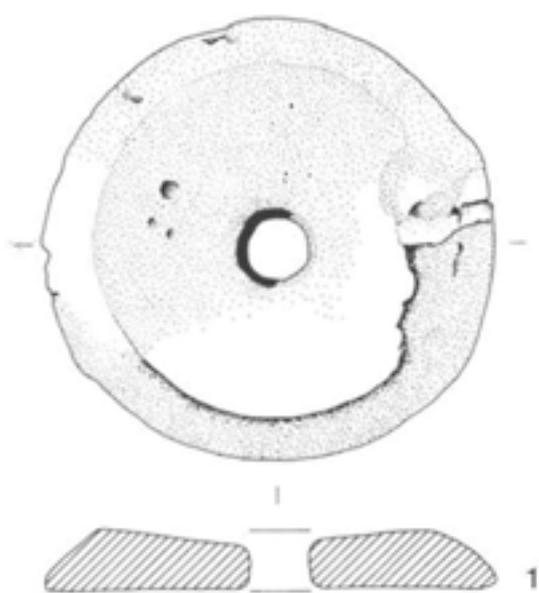


GH74

Fig 128 Pottery from GH 74 (scale: 1:3)

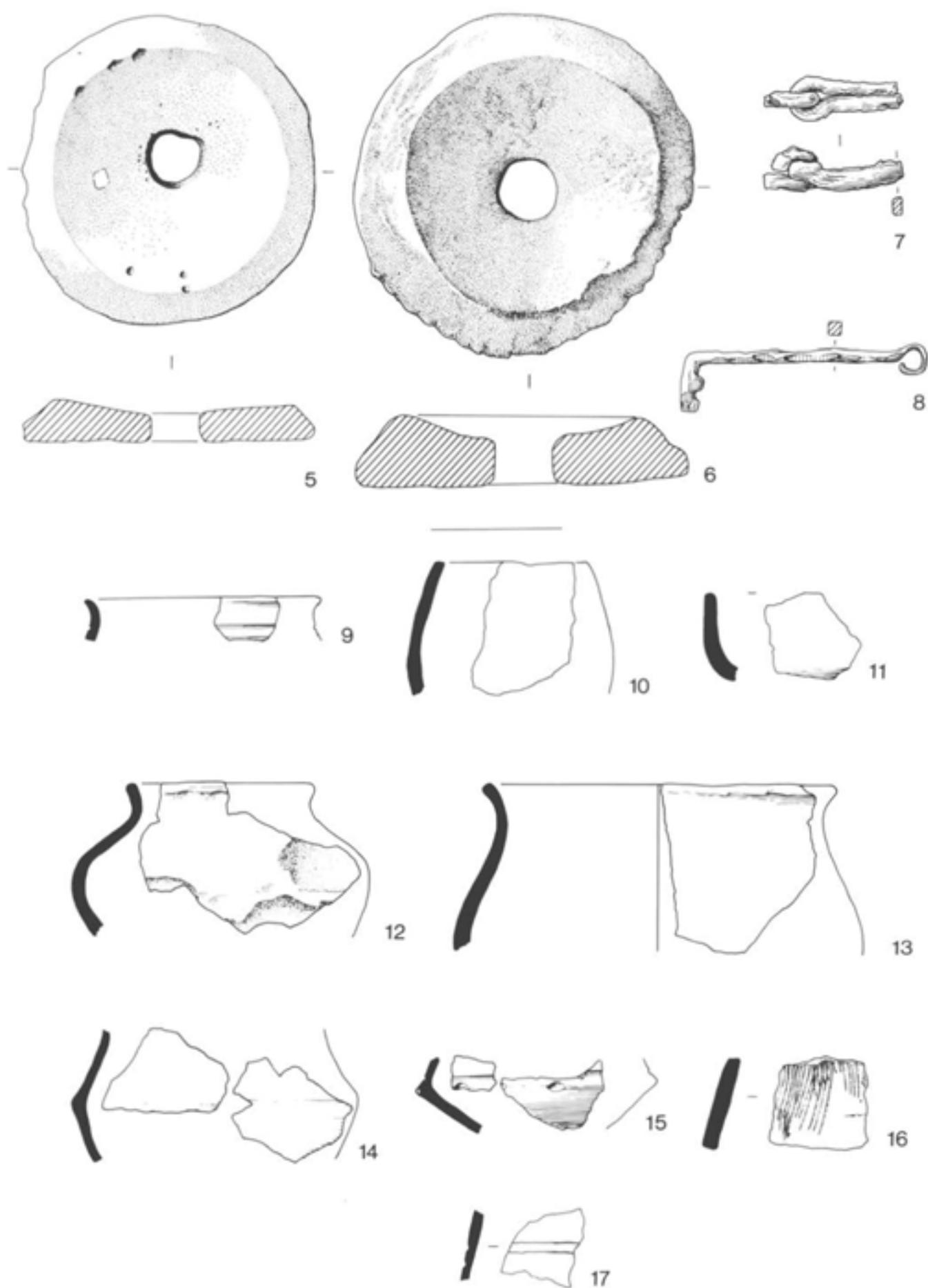


GH76



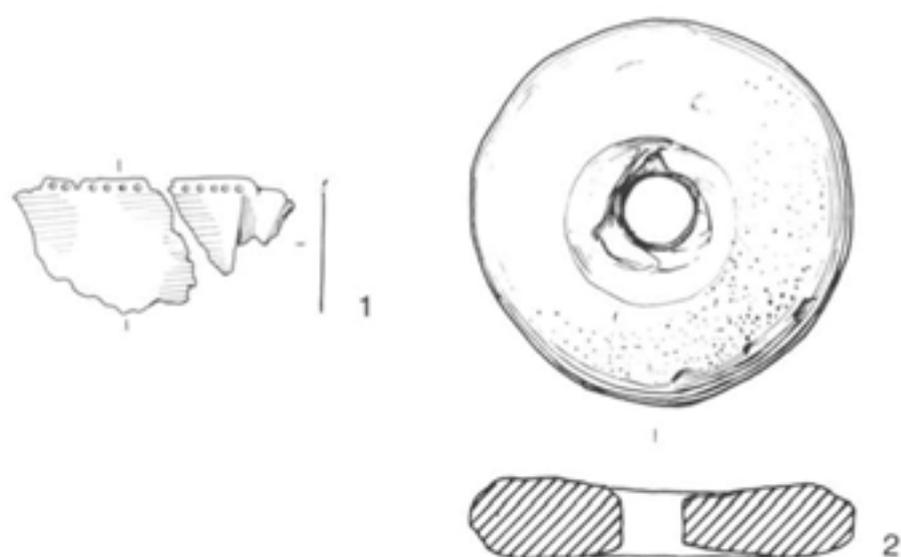
GH77

Fig 129 Finds and pottery from GH 76, 77 (scales: GH 76, 1:3; GH 77, 1:1)

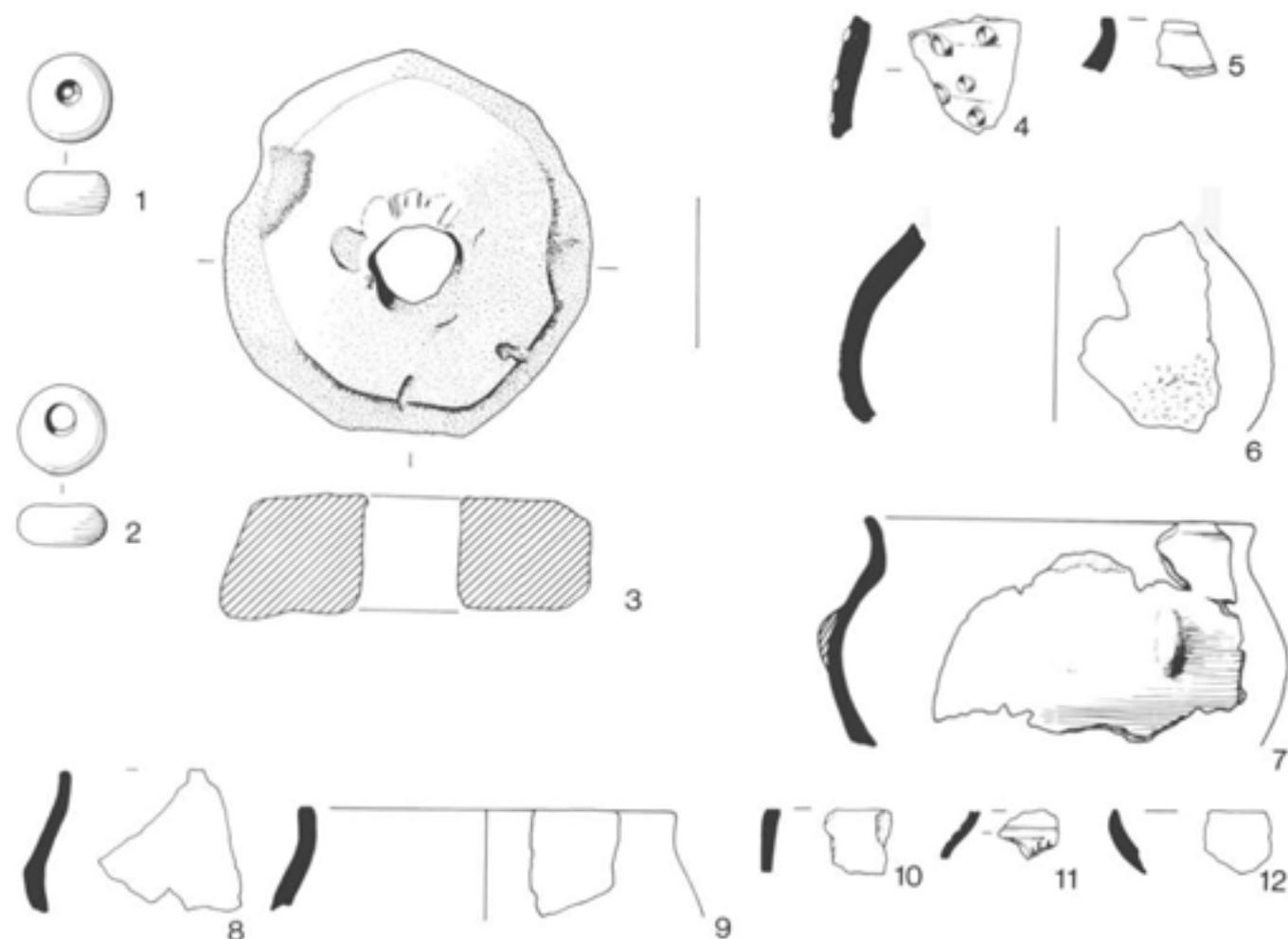


GH77 Cont'd

Fig 130 Finds and pottery from GH 77 (scales: 5-6, 1:1; 7-8, 1:2; 9-17, 1:3)

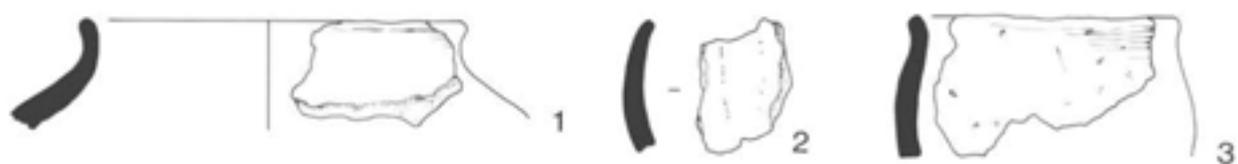


GH 78

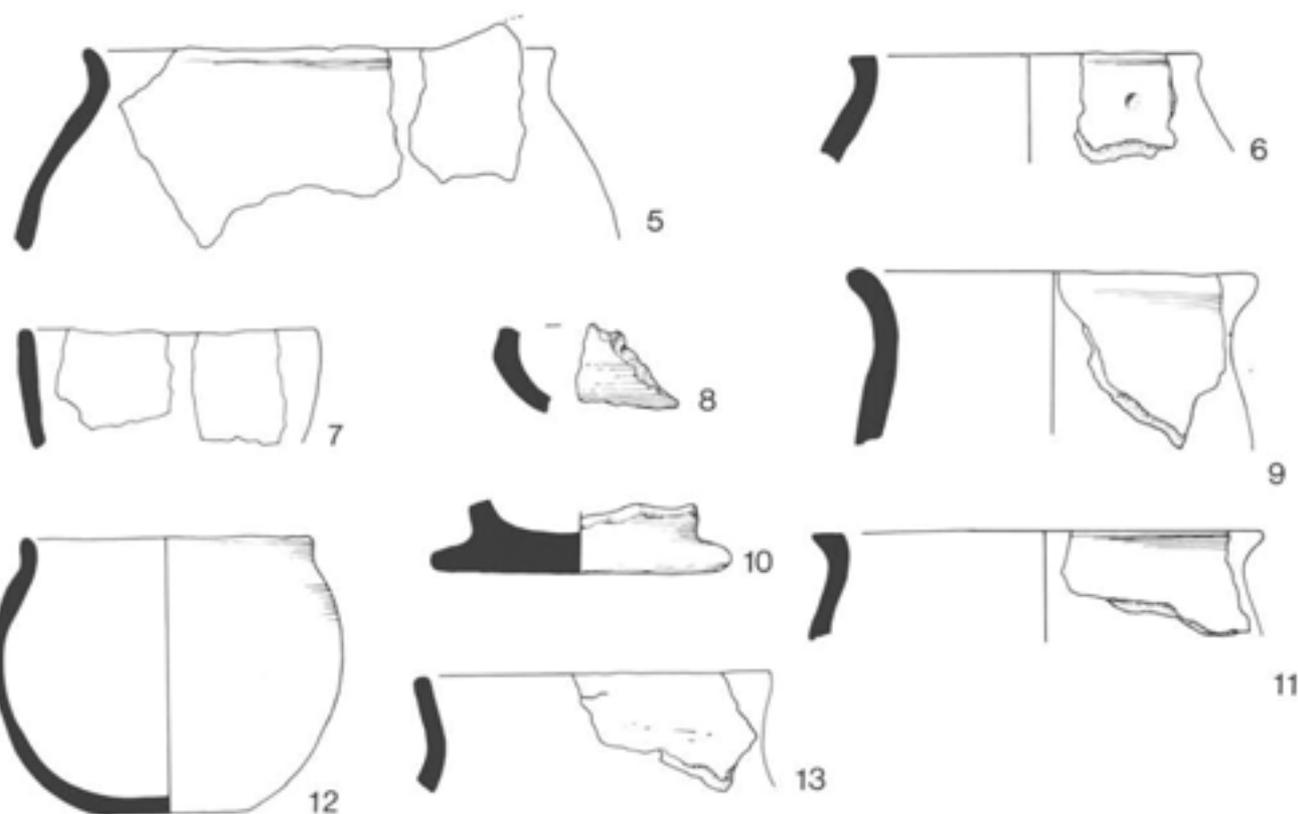
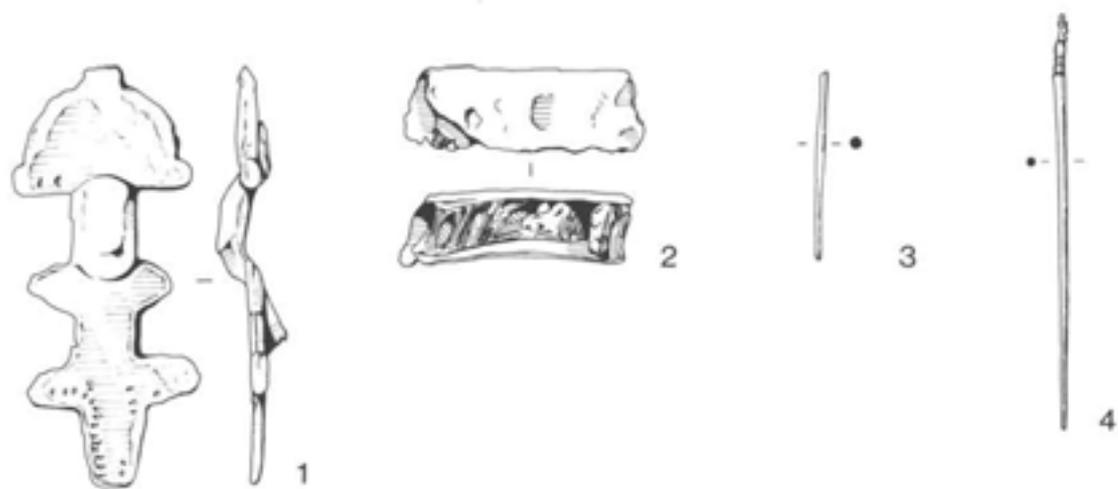


GH 79

Fig 131 Finds and pottery from GH 78, 79 (scales: GH 78.1-2, 1:1; 3-7, 1:3; GH 79.1-3, 1:1; 4-12, 1:2)



GH 80

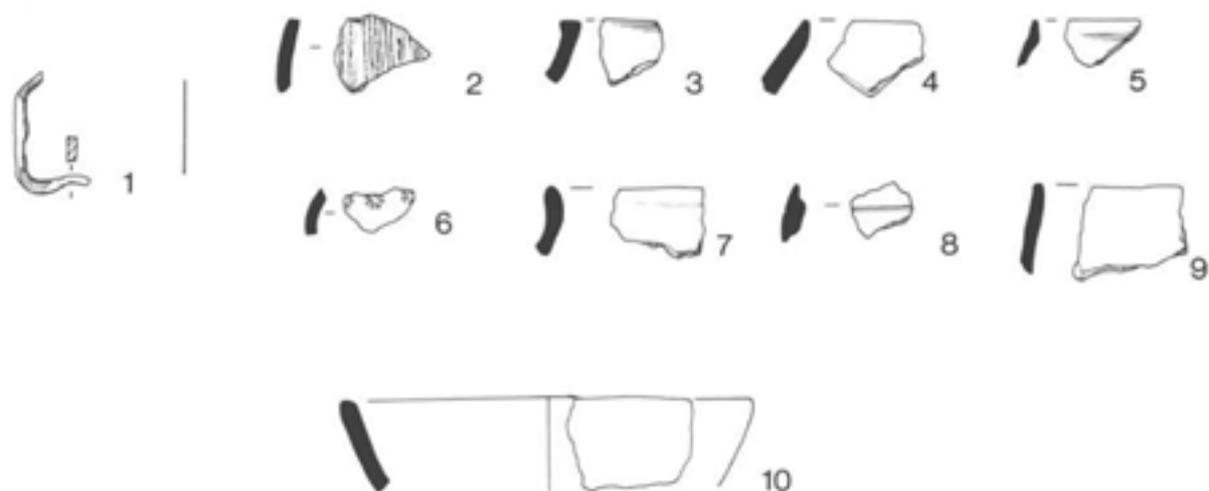


GH 81

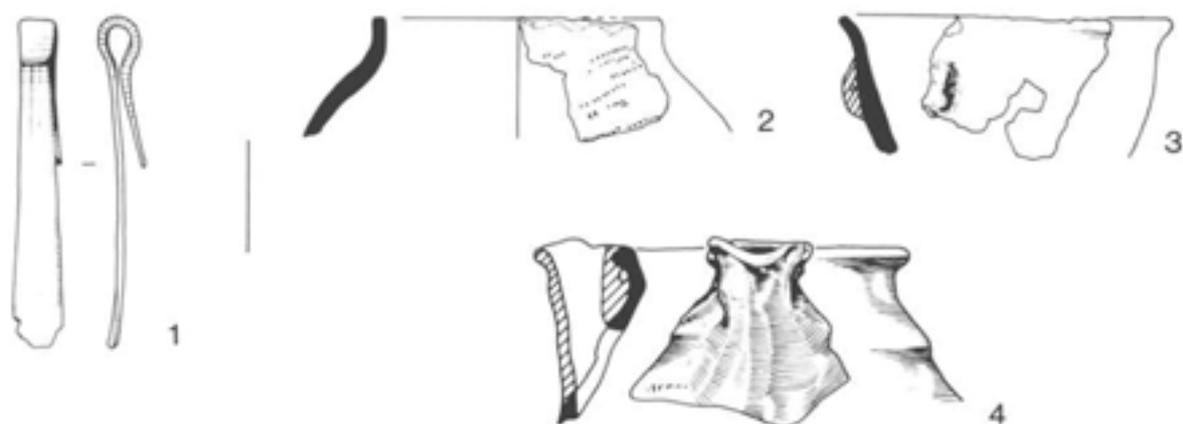
Fig 132 Finds and pottery from GH 80, 81 (scales: GH 80, 1:3; GH 81.1-4, 1:1; 5-13, 1:3)



GH 81 Cont'd



GH 82

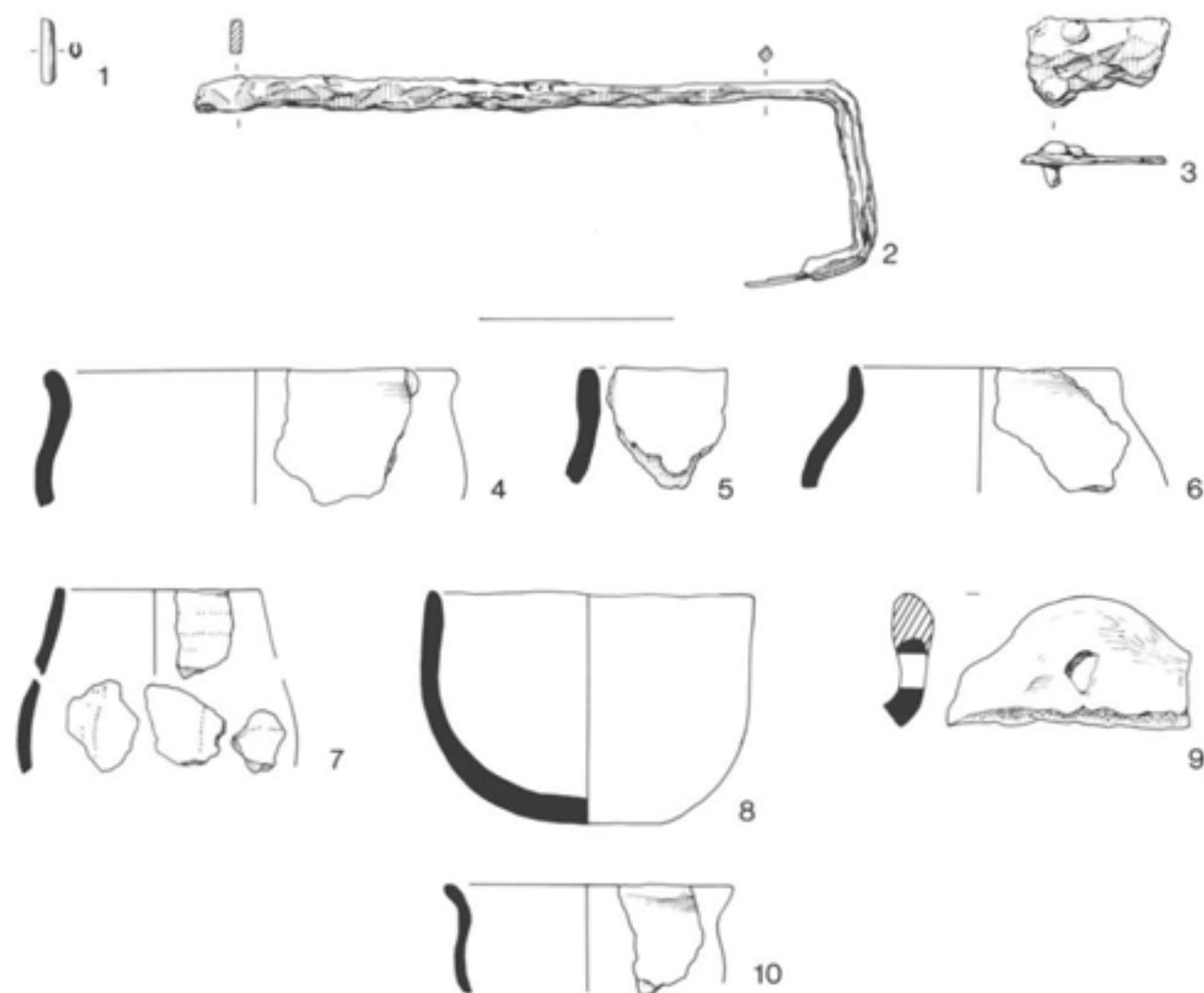


GH 83

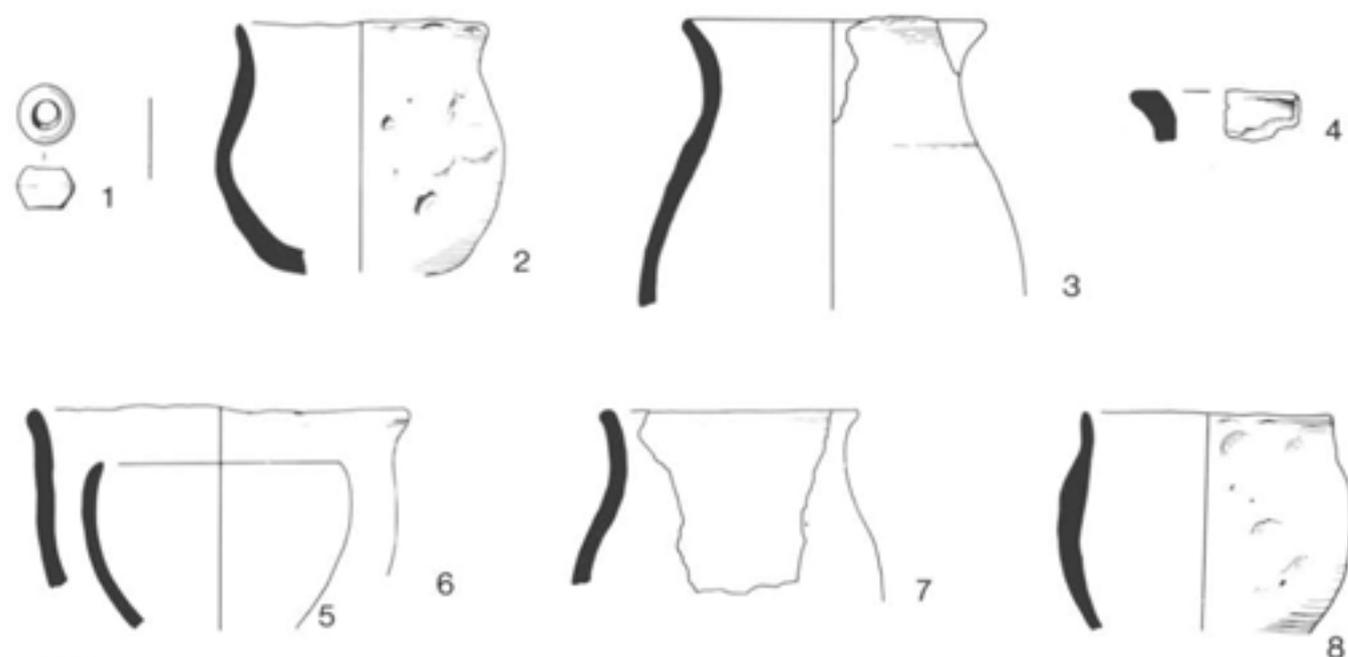


GH 84

Fig 133 Finds and pottery from GH 81-84 (scales: GH 81, 1:3; GH 82.1, 1:1; 2-10, 1:3; GH 83.1, 1:1; 2-4, 1:3; GH 84.1-2, 1:1; 3-4, 1:3)



GH85



GH86

Fig 134 Finds and pottery from GH 85, 86 (scales: GH 85.1, 1:1; 2-3, 1:2; 4-10, 1:3; GH 86.1, 1:1; 2-8, 1:3)

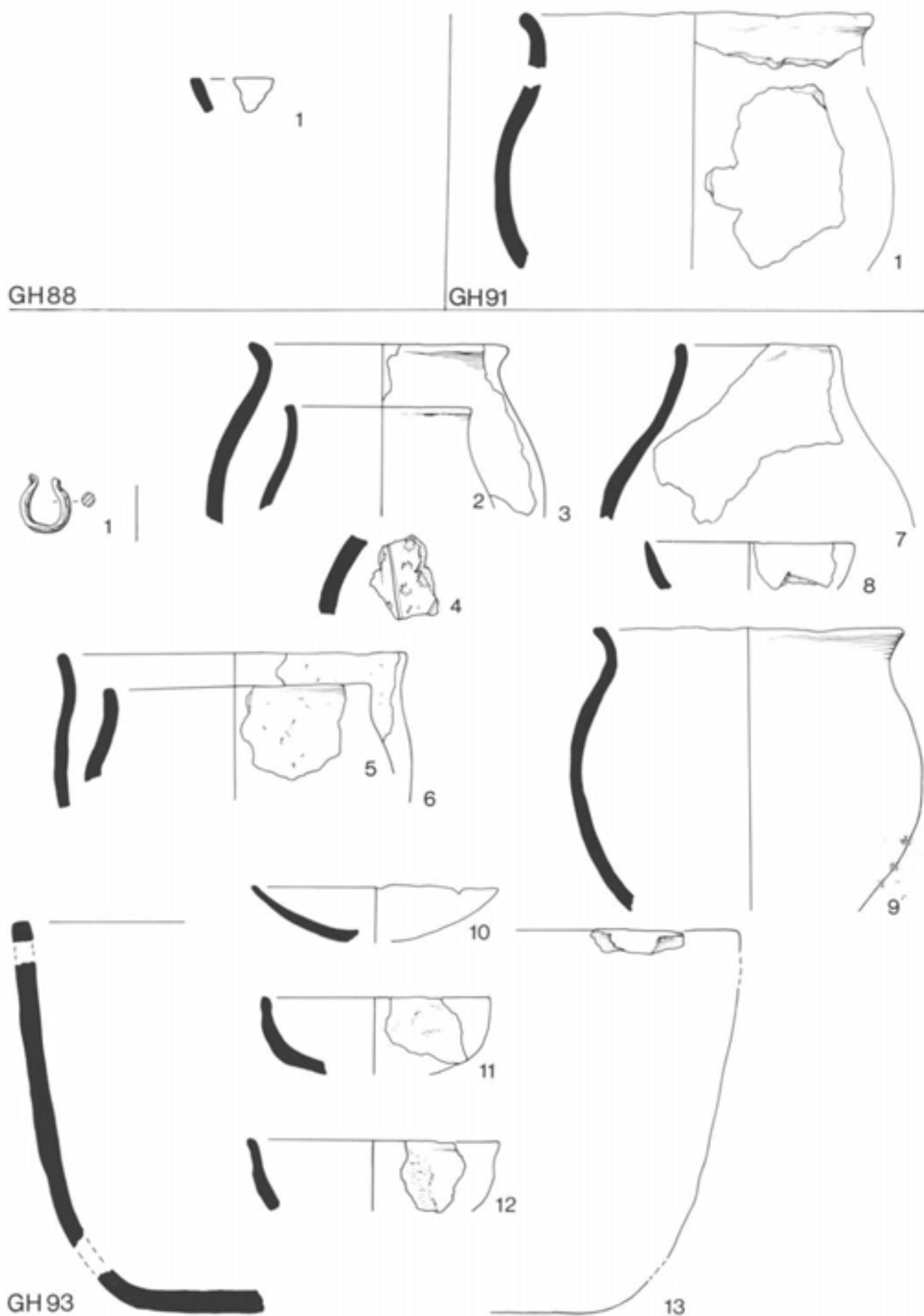
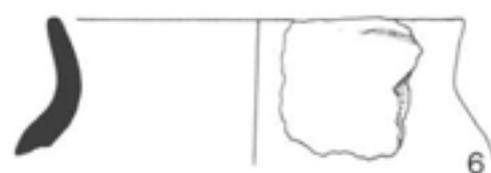


Fig 135 Finds and pottery from GH 88, 91, 93 (scales: GH 88, 1:3; GH 91, 1:3; GH 93.1, 1:2; 2-13, 1:3)



GH95



GH96



GH97

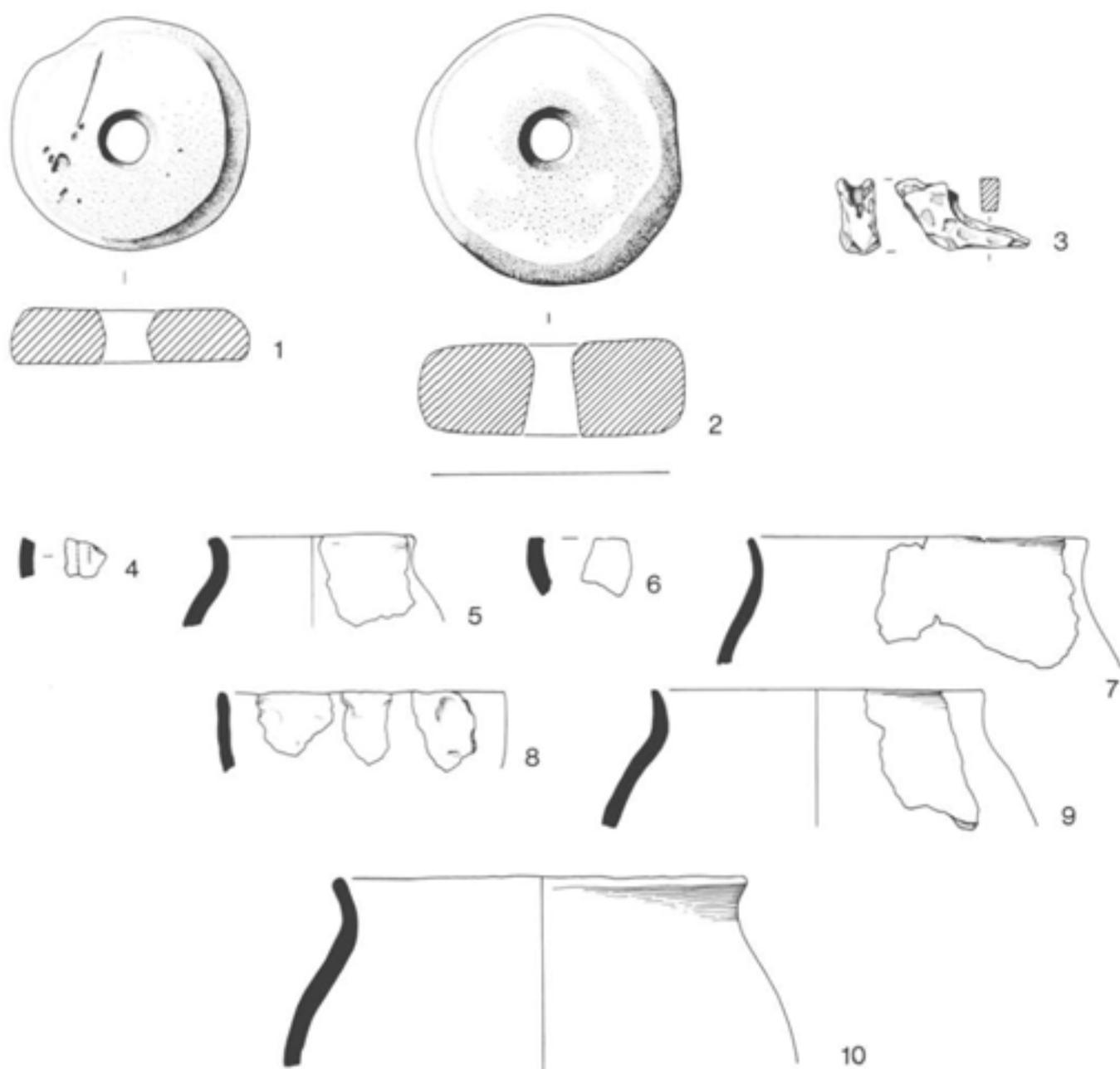


GH98

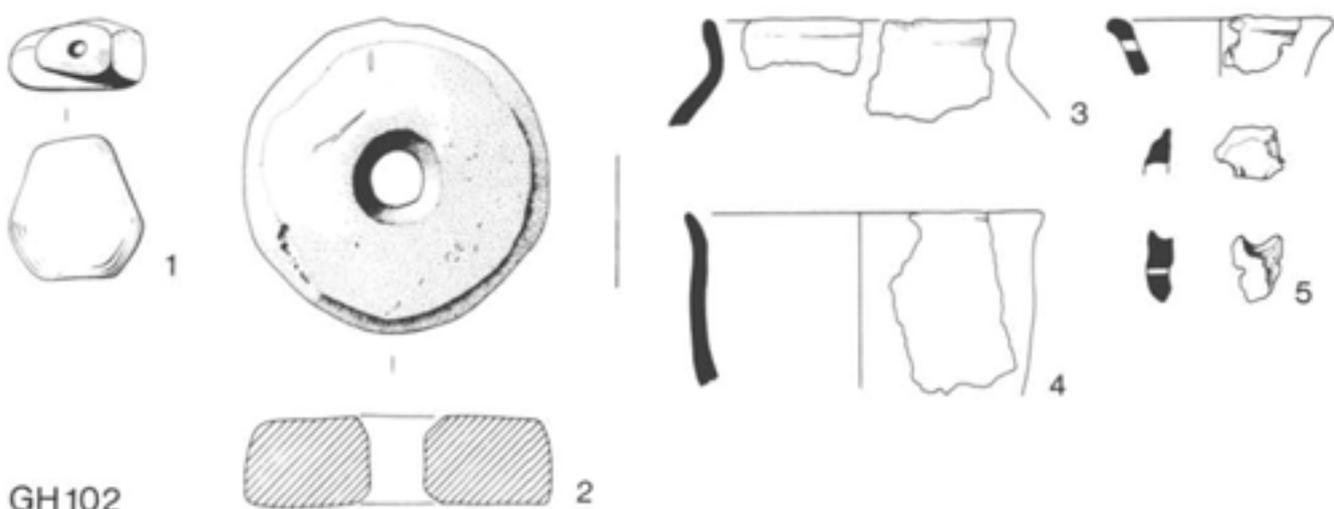


GH99

Fig 136 Finds and pottery from GH 95–99 (scales: GH 95.1, 1:2; 2–6, 1:3; GH 96.1, 1:2; 2–4, 1:3; GH 97, 1:3; GH 98, 1:3; GH 99, 1:3)

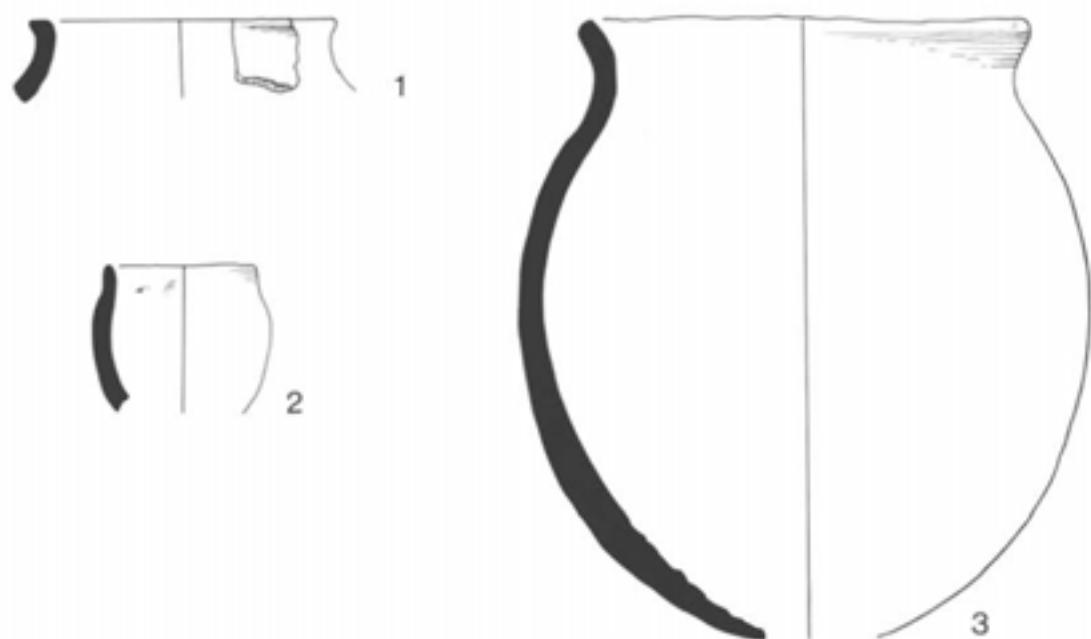


GH 100

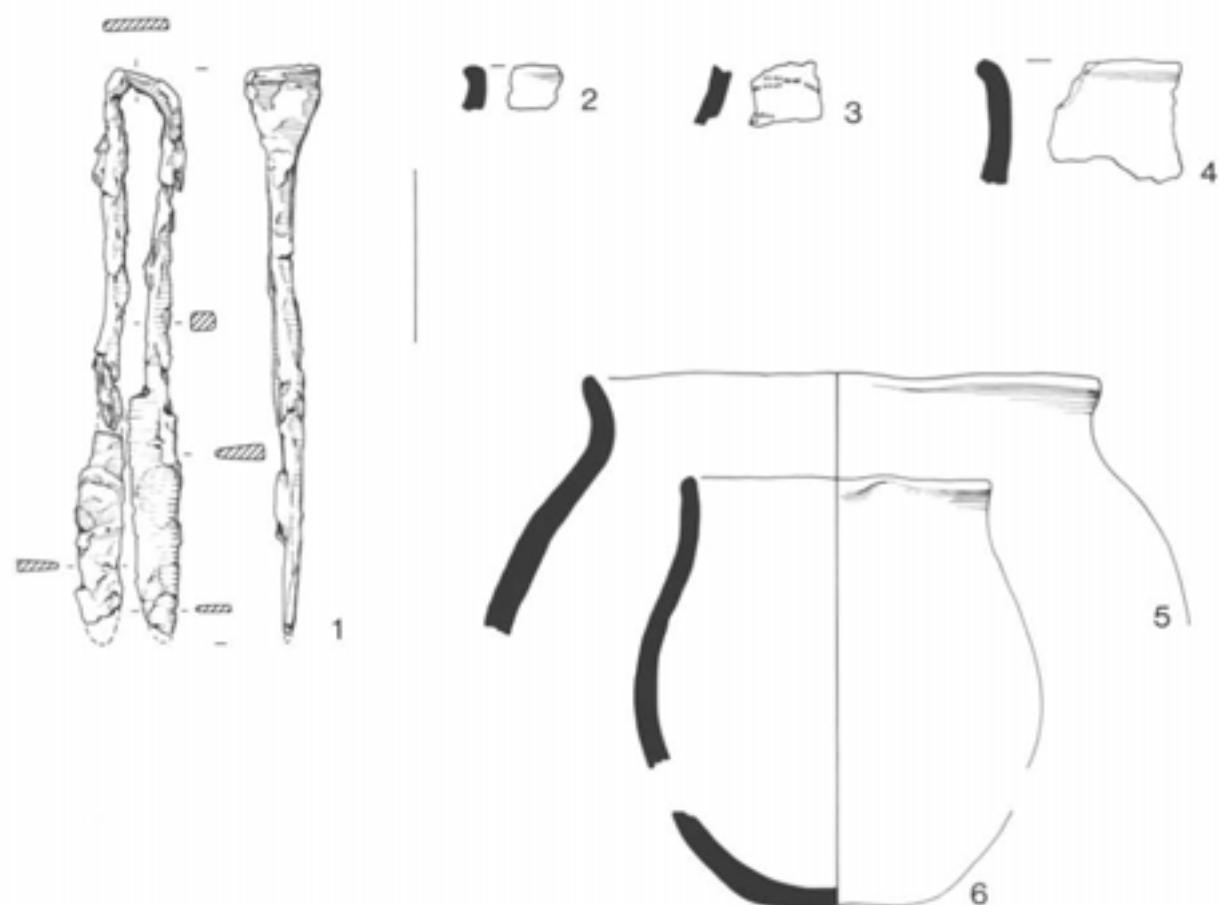


GH 102

Fig 137 Finds and pottery from GH 100, 102 (scales: GH 100.1-2, 1:1; 3, 1:2; 4-10, 1:3; GH 102.1-2, 1:1; 3-5, 1:3)



GH103



GH 104

Fig 138 Finds and pottery from GH 103, 104 (scales: GH 103, 1:3; GH 104.1, 1:2; 2-6, 1:3)

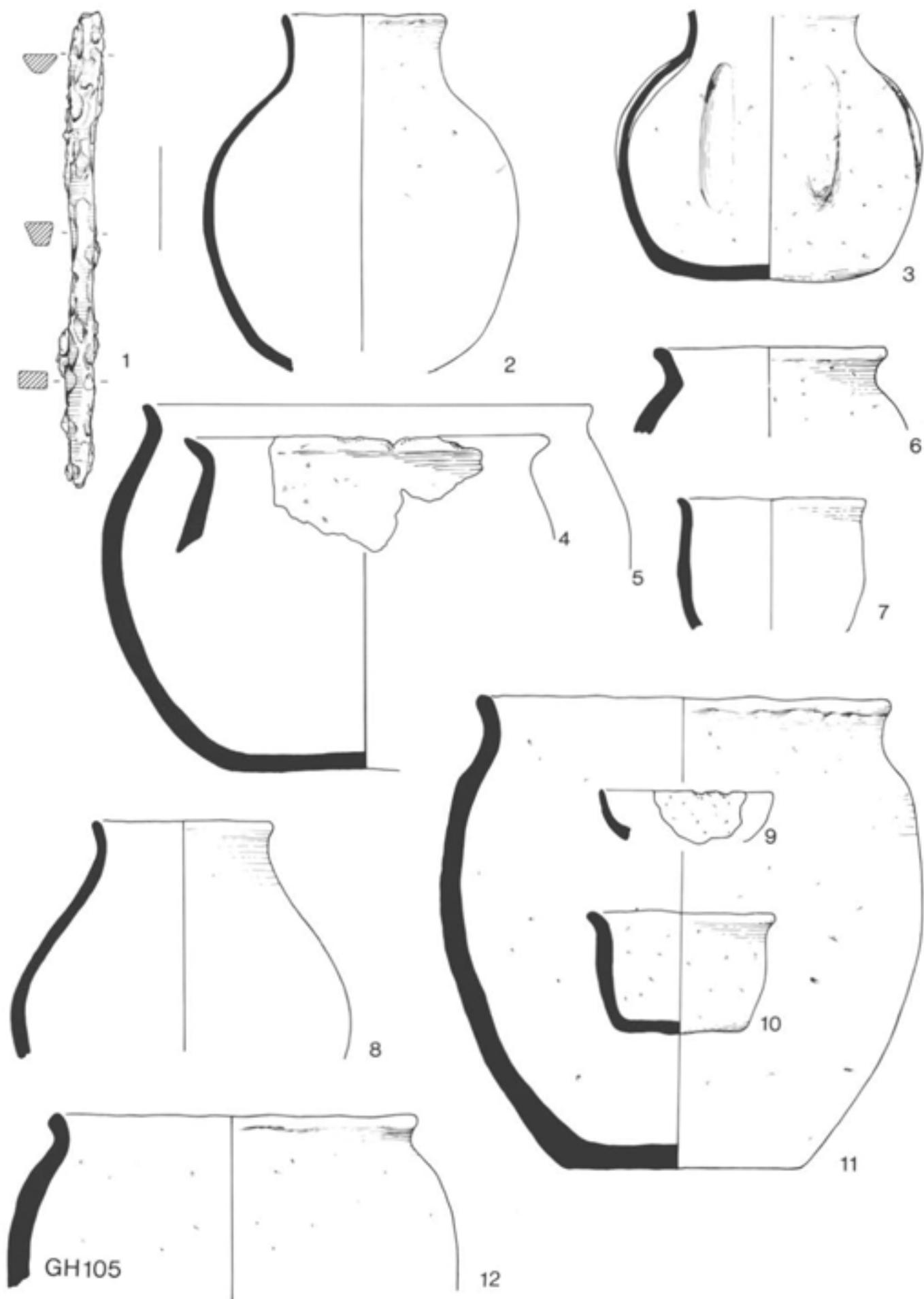
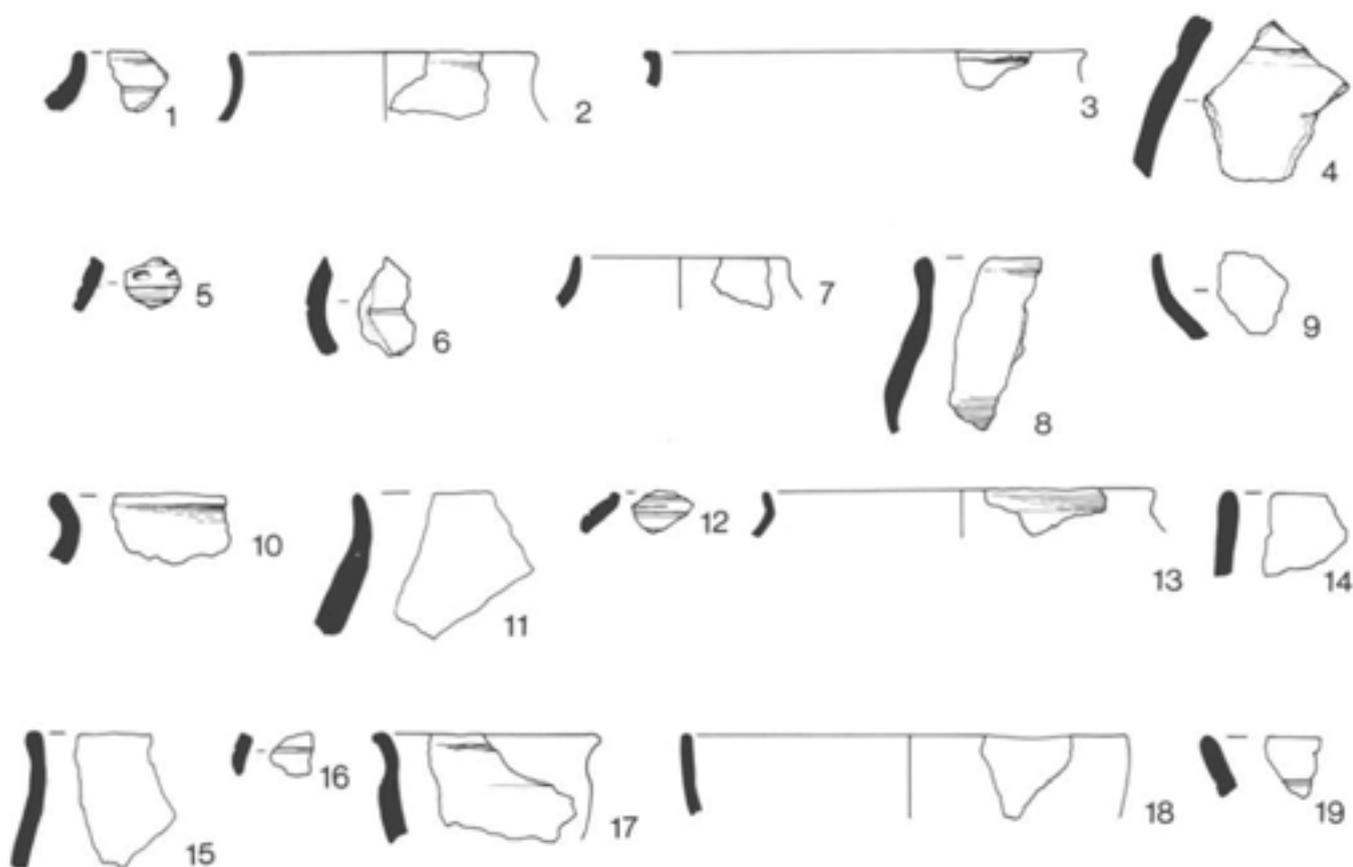


Fig 139 Finds and pottery from GH 105 (scales: 1, 1:2; 2-12, 1:3)



GH106

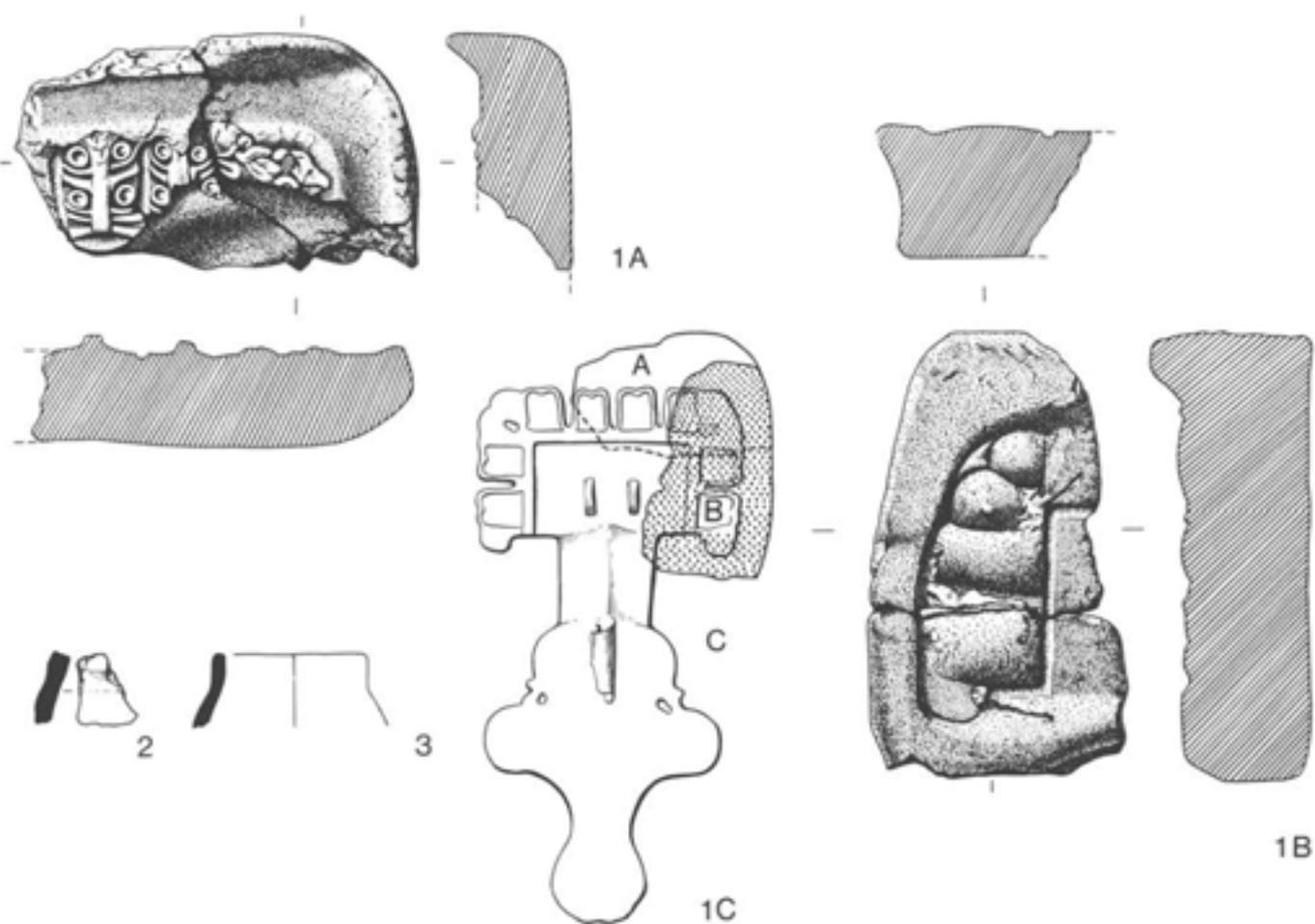


GH107

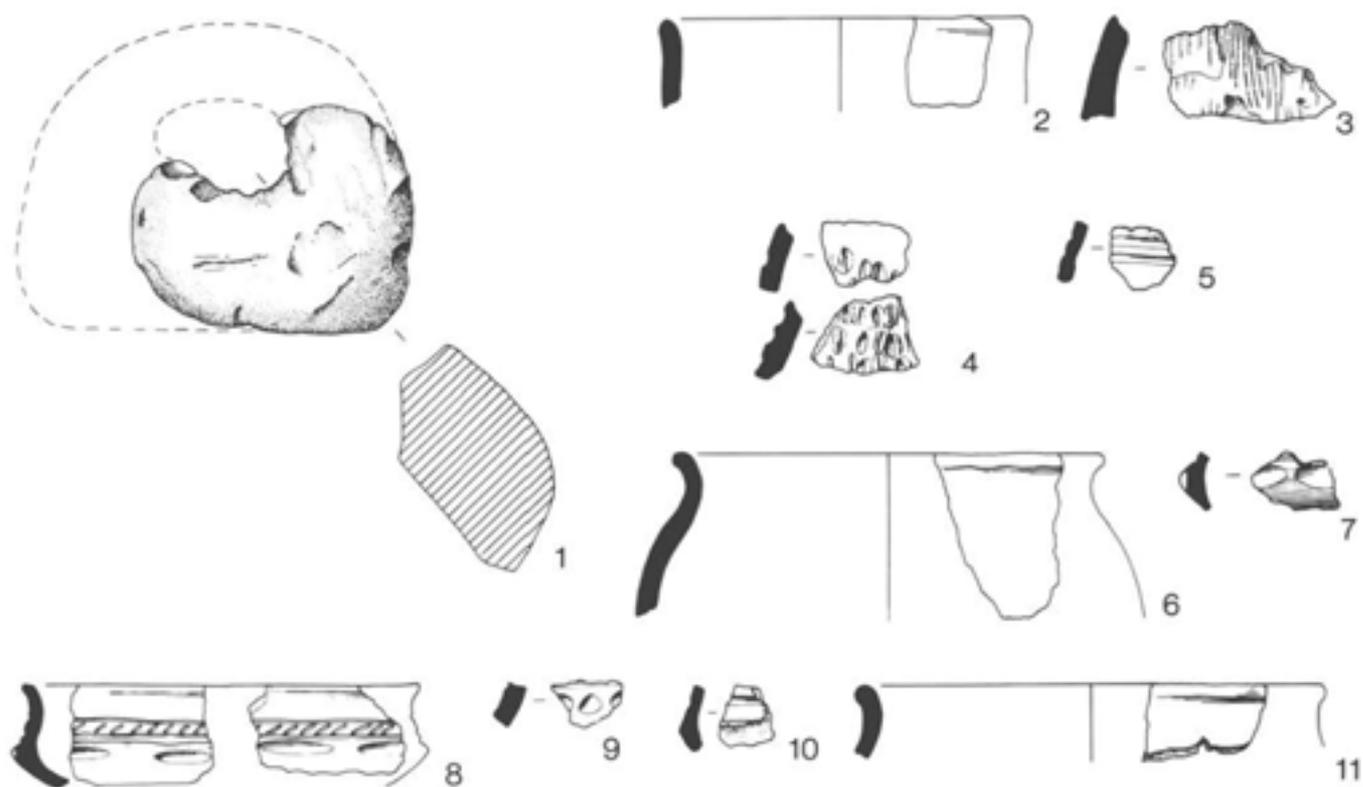


GH108

Fig 140 Finds and pottery from GH 106–108 (scales: GH 106, 1:3; GH 107, 1:3; GH 108.1–2, 1:1; 3–9, 1:3)

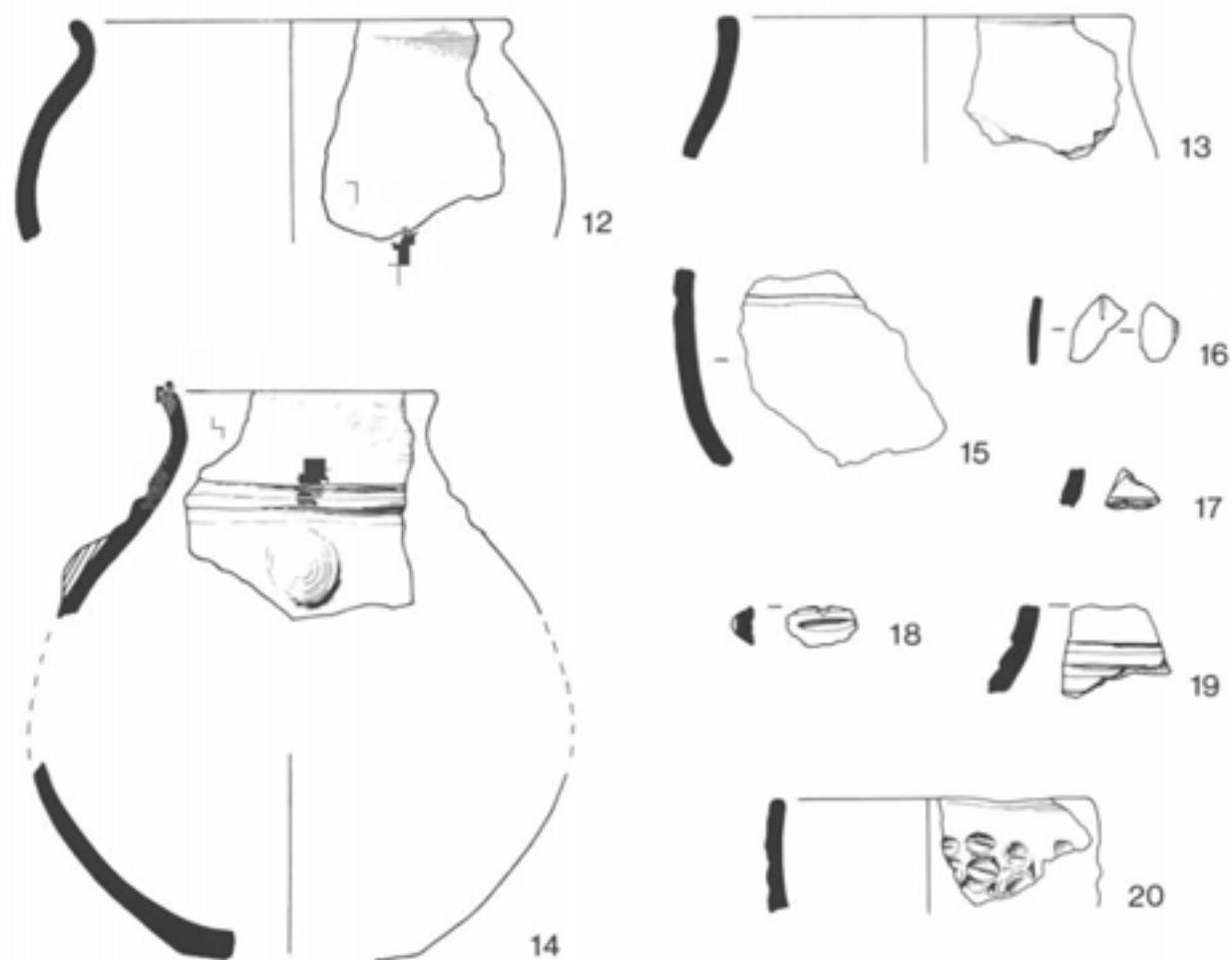


GH 109

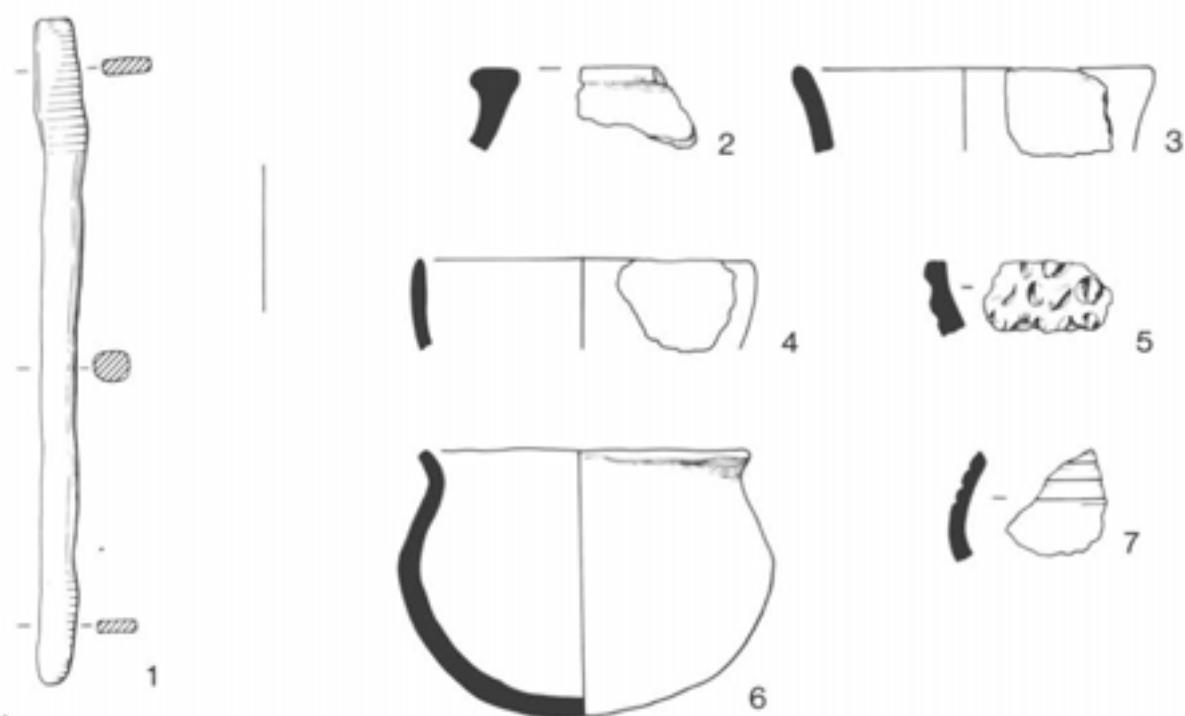


GH 110

Fig 141 Finds and pottery from GH 109, 110 (scales: GH 109.1A-B, 1:1; 2-3, 1:3; GH 110.1, 1:2; 2-11, 1:3)

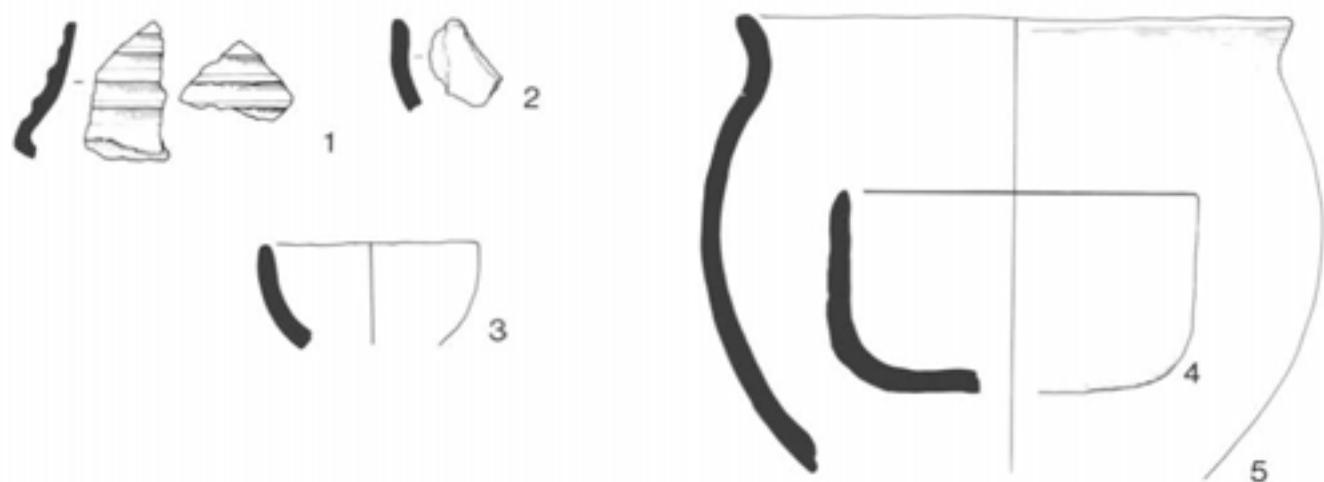


GH110 Cont'd

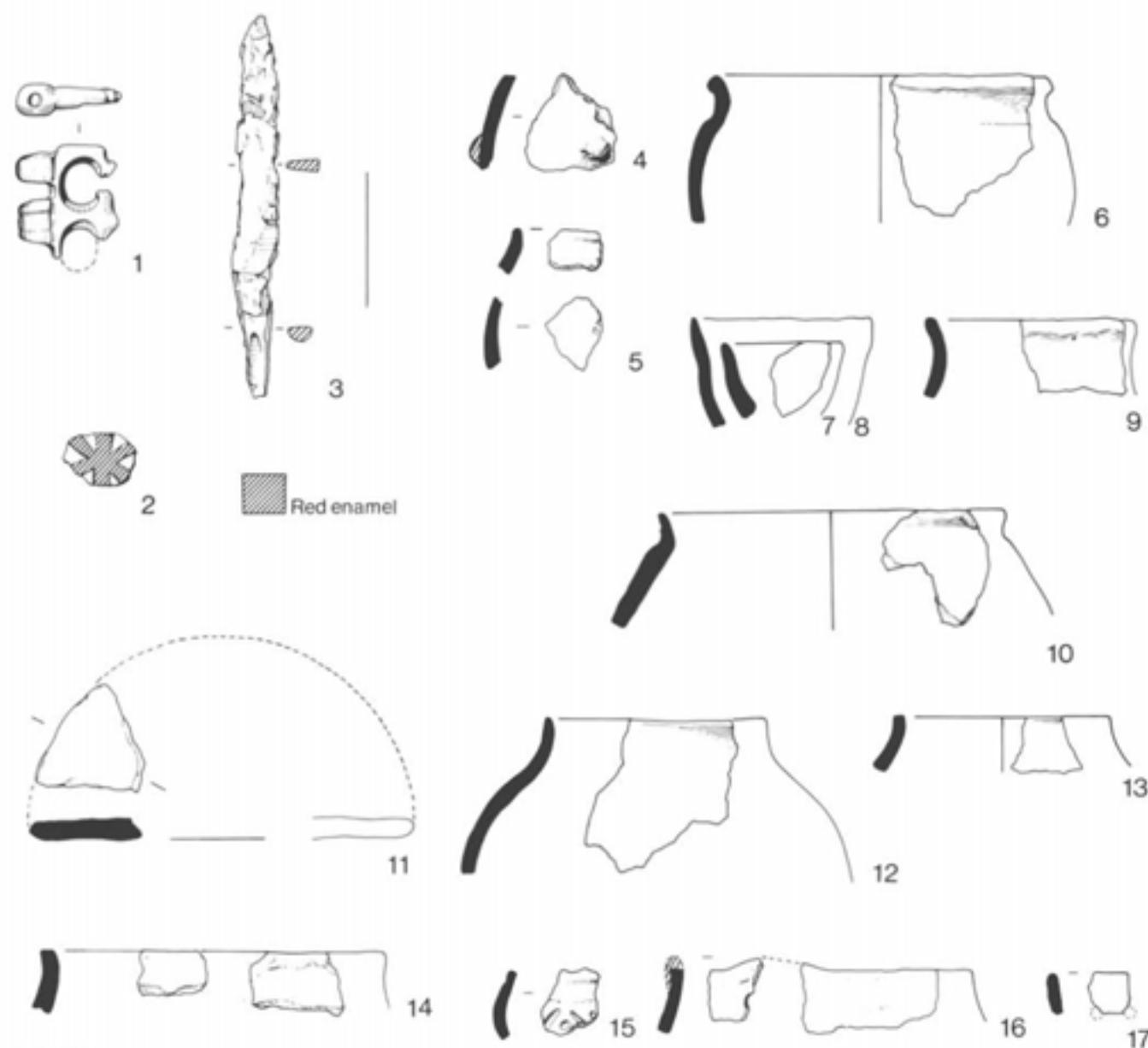


GH 111

Fig 142 Finds and pottery from GH 110, 111 (scales: GH 110, 1:3; GH 111.1, 1:1; 2-7, 1:3)



GH112

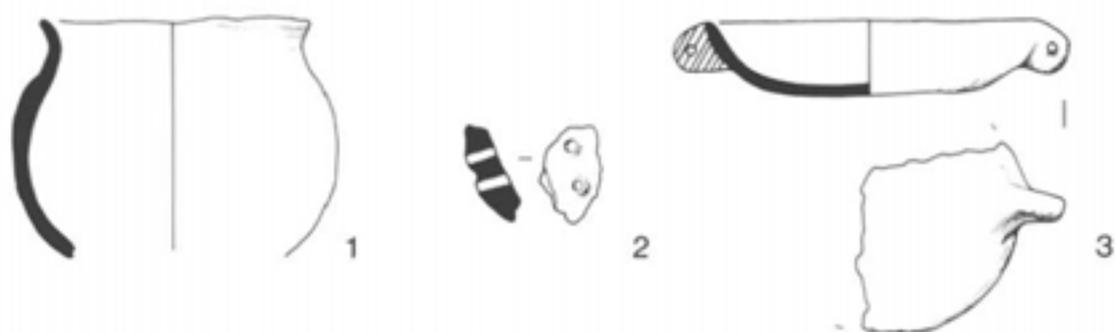


GH113

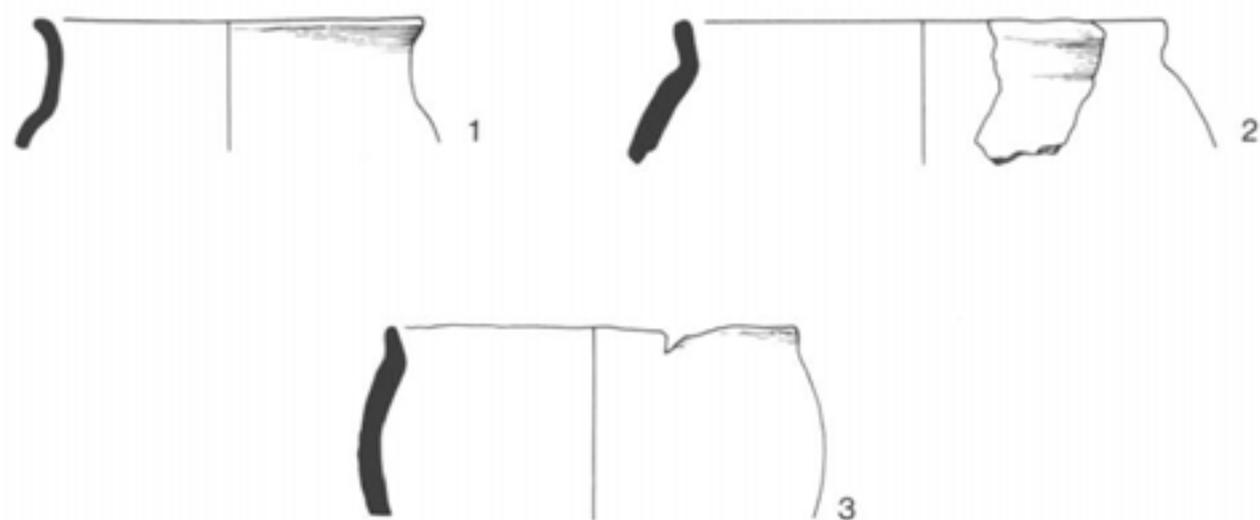
Fig 143 Finds and pottery from GH 112, 113 (scales: GH 112, 1:3; GH 113.1-2, 1:1; 3, 1:2; 4-17, 1:3)



GH 113 Cont'd

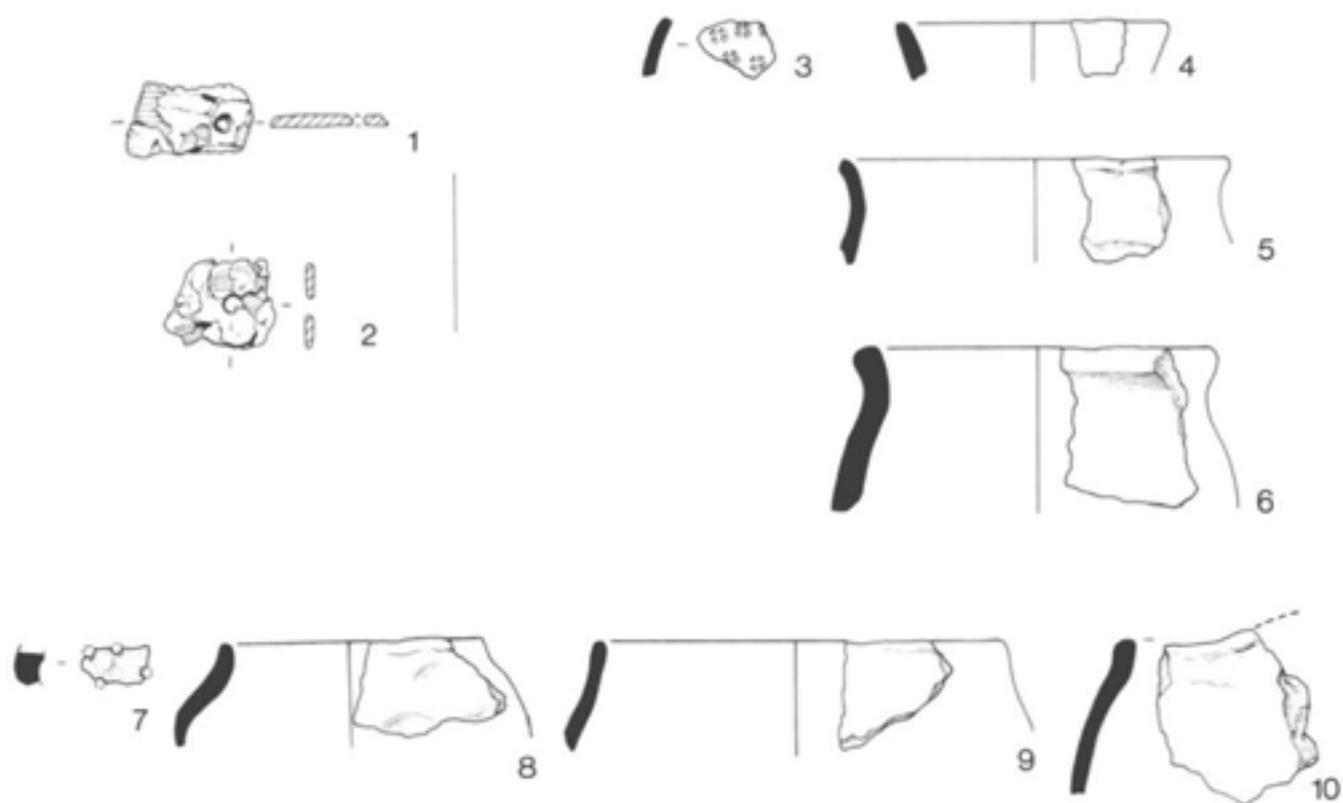


GH 114

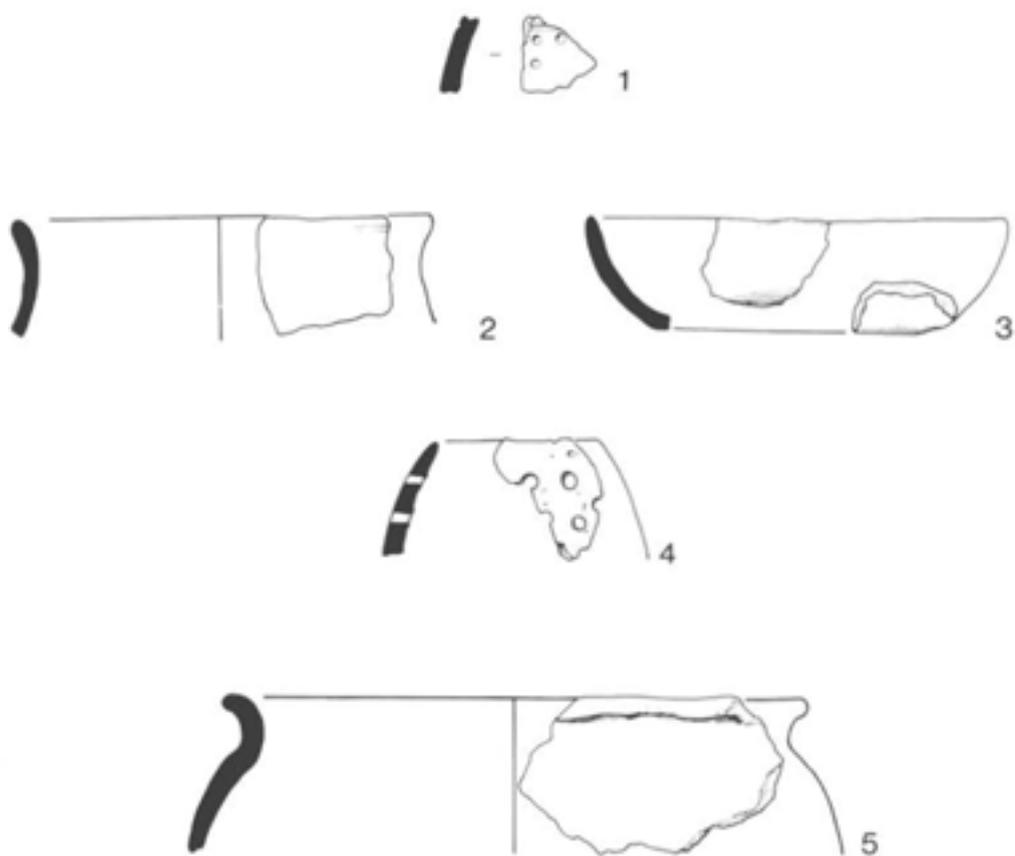


GH 115

Fig 144 Pottery from GH 113-115 (scale: 1:3)



GH 116



GH 117

Fig 145 Finds and pottery from GH 116, 117 (scales: GH 116.1-2, 1:2; 3-10, 1:3; GH 117, 1:3)

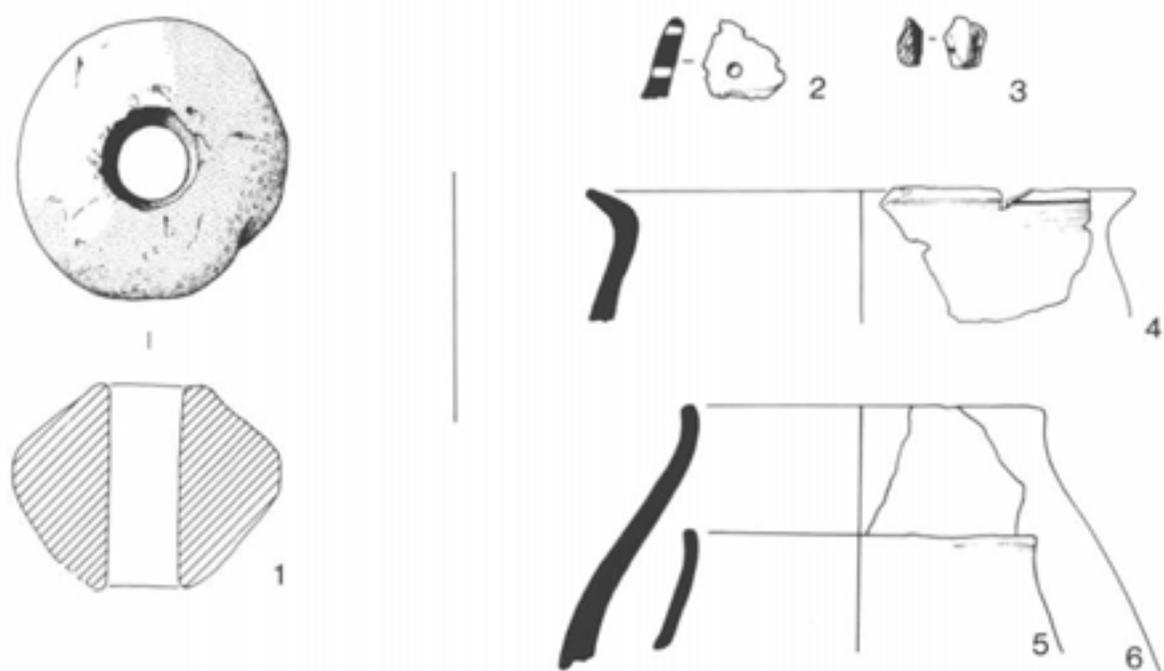
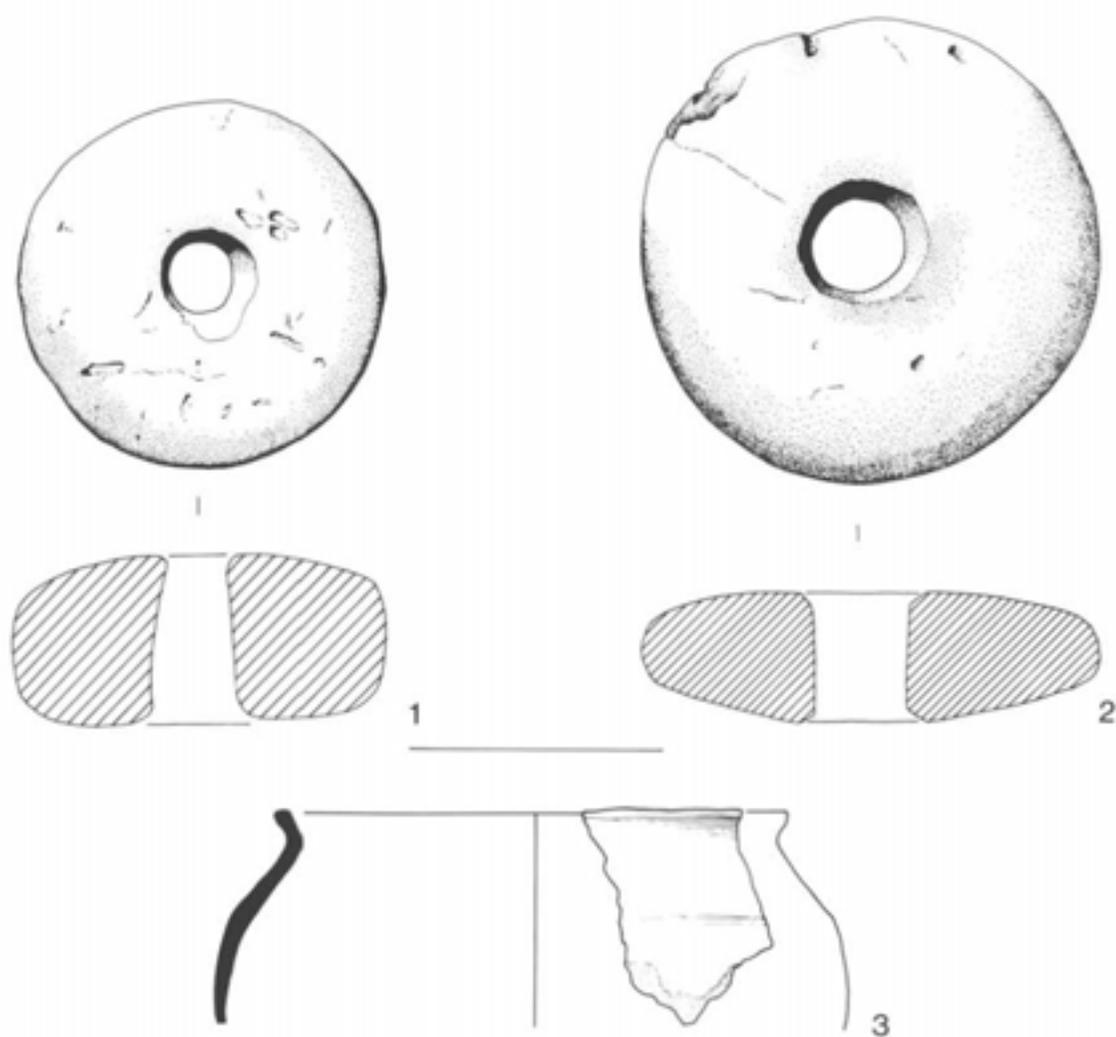
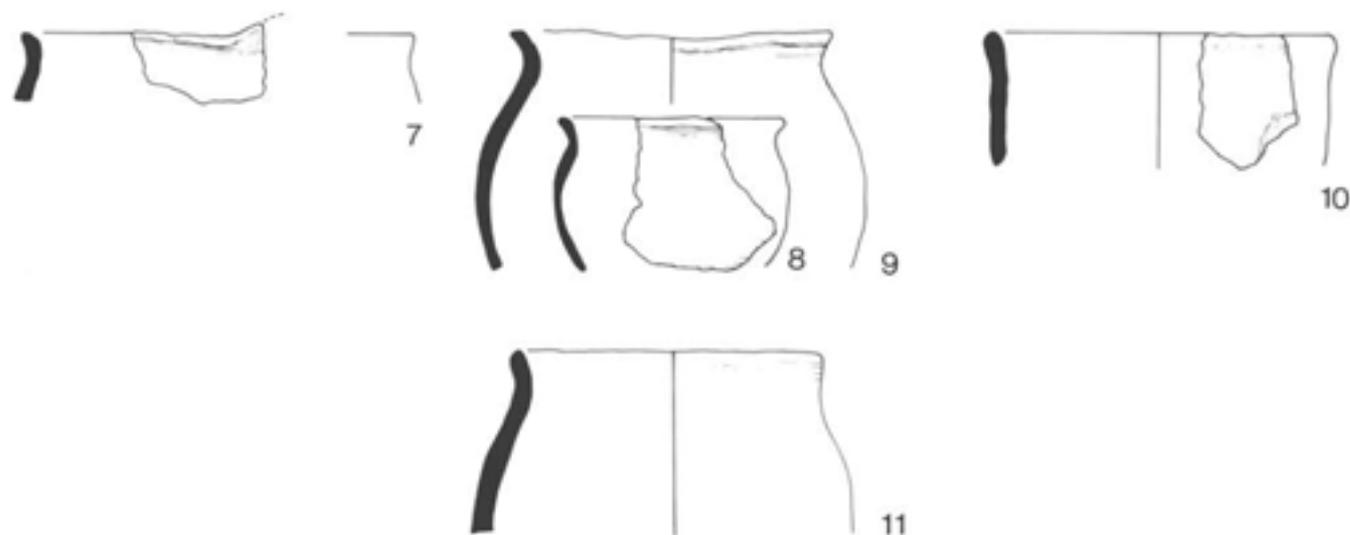


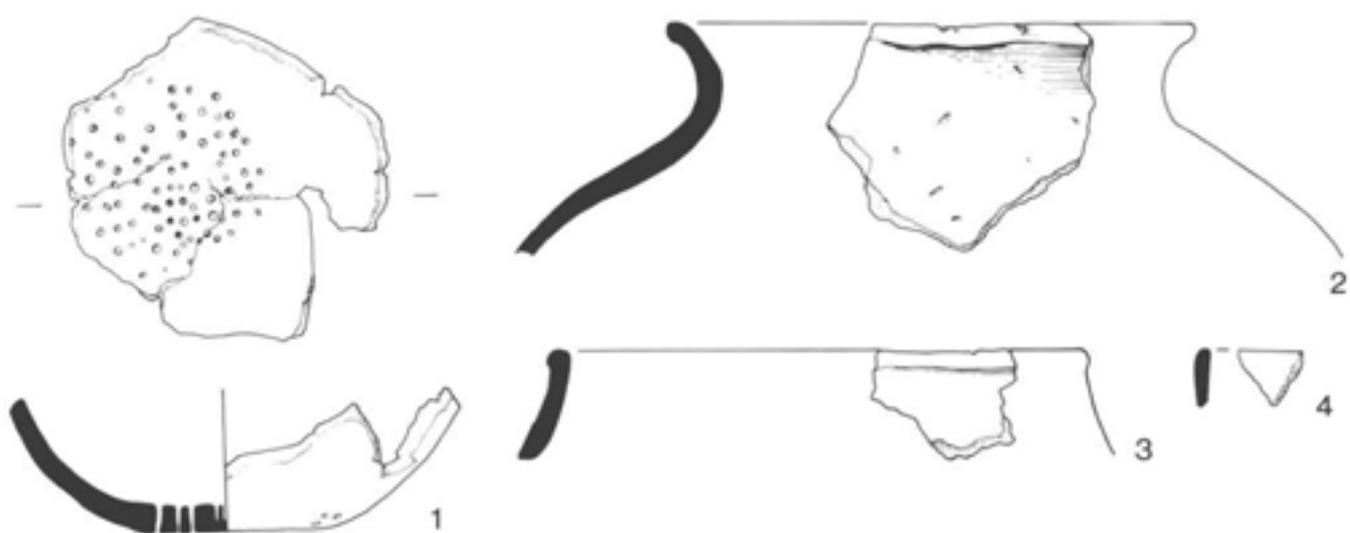
Fig 146 Finds and pottery from GH 118, 120 (scales: GH 118.1-2, 1:1; 3, 1:3; GH 120.1, 1:1; 2-6, 1:3)



GH 120 Cont'd



GH 121



GH 123



GH 125

Fig 147 Pottery from GH 120, 121, 123, 125 (scale: 1:3)



1



2



1

GH126



1



2

3



4



5



6



7

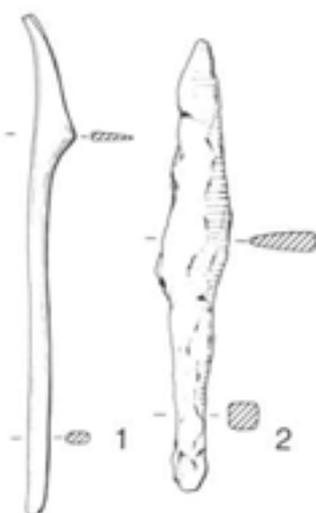


8



9

GH127

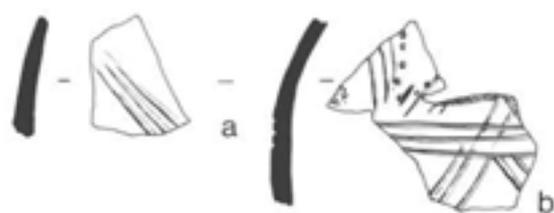


1

2



3



a

b



c

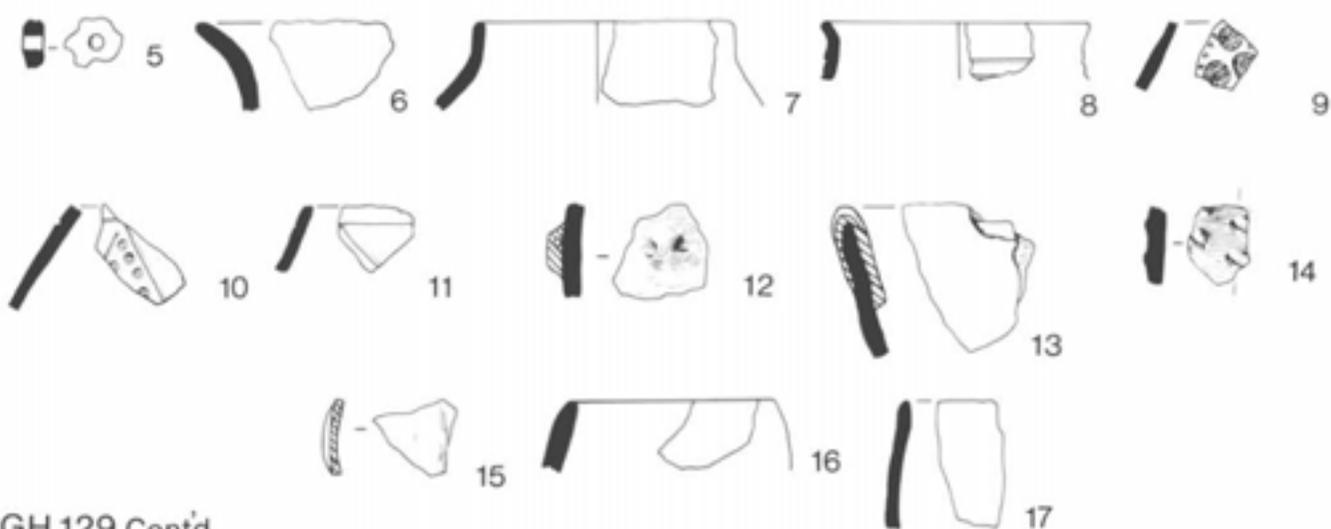
d

e

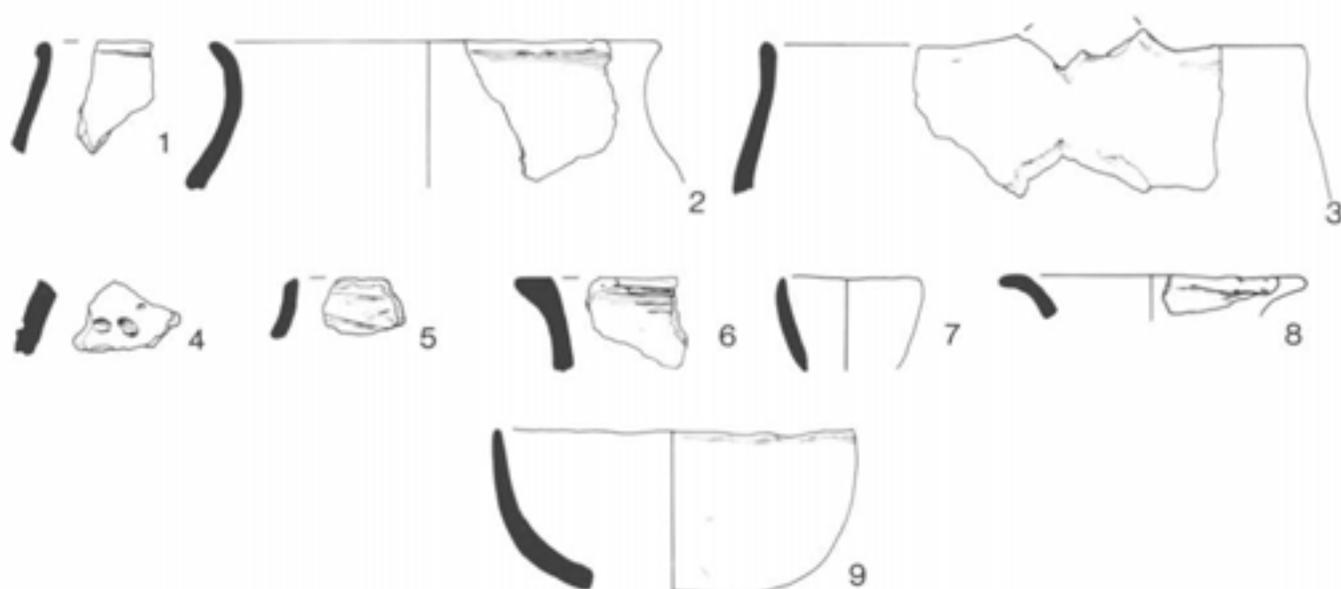
4

G129

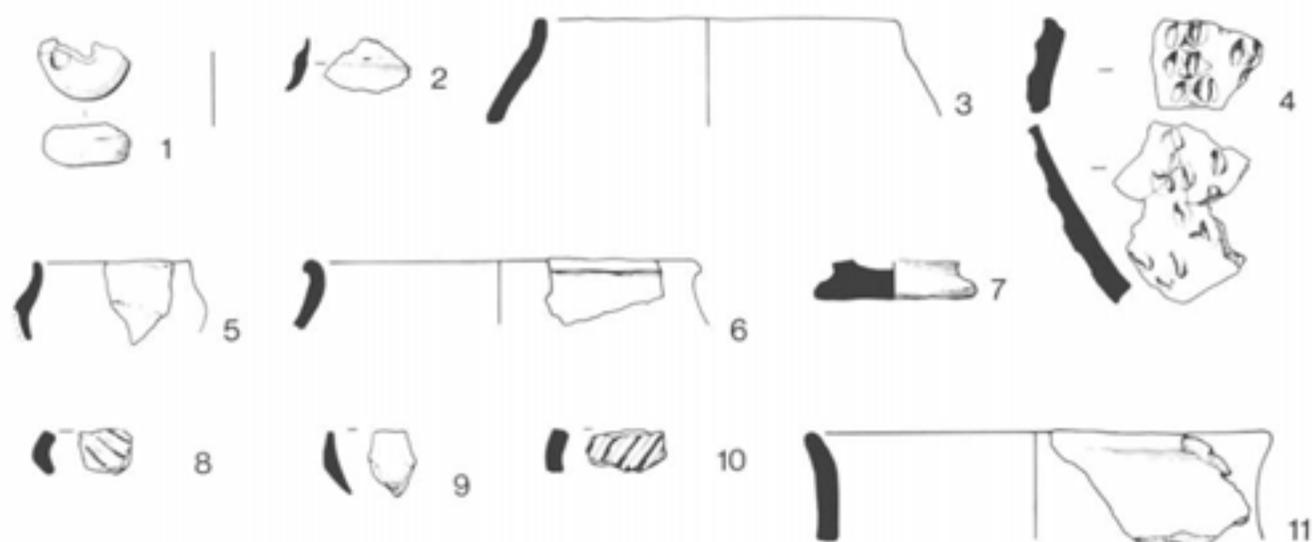
Fig 148 Finds and pottery from GH 126, 127, 129 (scales: GH 126.1, 1:1; 2, 1:3; GH 127, 1:3; GH 129.1, 1:1; 2-3, 1:2; 4a-e, 1:3)



GH 129 Cont'd



GH 130



GH 131

Fig 149 Finds and pottery from GH 129-131 (scales: GH 129, 1:3; GH 130, 1:3; GH 131.1, 1:1; 2-11, 1:3)

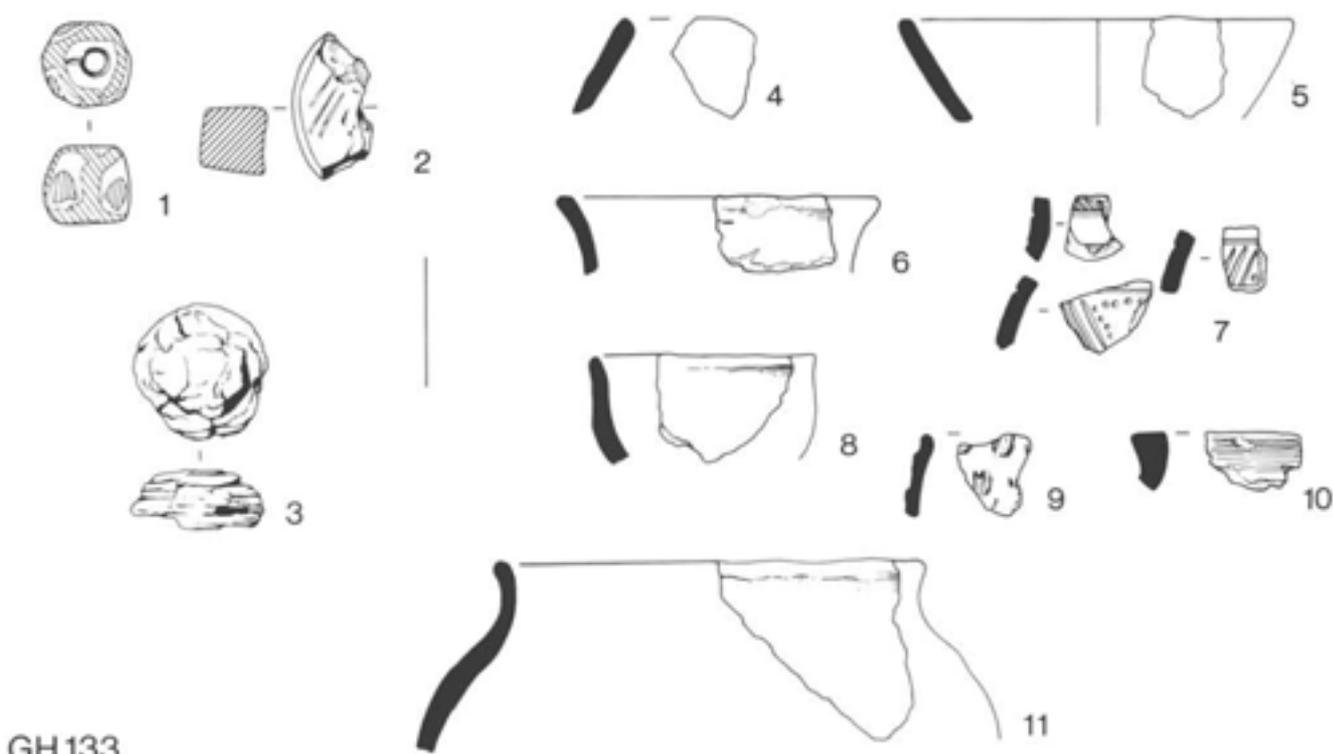
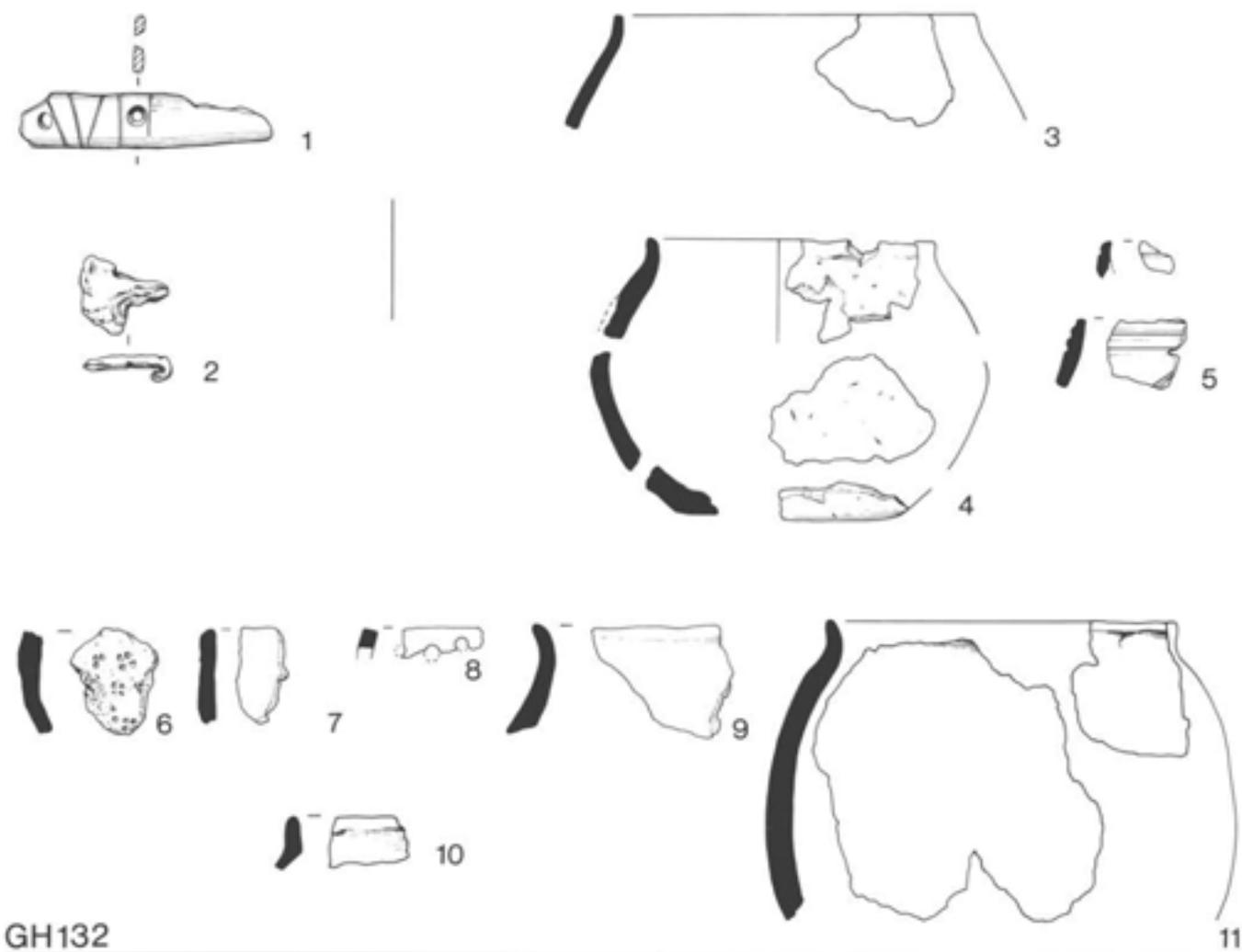
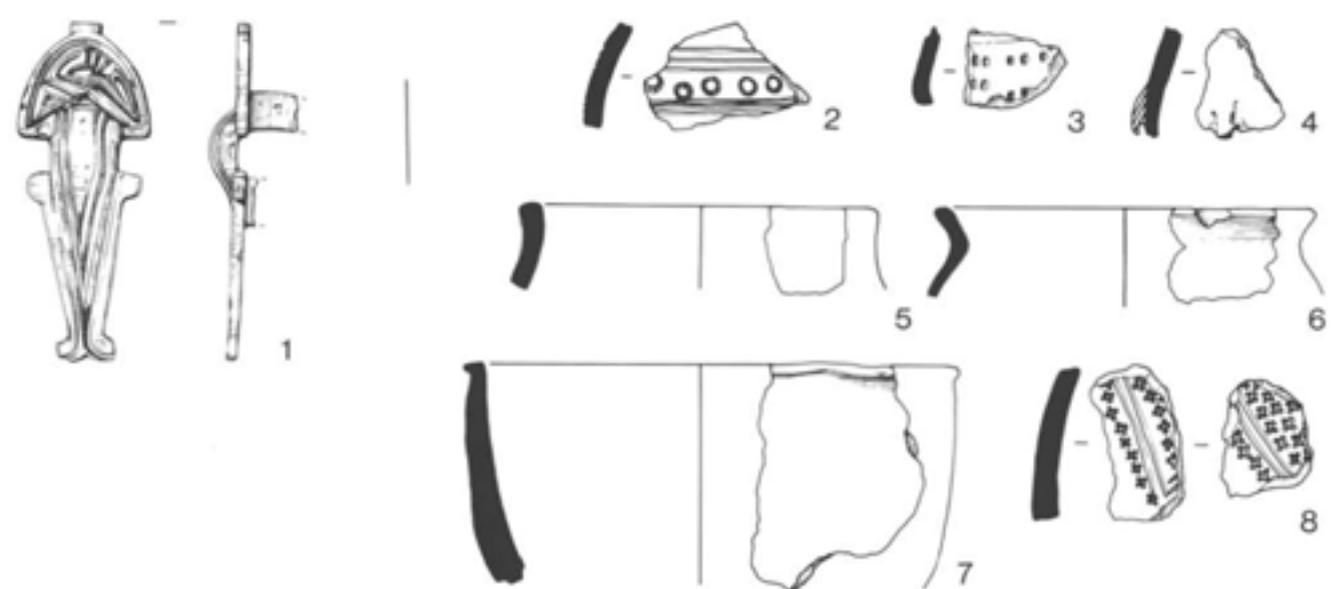


Fig 150 Finds and pottery from GH 132, 133 (for key to glass beads see Fig 53) (scales: GH 132.1, 1:1; 2, 1:2; 3-11, 1:3; GH 133.1-3, 1:1; 4-11, 1:3)

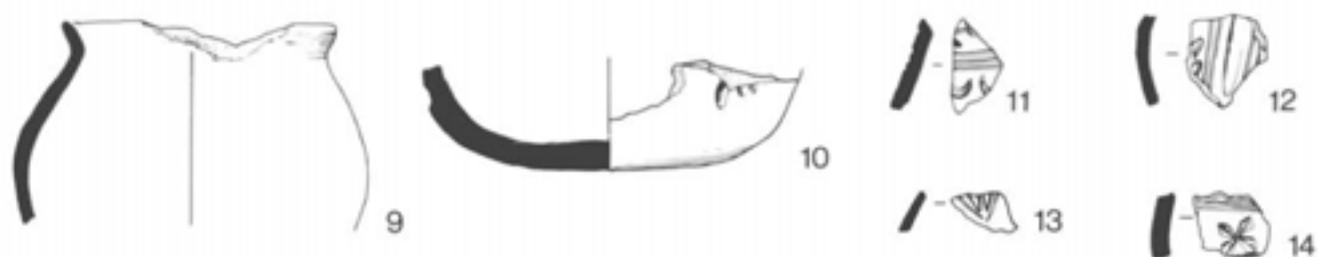


GH134



GH135

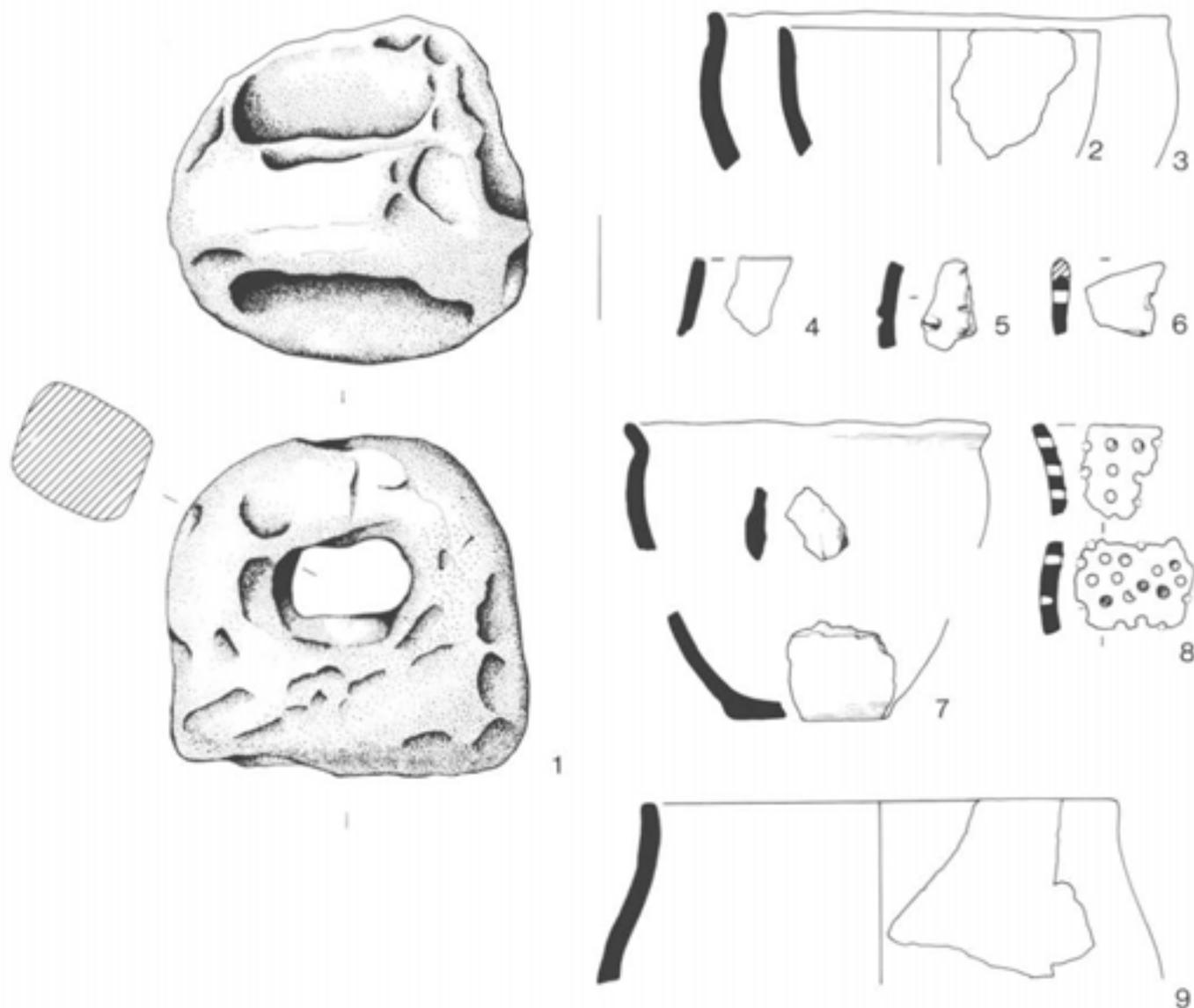
Fig 151 Finds and pottery from GH 134, 135 (scales: GH 134.1-2, 1:1; 3-4, 1:2; 5-13, 1:3; GH 135.1, 1:1; 2-8, 1:3)



GH 135 Cont'd



GH 136



GH 137

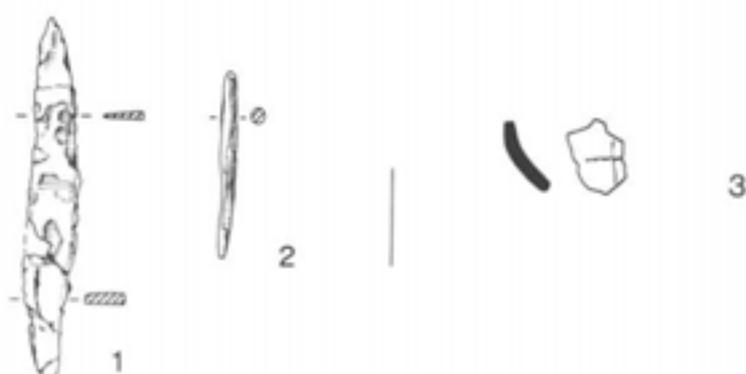
Fig 152 Finds and pottery from GH 135-137 (scales: GH 135, 1:3; GH 136, 1:3; GH 137.1, 1:2; 2-9, 1:3)



GH139



GH140



GH142

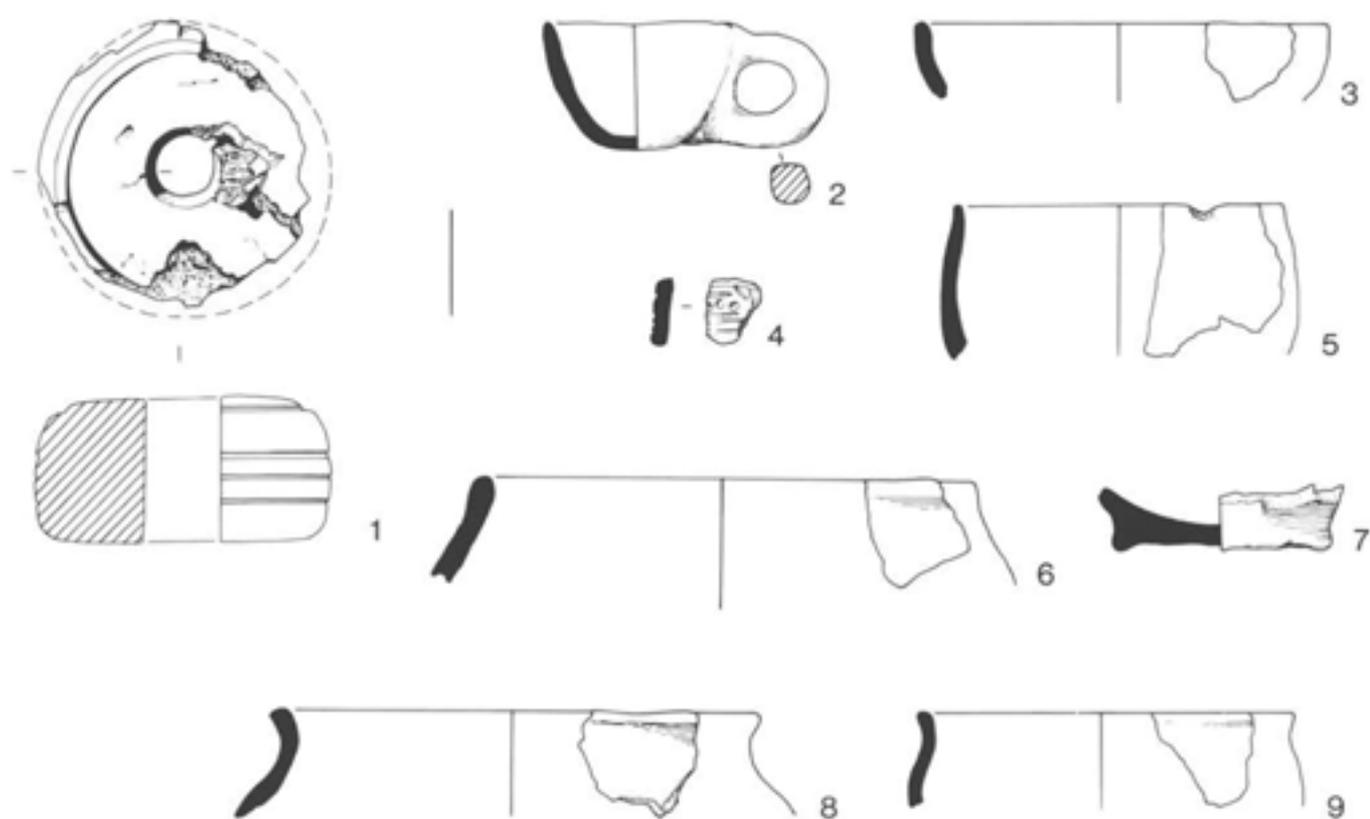


GH143

Fig 153 Finds and pottery from GH 139, 140, 142, 143 (scales: GH 139.1, 1:1; 2, 1:2; 3-5, 1:3; GH 140.1, 1:2; 2-5, 1:3; GH 142.1-2, 1:2; 3, 1:3; GH 143.1, 1:1; 2, 1:2; 3-4, 1:3)



GH 144

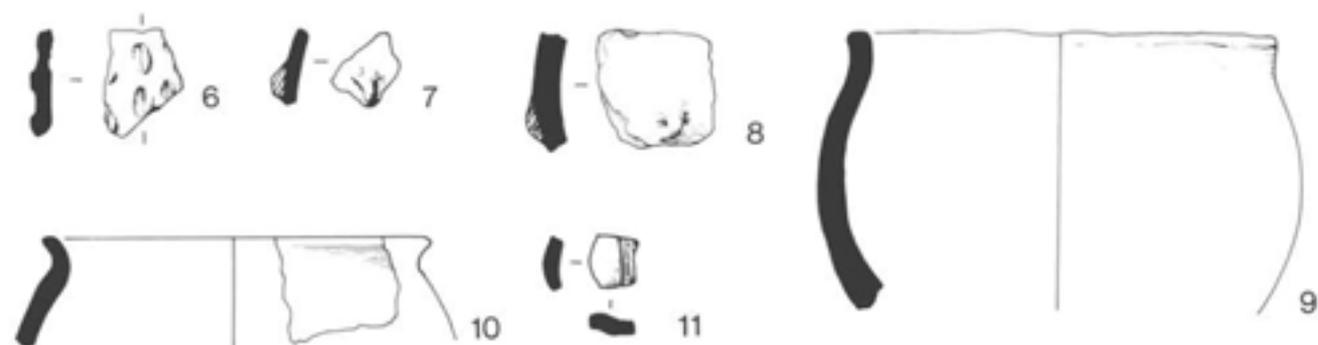


GH 145

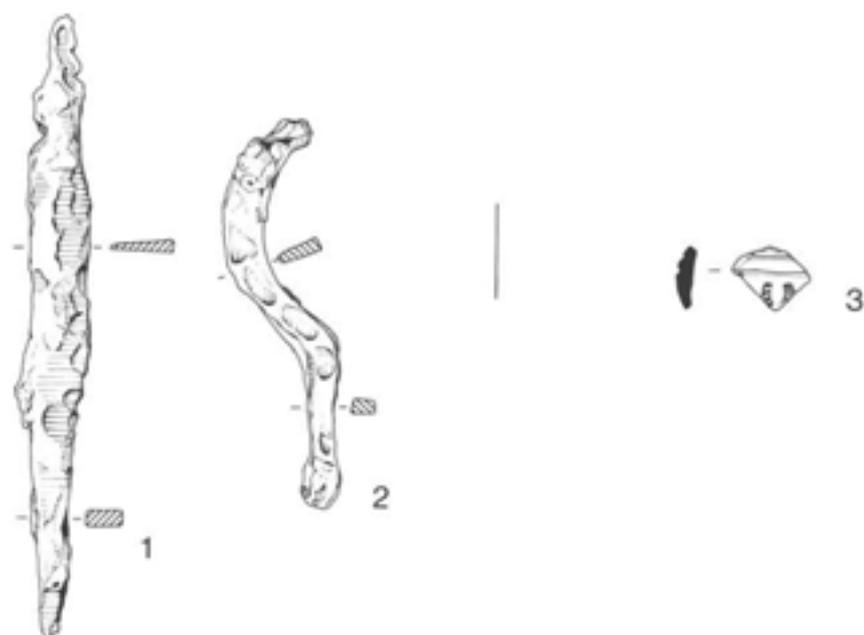


GH 146

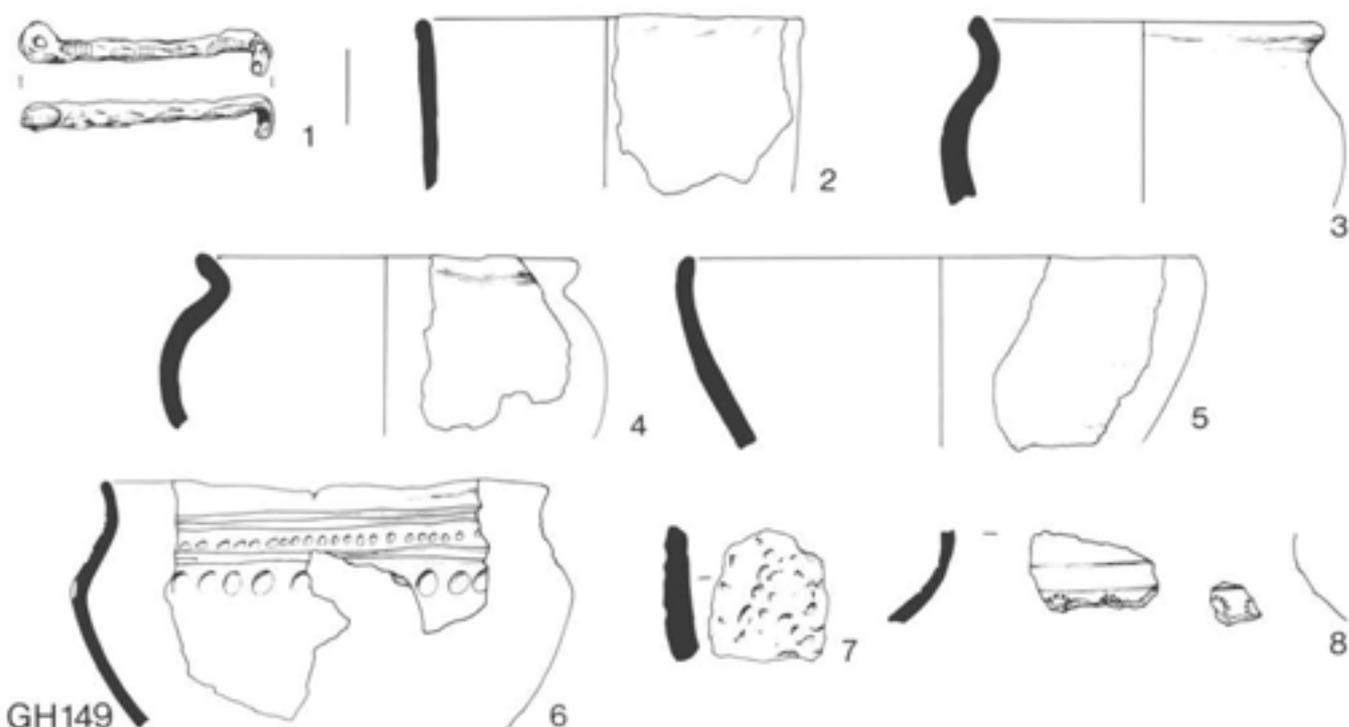
Fig 154 Finds and pottery from GH 144-146 (scales: GH 144.1, 1:1; 2-4, 1:3; GH 145.1, 1:1; 2-9, 1:3; GH 146.1, 1:2; 2-5, 1:3)



GH 146 Cont'd

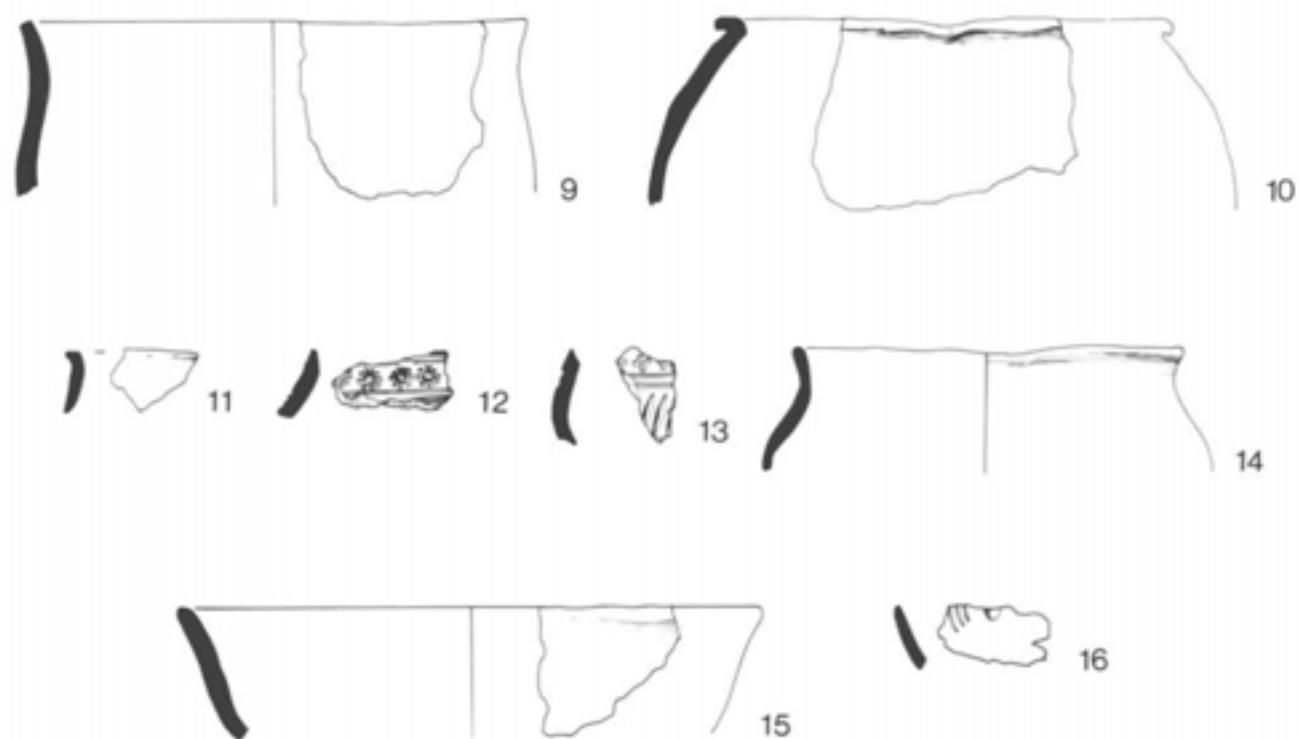


GH 148

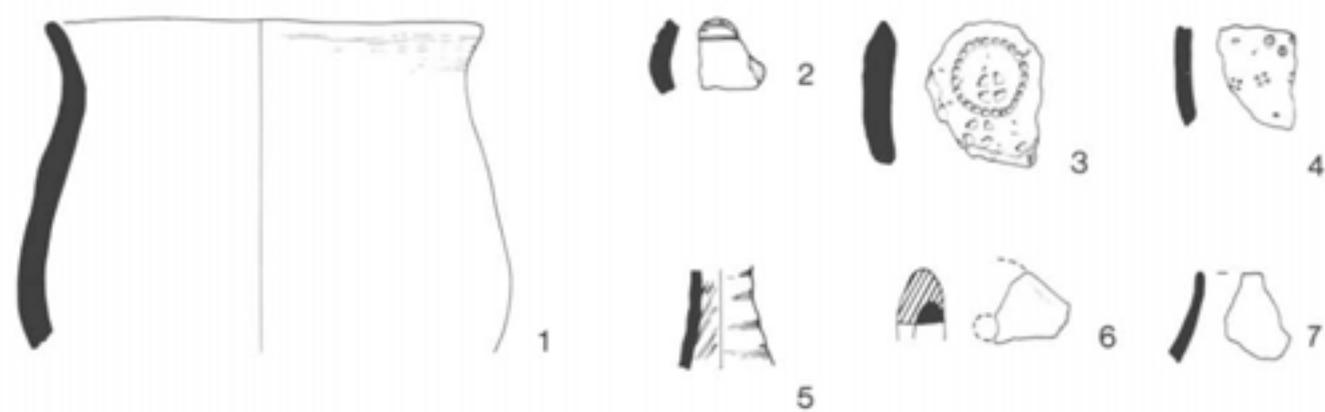


GH 149

Fig 155 Finds and pottery from GH 146, 148, 149 (scales: GH 146, 1:3; GH 148.1-2, 1:2; 3, 1:3; GH 149.1, 1:2; 2-8, 1:3)



GH149 Cont'd

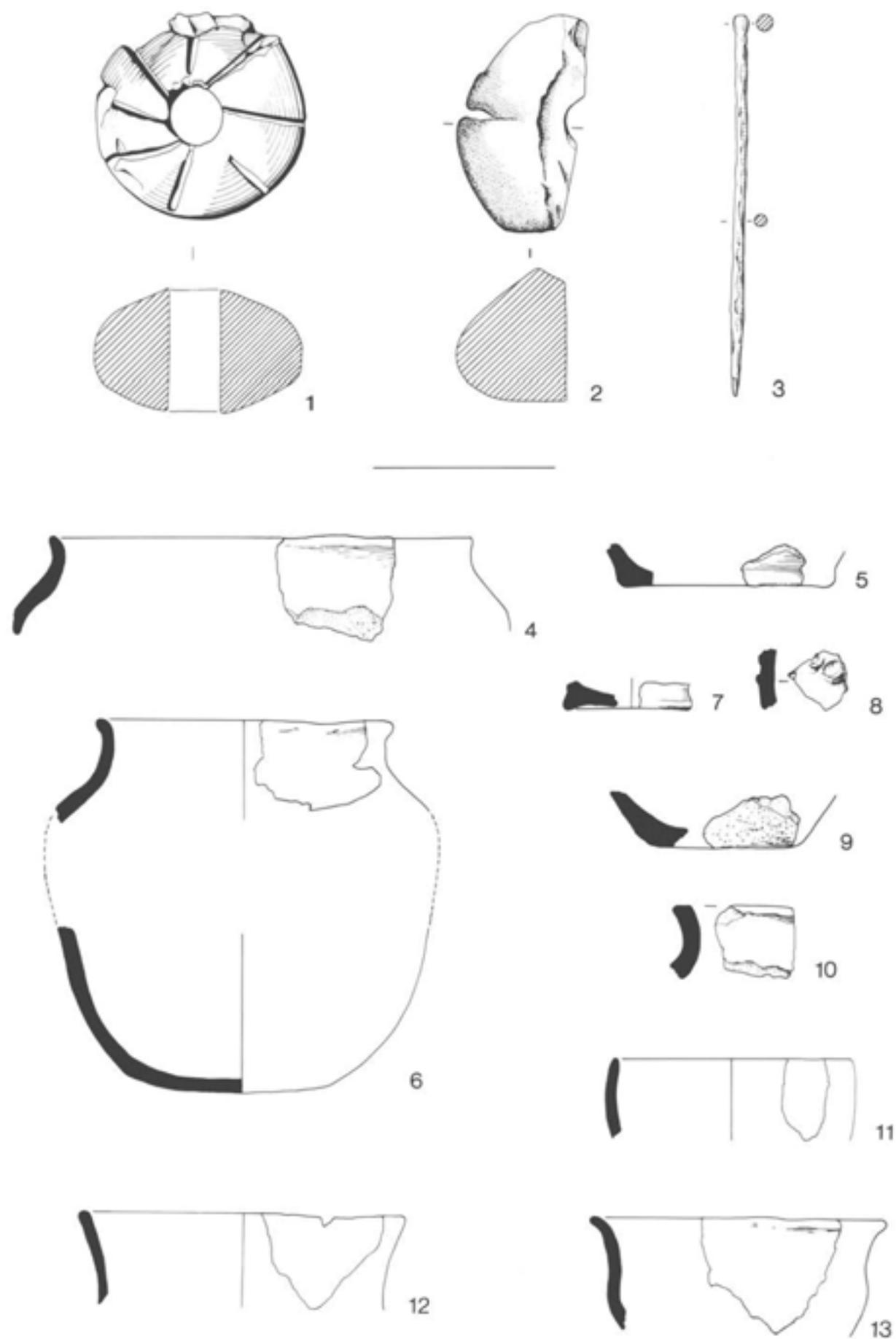


GH150



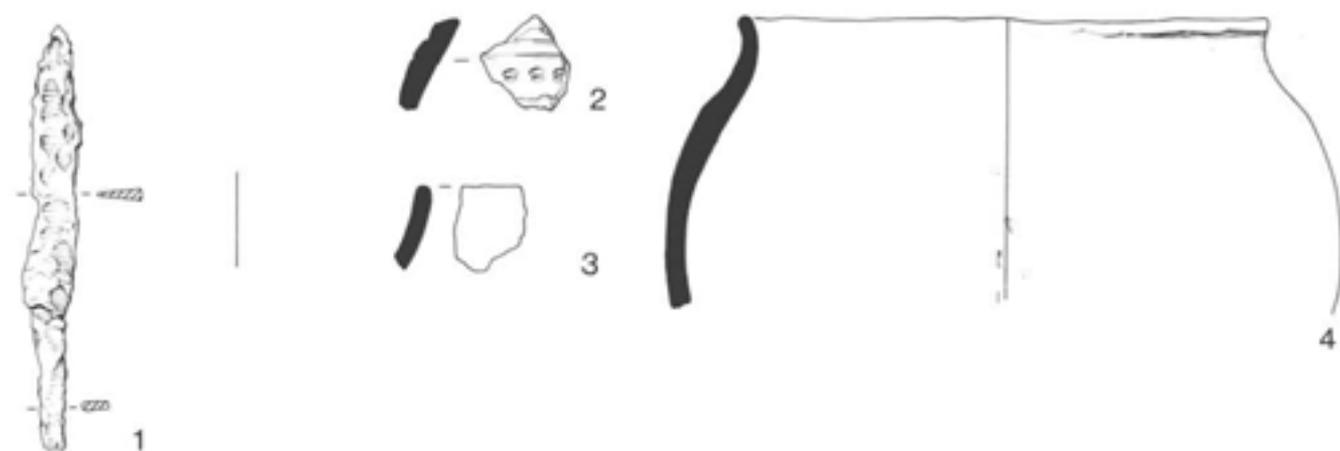
GH151

Fig 156 Pottery from GH 149-151 (scale: 1:3)

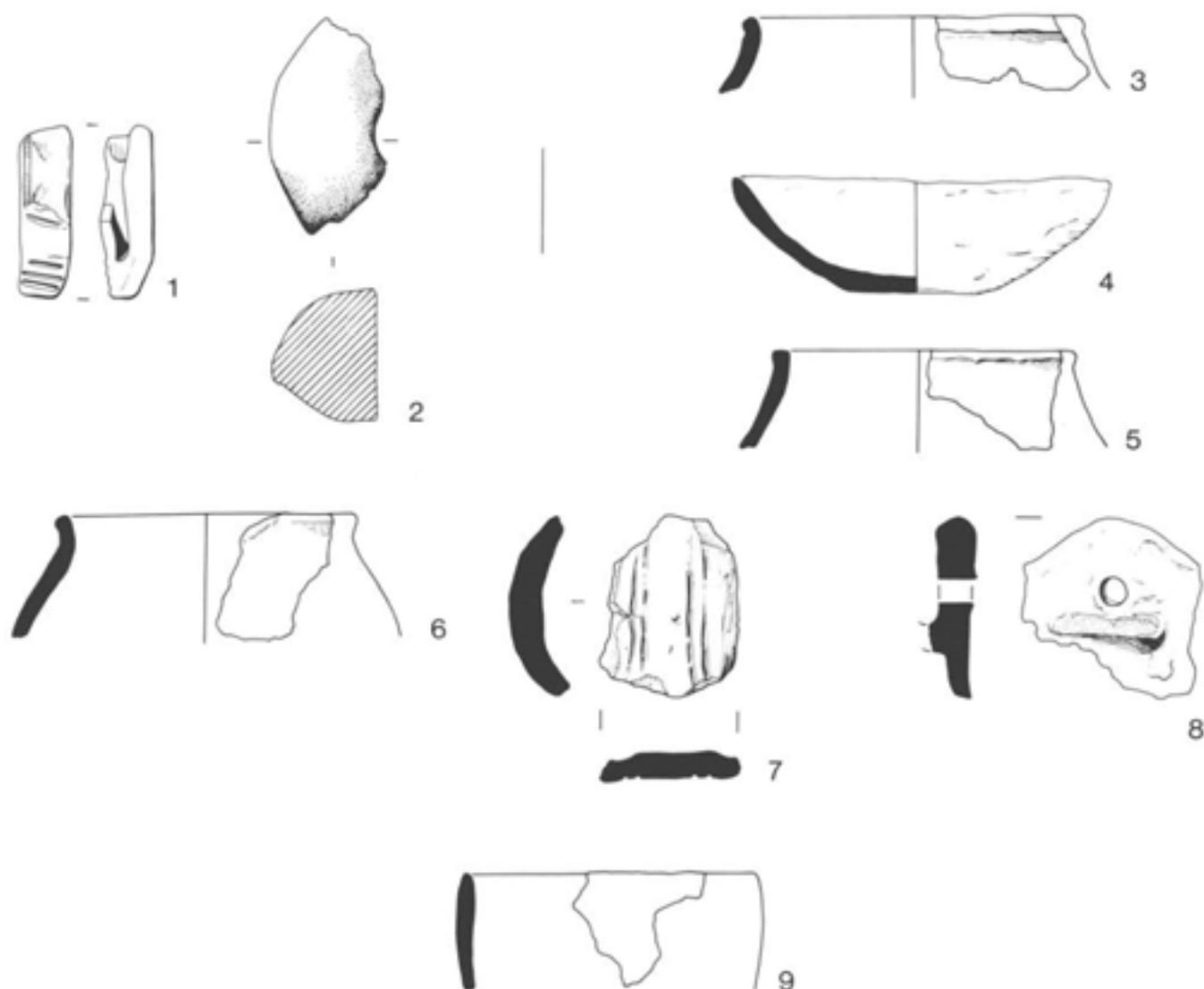


GH152

Fig 157 Finds and pottery from GH 152 (scales: 1-2, 1:1; 3, 1:2; 4-13, 1:3)

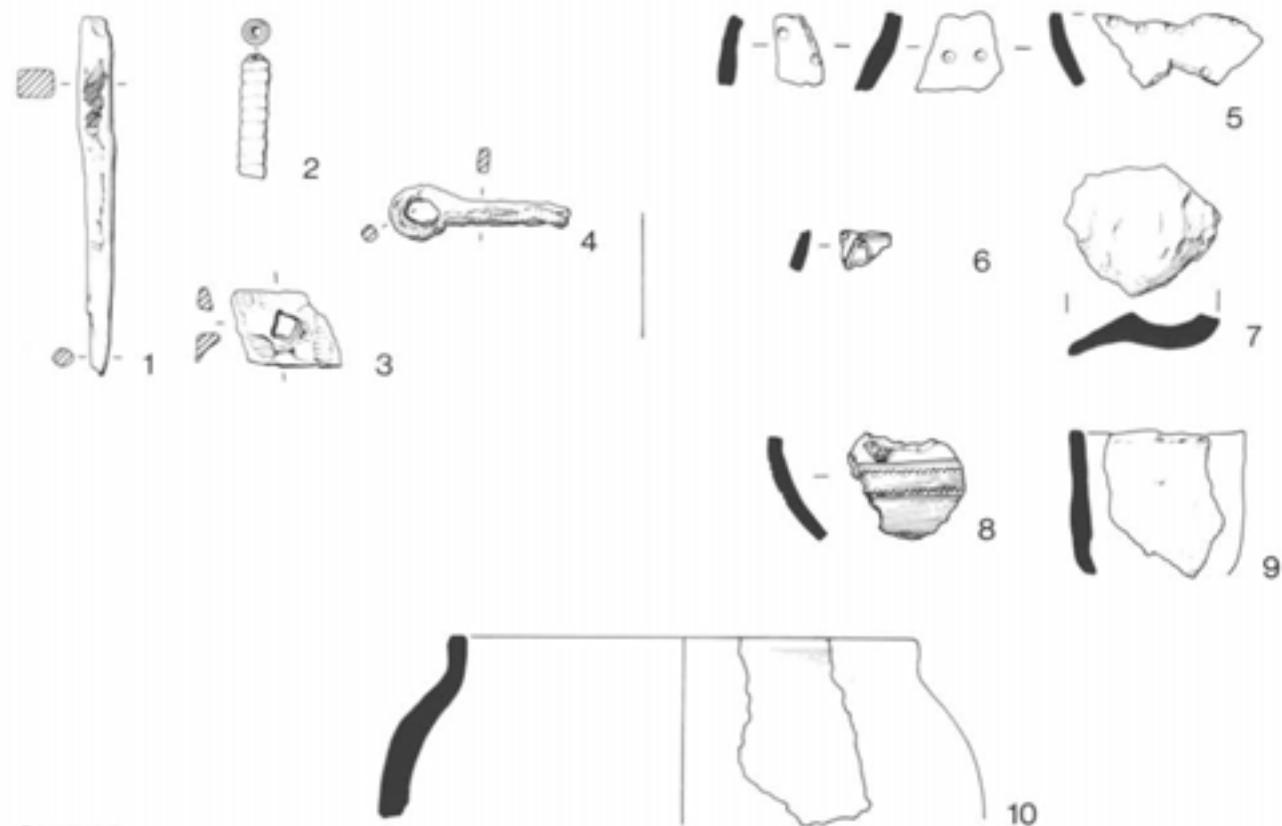


GH 153

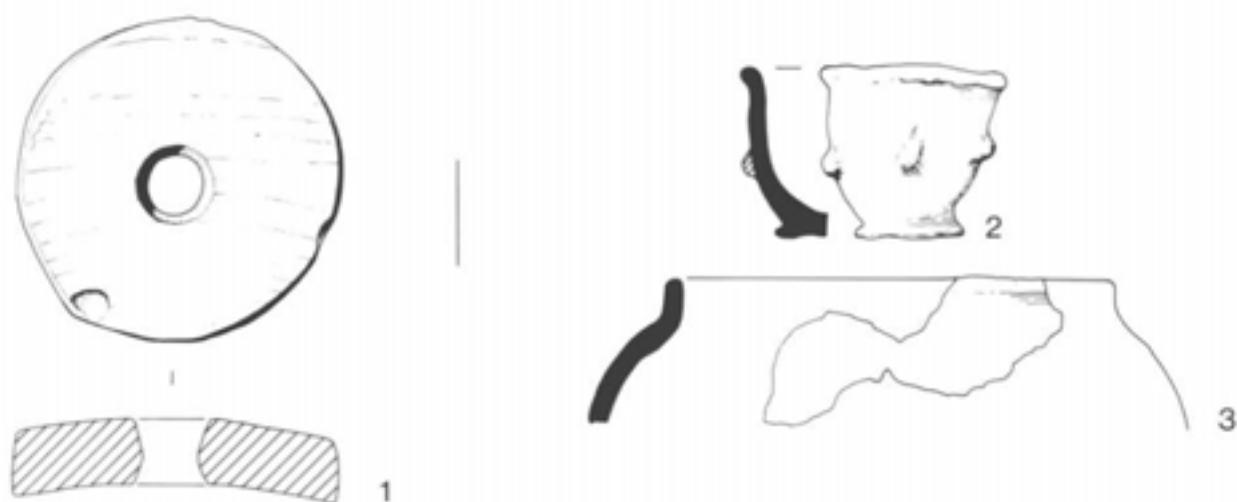


GH 154

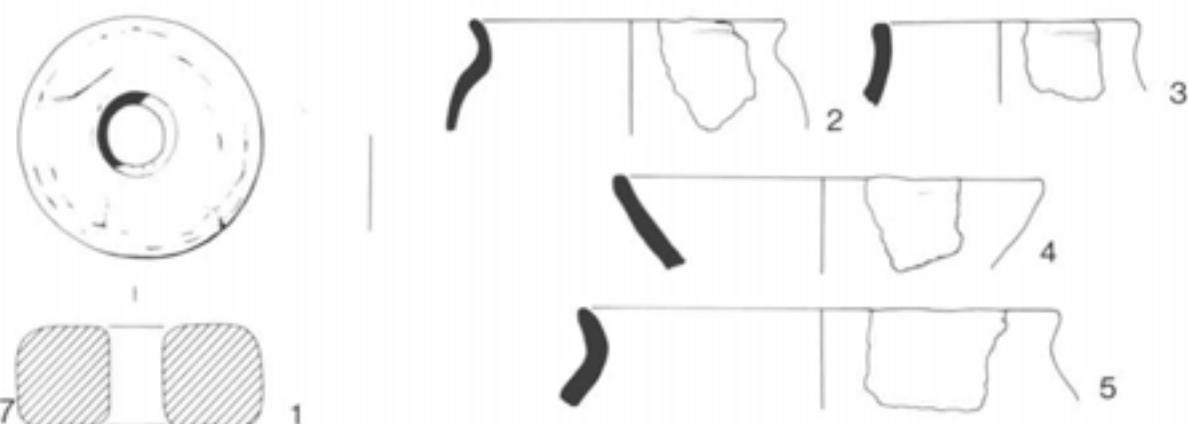
Fig 158 Finds and pottery from GH 153, 154 (scales: GH 153.1, 1:2; 2-4, 1:3; GH 154.1-2, 1:1; 3-9, 1:3)



GH155

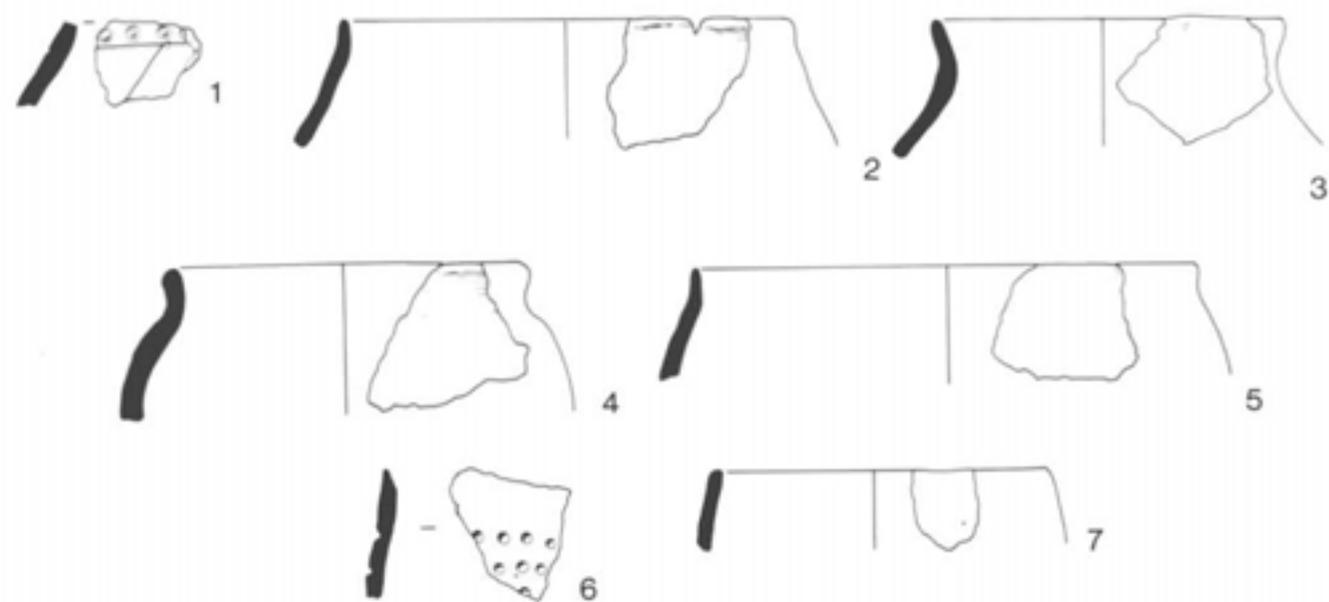


GH156



GH157

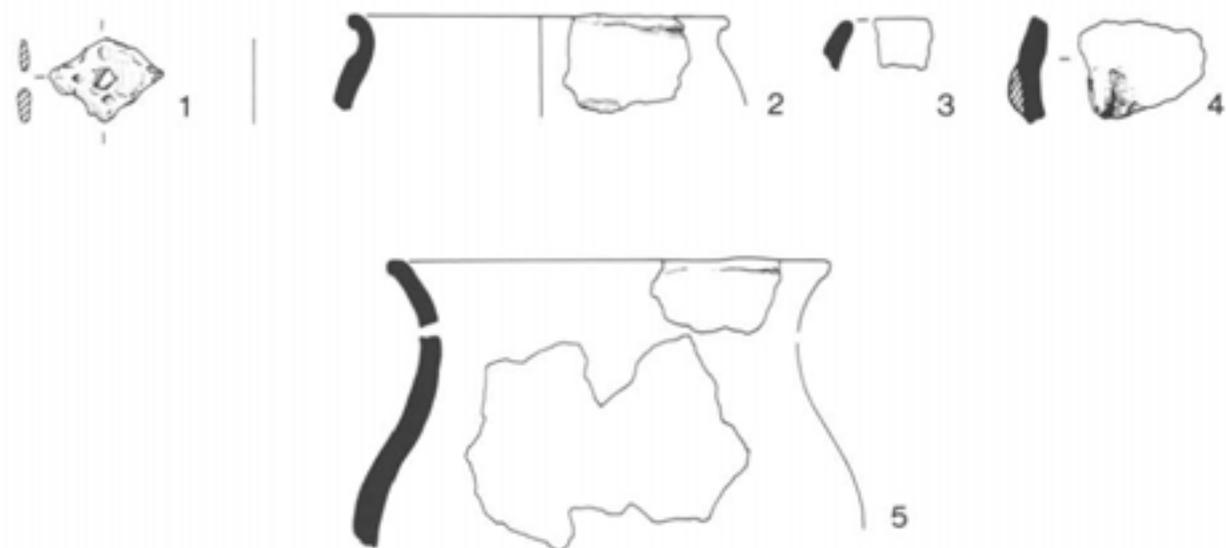
Fig 159 Finds and pottery from GH 155–157 (scales: GH 155.1–2, 1:1; 3–4, 1:2; 5–10, 1:3; GH 156.1, 1:1; 2–3, 1:3; GH 157.1, 1:1; 2–5, 1:3)



GH158

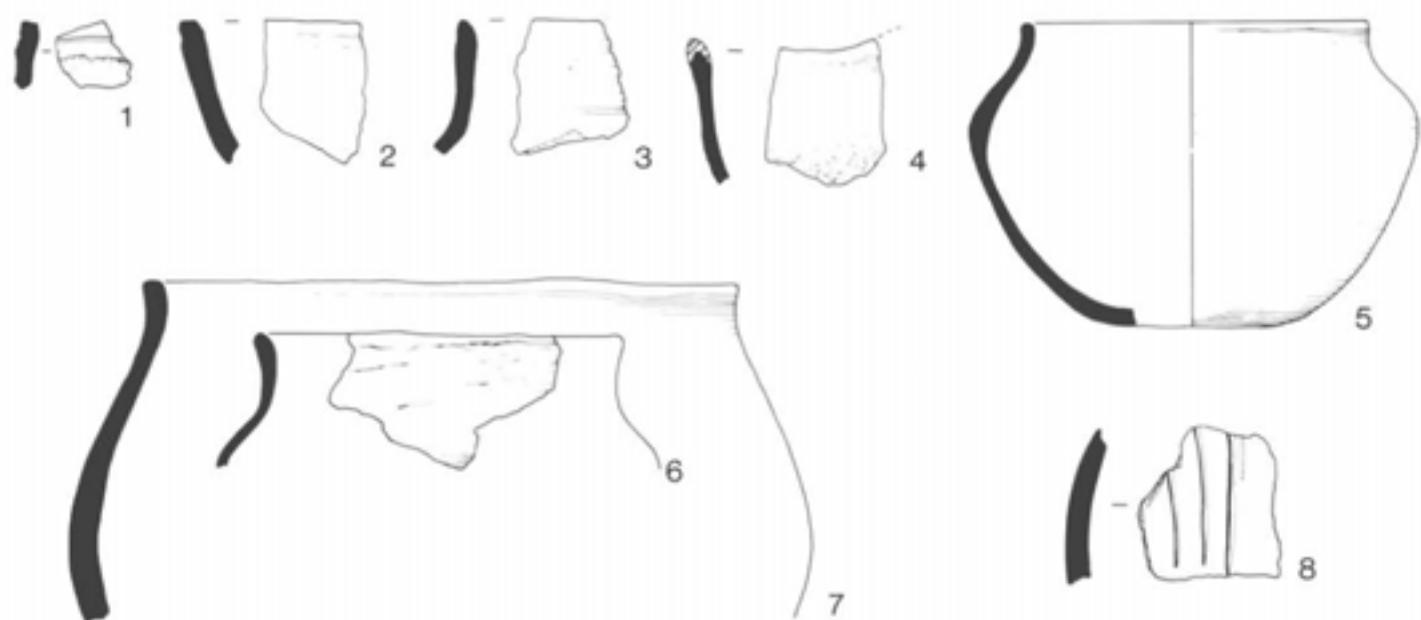


GH159

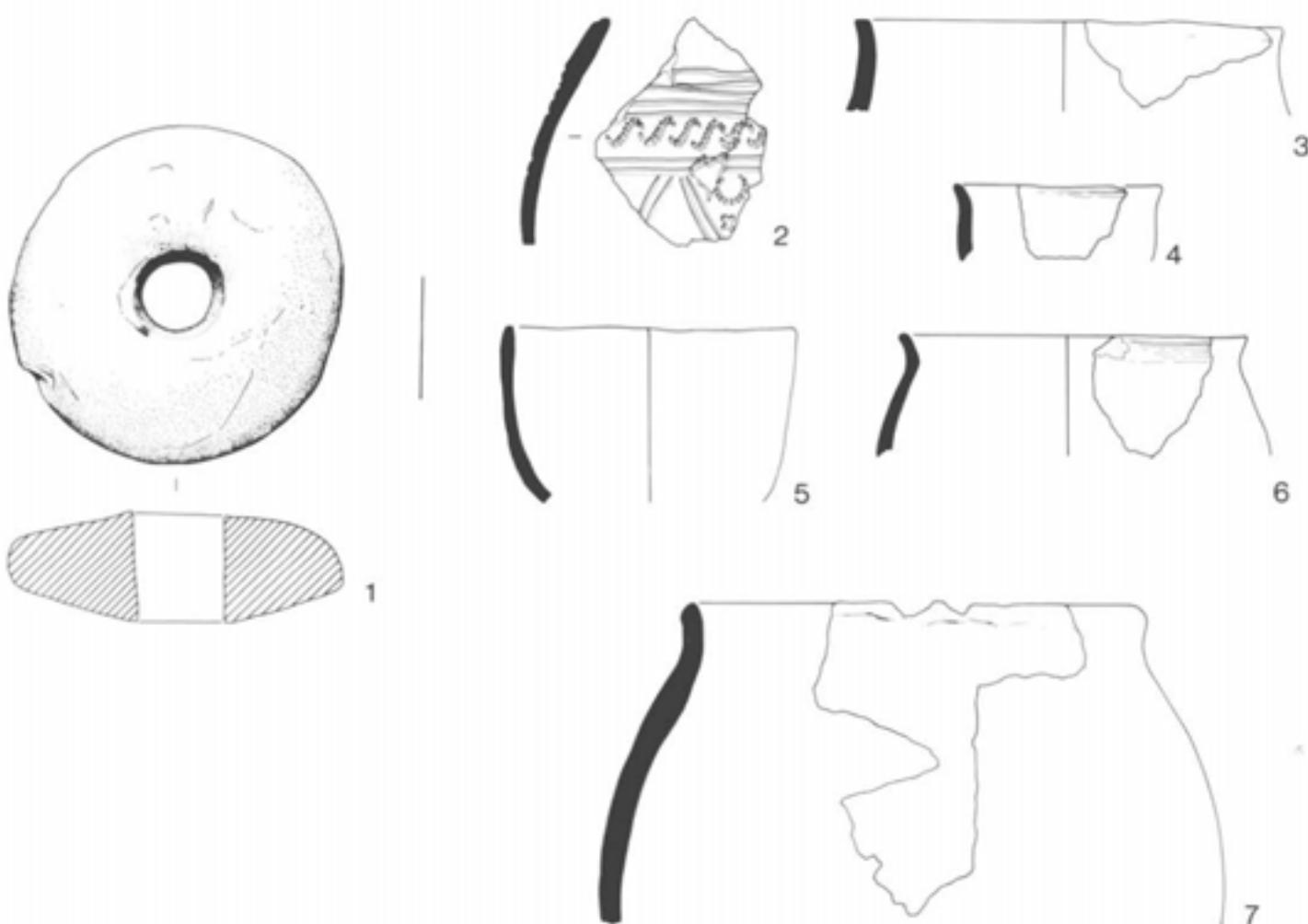


GH160

Fig 160 Finds and pottery from GH 158–160 (scales: GH 158, 1:3; GH 159, 1:3; GH 160.1, 1:2; 2–5, 1:3)

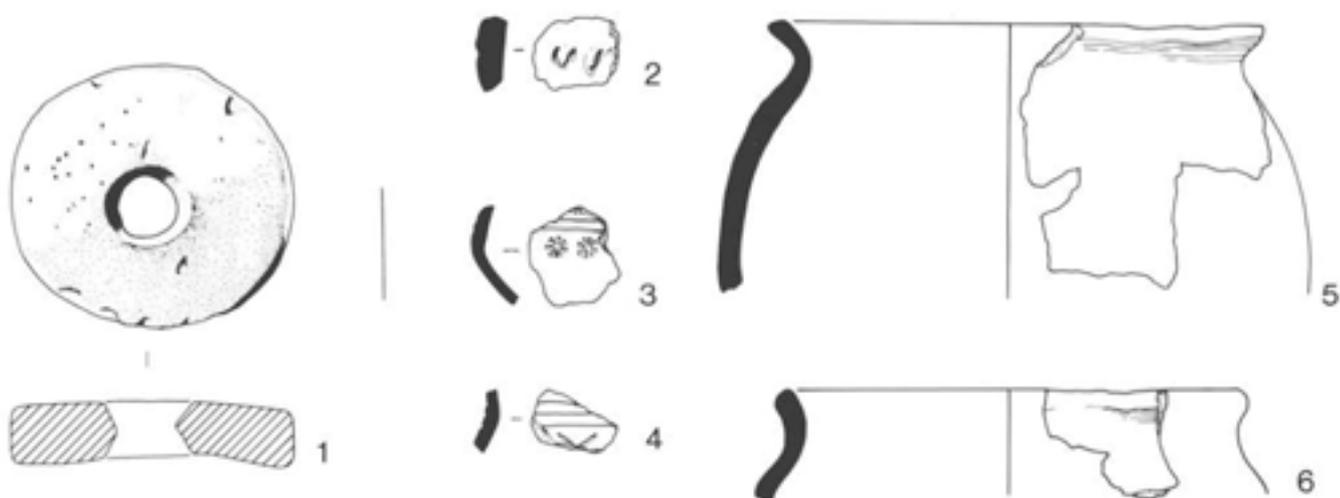
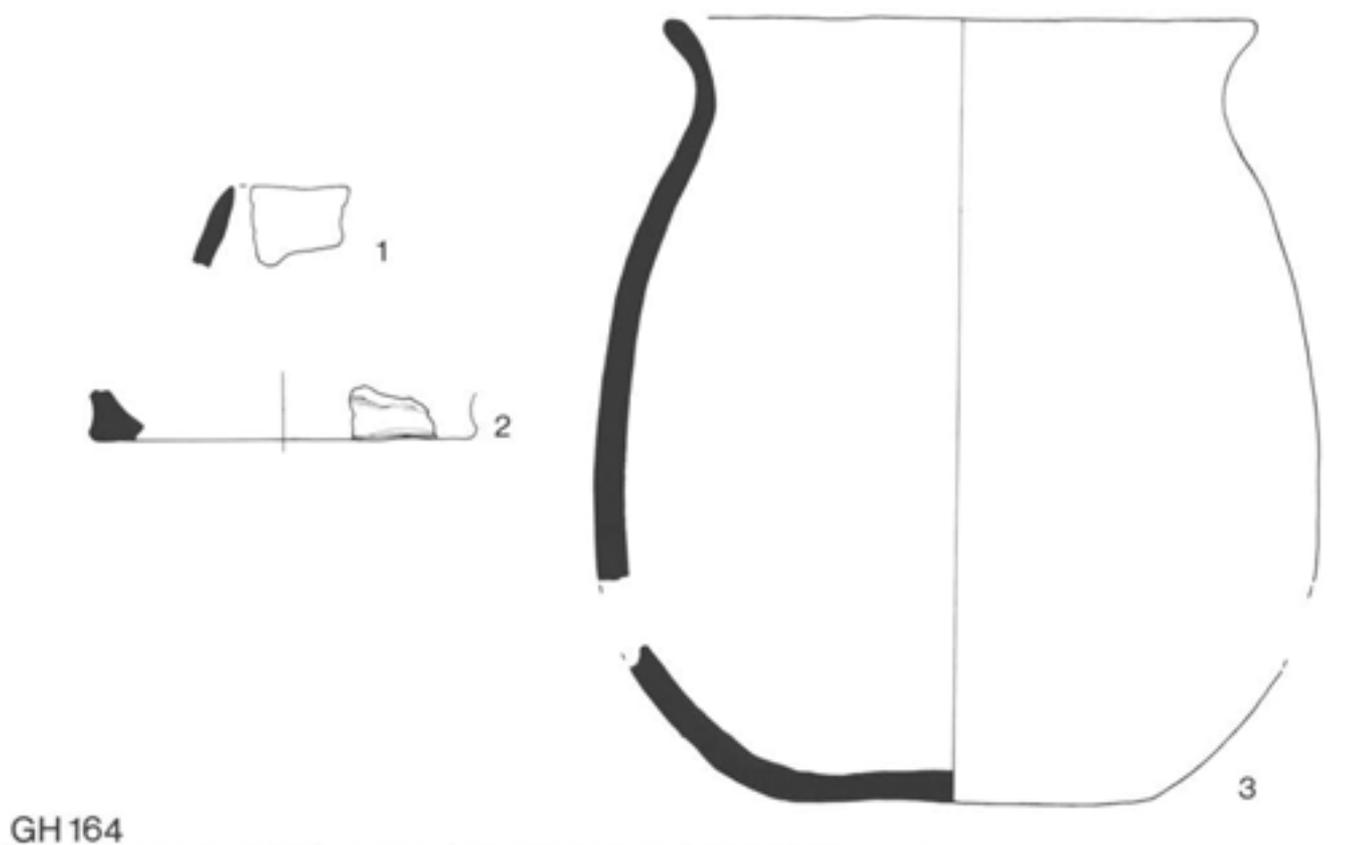
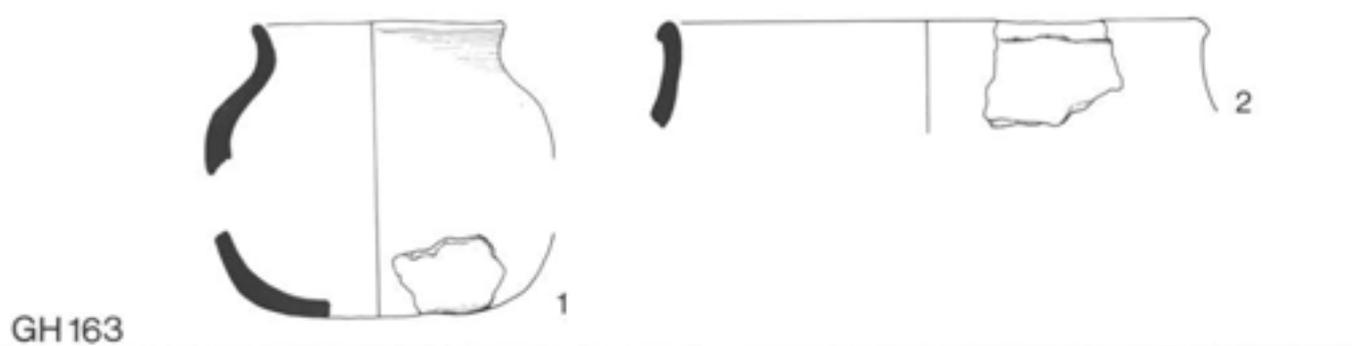


GH161



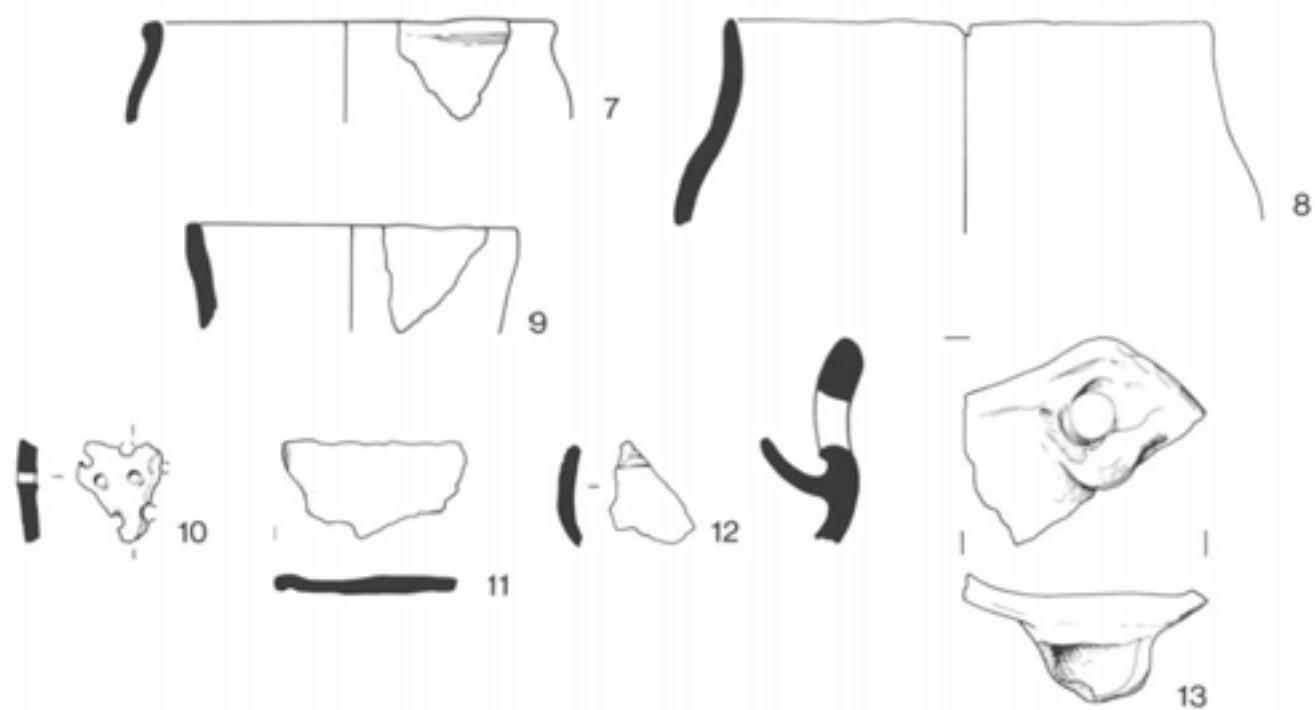
GH162

Fig 161 Finds and pottery from GH 161, 162 (scales: GH 161, 1:3; GH 162.1, 1:1; 2-7, 1:3)

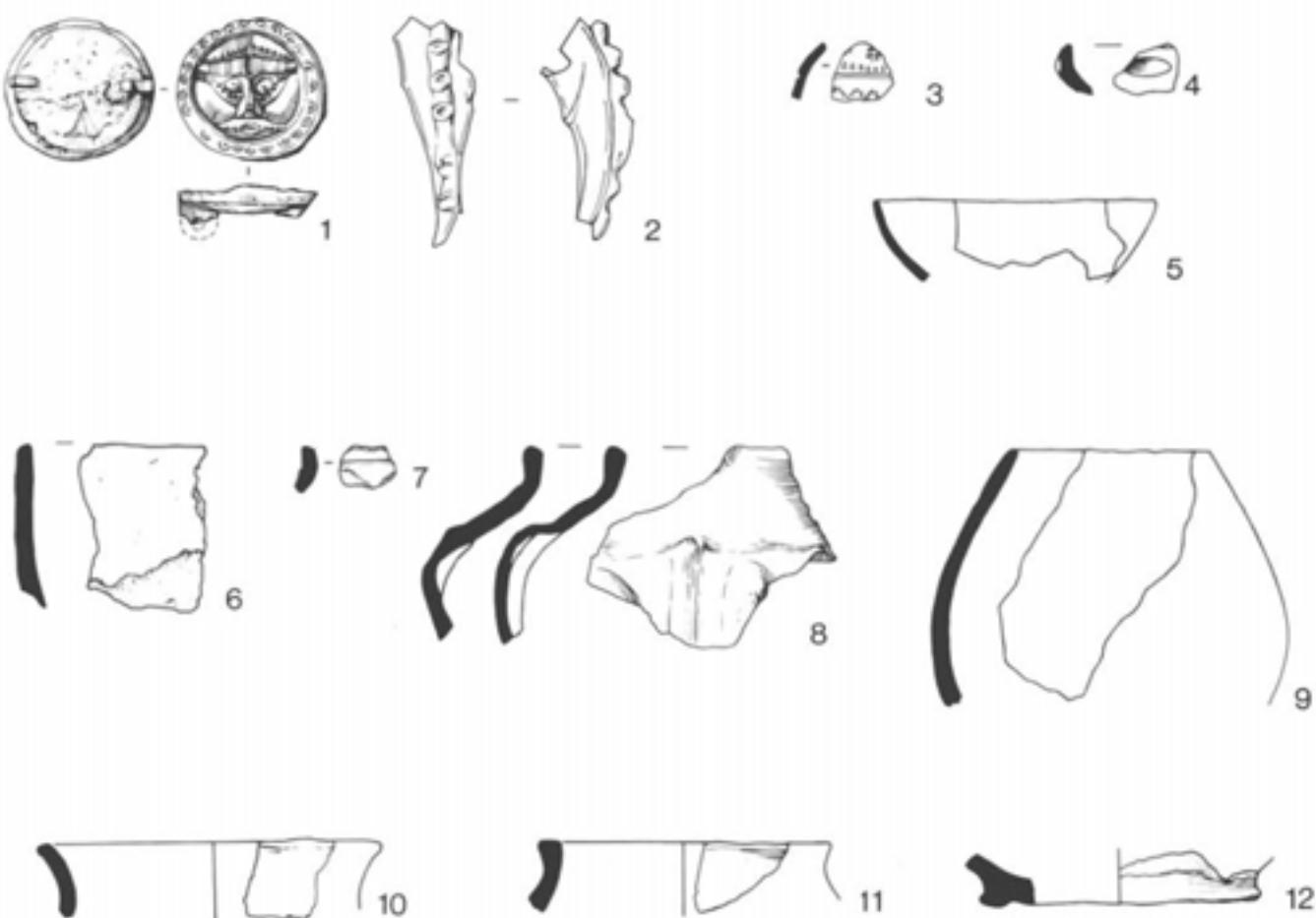


GH 165

Fig 162 Finds and pottery from GH 163–165 (scales: GH 163, 1:3; GH 164, 1:3; GH 165.1, 1:1; 2–6, 1:3)

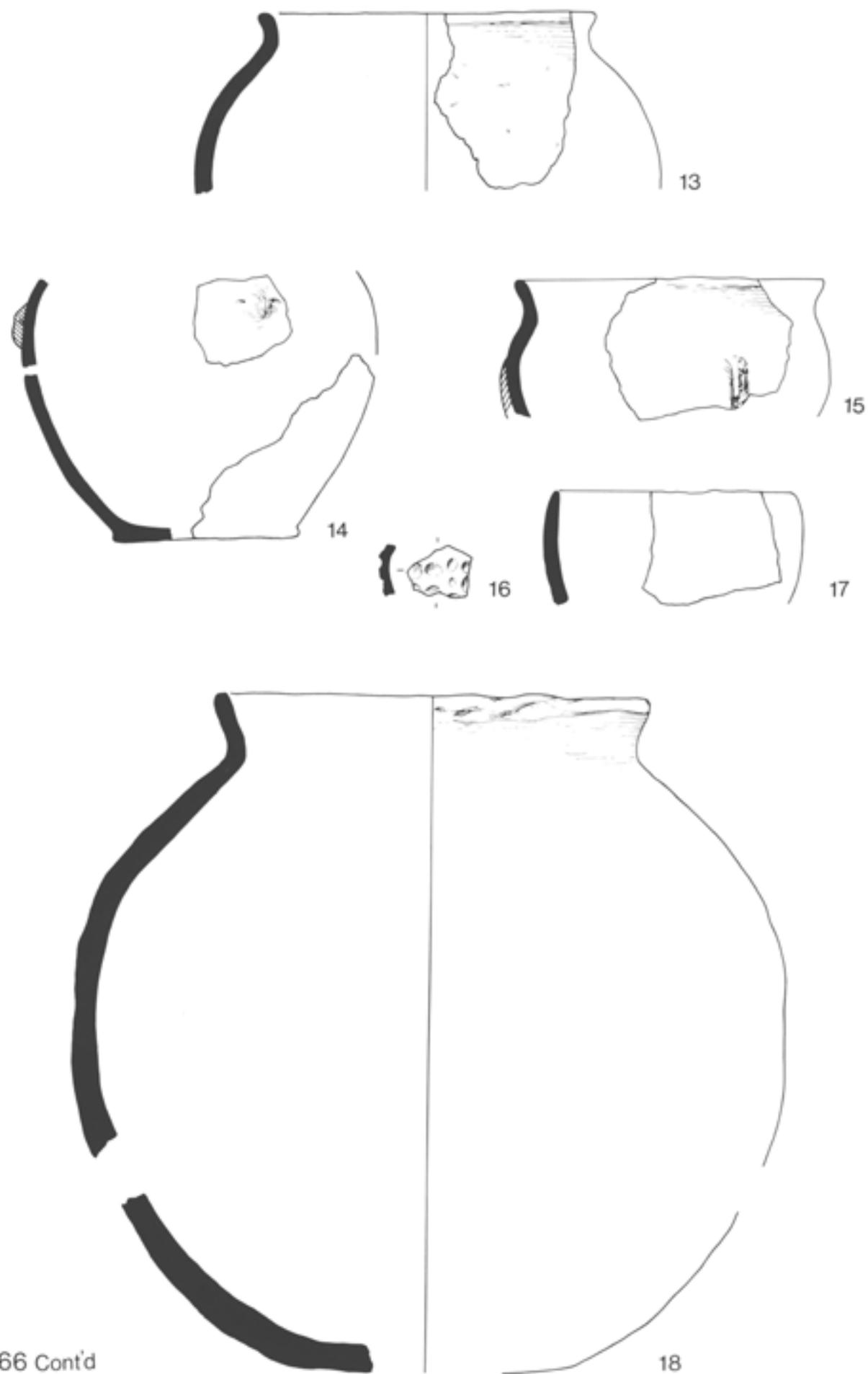


GH 165 Cont'd



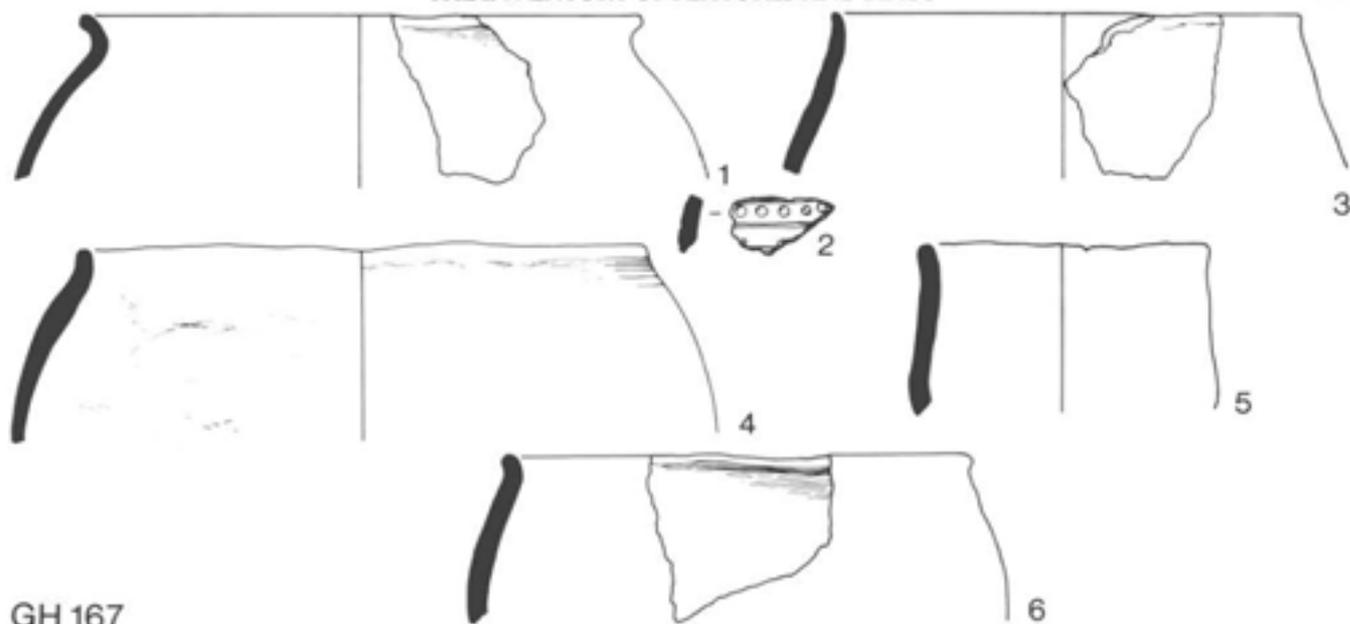
GH 166

Fig 163 Finds and pottery from GH 165, 166 (scales: GH 165, 1:3; GH 166.1-2, 1:1; 3-12, 1:3)

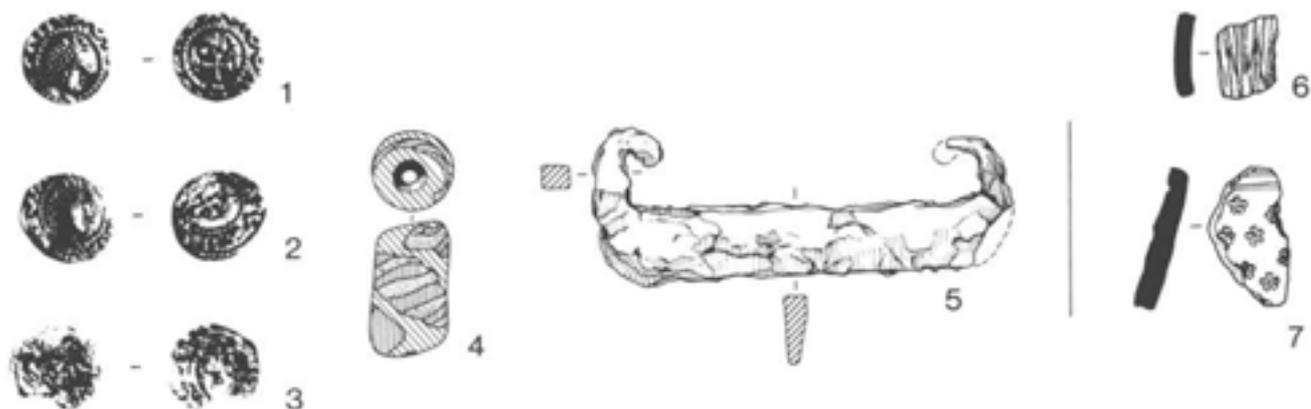


GH166 Cont'd

Fig 164 Pottery from GH 166 (scale: 1:3)



GH 167



GH 168



GH 169

Fig 165 Finds and pottery from GH 167-169 (for key to glass beads see Fig 53) (scales: GH 167, 1:3; GH 168.1-4, 1:1; 5, 1:2; 6-7, 1:3; GH 169.1, 1:2; 2-11, 1:3)



GH170



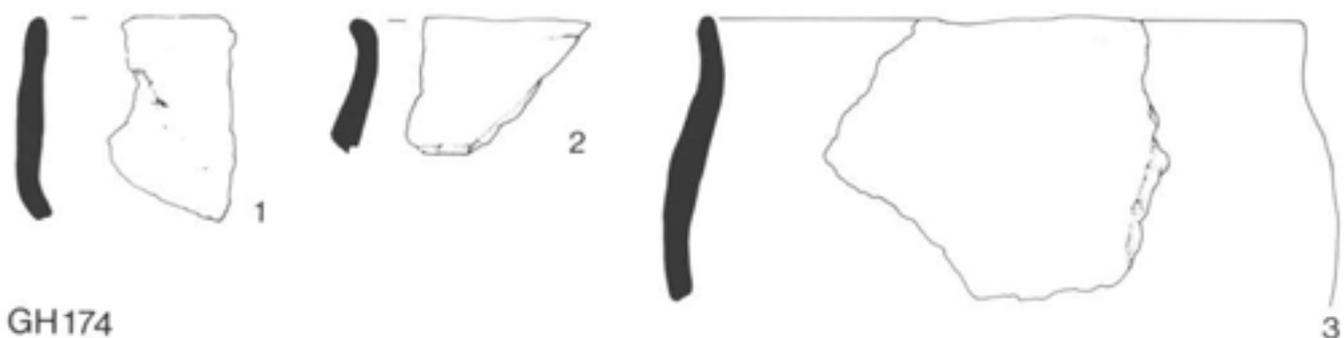
GH171



GH172

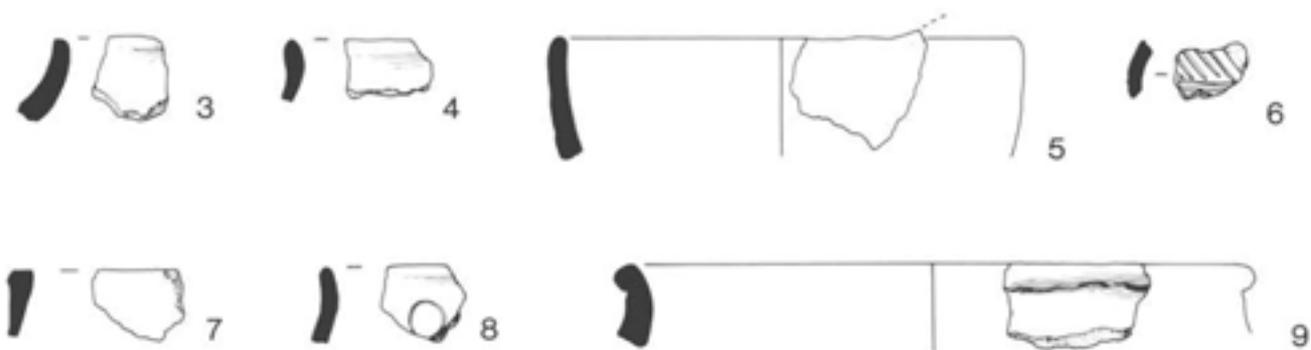
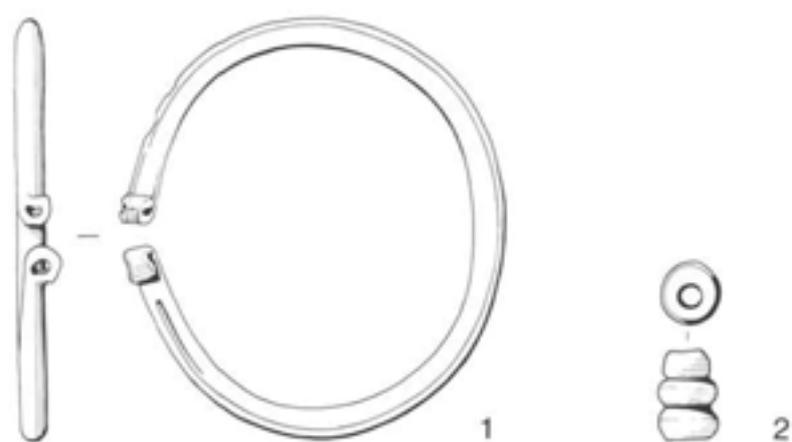


GH173



GH174

Fig 166 Pottery from GH 170-174 (scale 1:3)

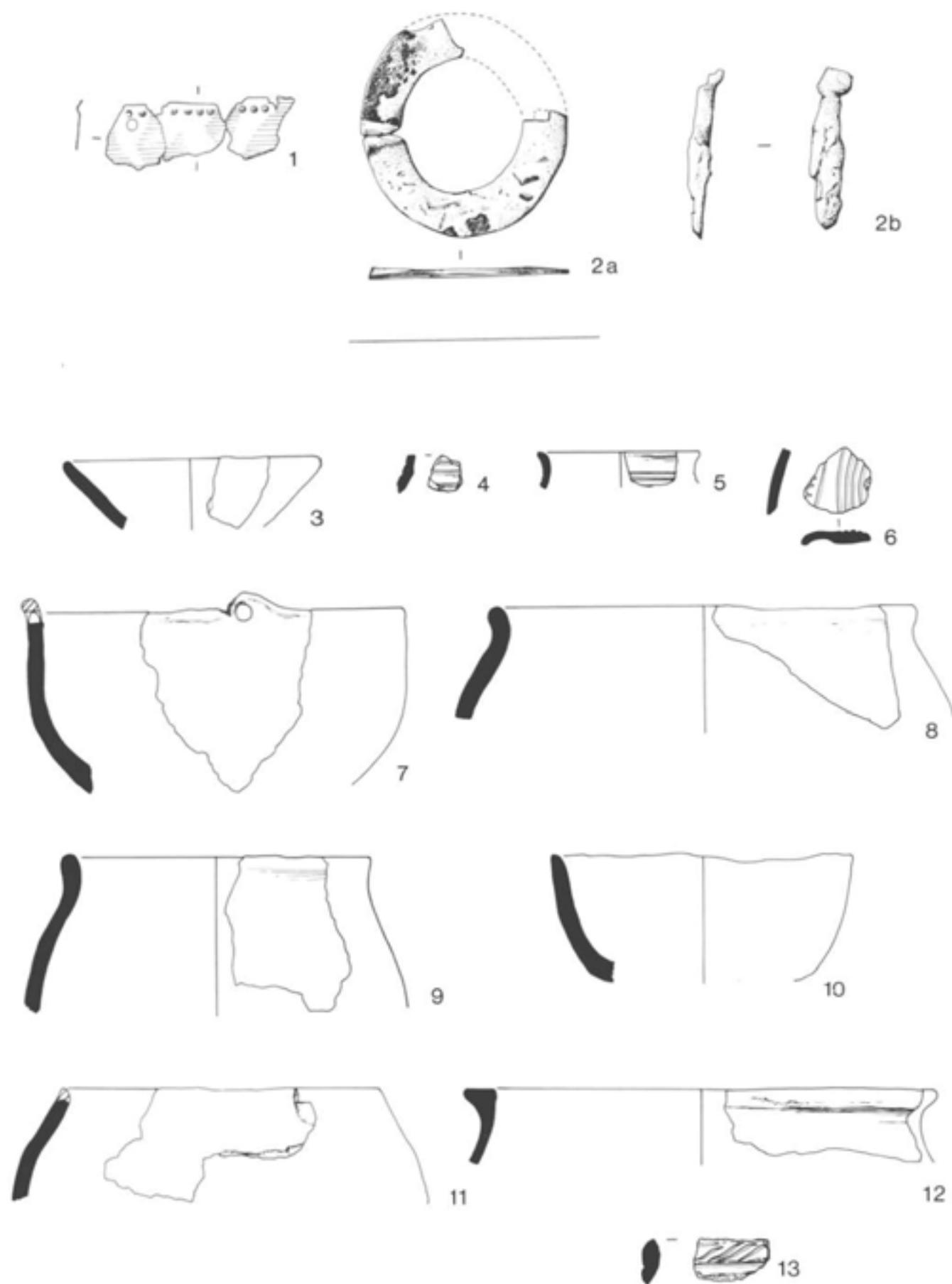


GH175/185



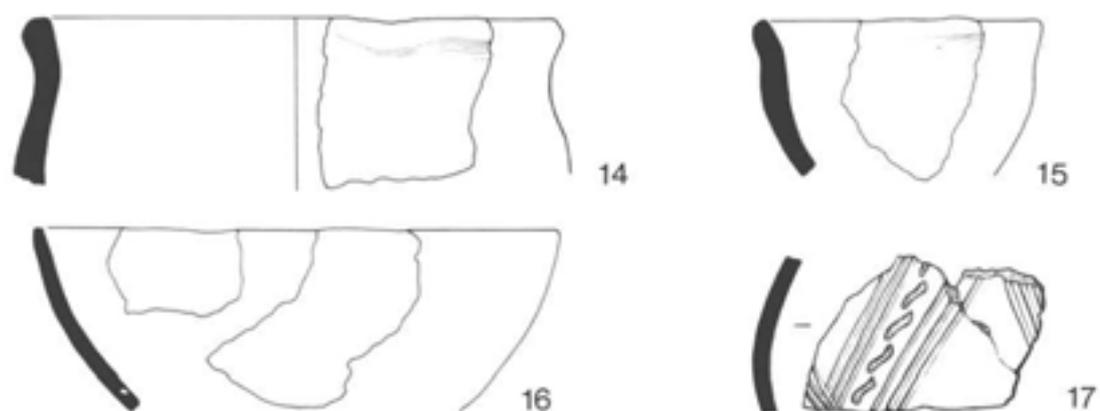
GH176

Fig 167 Finds and pottery from GH 175/185, 176 (scales: GH 175/185.1-2, 1:1; 3-9, 1:3; GH 176, 1:3)

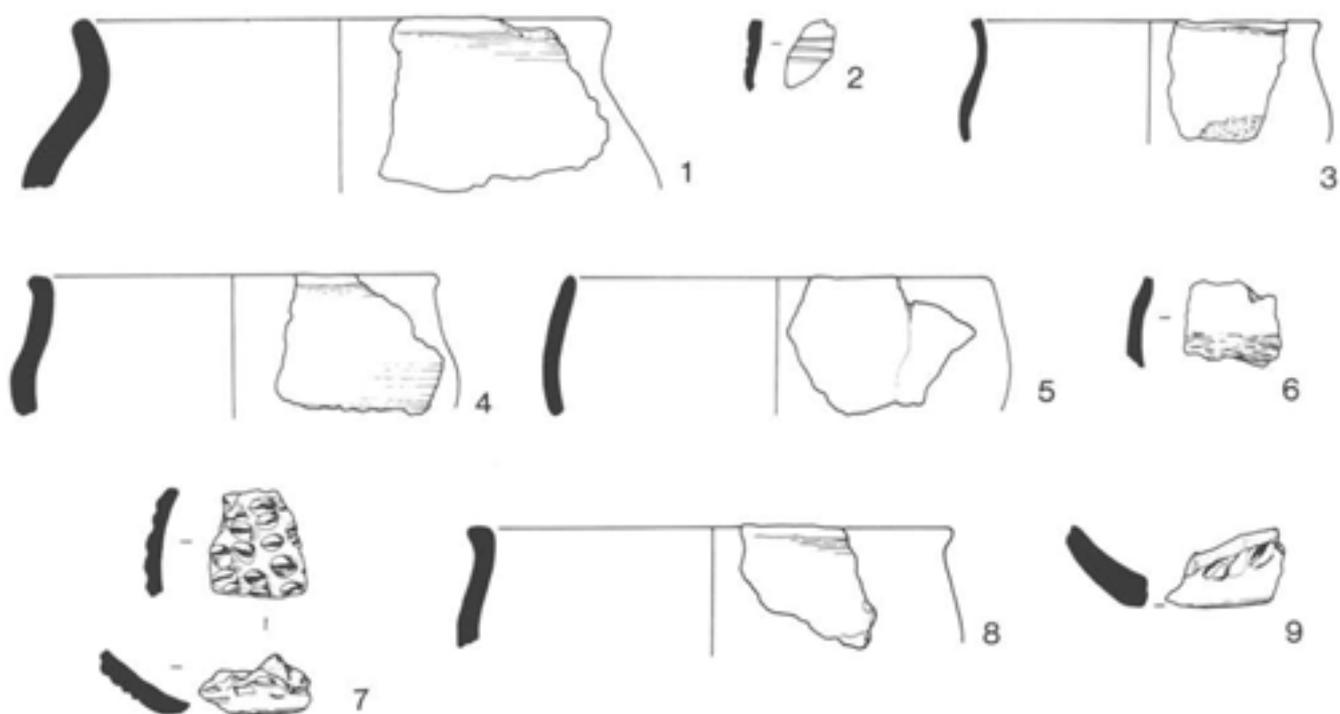


GH 177

Fig 168 Finds and pottery from GH 177 (scales: 1-2, 1:1; 3-13, 1:3)

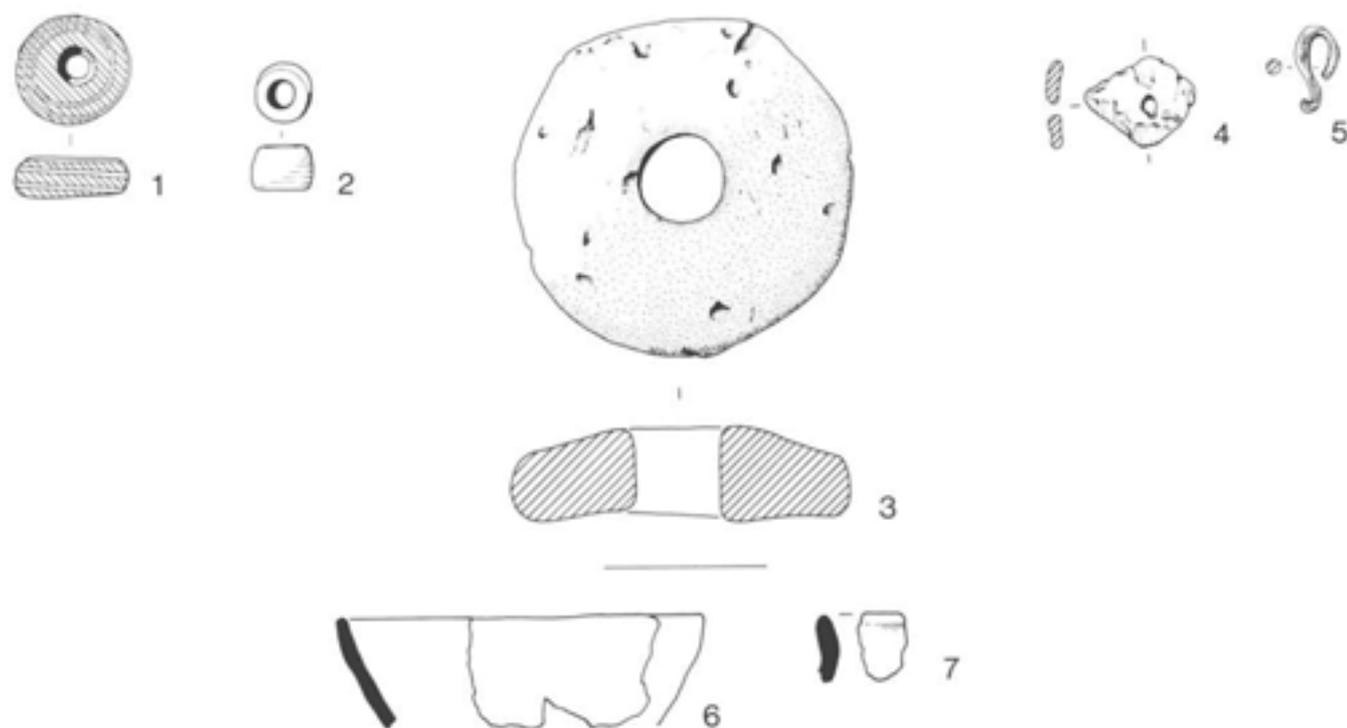


GH 177 Cont'd



GH 178

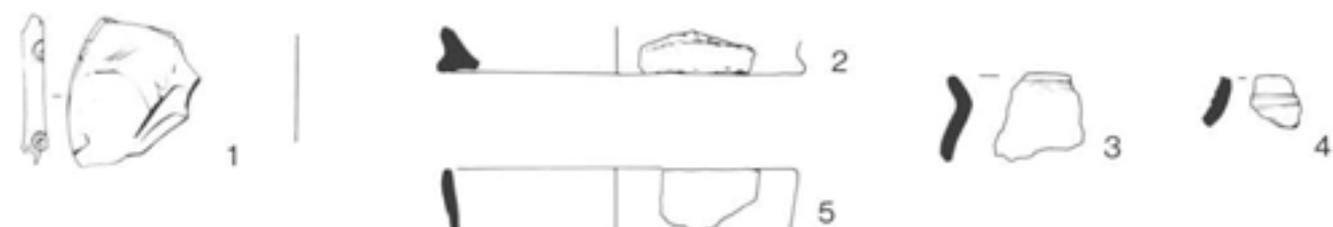
Fig 169 Pottery from GH 177, 178 (scale: 1:3)



GH179

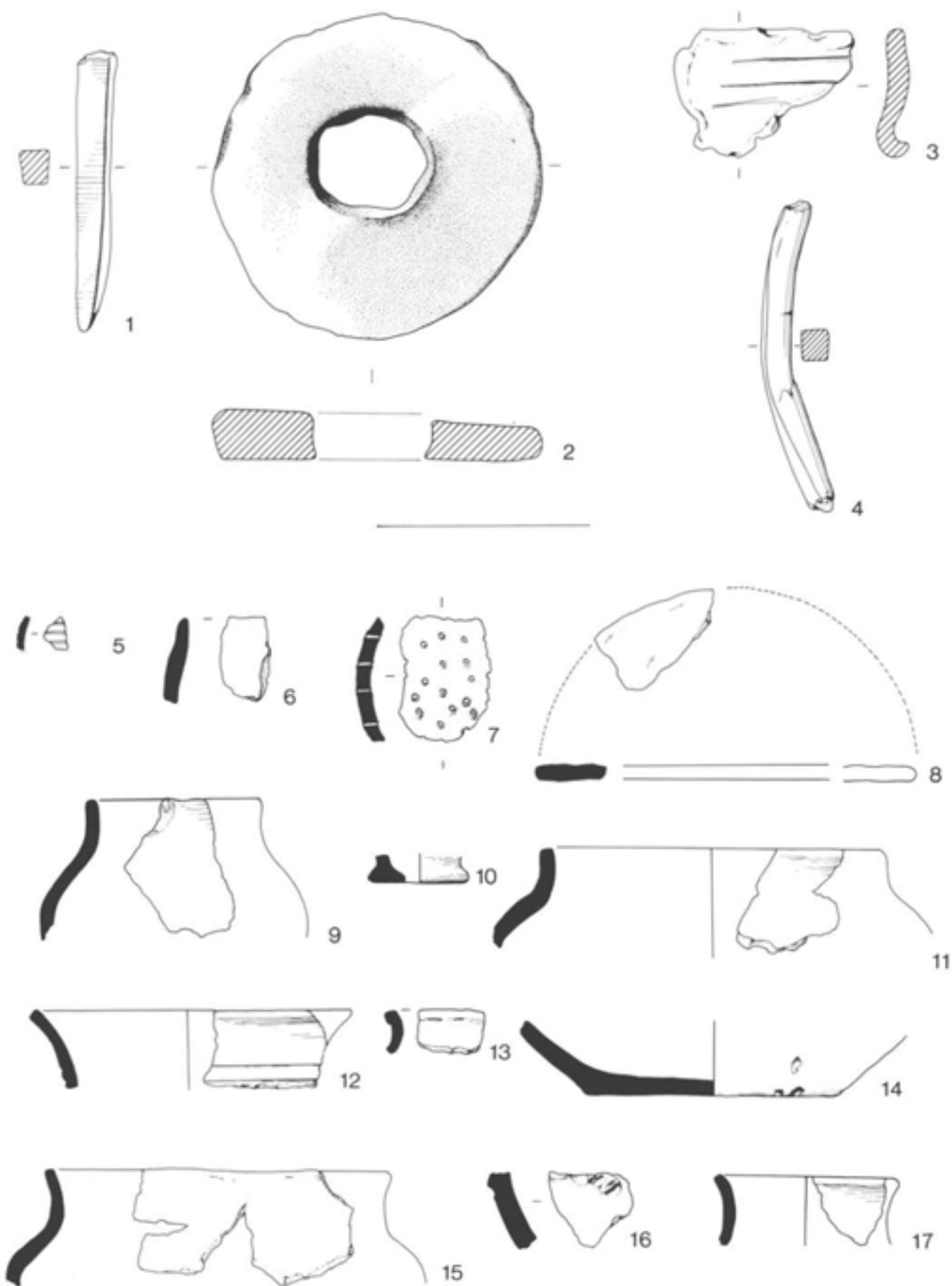


180



GH181

Fig 170 Finds and pottery from GH 179–181 (for key to glass beads see Fig 53) (scales: GH 179.1–3, 1:1; 4–5, 1:2; 6–7, 1:3; GH 180, 1:3; GH 181.1, 1:1; 2–5, 1:3)



GH 182

Fig 171 Finds and pottery from GH 182 (scales: 1-4, 1:1; 5-17, 1:3)



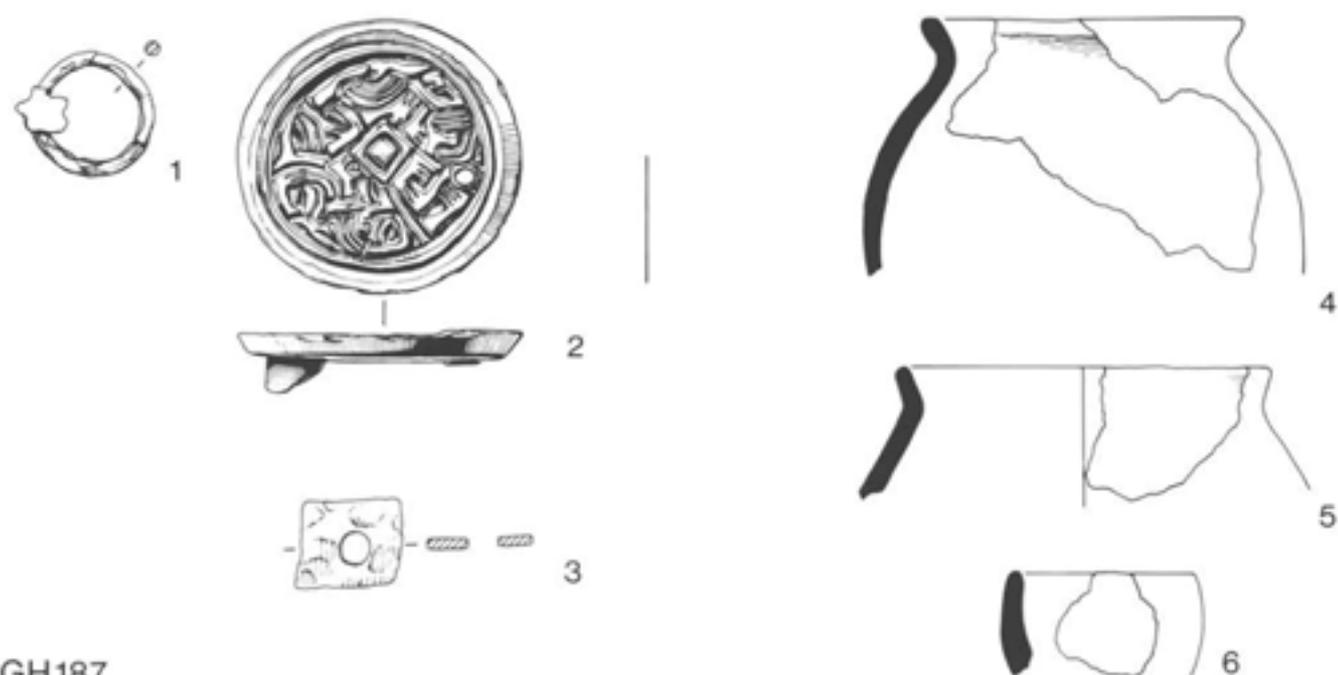
GH184



GH185

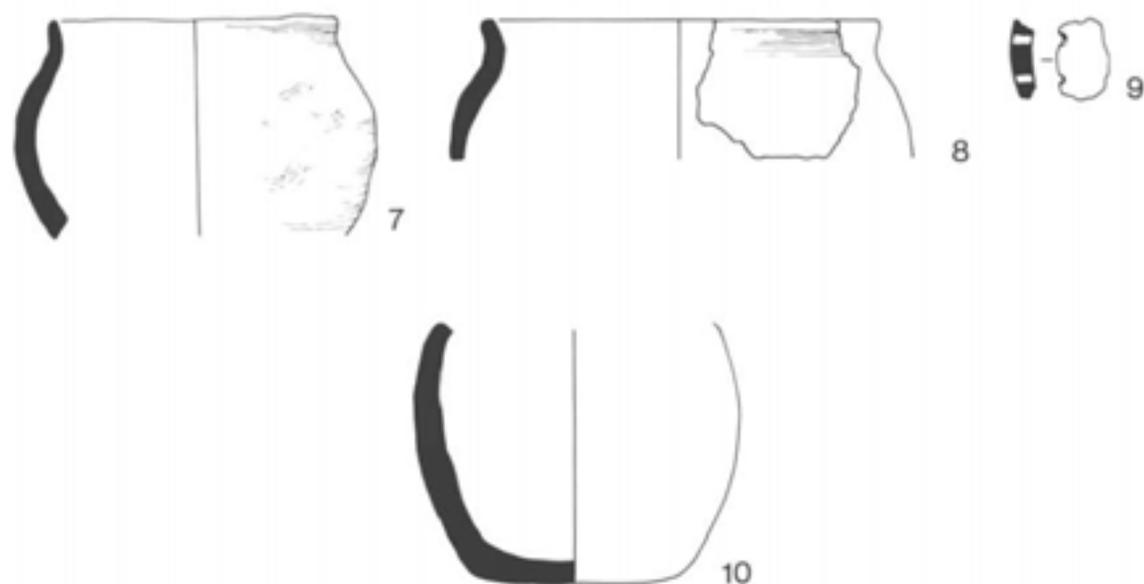


GH186



GH187

Fig 172 Finds and pottery from GH 184–187 (scales: GH 184–186, 1:3; GH 187.1–2, 1:1; 3, 1:2; 4–6, 1:3)



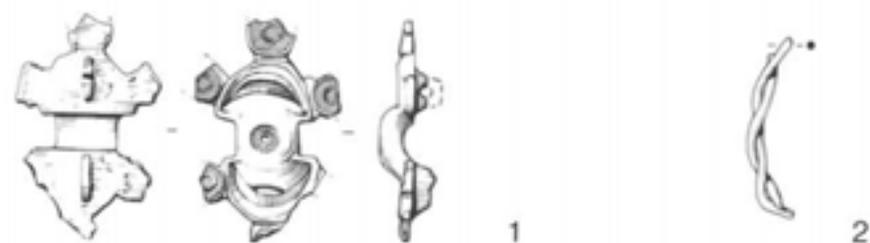
GH 187 Cont'd



GH 188

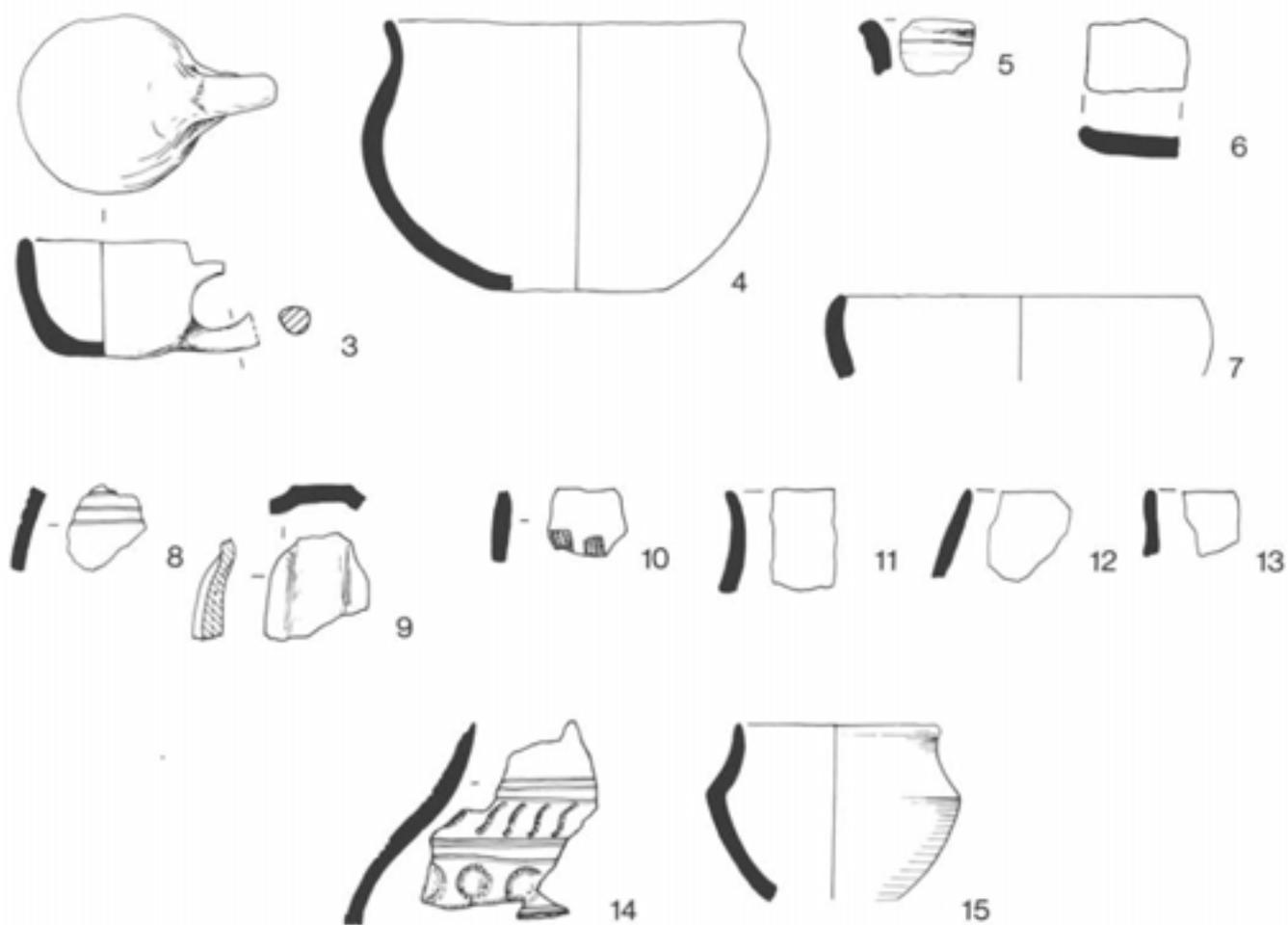


GH 189



GH 190

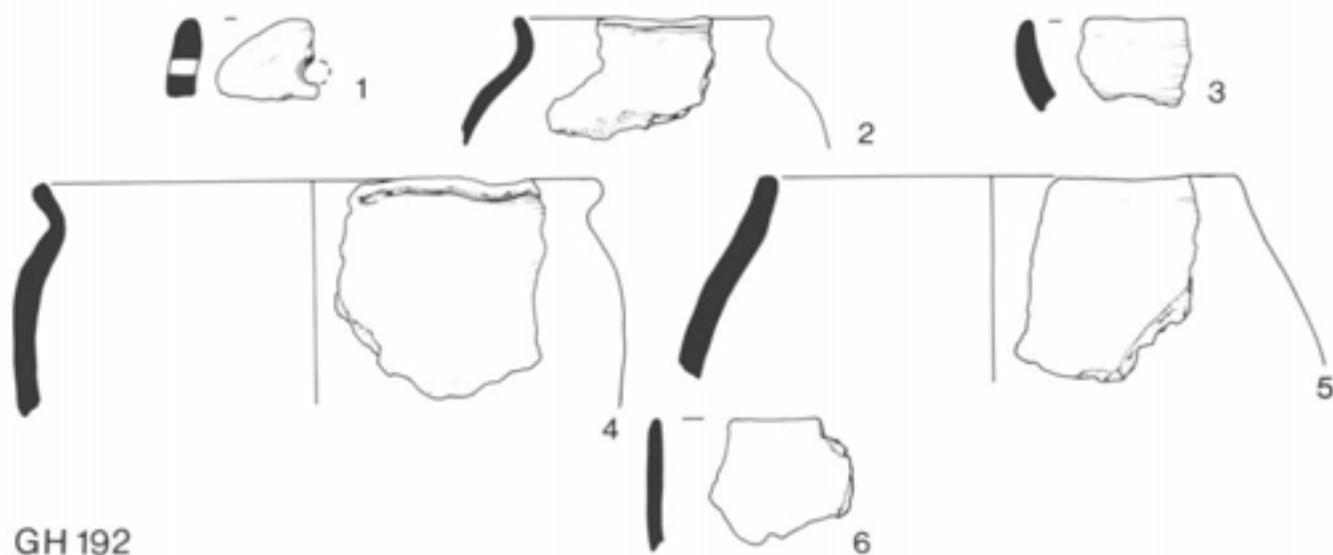
Fig 173 Finds and pottery from GH 187-190 (scales: GH 187-189, 1:3; GH 190, 1:1)



GH 190 Cont'd

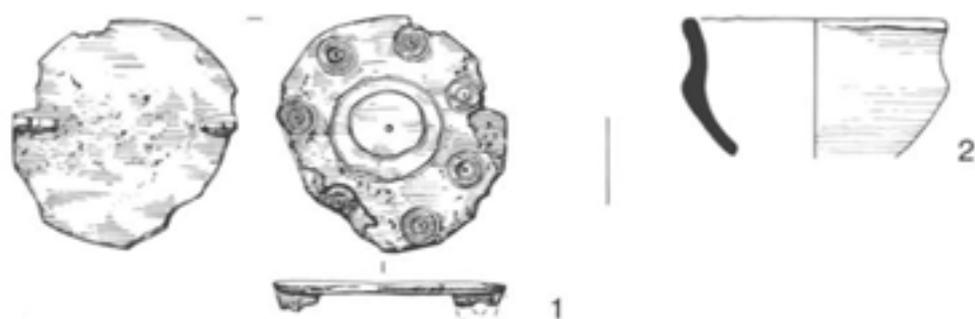


GH 191

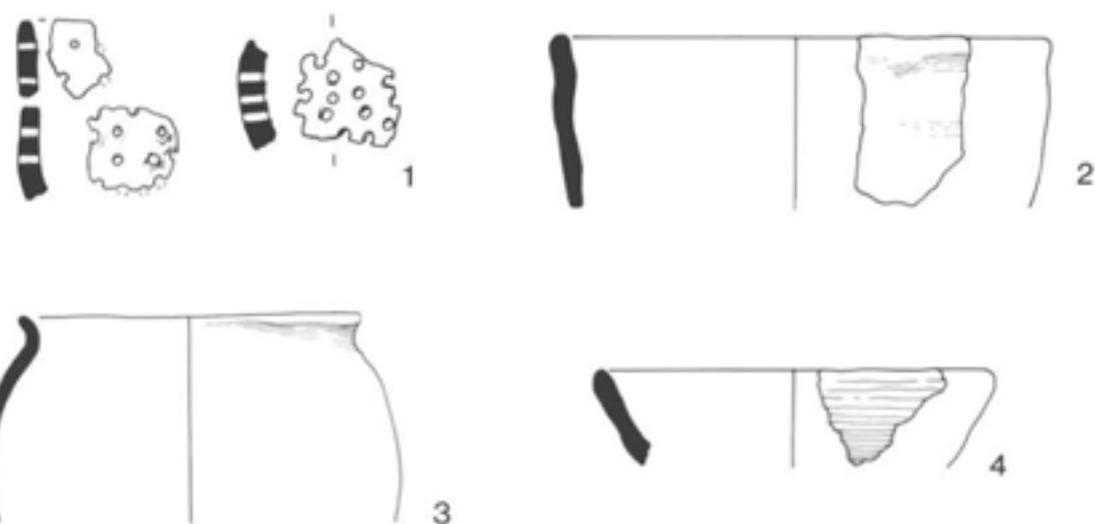


GH 192

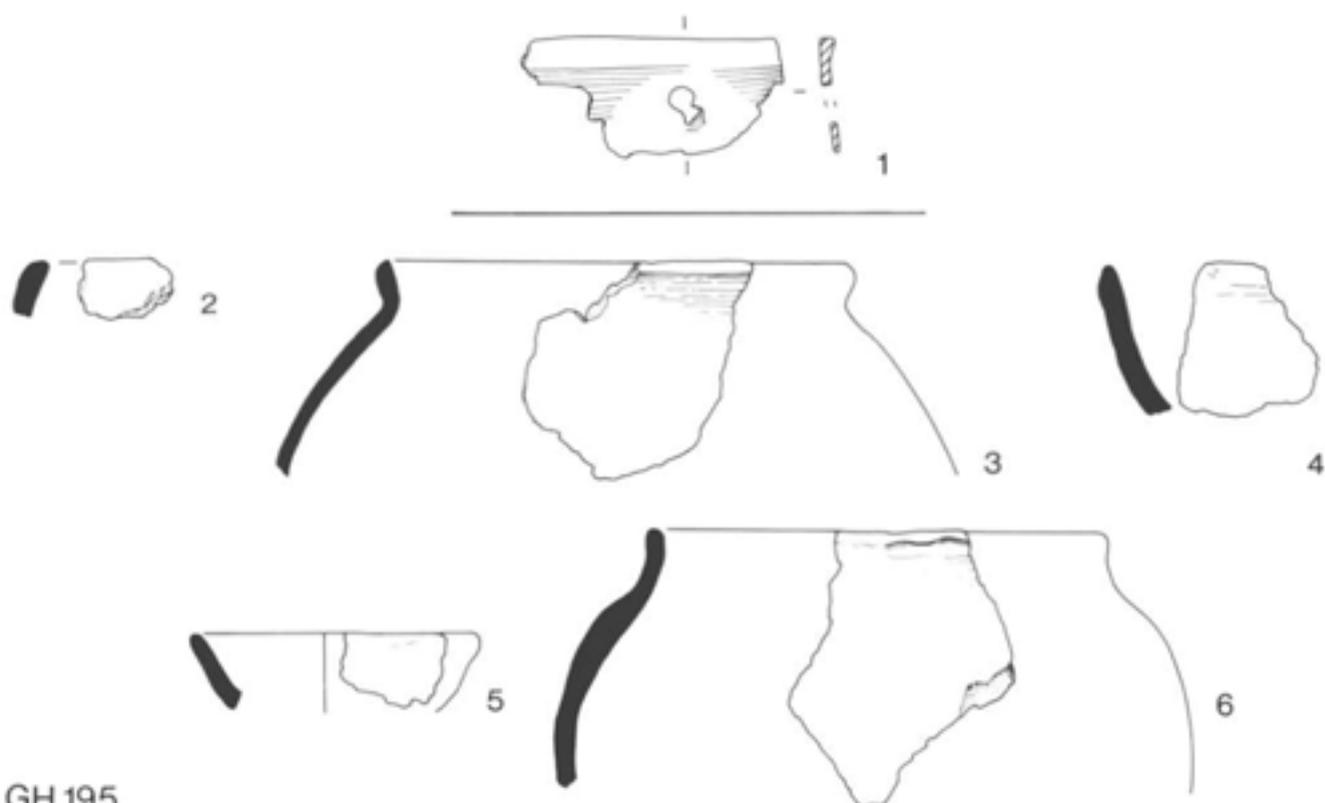
Fig 174 Pottery from GH 190-192 (scales: 1:3)



GH 193



GH 194



GH 195

Fig 175 Finds and pottery from GH 193–195 (scales: GH 193.1, 1:1; 2, 1:3; GH 194, 1:3; GH 195.1, 1:1; 2–6, 1:3)

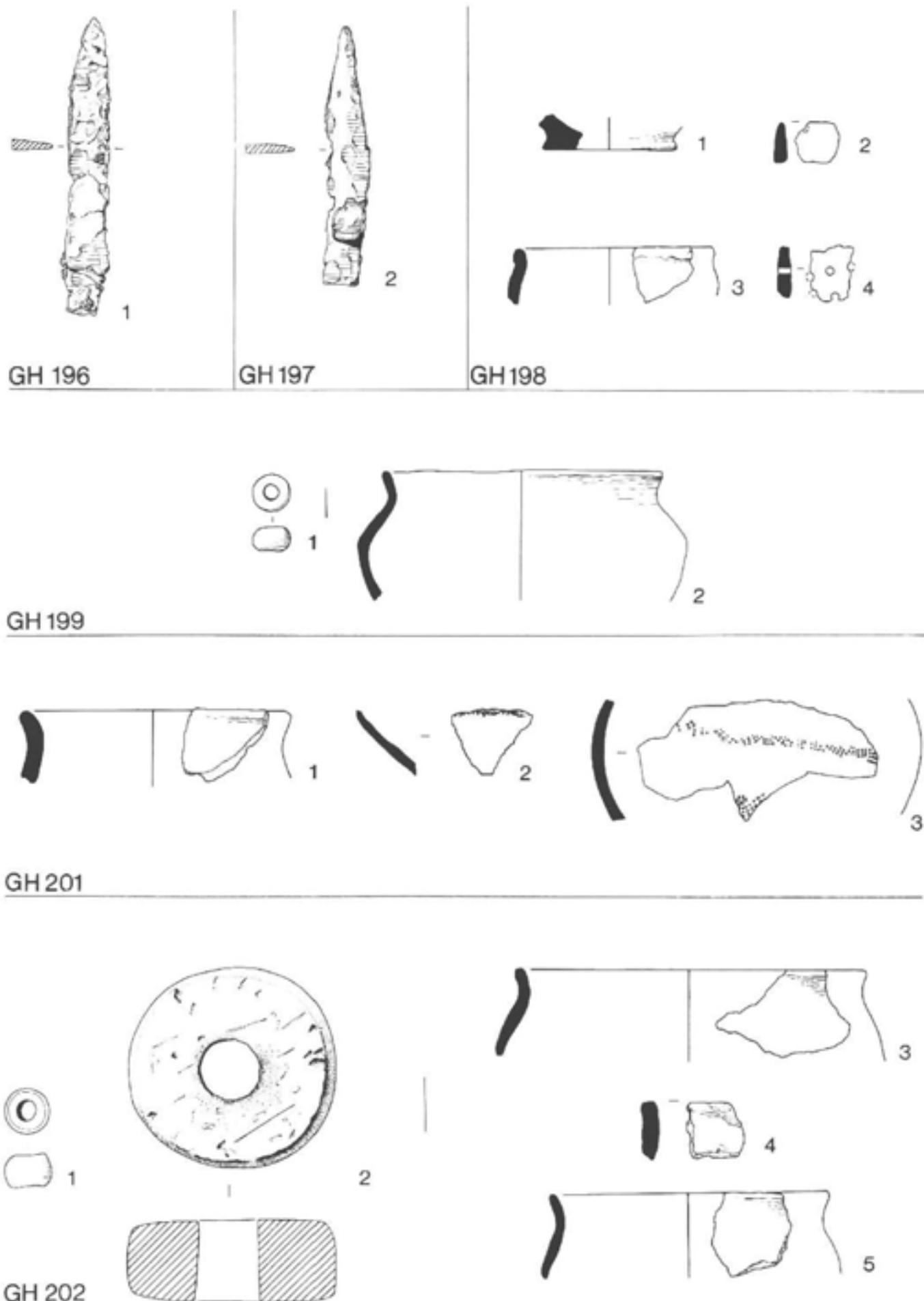
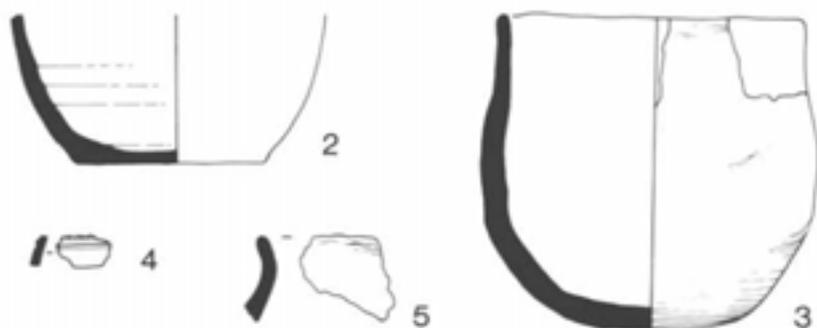
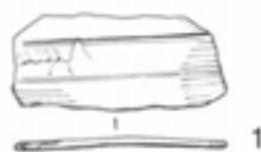


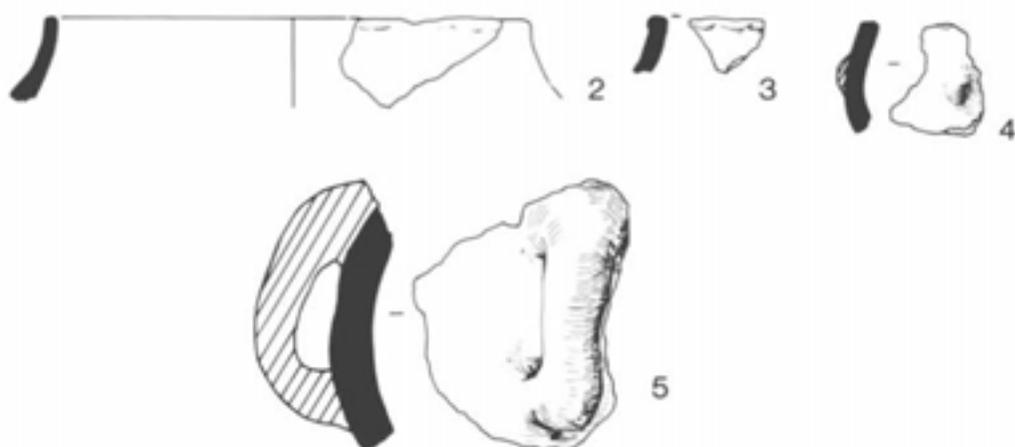
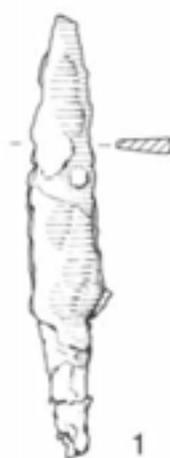
Fig 176 Finds and pottery from GH 196–199, 201, 202 (scales: GH 196, 1:2; GH 197, 1:2; GH 198, 1:3; GH 199.1, 1:1; 2, 1:3; GH 201, 1:3; GH 202.1–2, 1:1; 3–5, 1:3)



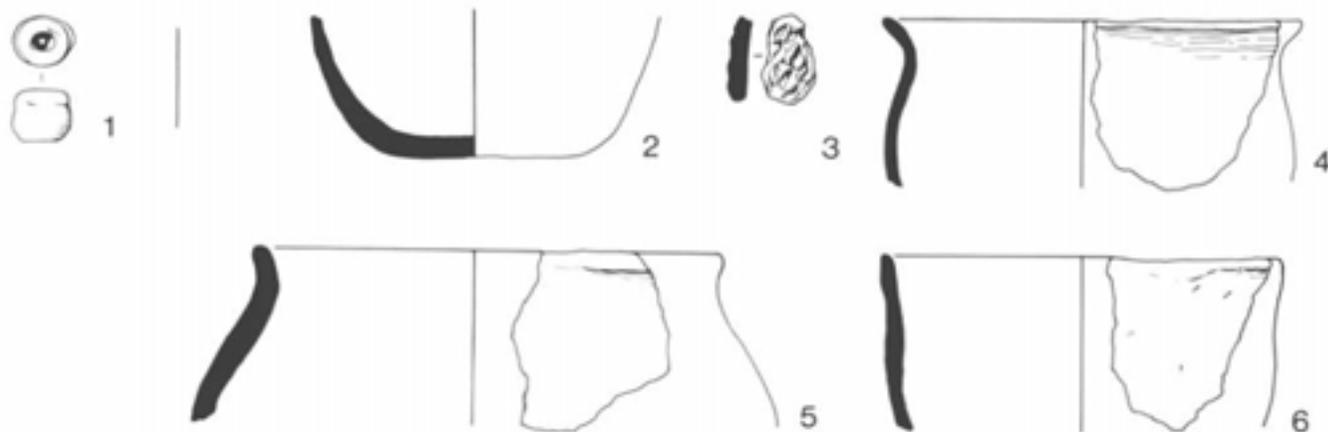
GH 203



GH 205

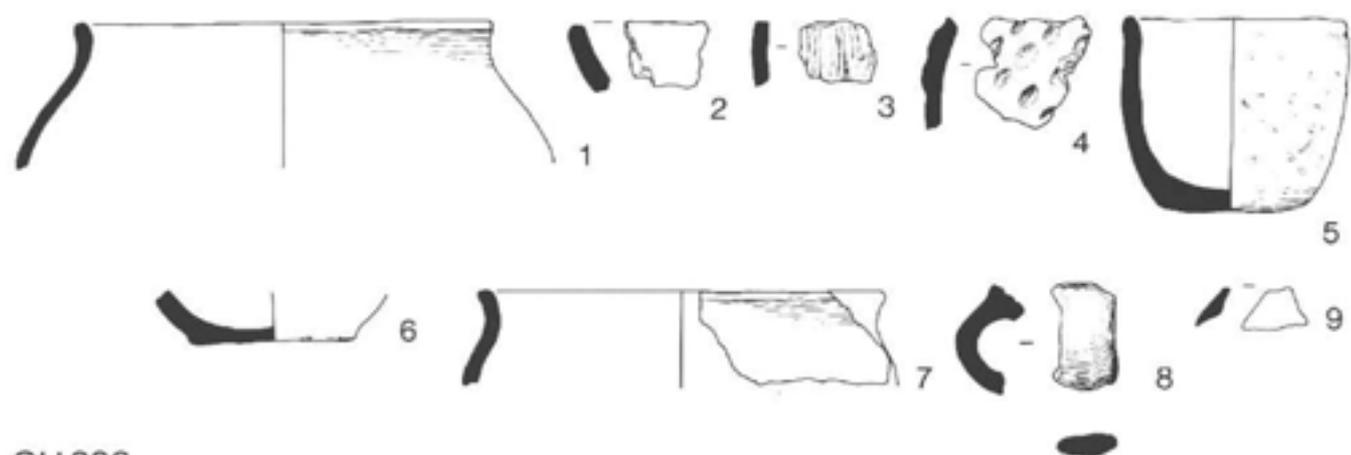


GH 206

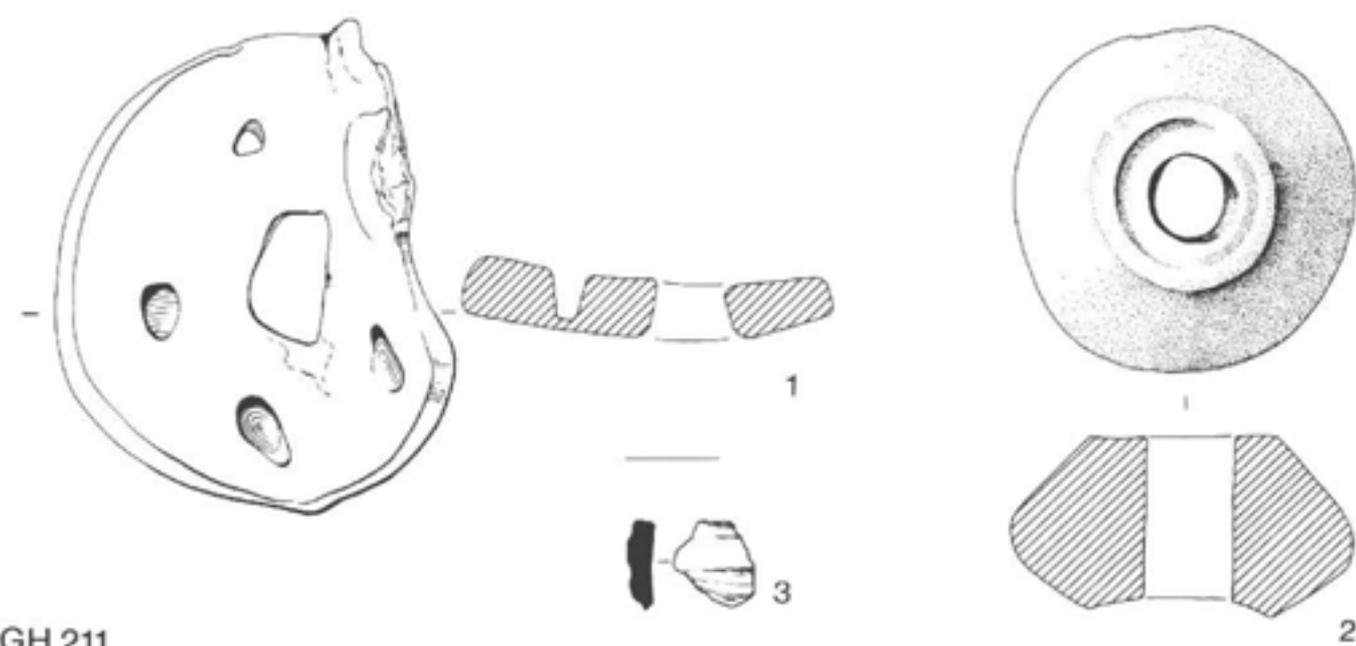


GH 207

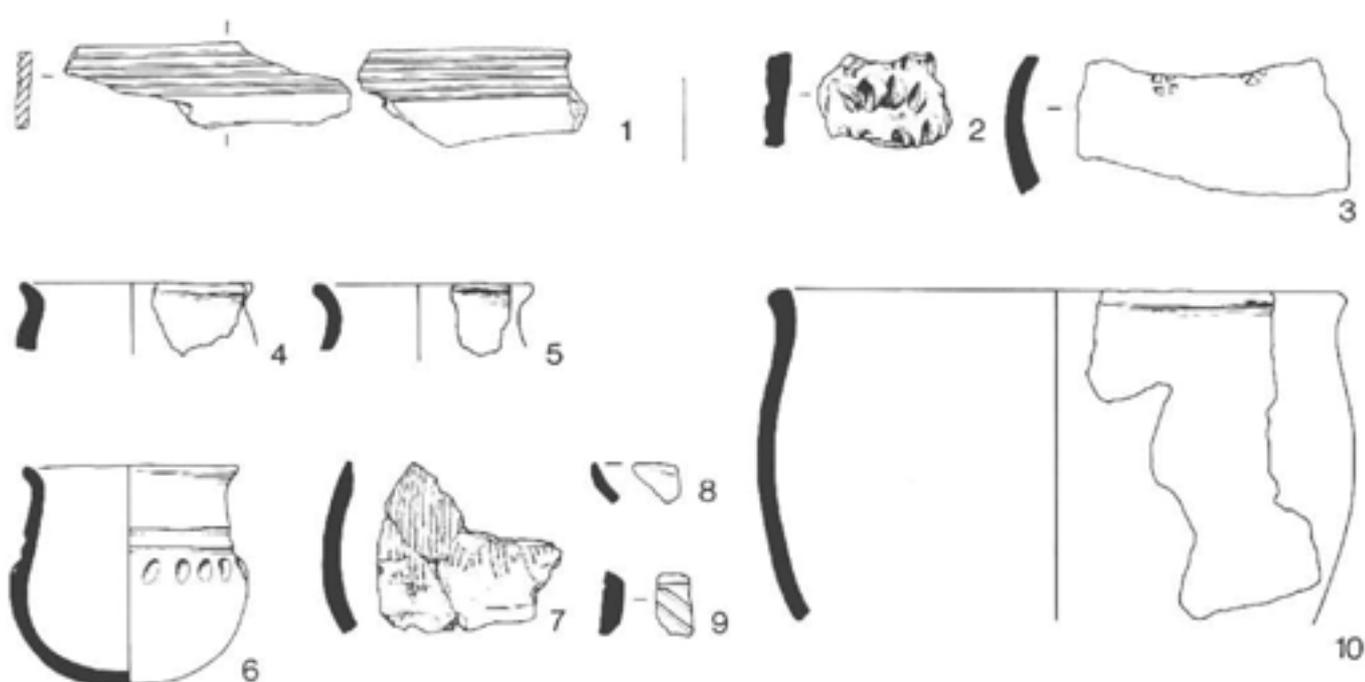
Fig 177 Finds and pottery from GH 203, 205–207 (scales: GH 203.1, 1:1; 2–5, 1:3; GH 205.1, 1:1; 2–5, 1:3; GH 206.1, 1:1; 2–5, 1:3; GH 207.1, 1:1; 2–6, 1:3)



GH 208



GH 211



GH 212

Fig 178 Finds and pottery from GH 208, 211, 212 (scales: GH 208, 1:3; GH 211.1-2, 1:1; 3, 1:3; GH 212.1, 1:1; 2-10, 1:3)

Ditches, pits, postholes, and unstratified contexts

The North Enclosure

(Figs 180–183) Site atlas plans 17, 18, 20, 21

Illustrated late Roman and Anglo-Saxon finds

- 1 Copper alloy tubular-sided belt fittings, 2 fragments; late Roman (Bronze 476/AML820806)
- 2 Copper alloy Roman coin, pierced, very worn (Coin 122)
- 3 Copper alloy tubular ?belt fitting (Bronze 537/AML820872)
- 4 Copper alloy ornament inlaid with deep purple glass over hatched silver (possibly gilded) foil (Bronze 545/AML820880)
- 5 Fired clay spindlewhorl, Type 3c; dark grey, sandy fabric (SPW 41)
- 6 Iron ?bell clapper (Iron 756)
- 7 Iron ?sickle blade fragment; blade curves slightly and has a triangular cross-section; broken, tip missing; narrows at other end to a broken tang which curves away from the blade (Iron 752)
- 8 Iron firesteel fragment; X-radiograph revealed grooves, but no inlay (Iron 751)

Illustrated pottery

- 9 ?Spout
Dark grey throughout; surface smoothed
Fabric 1c (9087.1)
- 10 Carinated bowl
Light red-brown to grey exterior, with traces of burnishing; dark grey burnished interior; black core
Unclassified fabric: fine, sandy matrix containing common well-sorted flint chips (9070.1)
- 11 Body sherds from a vessel with slashed cordons
Black burnished surfaces; red-grey core
Fabric 3 (9084.1b)
- 12 Faceted carinated bowl; may be from the same bowl as 13 and 52
Red-brown to black exterior, lightly burnished; dark grey, evenly smoothed interior; black core
Fabric 1c (9093.1)
- 13 Faceted carinated bowl; may be from the same bowl as 12 and 52
Black throughout; surfaces lightly burnished
Fabric 1c (9966.1)
- 14 Body sherd, decorated with A1b stamp
Light brown exterior, smoothed and lightly burnished; black, smoothed interior; black core
Fabric 1b, densely grass-tempered (9004.1)
- 15 Faceted carinated bowl
Black throughout, with a red-brown external margin; lightly burnished surfaces
Fabric 3 (9019.1)
- 16 Faceted carinated bowl
Black throughout; exterior burnished; interior smoothed
Fabric 3 (9023.1)
- 17 Jar, decorated with hollow bosses and A5b and A5f stamps
Fabric dark grey to black; both surfaces smoothed
Fabric 3 (9000.1 & 1700N 755E)
- 18 Shoulder, decorated with N1 stamps
Dark grey throughout; surfaces lightly burnished
Fabric unclassified: contains abundant relatively well-sorted quartz sand and moderate haematite (9008.1)
- 19 Body sherd decorated with A5 or G2 stamp
Black throughout; surfaces smoothed
Fabric 2 (9001.1)
- 20 Body sherd decorated with B2 stamp
Light brown smoothed surfaces; black core
Fabric 1c (9965.1)
- 21 Faceted carinated bowl decorated with A1b stamps
Black throughout; surfaces evenly burnished
Fabric 4 (1708N 760E)
- 22 Upright, pierced lug
Black throughout; surfaces unevenly burnished
Fabric 2 (1842N 877E)
- 23 Straight-sided bowl with pierced applied lug
Black throughout; traces of burnishing on both surfaces and light sooting on the exterior
Fabric 2 (9082.1)
- 24 Globular bowl with pierced, applied lug
Black throughout; surfaces scraped and burnished
Fabric 2, densely grass-tempered and hard (9081.1)
- 25 Upright lug
Black throughout; exterior lightly burnished, with carbonised deposits near the rim; interior smoothed
Fabric 2 (9016.1)
- 26 Body sherd decorated with A1a stamps and shallow grooves
Brown to black exterior, lightly burnished, with a red-brown margin; black, lightly burnished interior; black core
Fabric 2 (9005.1)
- 27 Body sherd, decorated with A4a stamp
Brown-red throughout; both surfaces smoothed
Fabric 3 (9014.1)
- 28 Body sherd with a vertical boss which has been partly pushed out and partly built up
Grey-brown exterior, scraped and lightly burnished; black smoothed interior; black core
Fabric 2 (9096.1)
- 29 Shoulder decorated with A5a stamps
Dark grey-brown exterior; black interior; black core; surfaces lightly and evenly burnished
Fabric 1b (9006.1)
- 30 Lid or dish
Brown, smoothed surfaces; black core; red-brown margins
Fabric 1c, with sparse grass temper (9045.1)
- 31 Shoulder decorated with A1a stamp, from same pot as GH 117.1
Dark grey exterior with red-grey margin; dark grey smoothed interior; grey core
Fabric 4 (1654N 840E)
- 32 Body sherd
Light brown combed exterior; black, smoothed interior; black core
Fabric 3 (9024.1)
- 33 Rim and body sherds from a thin-walled vessel, decorated with deep grooves, facets, and hollow bosses
Black throughout; surfaces highly burnished
Fabric 1c, exceptionally hard (9085.1a, b)
- 34 Straight-sided bowl with a broken handle
Black smoothed surfaces; red external margin
Unclassified fabric: coarse matrix containing abundant quartz sand and common dull white and dull red-brown non-magnetic inclusions, possibly limestone and decayed limestone; the inclusions have partly leached out (9086.1)
- 35 Body sherd
Light red-brown exterior, with pinched-up 'ribs'; black, smoothed interior, with light carbonised deposits; black core
Fabric 3 (9565.1a)
- 36 Shoulder of ?biconical bowl
Light brown, evenly smoothed and neatly pinched exterior; black, smoothed interior
Fabric 1c (1734N 584E)

- 37 Pedestal base, complete
Black burnished exterior; black smoothed interior; red-brown core
Fabric 4 (9083.1)
- 38 Hemispherical bowl with a flat-angled base
Dark grey with a red-brown external margin; smoothed surfaces
Fabric 2, lightly grass-tempered (9037.1)
- 39 Flat-angled base
Dark brown to black exterior, smoothed and evenly pinched, burnished at base; brown to black interior, scraped smooth and lightly, evenly burnished
Fabric 1c, hard (9545.1)
- 40 Body sherd from globular vessel
Red-brown exterior, smoothed, and pinched; black, lightly burnished interior
Fabric 3 (9567.1)
- 41 Straight-sided bowl, c 30% complete
Black throughout; both surfaces smoothed
Fabric 2 (9091.1)
- 42 Flat-angled base
Red-brown, evenly pinched exterior, smoothed under base; black, evenly burnished interior; black core
Fabric 3 (9565.1b)
- 43 Splay-sided bowl, c 50% complete
Red-brown surfaces, unevenly smoothed; black core
Fabric 1c (9033.2)
- 44 Biconical bowl, c 25% complete
Predominantly black surfaces, evenly smoothed with traces of burnishing
Fabric 1b (9094.1)
- 45 Flat-angled base
Light red-brown exterior, smoothed under base and neatly pinched on body; red-brown to grey, evenly smoothed interior; grey core
Fabric 1c (9547.1)
- 46 Globular bowl
Light brown exterior; brown to black interior; black core; surfaces smoothed
Fabric 2, densely grass-tempered (9046.1)
- 47 Globular bowl
Brown to black exterior, scraped above the shoulder, evenly pinched below; grey, smoothed interior
Fabric 1b (9564.1)
- 48 Handle from a handled bowl
Red-brown smoothed surfaces; black core; reddening may indicate secondary burning
Fabric 3, hard (9017.1)
- 49 Carinated bowl
Light red-brown to black exterior, lightly and evenly burnished; black, evenly smoothed interior; black core
Fabric 1c (9092.1)
- 50 Carinated bowl
Exterior brown on and below the carination, black near the rim; interior and core black; burnished surfaces
Fabric 1a (9021.1)
- 51 Carinated bowl, c 50% complete
Black burnished surfaces, badly flaking; red-brown core
Fabric 1a (9095.1)
- 52 Faceted carinated bowl; may be from the same bowl as 12 and 13
Black throughout; surfaces lightly, evenly burnished
Fabric 1c (9093.1b)
- 53 Carinated bowl
Black throughout; surfaces burnished
Fabric 3 (9084.1a)
- 54 Carinated bowl
Brown to black smoothed exterior with light sooting; dark grey smoothed interior; black core
Fabric 3 (9073.1)
- 55 Biconical bowl
Red-grey exterior with traces of burnishing; red-brown smoothed interior
Fabric 1c (9033.1)
- 56 Rim decorated with A1b stamps
Light grey throughout; surfaces worn
Fabric 1a (9015.1)
- 57 Biconical bowl with vertical nicks and slightly hollowed bosses on the carination
Black throughout with a red-brown external margin; exterior evenly burnished; interior wiped smooth and burnished
Fabric 4 (9080.1)
- 58 Wheel-thrown biconical bowl, Frankish
Sandy fabric; surfaces and core light grey; darker grey margins
- 59 Rim of wheel-thrown vessel with hollow boss, Frankish
Sandy fabric; grey throughout
- 60 Wheel-thrown body sherd, Frankish
Sandy fabric; light grey surfaces; red core
- 61 Shoulder decorated with H2, N1, and B1 stamps
Black throughout; surfaces lightly and evenly burnished
Fabric 1b (9978.1)
- 62 Flaring rim decorated with A4 stamps
Red-brown to brown, smoothed exterior with red-brown margin; dark grey interior, wiped smooth
Fabric 1c (9011.1)
- 63 Body sherd decorated with C4a stamps
Brown-red, smoothed exterior; black, smoothed interior; black core
Fabric 2 (9933.1)
- 64 Shoulder decorated with unidentified stamp
Black throughout; surfaces smoothed with traces of burnishing
Fabric 1b (9003.1)
- 65 Carinated bowl, c 50% complete
Slight hollow bosses at the carination defined with vertical incised lines; exterior grey-brown to dark grey with traces of burnishing; interior grey-brown and smoothed
Fabric 1b, containing common unsorted quartz sand (9054.1)
- 66 Body sherd decorated with A1ai stamps
Grey, smoothed surfaces, marked by dense grass temper; red-brown external margin
Fabric 2, densely grass-tempered (9728.4)
- 67 Carinated bowl
Black throughout; traces of burnishing on both surfaces
Fabric 2, lightly grass-tempered (9063.1)
- 68 Sherds from a globular vessel decorated with A9a stamps
Brown to black smoothed surfaces with traces of burnishing
Fabric 2, densely grass-tempered (9013.1)
- 69a, b Faceted carinated bowl
Black throughout; surfaces evenly burnished
Fabric 3, hard (9029.1)

The kiln ditches (ditch 296 and associated features) (Fig 184) Site atlas plans 4, 7

Illustrated pottery

- 1 Pedestal base
Black throughout; exterior evenly burnished; interior smoothed
Fabric 7 (150N 550E)

- 2 Handled bowl; from same bowl as GH 41.10
Dark grey throughout; surfaces smoothed
Fabric 3 (202N 581E)
- 3 Shoulder
Black throughout; exterior burnished; interior smoothed
Fabric 1c (9892.1)
- 4 Carinated bowl with faint horizontal grooves
Black throughout; surfaces smoothed
Fabric 3, containing common mica (9898.1)
- 5 Biconical bowl
Black throughout; surfaces lightly, evenly burnished
Fabric 3 (9899.1)
- 6 Carinated bowl with nicked carination
Dark grey-brown lightly burnished exterior; dark grey, smoothed interior; dark grey core
Fabric 3 (9899.3)
- 7 Straight-sided bowl with flat-topped rim
Black exterior, smoothed with traces of burnishing near the rim, coarse-slipped on the body; dark brown to grey smoothed interior; black core
Fabric 3, coarse (9900.1)
- 8 Carinated bowl
Dark grey throughout; surfaces lightly burnished
Fabric 3 (9902.1)
- 9 Rim, flat-topped, decorated with shallow grooves
Grey throughout; surfaces evenly scraped smooth, with traces of light, even burnishing
Fabric 1c (9907.2)
- 10 Carinated bowl with deeply impressed dimples
Black throughout; exterior highly burnished; interior evenly smoothed, with traces of burnishing
Fabric 1c (9909.2)
- 11 Carinated or biconical bowl, perhaps originally with a pedestal base
Black throughout; both surfaces highly burnished
Fabric 1c, exceptionally hard (9910.1)
- 12 Carinated bowl with diagonal slashes on the carination
Exterior grey-brown and smoothed on the carination, black and burnished below; interior black and burnished
Fabric 3 (9911.3)
- 13 Bowl with incurving, flat-topped rim
Black throughout; exterior evenly burnished near the rim and pinched on the body; interior wiped smooth
Fabric 3 (9915.1)
- 14 Biconical bowl, c 50% complete
Grey-brown smoothed exterior; light grey smoothed interior, with red-brown internal margin; dark grey core
Fabric 4 (9916.1)
- 15 Faceted carinated bowl
Grey surfaces and core with a red-brown external margin; surfaces burnished
Fabric 1c (9918.1)
- 16 Body sherd decorated with K1b ('brooch spring') stamp; stamp-linked to 18, which is also very similar in decoration and finish, and to GH 58.31, although the fabrics of these vessels differ
Black throughout; both surfaces evenly burnished
Fabric 3 (9919.1)
- 17 Rim decorated with notches
Black throughout; both surfaces lightly and evenly burnished
Fabric 3 (9920.1)
- 18 Body sherd decorated with K1b ('brooch spring') stamp; stamp-linked and very similar in decoration and finish to 16, although their fabrics differ slightly
Black throughout; both surfaces burnished
Fabric 7 (9921.1)
- 19 Body sherd decorated with raised cordons and A1a stamps
Black throughout; surfaces evenly burnished
Fabric 7 (9922.1)
- 20 Body sherd decorated with A5 stamp
Brown, smoothed exterior; black, lightly burnished interior; black core
Fabric 2 (9923.1)
- 21 Body sherd, decorated with C1c stamp
Brown-red abraded exterior; black, smoothed interior
Fabric 1c, with sparse grass temper (9924.1)
- 22 Shoulder, decorated with A1a stamps
Black throughout; surfaces highly burnished
Fabric 3, coarse (9925.1)
- 23 Hemispherical bowl on a pedestal base, c 40% complete
Brown, smoothed exterior; black, smoothed interior; black core
Fabric 2, densely grass-tempered and friable (9946.1)

Miscellaneous ditches

(Figs 185, 186)

Illustrated finds

- 1 (RBI ditch) Copper alloy supporting-arm brooch, Perlberg type; unlocated; Evison 1977, fig 1.f (Bronze 107/AML498)
- 2 (ditch 25614) Copper alloy button brooch (Bronze 495/AML820830)
- 3, 4 (ditch recut 7294) Perforated lead discs (AML 715324/AML715325)
- 5 (Double Ditched Enclosure) Iron knife (Iron 750)

Illustrated pottery

- 6 (RBI ditch) Rim decorated with irregular A1a stamp
Black throughout; surfaces smoothed with traces of burnishing
Fabric 1c (9926.1)
- 7 (Double Ditched Enclosure) Body sherd decorated with A1b stamp
Black, smoothed exterior; red-brown smoothed interior; black core
Fabric 1c
- 8 (Double Ditched Enclosure) Shoulder decorated with F2b stamps
Dark grey throughout; surfaces smoothed with traces of external burnishing
Fabric 3, coarse (9930.1)
- 9 (Double Ditched Enclosure) Body sherd decorated with A1a stamps
Dark grey throughout; surfaces smoothed with traces of light external burnishing
Fabric 4 (9932.1)
- 10 (Double Ditched Enclosure) Jar decorated with A3a and E2c stamps
Dark grey-brown, evenly smoothed exterior; black interior, scraped smooth; black core; both surfaces show traces of burnishing
Fabric 1b (9934.1)
- 11 (Double Ditched Enclosure) Biconical bowl with broken handle or applied lug
Black exterior, lightly and evenly burnished, with light red-brown margin; grey interior, smoothed
Fabric 3 (9948.1)

- 12 (ditch 296) Two body sherds decorated with two different A5d stamps and one C4 stamp
Brown, smoothed exterior; black, smoothed interior, with hard yellow deposits; black core
Fabric 2 (9927.1)
- 13 (ditch 14288) Globular jar, c 50% complete
Black throughout; exterior lightly, evenly burnished; interior smoothed
Fabric 2, lightly grass-tempered
- 14 (ditch ?) Shoulder of wheel-thrown bottle, Frankish
Sandy fabric; red surfaces; grey core (2027N 815E)
- 15 (ditch 25614) Two sherds of a bowl with 'swallow's nest' lugs, approximately 30% complete
Red-brown to black; smoothed with traces of burnishing
Fabric 2, densely grass-tempered and friable (2113N 744E, 2115N 750E)
- 16 (ditch 15010) Two cross-joining body sherds of sandy Ipswich Ware decorated with grid stamps and burnished lattice pattern
Sandy, dark grey fabric; smoothed surfaces (1198N 628E)

Pits

(Figs 179, 187–193)

Pit 177

120N 522E (Fig 187)

Illustrated pottery

- 1 Body sherd, notched
Dark grey throughout with red-brown external margin; surfaces evenly burnished
Fabric 5, hard (8022.2)
- 2 Carinated bowl decorated with A1a stamps; two sherds
Light red-brown, smoothed surfaces; black core
Fabric 7 (8023.1)

Pit 1002 (aa)

375N 718E, formerly GH 213 (Fig 187)

Illustrated finds

- 1 Iron hoop, incomplete (Iron 770)

Not illustrated

Copper alloy rod fragment; L 21mm (Bronze 584/AML820913)
Iron fragments, corroded, 365g

Illustrated pottery

- 2 Rim, exceptionally well-made and decorated with H2c stamps and shallow dimples
Black, evenly smoothed surfaces, lightly and evenly burnished near the rim; dark brown core
Fabric 3, hard (3277.1)
- 3 Hemispherical bowl
Light brown, crudely finished surfaces; black core
Fabric 1b (3278.1)
- 4 Rim
Dark grey surfaces with a light, even burnish; red-brown core
Fabric 1a, containing sparse grass temper (3281.1)
- 5 Hemispherical bowl
Brown to black throughout; surfaces lightly, evenly burnished
Fabric 1b (3280.2)
- 6 Dish
Black throughout; both surfaces smoothed with traces of uneven external burnishing
Fabric 1a (3282.1)

Pit 3399

10N 298E (Fig 187)

Illustrated pottery

- 1 Globular jar, c 30% complete
Grey-brown, smoothed exterior; dark brown, finger-wiped interior; black core
Fabric 2 (unnumbered)
- 2 Body sherd, neatly perforated from exterior
Red-brown, smoothed surfaces; black core
Fabric 2 (8011.2)

Pit 3596

224N 354E (Fig 187)

Illustrated pottery

- 1 Bowl
Black throughout; surfaces smoothed
Fabric 1a (8046.10)
- 2 Rim, decorated with shallow grooves
Black throughout with red-brown margins; exterior burnished; interior smoothed
Fabric 1c (8046.9)

Pit 6193

1538N 317E, formerly GH 94 (Fig 188)

Illustrated finds

- 1 Iron key (Iron 471)

Illustrated pottery

- 2 Splayed base
Black throughout; both surfaces smoothed
Fabric 1b (2274.1)
- 3 Body sherd, wheel-thrown and decorated with rouletting; heavily abraded; ?Frankish
Blue-grey to black surfaces; black core; light external carbonised deposits
Fabric fine, hard, and sandy (2275.1)
- 4 Rim, flat-topped
Brown, smoothed surfaces; black core
Fabric 2, densely grass-tempered (2276.1)

Pit 7811

1491N 680E (Fig 188)

Illustrated pottery

- 1 Rim with upright lug
Light brown, smoothed exterior; interior abraded; black core; overfired
Fabric 1b (8250.1)
- 2 Straight-sided bowl with pierced applied lug and footing base
Light red-brown to dark grey-brown exterior; brown to black interior; black core; surfaces smoothed
Fabric 2, densely grass-tempered (8250.2)
- 3 Biconical bowl with flat-angled base and flaring rim
Light to dark brown, smoothed exterior; dark brown, smoothed interior; black core
Fabric 2, densely grass-tempered (8250.3)

Pit 10420

2058N 611E (Fig 188)

Illustrated pottery

- 1 Globular jar, c 30% complete
Dark grey throughout; surfaces smoothed with traces of external burnishing
Fabric 1b (8407.1)

- 2 Globular bowl, c 30% complete
Black throughout; surfaces smoothed with light internal carbonised deposits
Fabric 2 (8409.2a)
- 3 Globular bowl
Black throughout; surfaces smoothed surfaces
Fabric 2 (8409.2b)
- 4 Flaring rim
Brown, smoothed exterior; black, smoothed interior; black core
Fabric 1b (8409.3)

Pit 11174

1917N 920E (Fig 189)

Illustrated pottery

- 1 Globular jar with short upright rim and splayed base
Exterior predominantly light brown-red and scraped smooth; interior light brown-red and smoothed; core light red-brown to black
Fabric 2 (8363.1, 2)
- 2 Upright rim
Dark brown to black throughout; exterior burnished; interior scraped smooth
Fabric 1b (8363.4)

Pit 11359

1800N 1052E, formerly GH 141 (Fig 189)

Illustrated pottery

- 1 Flat-rounded base
Red-brown, carefully smoothed then pinched exterior; black, burnished interior with carbonised deposits
Fabric 1a (2669.2)
- 2 Splay-sided dish
Red-brown to dark grey, weathered exterior; dark grey, smoothed interior
Fabric 3 (2674.2)
- 3 Rim
Black throughout; both surfaces wiped smooth with a coarse fibre
Fabric 1b, containing common quartz sand (2669.5)
- 4 Hemispherical bowl, crudely formed, possibly on a splayed base
Black throughout; both surfaces hand-wiped
Fabric 1c, containing abundant unsorted quartz sand (2678.1)
- 5 Swallow's nest lug, crudely formed; partially reconstructed profile
Brown-grey throughout; surfaces crudely finished
Fabric 2, densely grass-tempered (2673.1)
- 6 Globular bowl, decorated with H1 and G2 stamps; exceptionally evenly formed; decoration carefully and evenly executed
Surfaces weathered, but carefully smoothed; exterior light grey to brown, with localised reduction and a reddish margin; interior light grey
Fabric unclassified: very fine and relatively hard, containing virtually no inclusions visible under 10x magnification

Pit 11365

1800N 1052E (Fig 189)

Illustrated pottery

- 1 Globular jar with upright rim
Light brown, wiped surfaces; black core
Fabric 2, densely grass-tempered (8336.3)
- 2 Carination from biconical vessel
Black throughout; surfaces burnished
Fabric 1c (8338.1)

- 3 Flaring rim
Brown to grey-brown surfaces, scraped smooth; black core
Fabric 2, lightly grass-tempered (8338.2)
- 4 Splayed base, c 30% complete
Predominantly black, oxidised in patches, with light carbonised deposits near the base; black, smoothed interior; black core
Fabric 2, densely grass-tempered (8340.1)
- 5 Rim
Light grey-brown smoothed exterior; black, smoothed interior; black core; somewhat overfired
Fabric 2 (unnumbered)
- 6 Pedestal base
Dark grey-brown surfaces; black core
Fabric 3, fine (unnumbered)

Pit 11387

1720N 1012E, formerly GH 138 (Fig 190)

Illustrated pottery

- 1 Body sherd decorated with A1b stamp
Black throughout; surfaces burnished
Fabric 1c, exceptionally hard (2643.1)
- 2 Flat-angled base
Black exterior; light-brown interior; black core; surfaces smoothed
Fabric 1b (2643.3)
- 3 Bowl, slightly splay-sided
Brown to black exterior; black interior; surfaces lightly burnished
Fabric 3, fine (2646.1)

Pit 12413 (q)

1110N 394E, formerly Crem 866 (Fig 190)

Illustrated pottery

- 1 Hemispherical bowl with broken handle or lug, c 50% complete
Predominantly grey-brown throughout, with some oxidised patches
Fabric 2 (8173.1)
- 2 Shallow hemispherical bowl, c 50% complete
Light red-brown throughout; surfaces smoothed
Fabric 2 (8174.1)

Pit 12578

1765N 867E (Fig 190)

Illustrated pottery

- 1 Large globular jar with strongly flaring rim
Light brown smoothed surfaces; black core
Fabric 2, densely grass-tempered (8319.1)
- 2 Large globular jar, c 25% complete
Brown-red smoothed exterior; red-brown interior, scraped smooth; grey core; overfired
Fabric 2, densely grass-tempered (8321.1)

Pit 25231

2379N 793E (Fig 191)

Illustrated pottery

- 1 Flaring rim
Dark brown, smoothed exterior; red-brown, smoothed interior; black core
Fabric 1b, densely grass-tempered (8551.1)
- 2 Body sherd from a neatly perforated vessel
Grey to light red-brown exterior; red-grey interior; grey core; wiped smooth
Fabric 3 (8551.2)
- 3 Globular jar
Black throughout; surfaces evenly smoothed
Fabric 2 (8554.1)

Pit 25288 (I)

2400N 816E (Fig 191)

Finds, not illustrated

Sarsen rotary quern, approximately half complete, identified by Major as probably Anglo-Saxon; diam 290mm (quern 1894)

Illustrated pottery

- 1 Globular vessel
Dark red-grey exterior with red-brown margin, smoothed and unevenly burnished; dark grey, smoothed interior; black core
Fabric 2, lightly grass-tempered (8556.1)
- 2 Globular vessel
Red-brown, smoothed exterior, dark grey on rim; dark grey, smoothed interior; dark grey core
Fabric 2 (8556.2)

Pit 25456

2220N 645E (Fig 191)

Illustrated pottery

- 1 Bowl with incurving rim
Dark brown, smoothed surfaces with traces of external burnishing; black core
Fabric 2, densely grass-tempered (8457.3)
- 2 Straight-sided bowl, crudely formed
Brown, unfinished exterior; black, smoothed interior
Fabric 2, densely grass-tempered (8457.4)

Pits: single finds and pottery

(Figs 192, 193)

- 1 Pit 25244 2425N 481E
Copper alloy annular brooch with punched and incised decoration, very worn (Bronze 535/AML820870)
- 2 Pit 25850 2520N 941E
Iron metalworker's hammer; straight head with square cross-section; sloping chisel-like tail; shaft-hole highly corroded but appears to have been small and circular; date uncertain, possibly prehistoric (AML 831373)
- 3 Pit 4654 483N 605E
Body sherd
Brown exterior, pinched, with black, patchy, shiny deposit; dark grey smoothed interior; black core
Fabric 3 (8081.1)
- 4 Pit 11436 1673N 1029E
Body sherd decorated with A1a stamps and A4a stamps
Black throughout; surfaces smoothed
Fabric unclassified: grass-tempered, with the addition of abundant relatively well-sorted sub-rounded flint (8287.1)
- 5 Pit 11126 1996N 1132E
Body sherd decorated with C2c stamps; from the same pot as GH 190.10
Black throughout; surfaces smoothed
Fabric 1b (8382.6)
- 6 Pit 3592 248N 366E
?Globular bowl decorated with A1a stamps
Black throughout; both surfaces highly burnished
Fabric 1c (8049.1)
- 7 Pit 8668 970N 863E
Handle
Black throughout
Fabric 2 (8153.1)
- 8 Pit 13861 743N 590E
Body sherd
Dark grey throughout; both surfaces smoothed
Fabric 3 (unnumbered)
- 9 Pit 4224 1307N 337E
Carinated bowl
Dark grey surfaces with a red-grey external margin; traces of external burnishing
Fabric 5 (unnumbered)
- 10 Pit 25568 2232N 1020E
Hemispherical bowl with everted rim
Brown to black exterior, smoothed with traces of burnishing near rim; black, smoothed interior, with light carbonised deposits; black core
Fabric 1b, densely grass-tempered (8466.1)
- 11 Pit 10890 2117N 1057E
Body sherd with applied, vertical boss
Dark red-grey exterior with traces of burnishing; grey-brown, smoothed interior; black core
Fabric 4 (unnumbered)
- 12 Pit 1083 326N 502E
Biconical bowl
Grey-brown, smoothed exterior; black smoothed interior with carbonised deposits; black core
Fabric 1c (8064.1)
- 13 Pit 703 119N 485E
Bowl with applied, perforated lug
Dark grey-brown with red external margin; black interior; black core; both surfaces smoothed
Fabric 1b (8022.1)
- 14 Pit 25556 2280N 1050E
Body sherd decorated with H2a stamp
Black throughout; surfaces smoothed
Fabric 1b (8508.1)
- 15 Pit 25360 2443N 928E
Globular jar
Brown exterior, wiped smooth; dark grey smoothed interior; black core
Fabric 2, densely grass-tempered (8571.1)
- 16 Pit 11376 1726N 1056E
Basal sherd
Brown exterior, smoothed and neatly pinched, with black deposits; black interior, evenly burnished; black core
Fabric 4 (8307.1)
- 17 Pit 12671/73 469N 42E
Body sherd
Grey-brown, combed exterior; dark grey, smoothed interior; black core
Fabric 3 (8078.1)
- 18 Well 4 1051N 642E
Small globular bowl with flat-angled base, c 40% complete
Red-brown to black exterior, smoothed and spalled in firing; grey-brown to dark grey, smoothed interior
Fabric 3 (8340.2)
- 19 Pit 25728 2323N 970E
Shoulder and body sherds, decorated with C4b stamp
Dark grey, smoothed surfaces; red-grey core; light external burnishing
Fabric 1c (8539.1)
- 20 Pit 3143 55 335E
Globular jar
Red-brown to black exterior, lightly and evenly burnished; black smoothed interior; black core
Fabric 1c (unnumbered)

Anglo-Saxon pottery from postholes

(Fig 193)

- 1 Faceted carinated bowl
Dark brown to black, burnished surfaces
Fabric 1a (8356.1; 1866N 954E)
- 2 Body sherd decorated with C3c stamps
Black throughout; exterior burnished; interior smoothed
Fabric 3 (8533.1; 2302N 984E)
- 3 Body sherd decorated with H2a stamps
Black throughout; exterior smoothed; interior abraded
Fabric 4 (8544.1; 2347N 763E)

Unstratified Anglo-Saxon finds and pottery

(Fig 194)

- 1 Pottery spindlewhorl, Type 1; black-burnished ware (SPW 37)
- 2 Fired clay spindlewhorl, Type 2a; unlocated (SPW 72)
- 3 Carinated bowl, decorated with A2a and B2 stamps
Grey throughout; surfaces evenly smoothed
Fabric 3 (9928.1)
- 4 Body sherd decorated with A2c stamps
Black, smoothed exterior; dark grey, smoothed interior; grey-brown to black core
Fabric 4 (9929.1)
- 5 Body sherd decorated with A1a stamps
Red-brown smoothed exterior; dark grey, smoothed interior with traces of burnishing; black core
Fabric 1b, lightly grass-tempered (9931.1)
- 6 Flaring rim, flat-topped and perforated
Brown, smoothed surfaces, black and lightly burnished on the rim; black core
Fabric 1c (9935.1)
- 7 Body sherd decorated with C3b stamp
Light red-brown, smoothed exterior; black, smoothed interior; red-brown to black core
Fabric 3 (9938.1)
- 8 Body sherd with raised, slashed cordon
Black throughout; surfaces smoothed
Fabric 3, containing sparse grass temper (9950.1)
- 9 Biconical bowl, c 25% complete
Brown to black exterior, lightly burnished, with carbonised deposits; black, evenly smoothed interior; black core
Fabric 2, hard (7007.1)
- 10 Faceted carinated bowl
Brown to black exterior, lightly burnished; black, smoothed interior; black core
Fabric 1c (unnumbered)
- 11 Faceted carinated bowl
Black throughout; surfaces smoothed
Fabric 1b (884N 698E)
- 12 Rim and two body sherds from a bossed jar
Dark grey throughout; surfaces smoothed with traces of burnishing
Fabric 4 (8006.1)
- 13 Body sherd, possibly from an embossed vessel
Brown, smoothed exterior; dark grey, smoothed interior; dark grey core
Fabric 1a (unnumbered; 14S 200E)
- 14 Large globular jar with a strongly flaring rim
Well-made, with thin even walls; predominantly dark grey scraped surfaces; black core
Fabric 1b (8032.1)
- 15 Globular bowl, c 50% complete
Exterior dark brown and smoothed near the rim, light brown to red-brown and roughened on the body; interior dark grey-brown and evenly smoothed, with light carbonised deposits
Fabric 5 (8442.2; (2133N 1123E))
- 16 Faceted carinated bowl with alternating small triple facets and large single facets; exceptionally well-made
Black throughout; both surfaces evenly burnished
Fabric 4 (7140S 320E)

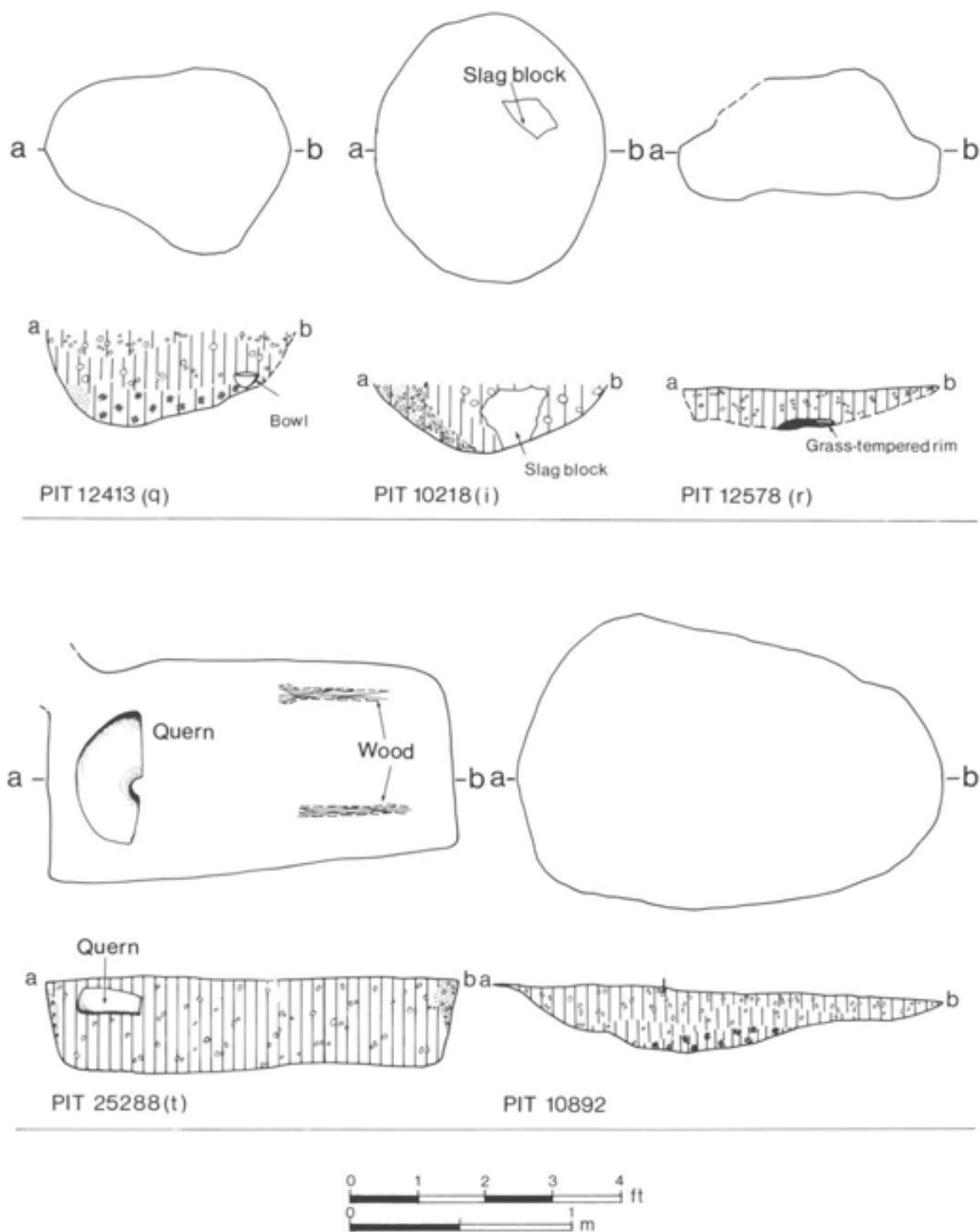


Fig 179 Anglo-Saxon pits

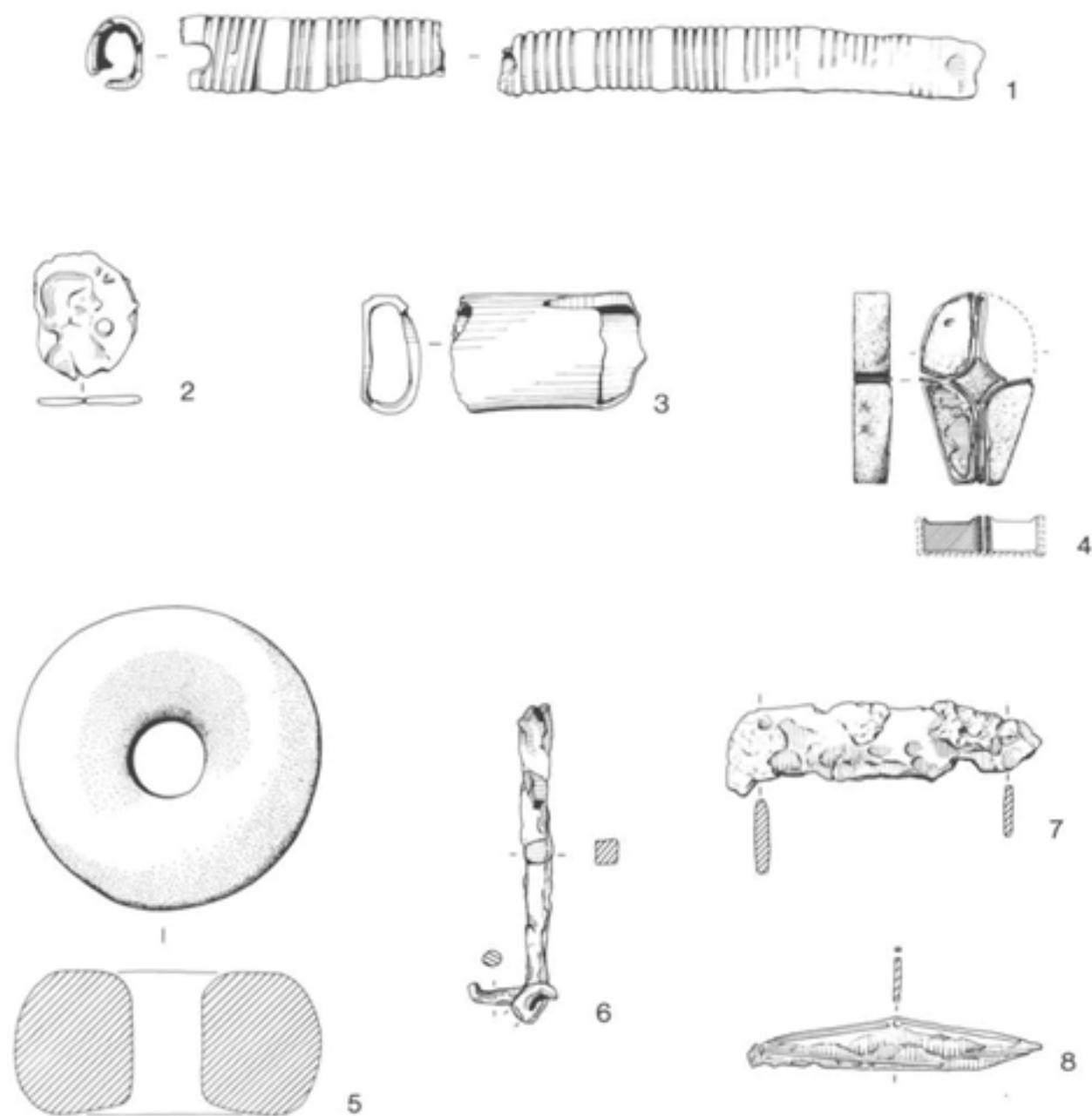


Fig 180 Finds from the North Enclosure (scales: 1-5, 1:1; 6-8, 1:2)

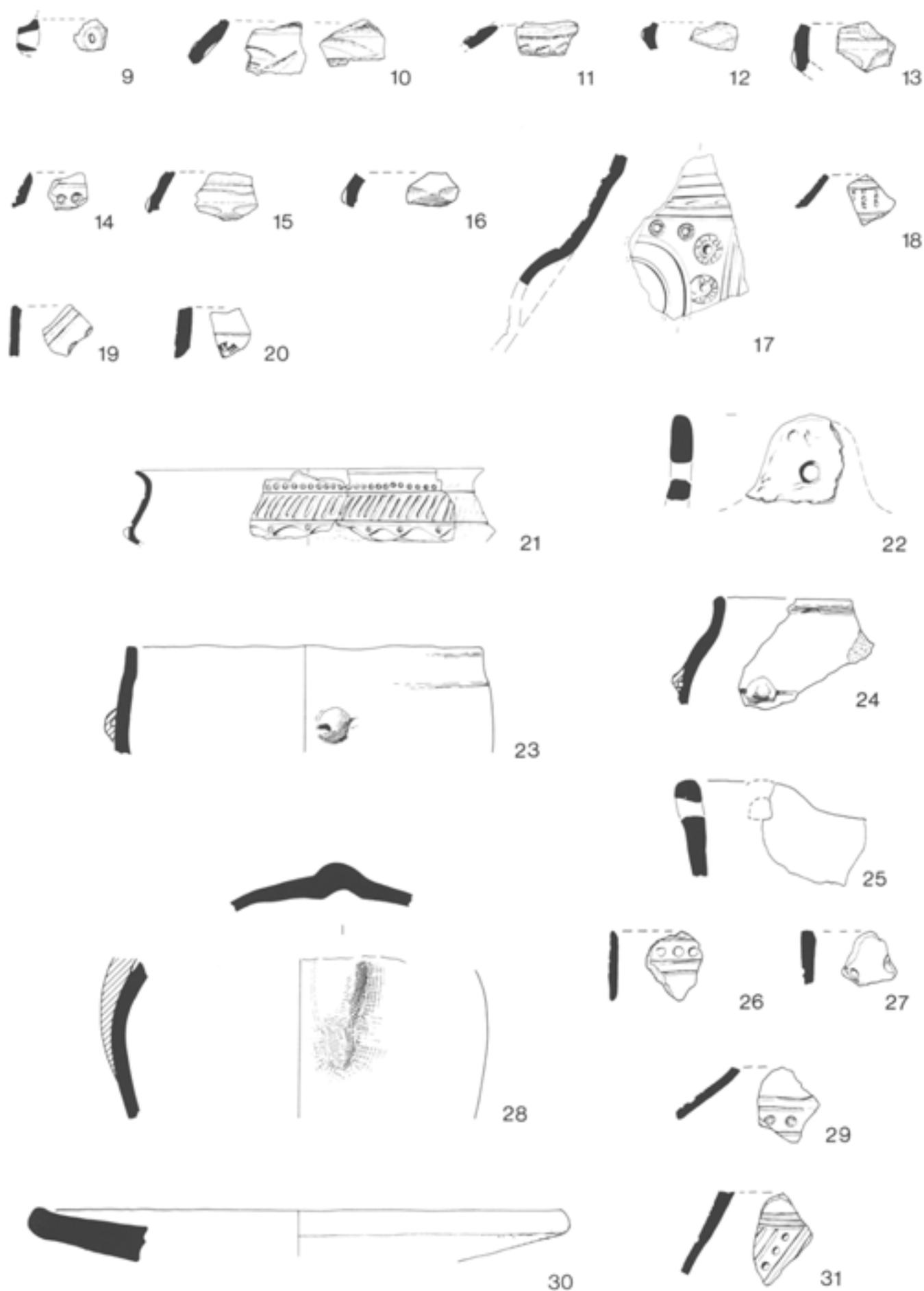


Fig 181 Pottery from the North Enclosure (scale: 1:3)



Fig 182 Pottery from the North Enclosure (scale: 1:3)

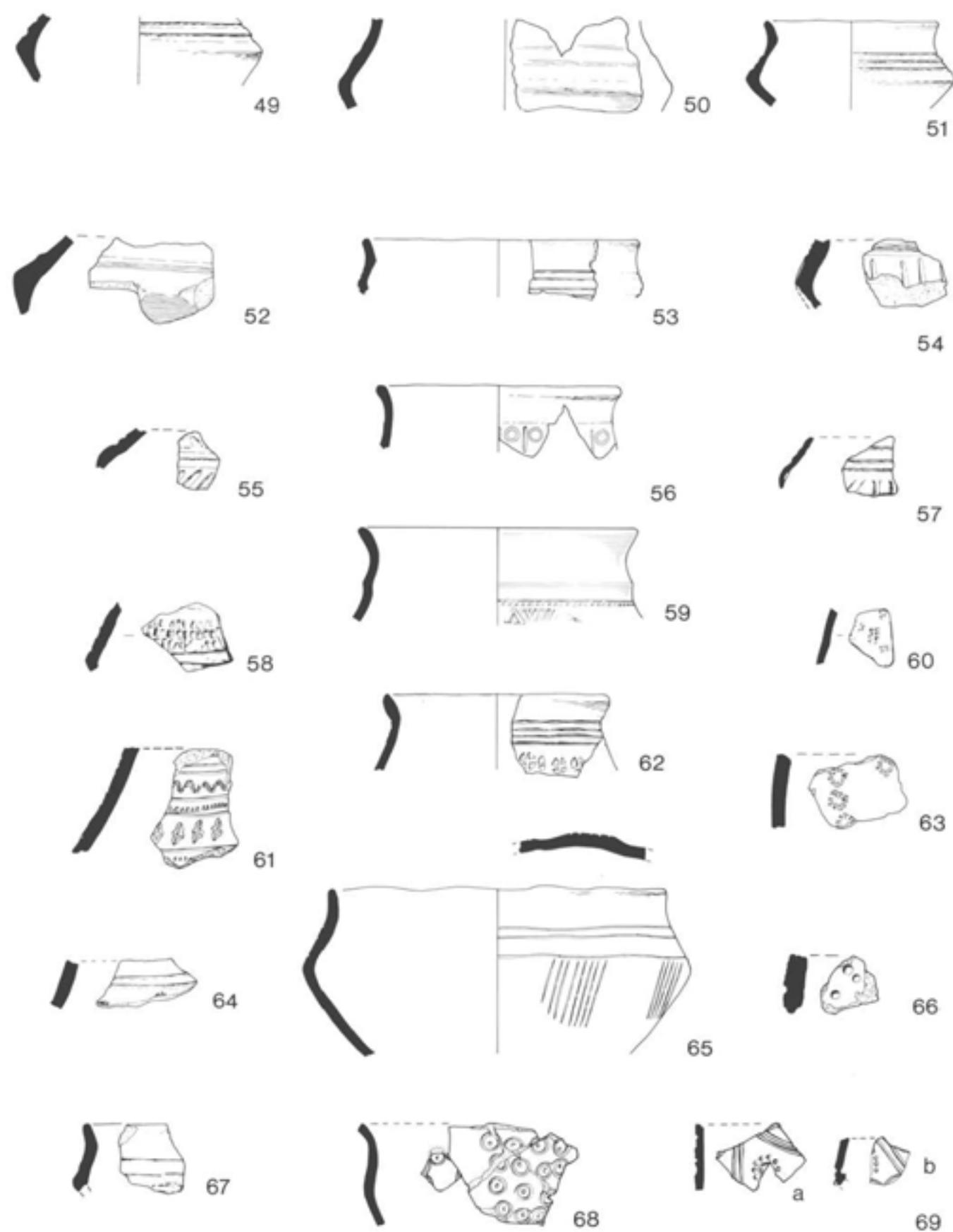


Fig 183 Pottery from the North Enclosure (scale: 1:3)

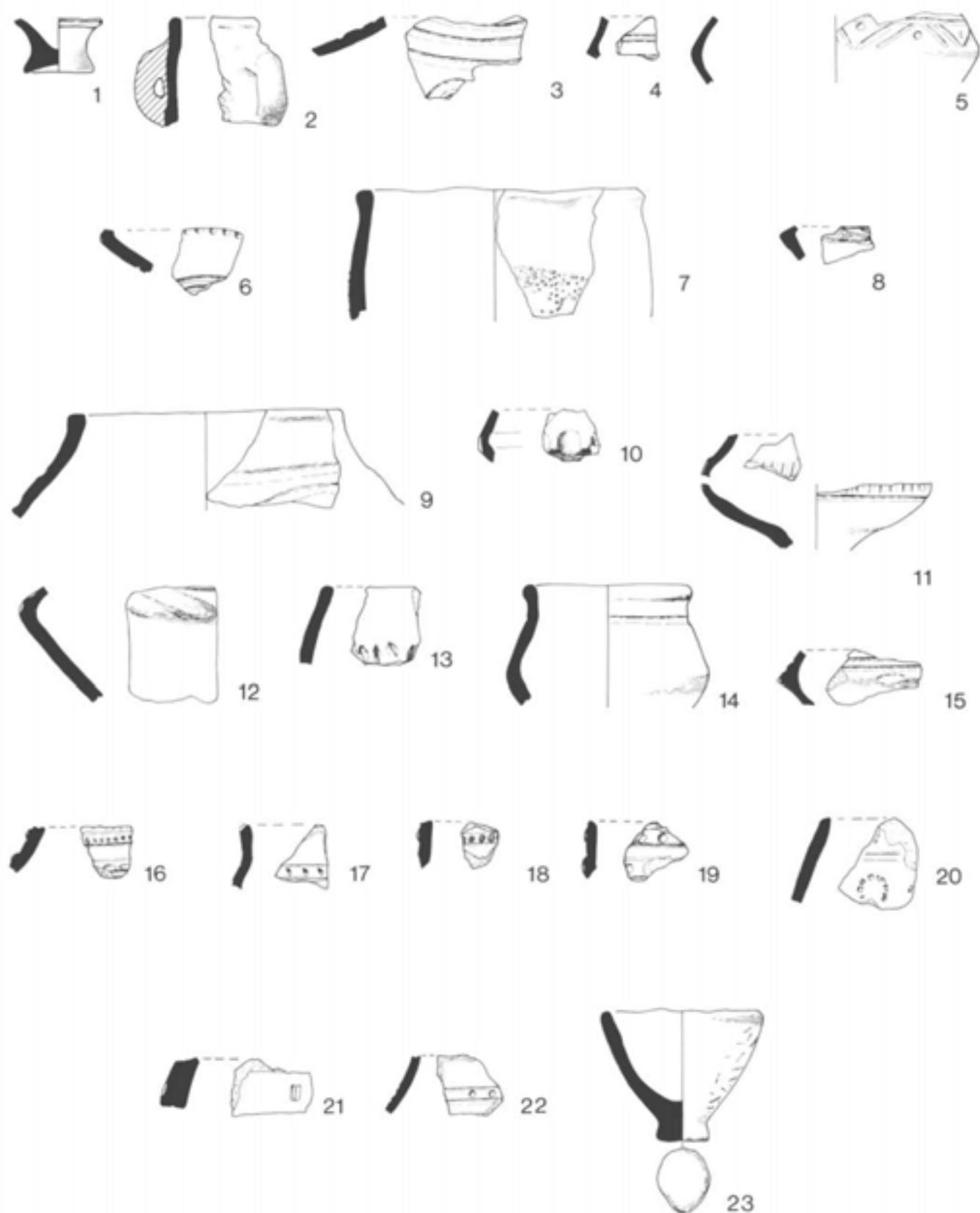


Fig 184 Pottery from the kiln ditches (scale: 1:3)

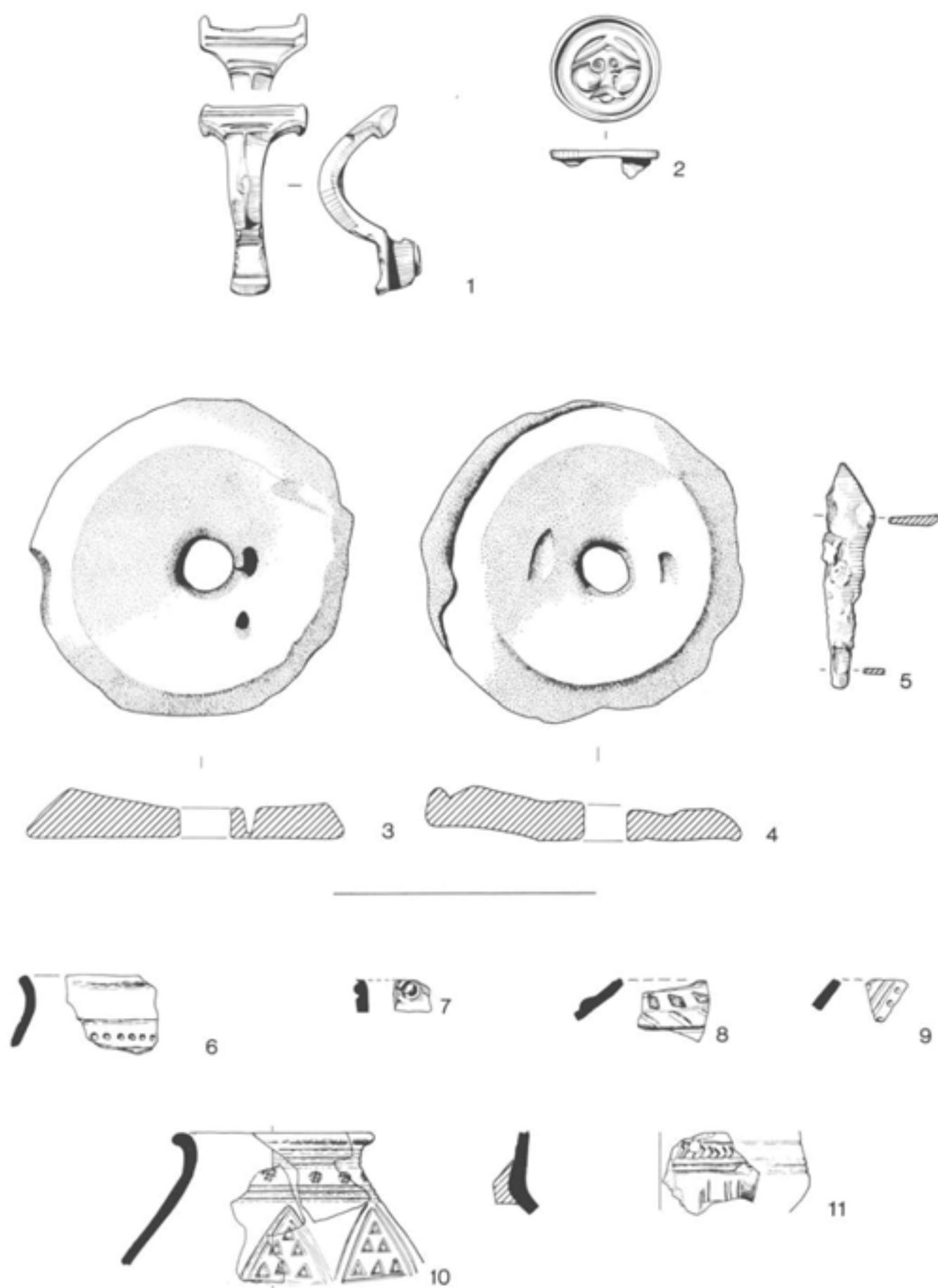


Fig 185 Finds and pottery from ditches (scales: 1-4, 1:1; 5, 1:2; 6-11, 1:3)

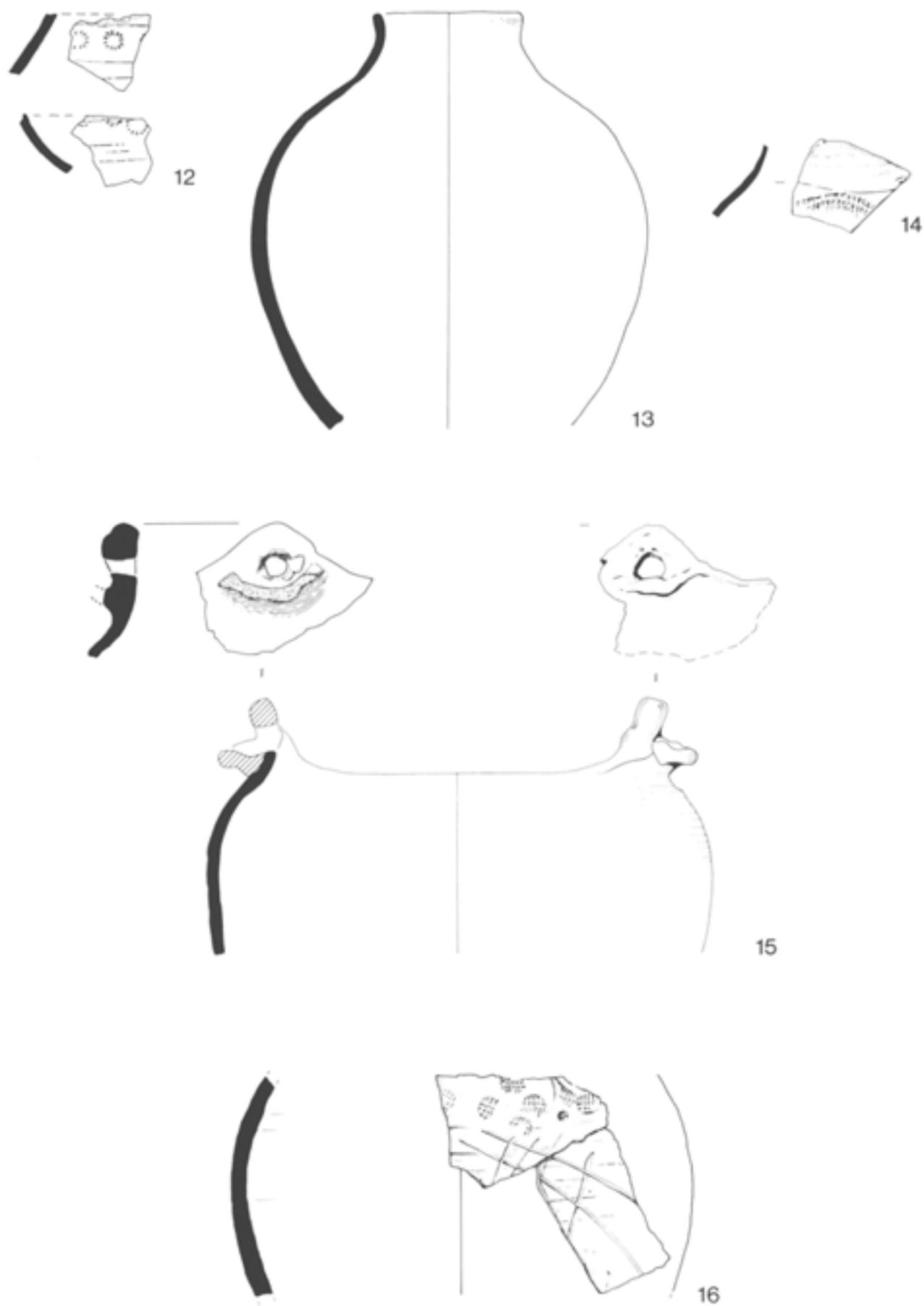


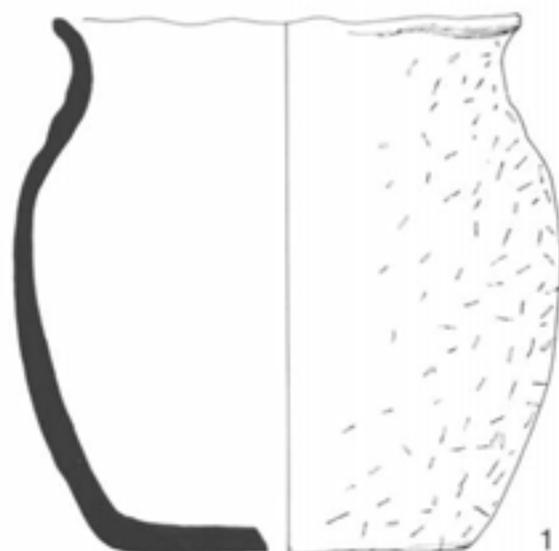
Fig 186 Pottery from ditches (scale: 1:3)



PIT 177



PIT 1002 (aa)



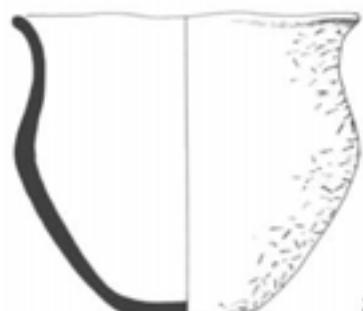
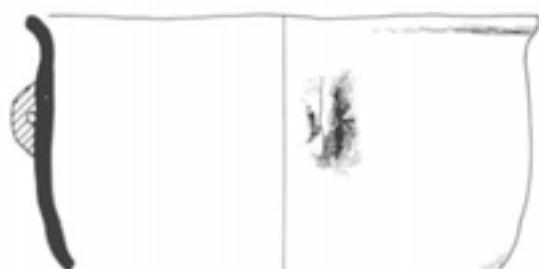
PIT 3399

PIT 3596

Fig 187 Finds and pottery from pits 177, 1002, 3399, 3596 (scales: pit 177, 1:3; pit 1002.1, 1:2; 2-6, 1:3; pits 3399 and 3596, 1:3)



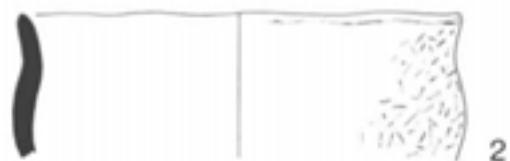
PIT 6193



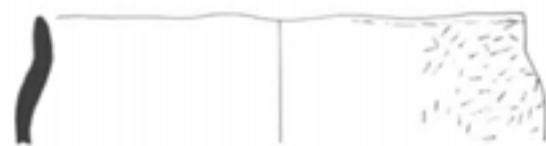
PIT 7811



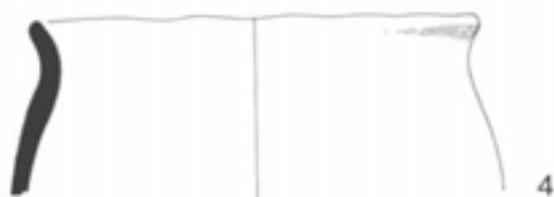
1



2



3



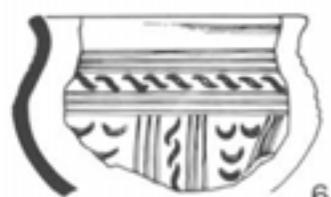
4

PIT 10420

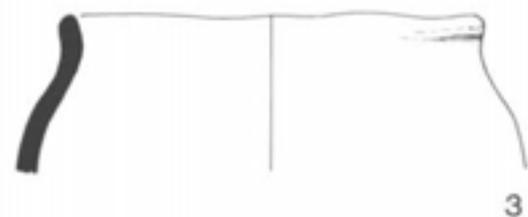
Fig 188 Finds and pottery from pits 6193, 7811, 10420 (scales: pit 6193.1, 1:2; 2-4, 1:3; pits 7811 and 10420, 1:3)



PIT 11174



PIT 11359

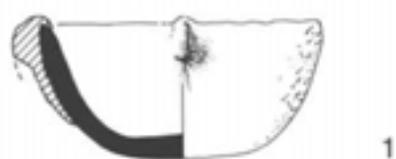


PIT 11365

Fig 189 Pottery from pits 11174, 11359, 11365 (scale: 1:3)



PIT 11387



1

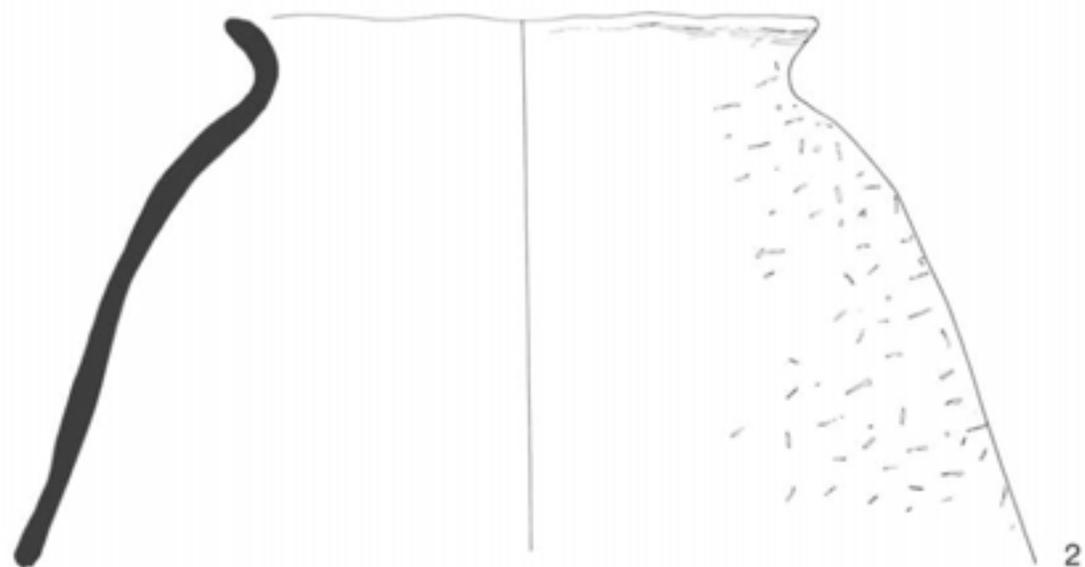


2

PIT 12413 (q)



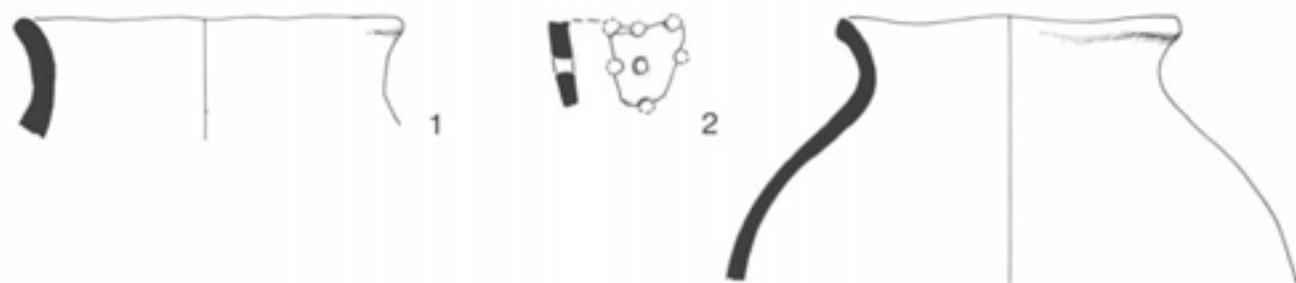
1



2

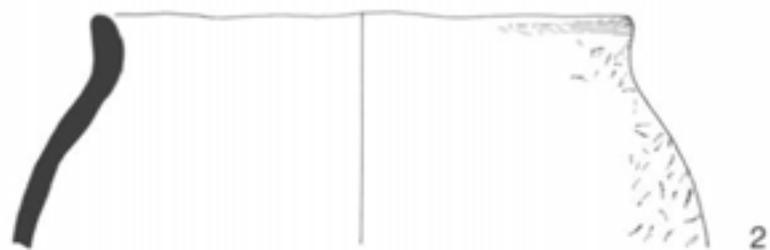
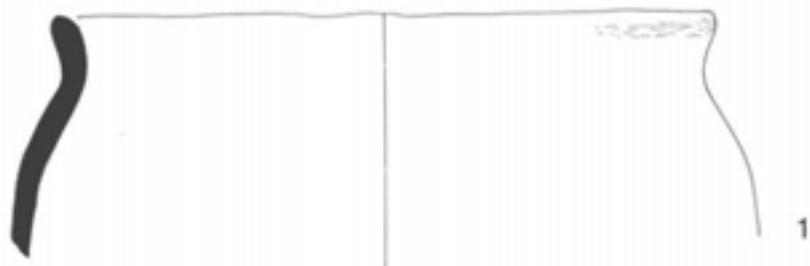
PIT 12578(r)

Fig 190 Pottery from pits 11387, 12413, 12578 (scale: 1:3)

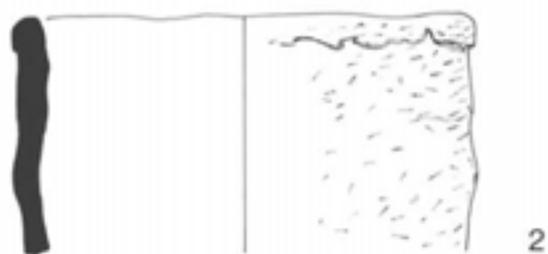


PIT 25231

3



PIT 25288 (t)



PIT 25456

Fig 191 Pottery from pits 25231, 25288, 25456 (scale: 1:3)



Fig 192 Single finds and pottery from pits (scales: 1, 1:1; 2, 1:2; 3-15, 1:3)

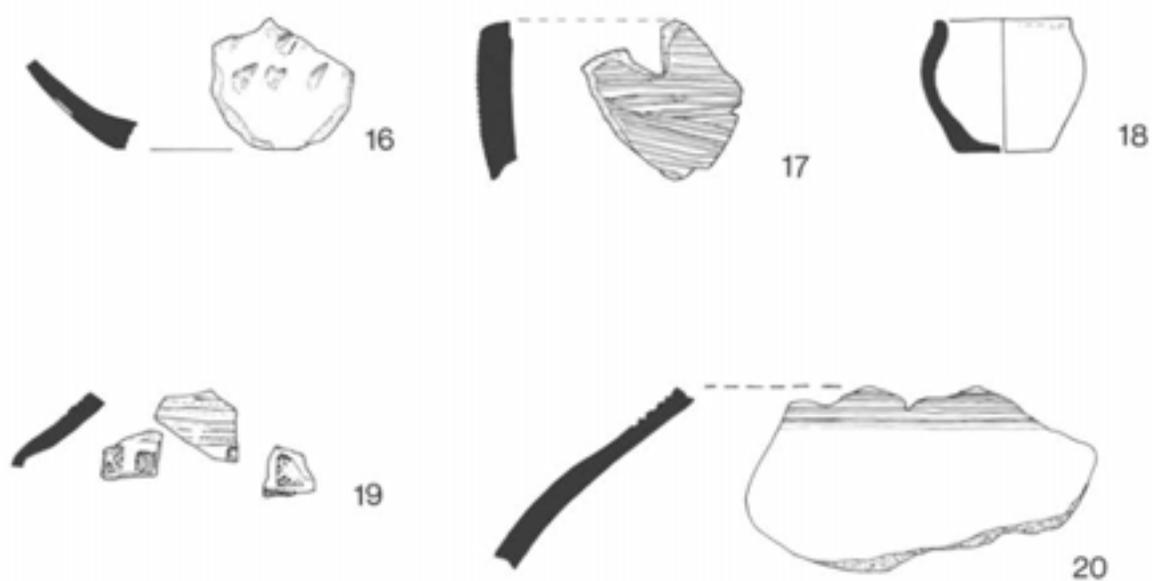


Fig 193 Pottery from pits (16–20); pottery from postholes (1–3) (scale: 1:3)

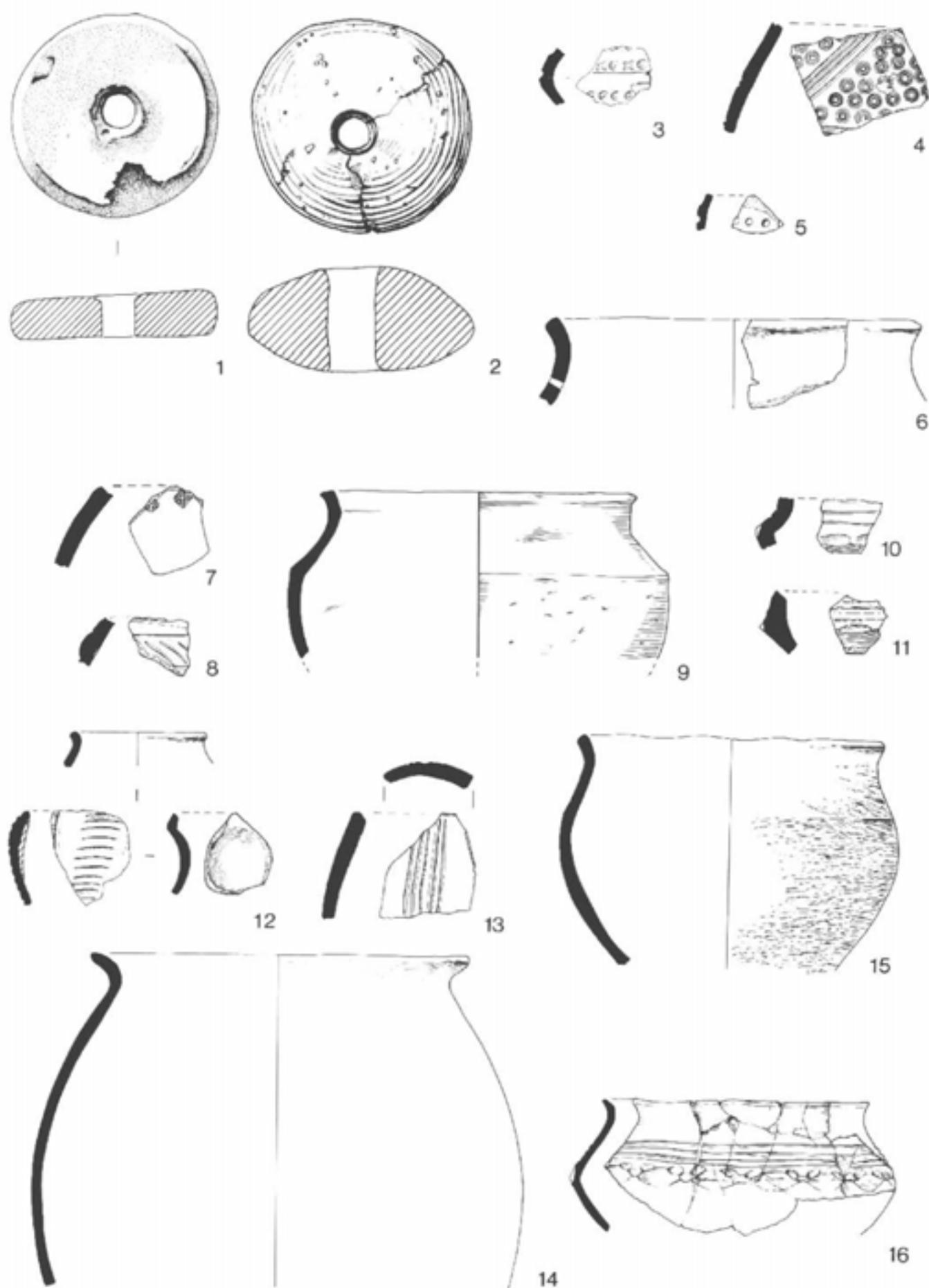


Fig 194 Unstratified finds and pottery (scales: 1-2, 1:1; 3-16, 1:3)

Summary

Excavations on the 100ft gravel terrace of the River Thames at Mucking in south-east Essex began in 1965. Over the next 13 years some 18 hectares were investigated, revealing a highly complex archaeological landscape spanning the Neolithic to Anglo-Saxon periods. Mucking provided the first opportunity to excavate an Anglo-Saxon settlement and associated burials simultaneously, and with two Anglo-Saxon cemeteries, at least 53 posthole buildings, and 203 sunken huts (*Grubenhäuser*), Mucking remains the most extensive and one of the earliest Anglo-Saxon settlements excavated to date. The metalwork and coin evidence suggests uninterrupted Anglo-Saxon occupation at Mucking from the first half of the fifth century to the beginning of the eighth century.

A wide range of artefacts derive from the settlement, including a substantial quantity of Frankish pottery, two sherds of Ipswich Ware, late Roman 'military' belt fittings, three silver pennies of c AD 680–5, a range of iron tools, a substantial quantity of spinning and weaving equipment, cast lead rings and discs, and the only early Anglo-Saxon brooch mould found to date.

The spatial development of the settlement is suggested by the distribution of chronologically diagnostic metalwork, glass, imported pottery, and certain types of Anglo-Saxon pottery. The most marked trends in the pottery sequence are an increase in the proportion of grass-tempered to other fabrics in the sixth and seventh centuries, while by the seventh century there is a decrease in the production of pottery in general, and of decorated pottery in particular. Few obvious contrasts are apparent between the settlement and cemetery pottery, the most notable being that faceted carinated bowls are almost entirely restricted to the settlement, while bossed pots are found mostly in the cemeteries. At least 160 different pot stamps have been identified from the settlement and some of these find close parallels in Kent, particularly along the Darent valley. The closest continental parallels for the Mucking pottery assemblage are found not only in the Elbe-Weser triangle of northern Germany, but also from the province of Drenthe in the Netherlands.

Nearly all the *Grubenhäuser* are of the two-post type. No chronological sequence could be detected apart from the late date of the largest huts. There is clear evidence that the sunken hollow functioned in most if not all cases as the effective floor level. Little evidence was found of plank construction or wattle and daub, or of true occupation levels, although a number of relatively undisturbed primary deposits or dumps of material can be identified. A small number of contemporary hearths and pits, as well as a range of workshop debris (primarily connected with iron and lead working, as well as spinning and weaving), were recorded from the huts.

All the posthole buildings were essentially earth-fast structures whose walls absorbed the full weight of the roof. Only the presence or absence of certain structural features such as external or double posts and internal partitions suggests some variation of this basic type. While most of the buildings were too irregular to pro-

vide unambiguous dimensions, it does appear that the majority were laid out according to the 'two-square module'. At least 27 Anglo-Saxon pits have been identified, although few, if any, ditches can be dated with certainty to the early Anglo-Saxon period.

The distribution of datable finds and pottery evokes a clear picture of a gradually shifting settlement. The initial phase of settlement was relatively dense, consisting of c 77 *Grubenhäuser*. In the sixth century, the main focus of settlement shifted northward. This phase was smaller (c 13 *Grubenhäuser* and 8 posthole buildings), possibly briefer in duration, and more dispersed. The third phase of settlement shifted further to the northeast, and was again relatively dense (c 55 *Grubenhäuser* and c 20 posthole buildings), with some deliberate alignment of buildings. The seventh century saw a shift of settlement away from the edge of the terrace. It consisted of widely dispersed farmsteads (c 54 *Grubenhäuser* and c 23 posthole buildings). Coin finds demonstrate that occupation of the terrace continued at least to c 685, and probably into the eighth century.

At Mucking, groups of farmsteads lay together without well-defined properties or boundaries, or a high degree of planning apparent in the layout of the buildings. Nor are there any exceptionally large or 'central' buildings. Yet it is clear from the cemeteries that the Anglo-Saxon community at Mucking possessed both wealth and a social hierarchy. A provisional assessment of population size suggests an 'active' average population of c 100, with a minimum of 10 posthole buildings and 14 *Grubenhäuser* standing at any one time. Despite its size, however, Mucking is best described not as a single, sprawling village, but rather as a shifting hamlet, at times perhaps more than one.

It has generally been assumed that the site originated as a settlement of Germanic mercenaries, stationed at Mucking in the early fifth century to guard the Thames estuary against invasion. Although the hypothesis is historically plausible, the archaeological evidence from the settlement is inconclusive, though not inconsistent with this scenario. While the coincidence of Romano-British and Anglo-Saxon settlement at Mucking and continuity of land use are clear, the existence of socio-economic continuity at a more profound level cannot be demonstrated. The settlement yielded no evidence for a 'phase of overlap' or for integration of the Romano-British and Anglo-Saxon communities. The silting up of Roman ditches by the time of the Anglo-Saxon settlement and the establishment of two Germanic cemeteries do, however, reflect discontinuity in some sense.

Mucking belongs to the broad category of 'wandering' settlements familiar from continental excavations, and it is argued that such mobility may have been widespread in early and middle Saxon England. For three centuries the Mucking settlement, though mobile, continued to utilise its ancestral burial grounds. The density of Anglo-Saxon settlement in the Mucking region and the proximity of the -ge place-name element suggest that this movement was not at random, but operated within a defined territorial unit.

Résumé

Les fouilles effectuées sur la terrasse de graviers qui se trouve à une trentaine de mètres au-dessus de la Tamise à Mucking, dans le sud-est de l'Essex, commencèrent en 1965. Durant les 13 années qui suivirent quelques 18 hectares furent examinés, ils révélèrent un paysage archéologique extrêmement complexe s'étendant de l'époque néolithique à la période anglo-saxonne. Mucking a rendu pour la première fois une occasion de mettre au jour une occupation anglo-saxonne et en même temps les sépultures associées; et avec deux cimetières anglo-saxons, au moins 53 bâtiments à poteaux, et 203 fonds de cabane (*Grubenhäuser*), Mucking représente l'habitation la plus étendue du début de la période anglo-saxonne exploré jusqu'à présent. Objets en métal et les pièces de monnaie trouvés suggèrent que l'occupation anglo-saxonne à Mucking a duré sans interruption de la première moitié du cinquième siècle jusqu'au début du huitième siècle.

Les objets façonnés trouvés sur le site incluent une quantité substantielle de poterie mérovingienne; deux fragments de céramique d'Ipswich; des garnitures de ceintures du type 'militaire' de la fin de l'époque romaine; trois pennies en argent datant d'environ 680-5 après J-C; de divers outils en fer; un nombre d'instruments utilisés pour filer et tisser; des anneaux et des disques en plomb coulé; et le seul moule à broches du début de la période anglo-saxonne trouvé à ce jour.

La distribution des objets dont on a pu établir la chronologie, les objets en métal et en verre, la poterie importée ainsi que certains types de poterie anglo-saxonne, nous a permis de mettre en évidence le développement spatial de l'occupation du site. Parmi les tendances les plus marquées concernant l'évolution de la poterie, on constate une augmentation de la proportion de poterie tempérée à l'herbe trouvés par rapport aux autres types de poterie au sixième et au septième siècle, tandis qu'au septième siècle on remarque un déclin dans la production de céramique en général, et de la céramique décorée en particulier. On n'a constaté que peu de contrastes évidents entre la poterie du village et celle du cimetière; on a surtout noté que les bols carénés à facettes étaient presque exclusivement trouvés au village, alors que les pots à bosses se retrouvent surtout dans les cimetières. On a identifié au moins 160 marques de pots différentes dans le village et certaines entre elles ressemblent étroitement à celles trouvées dans le Kent, en particulier le long de la vallée de la Darent. Sur le continent, les groupes de matériel qui se rapprochent le plus à la collection de poterie de Mucking se trouvent non seulement dans le triangle formé par l'Elbe et la Weser en Allemagne du nord, mais aussi dans la province de Drenthe aux Pays-Bas.

Presque tous les fonds de cabane sont du type à deux poteaux. On n'a pas pu établir un ordre chronologique, mis à part le fait que la plupart des huttes plus grandes sont les plus tardives. Il est absolument évident que le fond de la fosse de l'hutte servait dans la plupart des cas, sinon toujours de sol. On n'a trouvé que peu de témoignages de constructions en planches, de clayonnages ou de véritables niveaux d'occupation, bien qu'on ait pu identifier un certain nombre de dépôts primaires. On a relevé dans les huttes un petit nombre de foyers et de fosses contemporaines, ainsi que des

débris variés provenant d'ateliers principalement liés au travail du fer et du plomb, ainsi qu'au filage et au tissage.

Tous les bâtiments à poteaux consistaient essentiellement en structures dont les murs soutenaient tout le poids du toit. Ce n'est que par la présence ou l'absence de certains traits de construction, comme par exemple des poteaux extérieurs ou doubles, ou des cloisons internes, que nous pouvons distinguer quelques variations du modèle de base. Même que la plupart des bâtiments est trop irrégulière pour fournir des dimensions fiables, il semble que la majorité des structures étaient bâties selon 'le module des deux carrés'. Au moins 27 fosses anglo-saxonnes ont été identifiées, mais rien ne permet d'affirmer avec certitude que les fossés datent de la première période anglo-saxonne.

La manière dont les objets datés et la poterie était répartie indique clairement qu'il s'agissait d'une occupation qui se déplaçait graduellement. Pendant la phase initiale l'occupation était relativement dense et consistait en 77 fonds de cabane environ.

Au sixième siècle, le centre de cette occupation se déplaça vers le nord. Cette phase fut moins importante, 13 fonds de cabane environ et à peu près 8 bâtiments à poteaux; il est possible qu'elle n'ait pas duré aussi longtemps que la première et qu'elle ait été plus dispersée. Dans la troisième phase l'occupation se situa davantage au nord-est et fut à nouveau relativement dense (environ 55 fonds de cabane et à peu près 20 bâtiments à poteaux). Le septième siècle vit l'occupation s'éloigner du bord de la terrasse. Cette phase consistait en un nombre de fermes très dispersées (environ 54 fonds de cabane et 23 bâtiments à poteaux). Les pièces de monnaie trouvées prouvent que la terrasse était toujours occupée au moins jusqu'au début de 685, et probablement jusqu'au début du huitième siècle.

A Mucking les fermes se trouvent groupées sans bornes apparentes, et il n'est pas non plus évident qu'un haut degré d'organisation spatiale ont été appliqués dans la disposition des bâtiments. Il n'y a pas non plus d'édifices particulièrement vastes ou placés dans une position centrale. Il est pourtant clair, par les objets trouvés dans les cimetières, que la communauté anglo-saxonne de Mucking était assez riche et avait une hiérarchie sociale. Une évaluation provisoire de la taille de la communauté indique que la population 'active' moyenne comptait environ 100 personnes, et qu'à aucun moment il n'y a eu moins de 10 bâtiments à poteaux et 14 fonds de cabane dressés en même temps. Pourtant en dépit de sa taille, il vaut mieux considérer Mucking non pas comme un seul village très étendu, mais plutôt comme un hameau, peut-être même à certains moments comme plusieurs hameaux, qui se déplaçaient sur le terrain.

On a généralement supposé que le site originait d'un campement de mercenaires germaniques postés à Mucking au début du cinquième siècle pour défendre l'estuaire de la Tamise contre les invasions. Bien que cette hypothèse soit historiquement plausible, l'évidence archéologique provenant du site ne permette pas de la confirmer, malgré qu'elle ne soit pas incompatible avec le scénario. Alors qu'il est évident que la communauté anglo-saxonne a pris la place de la communauté romano-britannique à Mucking, et que le site a été occupé plus ou moins continuellement, il n'est pas possible de démontrer plus précisément l'existence

d'une continuité socio-économique. Le site n'a pas livré de preuves d'une 'phase de chevauchement', ni d'une forme d'intégration des communautés romano-britannique et anglo-saxonne.

Mucking appartient à la vaste catégorie des 'Wander siedlungen' qui nous sont familières à la suite de fouilles faites sur le continent; et nous suggérons dans ce volume qu'une telle mobilité était peut-être très répandue au début et au milieu de l'ère saxonne en Angleterre. Pendant trois siècles, la communauté de Mucking, bien que se déplaçant, a continué à utiliser les cimetières ancestraux. La densité de l'occupation anglo-saxonne dans la région de Mucking fait penser que ce déplacement n'était pas un fait du hasard, mais qu'il s'inscrivait dans une unité territoriale bien définie.

Zusammenfassung

1965 begannen die Ausgrabungen auf der 30m hohen Schotterterrasse der Themse bei Mucking im Südosten von Essex. Während der folgenden 13 Jahre wurden ungefähr 18 Hektar Land untersucht wobei eine außergewöhnlich vielschichtige archäologische Landschaft freigelegt wurde, die vom Neolithikum bis in die angelsächsische Zeit reichte. In Mucking bot sich zum ersten Mal die Gelegenheit eine angelsächsische Siedlung und gleichzeitig auch die dazugehörigen Gräberfelder zu untersuchen. Mit zwei angelsächsischen Gräberfeldern und mindestens 53 Pfostenbauten, sowie 203 Grubenhäusern bleibt Mucking die bis heute ausgedehnteste, ergrabene frühangelsächsische Siedlung. Der Metall- und Münzbefund deutet auf eine kontinuierliche angelsächsische Besiedlung bei Mucking hin, die von der ersten Hälfte des fünften bis zum Beginn des achten Jahrhunderts reichte.

Zu den in der Siedlung gefundenen Gegenständen gehören eine beachtliche Menge fränkischer Keramik, zwei Scherben Ipswich Ware, drei silberne Pfennige von circa 680-85 n Chr, spätromische, Militär-Gürtelbeschläge, eine Reihe eiserner Werkzeuge, eine beträchtliche Anzahl von Spinn- und Webzubehör, gegossene Bleiringe und -scheiben, und die einzige bisher gefundene Gußform für frühangelsächsische Fibeln.

Die räumliche Ausdehnung der Siedlung wird durch die Streuung von chronologisch deutbaren Metall- und Glassfunden definiert, sowie durch das Vorkommen von eingeführter Keramik und gewissen Typen angelsächsischer Waren. Die auffälligsten Tendenzen in der Keramikabfolge zeichnen sich in der Zeit vom sechsten bis zum siebten Jahrhundert durch einen Anstieg in dem proportionellen Anteil der grasgemagerten Scherben ab, während das siebte Jahrhundert einen Niedergang der Töpferwaren im allgemeinen und der verzierten Waren im besonderen sieht. Auch gibt es nur wenige augenfällige Unterschiede zwischen der Keramik aus den Siedlungsbereichen und derjenigen, die aus Gräberfeldern stammt. Der hervorstechendste davon ist, daß die Funde von Schalen mit facettiertem Umbruch beinahe vollständig auf den Bereich der Siedlung beschränkt sind, während man Buckelurnen hauptsächlich in den Gräberfeldern findet. Mindestens 160 verschiedene Topfstempel sind in der Siedlungskeramik gebraucht worden. Einige von

diesen Stempeln haben Parallelen in Kent, besonders im Darenttal. Engste Parallelen zur Keramik von Mucking finden sich auf dem Festland, nicht nur im Elbe-Weser-Dreieck in Norddeutschland, sondern auch in der Provinz Drenthe in den Niederlanden.

Beinahe alle Grubenhäuser gehören dem Zweipfosten-Typus an. Eine chronologische Abfolge konnte nicht etabliert werden, es sei denn, daß die größten Häuser zur jüngsten Phase gehören. Der Befund zeigt eindeutig, daß die ausgehobene Grube in den meisten, wenn nicht in allen Fällen effektiv den Bodenhorizont darstellte. Es gibt kaum Befunde für Plankonstruktionen, Flechtwerk mit Lehmwurf oder obwohl eine Anzahl relativ ungestörter Erstablagerungen oder Materialanhäufungen festgestellt werden konnten. Eine kleine Anzahl von Herdstellen und Gruben, sowie Werkstattabfälle, die hauptsächlich von der Eisen- und Bleiverarbeitung sowie von Spinnen und Weben stammen, wurden in den Grubenhäusern festgestellt.

Alle Pfostenbauten waren in der Hauptsache Strukturen, deren Wände das volle Gewicht des Daches trugen. Nur das Vorhandensein oder das Fehlen gewisser baulicher Einzelheiten, wie etwa äußere Pfosten- oder Doppelpfostenstellungen und interne Unterteilung deuten auf Abwandlungen des Grundtypes hin. Obwohl die Mehrzahl der Bauten zu unregelmäßig waren um ein deutige Masse zu ergeben, scheint es daß die Mehrzahl der Häuser nach der Zwei-Quadrat-Formel angelegt war. Mindestens 27 angelsächsische Gruben sind festgestellt worden. Weniger oder sogar Keiner der Gräben hat jedoch mit Sicherheit in die frühangelsächsische Zeit datiert werden können.

Die Verteilung der datierbaren Einzel- und Keramikfunde bringt ein klares Bild der allmählichen Wanderung der Siedlung. In der Anfangsphase war die Siedlungsdichte relativ hoch: man zählt ungefähr 77 Grubenhäuser. Im sechsten Jahrhundert wanderte der Siedlungskern nordwärts. Die Siedlung war in dieser Phase von geringerer Ausdehnung (ungefähr 13 Grubenhäuser und 8 Pfostenbauten), und war möglicherweise von kürzerer Dauer und weiter gestreut. In der dritten Phase wanderte die Siedlung weiter nach Nordosten und war jetzt wiederum verhältnismäßig dichtbesetzt (ungefähr 55 Grubenhäuser und 20 Pfostenbauten) mit einer wohl absichtlichen Ausrichtung der Bauten. Das siebte Jahrhundert sah den Rückzug der Siedlung vom Rand der Schotterterrasse. Die Siedlung bestand nun aus weitverstreuten Gehöften (ungefähr 54 Grubenhäuser und an die 23 Pfostenbauten). Münzfunde weisen darauf hin, daß die Besiedlung der Terrasse bis mindestens 685, möglicherweise sogar bis in das achte Jahrhundert gedauert hat.

In Mucking lagen die Gehöftegruppen ohne genauumschriebene Grundstücksgrenzen oder Begrenzungen nebeneinander. Eine erkennbare Planung in der Anordnung der Gebäude ist nicht augenfällig. Ebenso gab es keine außergewöhnlich große oder, zentrale Gebäude. Aus den Gräberfeldern läßt sich jedoch erschließen, daß unter der angelsächsischen Bevölkerung in Mucking sowohl Wohlstand als auch soziale Rangordnung zu finden waren. Eine vorläufige Schätzung der Bevölkerungszahl läßt auf eine, 'aktive' Einwohnerzahl von durchschnittlich circa 100 schließen mit einem Minimum von 10 Pfostenbauten und 14

Grubenhäusern jeweils gleichzeitig im Gebrauch. Trotz seines Ausmaßes kann man Mucking jedoch nicht als ein langgestrecktes Dorf bezeichnen sondern eher als einen – Zeitweise vielleicht auch mehr als einen – Weiler, der wanderte.

Es wird allgemein angenommen, daß der Ort seinen Ursprung in einer Ansiedlung germanischer Söldner hatte, die zur Verteidigung der Themsemündung gegen Einfälle im frühen fünften Jahrhundert in Mucking stationiert waren. Obwohl dies eine historisch durchaus plausible Hypothese ist, ist der archäologische Befund aus der Siedlung nicht genügend um dies zu beweisen, ist, jedoch auch nicht unvereinbar mit einer derartigen Darstellung. Das Zusammentreffen einer römisch-britischen und einer angelsächsischen Ansiedlung in Mucking und die Kontinuität der Landnutzung sind unverkennbar; die Existenz einer Kontinuität im sozio-ökonomischen Bereich kann jedoch nicht aufgezeigt werden. Die Siedlung lieferte keine Beweise für eine

'Phase der Überschneidung' oder für das Verschmelzen der römisch-britischen und angelsächsischen Bevölkerungen. Die Tatsache, daß die römischen Gräben zur Zeit der angelsächsischen Ansiedlung schon zugeschwemmt waren, wie auch die Anlage zweier germanischer Gräberfelder, deuten jedoch in gewissem Sinne auf eine Diskontinuität hin.

Mucking gehört in die weitgefaßte Kategorie der 'Wandersiedlungen', die von Ausgrabungen auf dem Festland her bekannt sind, und es wird hier vorgeschlagen, daß diese Art der Mobilität in der frühen und mittleren sächsischen Zeit in England weitverbreitet gewesen sein mag. Durch drei Jahrhunderte hindurch, obwohl mobil, fuhr Mucking fort seine angestammten Gräberfelder zu belegen. Die Dichte der angelsächsischen Besiedlung im Gebiet um Mucking deutet darauf hin, daß diese Bewegung nicht willkürlich war, sondern innerhalb einer begrenzten Gebietseinheit erfolgte.

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Index

by Lesley Adkins and Roy Adkins

Finds and features are of Anglo-Saxon date unless the contrary is stated.

- Abingdon, Oxon 94
aerial photographs 90; *see also* cropmarks
Alfriston, E Sussex 51, 69
amber beads 60, 143, Fig 137
amethyst beads 60, 167, Fig 177, Table 1
animal bones 14, 15, 19, 74–9, 116, Fig 75, Tables 9–19; *see also* antler, bone, burials
butchering marks/butchery 74, 79
cattle 77, Tables 12, 13; *see also* ox
deer 124, Tables 9, 10; *see also* antler
dental wear Tables 13, 15, 17
disease 79
dog 14, 15, 77, 79, Tables 9, 10
domestic fowl (*Gallus*) 77
fish 77, 79
frequency 74, Table 11
goose (*Anser* sp) 77
horse 77, 124, 78–9, Tables 9, 10, 18
ox 77, 124, Tables 9–11; *see also* cattle
pig 14, 79, 77, Tables 9–11, 16, 17
rabbit 77, Table 9
sheep/goat 74, 77, 79, Tables 9–11, 14, 15
annular brooches *see* brooches
antler
fallow deer 79, 116
sawn 116
red deer 15, 79, Table 19
sawn 15, 64, 79, 118
with cut marks 15
worked/working debris 15, 79, 129, 132, Fig 116
see also animal bones, antler ditch, bone, combs
antler ditch (recut of a Roman ditch) 19–20, 74
Ardale School, N Stifford, Essex 95, Fig 2
arrowheads, copper alloy (Bronze Age) 142; iron 69, 112, 129, Figs 89, 116
awls (iron) 69, 70, 139, 153, Figs 132, 153
Barking, Essex 91, 96
barley 80, 81, Table 20
bars
copper alloy 112, 140
iron 69, 108, 110, 112, 126, 129, 131, 138, 139, 142, 145, 154, 156, Figs 85, 89, 119, 155
possible sharpening steels 69, 118, Fig 99; *see also* rods
lead 128, Fig 114
beads
amber 60, 143, Fig 137
amethyst 60, 167, Fig 177, Table 1
glass 60, 71, 84, 85, 108, 111, 113, 119, 120, 121, 127, 128, 129, 130, 138, 140, 144, 151, 153, 156, 160, 161, 162, 166, 167, Figs 82, 86, 90, 101, 102, 104, 114, 116, 117, 131, 134, 150, 153, 159, 165, 167, 170, 176, 177, Table 2
jet 60, 150, Fig 149
bell clapper (possible, iron) 291, Fig 180
belt fittings (copper alloy) 37, 63–4; *see also* buckle plates, buckles
backplate (possibly Roman) 102, Fig 56
late Roman military 7, 63, 94
belt plates 63, 146, Fig 143, Table 1
disc belt attachments 63, 71, 93, 112, 116, Figs 89, 95, Table 1
reused as a pendant 7, 63, 128, Fig 114, Table 1
tubular-sided belt attachment 63, 116, 291, Figs 96, 180, Table 1
strap-ends 82
tubular belt fittings 63, 117, 291, Figs 96, 180, Table 1
belt plates *see* belt fittings
Bifrons, Kent 61
'Bifrons type' brooches *see* brooches
bindings, copper alloy 68, 112, 118, 119, 132, 139, 148, 149, Figs 88, 101, 132; iron 68; *see also* strips
Bishopstone, E Sussex 10, 91, 95
blades, copper alloy 112, Fig 89; iron 113, 131, 291; *see also* chisels, hand sickle, knives, shears, slakers
bone, preservation 15, 64, 74, 79; worked/working debris 15, 132; *see also* animal bones, antler, calcined bone, combs, cylinder, handles, pins, spindlewhorls
bottles *see* pottery
bowls *see* pottery, wooden bowls
bracelets (Roman), copper alloy 111, 125, Figs 87, 110; shale, 71, 128
brass 82, Fig 48; *see also* copper alloy
Bremen, Germany 51, 52, 92
bronze 82, 114, 117, 132, 139, 143, 152, 161, 164, Fig 48, Table 21; *see also* copper alloy
Bronze Age arrowhead (copper alloy) 142; *see also* prehistoric
Buckelurnen *see* pottery
brooches
copper alloy 7, 82, 152, Fig 151
annular 61, 161, 296, Figs 168, 192
applied (saucer) 60, Tables 1, 2
backplate 60, 125, 132, Figs 110, 120, Tables 1, 21
'Bifrons type' Tables 1, 21
button 7, 42, 61, 93, 114, 159, 293, Figs 91, 163, 185, Tables 1, 21
disc 61, 165, Fig 175, Table 1
equal-armed 61–2, 93, 164, Fig 173, Table 1
red enamel decoration, 61 164
La Tène III 117
penannular 61, 127, 128, 161, Figs 112, 167, Table 21
radiate 61, 139, Fig 132, Tables 1, 21
Roman 108, 111, 112, 132, 134, 158
'safety pin' 7, 61, 122, Fig 105, Tables 1, 21
saucer 60, 73, 117, 164, Figs 96, 172, Tables 1, 21
small-long 42, 61, 93
square-headed 42, 62, 145, Fig 141, Table 1
supporting-arm (Luton or Perlberg type) 61, 93, 293, Fig 185, Table 1
iron
annular 61
penannular 61, 116, Fig 96
Roman 61, 139
mould (fired clay) 13, 62–3, 145, Fig 141, Table 1
silver 61
buckle plates (copper alloy) 64, 116, Fig 96, Table 2
buckles, copper alloy 44, 93, 64, 82; iron (possibly late Roman) 64, 109, Fig 84
buildings 8–15, 20, 24, 68, 89, 90, Figs 2, 4–8, 52; *see also* daub, *Grubenhäuser*, hearths, posthole buildings, roofs, wattle and daub
reconstructions 8, 14, 20
stratigraphic relationships 8
burials 1, 2, 89, 90, 92, 94, Figs 2, 52; *see also* cemeteries, cremations, graves, inhumations
animal 74, 78, Fig 64
in the vicinity of Mucking 95
sword-burials 89
burnt flint 19
butchery *see* animal bones
button brooches *see* brooches
Caistor by Norwich, Norfolk 51, 93
Canterbury, Kent 22, 57
Catholme, Staffs 68
cattle *see* animal bones
cemeteries 1, 5, 22, 31, 42, 44, 45, 51, 54, 57, 58, 60, 63, 64, 68, 69, 70, 81, 82, 84, 89–90, 91, 92, 93, 94, 95, 97; Romano-British 94; *see also* burials, cremations, graves, inhumations
Cemetery I 1, 45, 82, 89, 90, 94
Cemetery II 1, 7, 8, 31, 45, 61, 63, 73, 82, 86, 89, 90, 94
cereals *see* grain impressions
Chadwell St Mary, Essex 95, Figs 2, 52
chains/chain links, copper alloy 68, 108, Fig 82; iron 68, 138, 140, 151, 162, Figs 130, 170; *see also* rings
chalk spindlewhorl (possible) 65, 136, Fig 126
Chalton, Hants 10, 11, 14, 17, 97
charcoal 14, 15, 20, 113, 116, Figs 59, 61, 73, 74, 81; *see also* charred wood
charred wood (radiocarbon date) 7; *see also* charcoal
charters 9, 95, 96
Chessell Down, IOW 61, 62, 63
chisels (iron) 69, 121, Fig 103
churches Fig 52
claw beakers *see* glass
clay deposits/raw clay, for pottery-making 17; possible weathered loomweights 15–17, 73
clay sources, diatom analysis 27; for pottery 22, 28–31, 83
clips (copper alloy, for repairing wooden bowls) 60
coins 5
copper alloy (Roman) 7, 71, 72–3, 111, 112, 117, 124, 125, 128, 132, 136, 139, 141, 148, 155, 166, Table 8
perforated/pierced for suspension 73, 291, Fig 180
silver 64, 86–7, 91, 159, Figs 79, 165, Table 1
combs, bone/antler 64, 124, 128, 136, 168, Figs 108, 114, 178
computerisation *see* MPX computerisation
cone beaker *see* glass
copper alloy *see* arrowheads, bars, belt fittings, bindings, blades, bracelets, brass, bronze, brooches, buckle plates, buckles, chains, clips, discs, ferrules, gunmetal, hooks, ingots, ligula, loops, pendants, pins, ring-key, rings, rivets, rods, sheet, spearheads, split pin, spoon, staples, steelyard, strips, vessels, weights, wire
objects analysis 81–2, Fig 48, Table 21
counters (shale) 151, 163, Figs 150, 170

- Cowdery's Down, Hants 10, 81, 89
 cremations 1, 69, 90, 95, 295, Fig 64; dis-
 proved 15, 20; *see also* burials, cemeteries
 cremation urns 22, 31, 37, 51, 81
 cropmarks 86, 95, Fig 1; *see also* aerial photo-
 graphs
 Croydon, Gtr London 51, 94
 cylinders, bone 64, 124, Fig 108; iron 112
- Dalem, Lower Saxony, Germany 17, 68
 Dankirke, Denmark 56, 57
 Darent Valley, Kent 2, 51
 Darum, Denmark 56, 57
 datable finds 5-7, 8, 22, 27, 31, 42, Table 1
 distribution 7, 86, Fig 3
 dating (of features and finds) 4, 5-7; *see also*
Grubenhäuser, radiocarbon dates, thermo-
 luminescence dating
 daub 13, 21, 83; *see also* wattle and daub
 deer *see* animal bones, antler
 demography 90-1, 92, 97
 diatom analysis 27
 disc belt attachments *see* belt fittings
 disc brooches *see* brooches
 discs
 bronze inlaid with enamel 146, Fig 143
 copper alloy 162
 ?Roman (possible mount) 133, 144, Fig
 122
 fired clay 54
 iron 154
 jet 151, Fig 150
 lead, perforated (possible spindlewhorls
 or ingots) 15, 65, 70-1, 109, 111, 113,
 115, 124, 127, 131, 133, 134, 138, 163,
 168, 293, Figs 47, 83, 86, 87, 94, 108,
 113, 119, 122-4, 129-31, 171, 178, 185
 disease *see* animal bones
 distribution maps 24
 ditches 1, 4, 19, 20, 21, 58, 79, 101, 293-4, Figs
 31-4, 185, 186, Table 9; *see also* gullies
 antler ditch (recut of Roman ditch) 19-
 20, 74
 Double-ditched Enclosure 19, 293
 kiln ditches 19, 122, 292-3, Figs 32-5, 184
 late upper fills of prehistoric and Roman
 ditches 19, 66, 93
 North Enclosure (Iron Age) 19, 37, 60, 66;
see also North Enclosure
 on alignment of medieval/post-medie-
 val field system 19
 prehistoric 1, 19, 86, Fig 51
 Roman 1, 19, 66, 71, 73, 86, 93, 95, 102,
 293, Fig 51
- dog *see* animal bones
 Dorchester-on-Thames, Oxon 15, 63, 64
 Double-ditched Enclosure 19, 94, 293
 Double Rings 93
 double-spiked loops (iron, possibly Roman)
 68, 125, 129, 141, Figs 110, 116, 135
 Dover, Kent 22, 60, 61, 63
 Buckland Anglo-Saxon cemetery 68, 69
 Drengsted, Denmark 56, 57
 dress fasteners *see* brooches, pins
 Dronrijp, Gem Menaldumadeel, Nether-
 lands 44
- East Tilbury, Essex 4, 31, 95, Figs 1, 52
 electron-probe microanalysis 84, Table 23
 enamel inlays 61, 146, 164, Fig 143; *see also*
 glass inlays
 engraving tool (iron) 154, Fig 155
 equal-armed brooches *see* brooches
 Eursinge, Drenthe, Netherlands 42, 44
 excavation methods 2, 7, 24
 experiment in building and firing vessels 31, 58
 Ezinge, Friesland 44, 71
- fallow deer *see* animal bones, antler
- Feddensen Wierde, Lower Saxony, Ger-
 many 45, 57, 68, 73
 fences 20, 89, 102, 103, 104
 fern 80, 81, Table 20
 ferrous metalworking 17; residues 85; *see*
also ironworking, slag
 ferrules, copper alloy 64, 108, 109, 120, Figs
 82, 84, 102; iron (possible) 132
- Ferwerd, Netherlands 44
 field ditches (prehistoric/Roman) 86, Fig 51
 field systems, medieval/post-medieval 19;
 Roman 69, 91, 94
 fired clay 13, 21; *see also* discs, loomweights,
 moulds, pottery, spindlewhorls,
 weights
 firesteels (or purse mounts, iron) 64, 128, 291,
 Fig 180
 fish *see* animal bones
 Fishbourne, W Sussex 68, 69
 fittings (iron) 64, 149, 151, Figs 148, 151;
 hooked 151, Fig 150; *see also* structural
 fittings
 flint (burnt) 19
 foederati 1, 93, 94
 Flögel, Lower Saxony, Germany 10, 19, 89,
 91
- foundation trenches (posthole buildings) 8,
 103
- four-post huts 10, 11
 fowl *see* animal bones
 Frankish pottery 7, 22, 96, Table 1
- garnet, -headed pin (copper alloy) 7, 61, 63,
 122, Fig 105, Tables 1, 21; pendant 63
 gilt/gilded objects 61, 82, 159, 164, 291,
 Tables 1, 21
 gimlet (iron) 70, 73, 149
 girdle hanger *see* hooked terminal
 glass 84-5, Fig 53; *see also* beads, enamel
 inlays
 claw beakers 7, 42, 60, 159, Fig 163, Table
 1
 cone beaker 132, 149
 inlays for pendants 63, 84, 85, 126, 291,
 Figs 111, 180, Tables 1, 23
 chemical analysis 84-5, Table 23
 Roman 60, 84, 108, 110, 111, 112, 113, 119,
 120, 121, 122, 125, 126, 130, 131, 132,
 134, 139, 156
 vessel 60, 84, 85, 108, 132, 144, 146, 149,
 Fig 82
- goat *see* animal bones
 goose *see* animal bones
 grain impressions in pottery 80-1, 85, Table 20
 granaries 19
 grave goods 42, 45, 95, Table 2
 graves 60, 61, 63, 68, 69, 73, 81, 82, 90, 93, 94,
 Figs 60, 62, 64, 76, Tables 2, 8; Romano-
 British 61; *see also* burials, cemeteries,
 inhumations
 ground surface 19; *see also* turf layer
Grubenhäuser 1, 2, 4, 5, 7, 8, 10-19, 20, 21, 27,
 42, 60, 61, 64, 65, 66, 68, 70, 71, 72, 79,
 81, 82, 83, 86, 89, 90, 91, 94, 95, 97, 101,
 108-68, Figs 45, 57-81, Table 1; Plate 3;
see also buildings, loomweights, *scrowa*
 clay deposits (possibly weathered loom-
 weights) 15-17
 dating 7, 13
 distribution of
 lead 71, Fig 9
 loomweights Fig 10
 slag 82-3, Fig 9
 spindlewhorls Fig 10
 entrances 13
 excavation methods 2, 24
 finds from 108-68, Figs 82-178
 floors 11, 14, 15, 17, 27, 61, 70, 73, 86, 113,
 116, 125, Fig 75, Table 1
 planked 13, 14
- four-post huts 10, 11
 function 14, 15
 bone/antler working 15
 ferrous metalworking 17
 lead casting 15
 weaving 17-19
 hearths 15, 19, 20, Figs 57, 59, 65, 72, 78
 external 15, 20
 hollows 13, 14, 15
 illustration procedure 4
 metrology 11, Figs 6-8
 'occupation layer' 14
 ovens 19
 postholes 10, 11, 13, 14, 17, 110, 113, 160,
 Figs 57-81
 post-occupation processes 13-14, 15
 use as rubbish pits 14, 57
 pottery 5, 22, 23-4, 27, 31, 37, 42, 44, 45,
 51-2, 54, 56, 57, 58, 71, 80, 93, 102-3,
 108-68, Figs 11-17, 23, 29, 31-6, 38, 56,
 73, 77, 82-91, 93-113, 115-22, 124-78,
 Tables 5, 6
 Roman 71-2, Table 7
 reconstructions 14, 20
 roofs 14, 17
 six-post huts 10
 slots 17, Figs 68, 79
 stakeholes/stakes 11, 13, 14, 110, 113,
 Figs 61, 65
 stratigraphic relationships 7, Table 2
 sunken area 11
 two-post huts 10-11, 14, 19
 typology 10-11
 walls 11-13, 15
 workshop debris 14, 15-19
 gullies 13, 95, Fig 69; *see also* ditches
 Gun Hill, West Tilbury, Essex 2, 95, Fig 2
 gunmetals 82, 122, Fig 48, Table 21; *see also*
 copper alloy
 gynaeceum (women's work quarters) 17
 gyrf (rod) 9
- hammers (iron), metalworker's (possibly
 prehistoric) 70, 296, Fig 192
 hand gouge (possible, iron) 154, Fig 155
 handles, bone 69; wooden 69, 70, 128, 139,
 153
 handmade pottery *see* pottery
 hand sickle (iron) 69, 128, Fig 114; *see also*
 sickles
 hearths 1, 10, 14, 15, 17, 19, 20, 103, Figs 57,
 59, 65, 72, 78, Table 3; *see also* ovens
 heckle (iron) 149
 Helgö, nr Stockholm, Sweden 62
 Heybridge, Essex 71-2
 hinge *see* loop hinge
 historical context 93-5
 honestones 4
 hooked terminal (iron, possible girdle
 hanger) 64, 160, Fig 165
- hooks
 copper alloy (of a ferrule) 109, Fig 84
 iron 112, 118, 123, 141, Figs 98, 107, 136
 possible pot hook 68, 140, Fig 134
 hoop (iron) 294, Fig 187
 horse *see* animal bones
- illustration of features, finds, and pottery
 4-5; key Figs 53, 81
 ingots, copper alloy 108, 130, 163, Figs 82,
 171; lead 70, 71, 122, 163, Figs 104, 171;
see also discs (lead)
 inhumations 1, 22, 42, 60, 69, 90, 95; *see also*
 burials, cemeteries, graves
 inventory (of features and finds) 4-5, 101-
 313
 Ipswich Ware 22, Fig 31, Table 1
 iron *see* arrowheads, awls, bars, bell clapper,
 bindings, blades, brooches, buckles,
 chains, chisels, cylinders, discs,

- double-spiked loops, engraving tool, ferrules, firesteels, fittings, gimlet, hammers, hand gouge, hand sickle, heckle, hooked terminal, hooks, hoop, joiner's dogs, keys, knives, loop hinge, nails, needle, pins, plate, punches, reaping hook, rings, rivets, rods, round shaves, roves, shears, sheet, sickle, sleakers, spade shoes, spearheads, spikes, staples, strips, tweezers
- Iron Age *see* ditches (North Enclosure), pins, pits, pottery, prehistoric
- iron ores 83
- ironworking 17, 83, 91; *see also* ferrous metalworking
distribution of debris 17
residues/debris 82, 83
- Isle of Wight 61; *see also* Chessell Down
- jars *see* pottery
- jet, beads 60, 150, Fig 149; discs 151, Fig 150
- joiners' dogs (iron) 60, 129
- Kent, relationship with 2-4, 22, 95
- keys (iron, possibly Roman) 69, 138, 151, 154, 294, Figs 130, 151, 154, 188; *see also* ring-key
- key to illustrations Figs 53, 81
- 'kiln ditch' complex 19, 122, 292-3, Figs 32-5, 184
- Kingsworthy, Hants 51
- knives (iron) 4, 64, 73, 83, 110, 111, 112, 115, 116, 120, 121, 122, 123, 126, 128, 130, 133, 135, 136, 139, 140, 141, 142, 144, 145, 146, 149, 153, 154, 156, 157, 158, 161, 164, 165, 166, 167, 168, 293, Figs 86, 87, 94, 96, 103, 105, 124, 136, 143, 148, 153, 155, 158, 176, 177, 185
organic traces on 4
- Krefeld-Gellep, Germany 22
- law codes 17, 90
- lead
bar 128, Fig 114
casting 15
discs (possible spindlewhorls or ingots) 15, 65, 70-1, 109, 111, 113, 115, 124, 127, 131, 133, 134, 138, 163, 168, 293, Figs 47, 83, 86, 87, 94, 108, 113, 119, 122-4, 129-31, 171, 178, 185
distribution 70, Fig 9
fragments 109, 112, 117, 118, 119, 121, 123, 124, 125, 127, 131, 134, 137, 152, 161
ingots 70, 71, 122, 163, Figs 104, 171
lump 144
molten 15, 70
pins 149, 151, Fig 151
possible loomweights 70
'puddle' 125
rings 15, 70, 71, 111, 113, 114, 121, Figs 47, 87, 90-2
rods 71, 111, Fig 86
sheet 71, 124, 163, Figs 108, 171
strips 71, 111, 120, 123, 124, 125, 127, 139, 141, 151, Figs 86, 87, 108
see also metalworking debris
- leatherworking tools 160, Fig 165; *see also* awls, sleakers
- ligula (copper alloy, Roman) 120
- Linford, Essex 2, 8, 20, 57, 69, 70, 86, 95, Figs 1, 2
- Little Totham, Essex 83
- London 1, 22, 93-4; *see also* Croydon
Battersea 94
Billingsgate 94
Clapham 81
Mitcham 94
Tower 94
- looms 17, 68; *see also* loomweights
- loomweights 17
distribution 66, Figs 10, 46
fired clay 4, 66-8, 70, 73, 123, 152, Figs 44-6, 107, 152
possible lead 70
storage in *Grubenhäuser* 17, 68
unfired clay 14, 15, 17, 66, 68, 73, Figs 62, 74, 76, 77; *see also* clay deposits
- loop hinge (iron, ?Roman) 68, 109, Fig 84
- loops, copper alloy 144, Fig 140; iron *see* double-spiked loops
- Luton type supporting arm brooches *see* brooches
- Margaretting, Essex 97-8
- Maxey, Northants 44, 69
- measurement *see* metrology
- metalworking debris 4; *see also* ferrous metalworking, ironworking debris, lead, smithing debris
- metrology of buildings 9-10, 11, Figs 4-8; *see also* rods
- Milton-next-Sittingbourne, Kent 63
- moulds (for brooch) 13, 62-3, 145, Fig 141, Table 1
- mounts (copper alloy) 161, Fig 168; *see also* discs, pendants
- MPX computerisation 5, 23, 57-8; *see also* post-excavation work
- nails (iron, many possibly Roman) 63, 68, 73, 108-68 *passim*
- needle (iron, possible) 118
- New Wintles Farm, Oxon 97
- Nørre Snede, Denmark 56
- North Enclosure (N Enc) 1, 4, 19, 37, 42, 54, 60, 61, 63, 64, 66, 73, 84, 86, 149, 291-2, Figs 31-5, 180-3, Tables 1, 6
- Northfleet, Kent 4, 51
- North Ring 7, 31, 97, Fig 1
- oats 80-1, Table 20
- Odoorn, Netherlands 42
- Omgård, Denmark 56
- organic traces (on knives) 4
- Orsett, Essex Fig 52
- Orsett Cock, Essex 2, 95, Fig 2
- Orsett Neolithic enclosure, Essex 2, 95, Fig 2
- ovens 15, 19; *see also* hearths
- parishes surrounding Mucking 95, Fig 52
- peas 80, 81, Table 20
- penannular brooches *see* brooches
- pendants
copper alloy ornament with glass (red/deep purple) inlay, possible pendant 63, 84, 291, Fig 180, Table 1
glass (dark blue/opaque turquoise) in copper alloy 'dog tooth' setting 63, 84, 126, Fig 111, Tables 1, 23
reused copper alloy disc belt attachment 7, 63, 128, Fig 114, Tables 1, 23
see also coins, Roman
- Pennyland, Bucks 11
- Perlberg type supporting-arm brooches *see* brooches
- petrological analysis
Atomic Absorption Spectrometry 27, 58
local clays 27, 31
pottery 22, 27
thin-sectioning 27, 31, 58
- phosphate analysis 10, 19
- pig *see* animal bones
- pins
bone 63, 64, 118, Fig 99
Roman 63
copper alloy 63, 109, 121, 122, 123, 134, 136, 147, 156, 161, Figs 105, 124, 126
garnet-headed 7, 61, 63, 122, Fig 105, Tables 1, 21
- Iron Age 164
?Roman 110
- iron (many possibly Roman) 61, 63, 73, 108, 111, 112, 116, 117, 118, 120, 121, 122, 124, 125, 126, 131, 132, 134, 135, 138, 139, 140, 141, 142, 149, 151, 155, 156, 157, 161, 164, 165, 166, 167, 168, Figs 86, 96, 98, 105, 109, 132, 157, 168
lead 149, 151, Fig 151
- pits 1, 4, 17, 19, 20, 21, 58, 61, 69, 82, 83, 95, 101, 102, 103, 113, 116, 141, 149, 153, 154, 168, 294-6, Figs 33, 34, 57, 61, 62, 64, 68, 179, 187-93, Tables 4, 6, 9, 22; *see also* rubbish pits
function 20
Iron Age 4, 164
Roman 73
smithing debris/slugs 17, 20, 83, Table 22
- place-names 97-8
Mucking 96, 97
Walton's Farm (*Wienahd-tun*) 95
- planking 13, 14, 20
- plate (iron) 123, 131, 141
- plates *see* pottery
- Pliny (on sunken-floored structures) 17, 21
- population *see* demography
- Portway, Andover, Hants 61
- post-excavation work 1, 4, 20; *see also* MPX computerisation
- posthole buildings (PHB) 1, 4, 8-10, 13, 20, 21, 54, 86, 89, 90, 95, 101, 102-4, Figs 54-6; Plates 1, 2
entrances/doorways 8, 102, 103, Figs 54-6
foundation trenches 8, 103
function 8, 10
hearths 103
metrology 9-10, 21, Fig 5
partitions/partition walls 8, 102, 103, 104
porch 102
postholes 8, 9, 102-4, Figs 54-6
reconstructions 20
slots 102, 103
stakeholes 103
typology 8
- postholes 1, 8, 9, 10, 11, 13, 14, 17, 20, 21, 101, 102-4, 110, 113, 160, 296-7, Figs 33, 34, 54-81, 193; Roman 73
- pottery 1, 7, 14, 17, 19, 20, 22-59, 71, 80, 95, 97, 102-3 *passim*, 108-68 *passim*, 291-7 *passim*, Figs 11-41, 56, 73, 77, 82-91, 93-113, 115-22, 124, 178, 181-94, Tables 5, 6; *see also* spindlewhorls
clay sources 22, 28-31, 83
diatom analysis 27
cremation urns 22, 31, 37, 81
cross-joining 22, 27, Table 1
decoration 5, 23, 24, 27, 31, 37, 39, 42, 45-52, 54-7, 58, 86, Figs 31-41
bossed 45, 54, 57, Fig 30
Buckelurnen 45
'comb-point' impressions 45, 56, 58, 95, Fig 28
stamped/pottery stamps 19, 24, 31, 42, 45-51, 52, 54, 58, 95, Figs 31-5, 37, 38, Table 6
distribution 7, 8, 22, 24, 27, 31, 35, 37, 39, 44, 45, 58, 86, Figs 12, 13, 18-20, 22, 23, 28, 30, 38, 40, 41
experimental firing 31, 58
fabrics 24, 27-31, 37, 52, 54, 56, 57, 58, 59, 86
grass-tempered 1, 15, 19, 20, 23, 27, 28, 31, 37, 52, 54, 56, 57, 58, 64, 95, Figs 14-17, 27, 41, 179
- form parts 40-2, Fig 26
bases 41, 54, 57, Fig 26
lugs 41-2, 54, Fig 26
rims 40-1, 44, 54, Figs 26, 29
forms 5, 24, 27, 37-45, 52, 54, 56, 57, 58, Figs 24, 27

- bottles 22, Table 1
- bowls 20, 39, 42, 44, Figs 24, 179
- biconical 22, 39, 40, 54, 56, Figs 24, 27, Table 1
 - carinated 37, 39, 40, 54, 57, Figs 24, 27
 - faceted carinated 19, 24, 27, 37, 42-4, 54, 56, Fig 28
 - globular 37, 40, 44, 54, Figs 24, 27
 - hemispherical 27, 37, 40, 44, 54, Fig 24
 - inturned-rim 27, 40, 54, Fig 24
 - splay-sided 27, 40, 54, Fig 24
 - straight-sided 37, 40, 44, 54, Figs 24, 27
- dishes 27, 40, Fig 24
- jars 39, 40, 44, Fig 24
- biconical 37, 40, 54, Figs 24, 27
 - low bulbous 40, Figs 24, 27
 - shouldered 22, 37, 40, 54, Figs 24, 27
 - straight-sided ovoid 37, 40, 44, Figs 24, 27
- plates 15, 40, 54
- spouted pitcher 22, Table 1
- Frankish 7, 22, 96, Table 1
- function 44-5, 54
- perforated vessels 44-5
- glossary 40
- grain impressions 80-1, 85, Table 20
- handmade 22-57
- Ipswich Ware 22, Fig 31, Table 1
- Iron Age 71
- petrological analysis 22, 27
- of local clays 27, 31, 58
 - thin-sectioning 27, 58
- post-depositional change 27-8, 31
- prehistoric 4, 71, 85
- presentation in report 4-5, 7
- quantification 22-3
- equivalent number of vessels 23
 - sherd count 22-3, Table 5
 - sherd groups 5, 19, 23, 31, 51-2, 54, 56, 58, Figs 11, 13, 14, 17, 27, 36, 37, 39, 41
 - sherd weight 23, Table 5
- Roman/Romano-British 4, 64, 71-2, 85, 97, Table 7; *see also* spindlewhorls
- 'Romano-Saxon' 1, 71, 93
- surface treatment 23, 27, 31-7, 39, 40, 52, 54, 56, 57, 86
- burnishing 22, 27, 31, 35-7
- coarse-slipping (*Schlickung*) 27, 31, 37, 54, 57, 58, Figs 21, 23
- combing 31, 35, 37, 54, Figs 21, 22
- function 37
- roughened 31, 35, Fig 41; *see also* rustication
- rustication 5, 27, 52, 54
- finger-nail impressions 31
 - pinched clay strips 35
 - pinched rustication 31, 35, 37, 54, 57, Figs 21, 22
- smoothing 31, 35-7
- thermoluminescence dating 58
- wheel-turned/wheel-thrown 22, 57; *see also* Frankish pottery, Ipswich Ware
- prehistoric
- ditches 1, 19, 86, Fig 51
 - pottery 4, 71, 85
 - spindlewhorls 65
 - see also* hammers
- Puddlehill, Beds 11, 13, 14, 15, 91
- punches (iron, possibly Roman) 70, 143, Fig 139
- pursemounts (or firesteels, iron) 64, 128
- Purwell Farm, Oxon 97
- quarrying 1-2, 4, 19, 86
- quern stones 14, 20, 296, Fig 179
- quoit brooch style decoration 1, 63
- rabbit *see* animal bones
- radiate brooches *see* brooches
- radiocarbon dates 7, 42, Table 3
- Rainham, Essex 45, 63
- reaping hook (iron) 69, 128, Fig 114; *see also* sickles
- reconstructions (of buildings) 8, 14, 20
- red deer *see* antler
- ring brooch *see* brooches
- ring-key (copper alloy, Roman) 69, 160; *see also* keys
- rings
- copper alloy 68, 82, 108, 125, 127, 135, 138, Figs 110, 125
 - iron 68, 110, 113, 127, 132, 135, 145, 164, Figs 85, 90, 121, 125, 172, Table 2
 - possible annular brooch 61, 153, Fig 153
 - lead 15, 70, 71, 111, 113, 114, 121, Figs 47, 87, 90-2
 - see also* chains
- River Thames 1, 4, 22, 62, 63, 93, 94, 95, 96, Figs 2, 52
- crossing of 4, 95, 96
- water level 4
- rivets, copper alloy 119, 128, 129, 156, Fig 114; iron 128, 131, 136, 140, 141, 151, 166
- rods 9, 21; *see also* metrology
- copper alloy 114, 146, 156, 294, Figs 142, 159
 - iron 151, 156, 160, Fig 159
 - possible sharpening steel 112; *see also* bars
 - lead 71, 111, Fig 86
 - silver 129, Fig 116
- Roman/Romano-British
- bracelets, copper alloy 111, 125, Figs 87, 110; shale 71, 128
 - burials 94
 - cemeteries 94
 - ditches 1, 19, 66, 71, 73, 86, 93, 95, 102, 293, Fig 51
 - field system 69
 - finds/artefacts (from Anglo-Saxon contexts) 4, 7, 71-3, 94
 - graves 61
 - hammers 70
 - ligula 120
 - metalwork 1
 - pits 73
 - postholes 73
 - pottery 4, 64, 71-2, 85, 97, Table 7
 - settlement 94, 95
 - turfline 1, 19, Table 3
 - villa/farm 71, 94
 - see also* belt fittings, brooches, buckles, coins, discs, double-spiked loops, glass, loop hinge, keys, pins, punches, roves, spindlewhorls, structural fittings, tweezers, vessels, weights
- 'Romano-Saxon' pottery 1, 71, 93
- roofs 14, 17, 19
- round shaves (iron), 70, 153, Fig 153
- roves (iron, diamond-shaped) 68, 151, 156, 157, 162, 164, Figs 159, 160, 170, 172
- rubbish pits/tips 14, 15, 57; *see also* middens, pits
- rye 80, Table 20
- 'safety pin' brooches *see* brooches
- St Cedd's monastery, Tilbury 89, 91
- Sandbanken, Denmark 56
- Sarre, Kent 22, 61, 63
- saucer brooches *see* brooches
- scantias* 73, 86-7, 91, 96; *see also* coins
- scrowa* (hut with a sunken floor) 17, 21; *see also* *Grubenhäuser*
- scudding knife *see* sleekers
- sea level 4
- Sewerby, E Yorks 60, 68, 84
- Shakenoak, Oxon 69, 70
- shale, bracelets (Roman) 71, 128; counters 151, 163, Figs 150, 170; spindlewhorls (possibly Roman) 65, 108, 109, 113, 123, 157, 163, Figs 84, 90, 106, 159, 170
- sharpening steels *see* bars, rods
- shears (iron) 69, 112, 143, Figs 89, 138
- sheep *see* animal bones
- sheet
- copper alloy 68, 71, 109, 110, 111, 116, 118, 119, 125, 128, 129, 130, 132, 138, 139, 140, 143, 146, 148, 149, 150, 151, 153, 161, 162, 164, 165, Figs 88, 99, 114, 116, 117, 121, 131, 134, 148, 151, 168, 172; *see also* ferrules
 - iron (much representing smithing waste) 68, 73, 111, 114, 118, 122, 125, 127, 140, 143, 151, 153, 156, 157, 164, 166
 - lead 71, 124, 163, Figs 108, 171
- shouldered jars *see* pottery
- sickle (iron) 291, Fig 180; *see also* hand sickle
- silver
- ferrous object with silver inlay 81, 82
 - foil in pendant 291
 - objects analysis 81, 82
 - rod 129, Fig 116
 - see also* coins
- six-post huts 10
- slag 82-4, 85, Figs 49, 73, 75, Table 22
- blocks 20, 82, 83, Fig 179
 - smelting 15, 17, 82, 83, Table 22
 - smithing 17, 83, Table 22
 - tap slag 83, Table 22
- sleakers (iron) 70
- small-long brooches *see* brooches
- smelting *see* slag
- smithing 83-4; *see also* ironworking debris, metalworking debris, slag debris/waste 17, 20, 68, 83-4
- hammers 70
- raw material (iron bars) 69
- tongs 70
- South Rings 20, 66
- spade shoes (iron, possible) 121, 142, Figs 104, 137
- spatial development (of the settlement) 24, 86-92, 96-7, Fig 50; phasing 86, Fig 50
- spearheads, copper alloy (Bronze Age) 142; iron 69, 109, 112, Figs 83, 89
- spikes (iron) 115, 117, 139, 162
- spindlewhorls
- bone 64, 65, 108, 113, 131, 153, Figs 82, 90, 120, 154
 - distribution Fig 10
 - chalk (possible) 65, 136, Fig 126
 - fired clay (Type 2) 17, 31, 64, 65, 66, 71, 73, 108, 109, 110, 117, 118, 119, 120, 128, 130, 136, 148, 149, 153, 155, 156, 158, 162, 168, 291, 297, Figs 42, 43, 82, 83, 85, 97, 101, 102, 114, 117, 126, 146, 148, 154, 157, 158, 161, 170, 178, 180, 194
 - decorated 65, 155, Fig 157
 - lead (possible) 65, 70-1; *see also* lead (discs)
 - potsherds/Roman potsherds (Type 1, sherd whorls) 64-5, 73, 110, 118, 126, 138, 142, 143, 156, 158, 166, 297, Figs 42, 43, 85, 99, 112, 131, 137, 159, 162, 176, 194
 - prehistoric 65
 - shale (possibly Roman) 65, 108, 109, 113, 123, 157, 163, Figs 84, 90, 106, 159, 170
- spinning equipment 13, 15, 64-6; *see also* spindlewhorls
- Spong Hill, Norfolk 37, 60, 69, 81, 91

- Springfield Lyons, Essex 42
 square-headed brooches *see* brooches
 stakeholes 11, 13, 14, 103, 110, 113, Figs 61, 65
 stamps *see* pottery
 Stanford-le-Hope, Essex 45, 91, Figs 1, 2, 52
 staples, copper alloy 60; iron 60, 136, 139, Figs 126, 133
 Stifford Clays, Essex 95, Fig 2
 stone objects *see* chalk, honestones, querns, spindlewhorls
 strap-ends (copper alloy) 82; *see also* belt fittings
 strips
 copper alloy 68, 108, 109, 110, 112, 113, 114, 116, 119, 121, 127, 129, 139, 149, 151, 153, 157, 166, 167, Figs 91, 96, 116, 150, 153, 177
 possible finger ring 112
 iron 68, 73, 108, 109, 110, 111, 112, 114, 117, 119, 121, 122, 124, 125, 127, 128, 131, 132, 133, 139, 141, 143, 144, 145, 147, 149, 151, 161, 164, 165, Figs 86, 88, 92, 113, 122, 145
 lead 71, 111, 120, 123, 124, 125, 127, 139, 141, 151, Figs 86, 87, 108
 structural fittings *see* double-spiked loops, fittings, loop hinges, nails, roves
 sunken huts *see* *Grubenhäuser*
 supporting-arm brooches *see* brooches
 Sutton Courtenay, Berks 19, 44
 Sutton Hoo, Suffolk 68
 Tacitus (on buildings) 17, 21, 89
 tap slag 83, Table 22; *see also* slag
 textile production 19; *see also* looms, loom-weights, spindlewhorls
 Thames *see* River Thames
 thermoluminescence dating 58
 thin-sectioning *see* petrological analysis
 Tilbury, Essex 4, 86, 89, 96, 97
 topography 2-4, 93, 95-6, Figs 1, 2
 tubular belt fittings *see* belt fittings
 tubular-sided belt attachments *see* belt fittings
 turfline (formed during Roman period) 1, 19, Table 3
 tweezers
 copper alloy 140, Fig 133
 possibly Roman 123, Fig 106
 iron (possibly Roman) 64
 two-post huts 10-11, 14, 19
 Upton, Northants 11, 13, 14, 17
 Vallhagar, Sweden 40, 54
 Vange, Essex 96
 Verulamium, Herts 69, 94
 vessels, copper alloy (possibly Roman) 60, 140, Fig 133; wooden 60, 139, 153; *see also* glass, pottery
 villa/farm (Roman) 71, 94
 Vorbasse, Denmark 19, 52, 56, 57, 59
 Wageningen, Netherlands 57
 Walton, Bucks 11
 Walton's Hall (Farm), Essex 95, Fig 1
Wandersiedlungen 96-7
 Warendorf, Germany 90
 water level *see* River Thames
 wattle and daub 13, 14; *see also* daub
 weapons *see* arrowheads, spearheads
 weaving 17-19, 91
 equipment 13, 15, 64-8; *see also* looms, loomweights
 huts 17, 19, 70
 weeds 80, 81, Table 20
 Wehden, Lower Saxony, Germany 51
 wells 19, Fig 60
 Westerwanna, Lower Saxony, Germany 51
 West Heslerton, N Yorks 91
 West Stow, Suffolk 8, 11, 13, 14, 52, 54, 64, 68, 69, 71, 72, 81, 91, 97
 wheat 80, 81, Table 20
 wheel-turned pottery *see* pottery
 Wicken Bonhunt, Essex 22
 Wijster, Netherlands 19, 35, 89, 92
 Willington, Derbys 52, 68
 Winchester, Hants (Back St, St Cross) 17
 wire (copper alloy) 114, 139, 164, Fig 91
 women's work quarters (*gymnaceum*) 17
 wood *see* charred wood, charcoal, planking
 wooden, bowls 60; handles 69, 70, 128, 139, 153; vessels 60, 139, 153
 X-ray fluorescence 62, 82
 Yeavinger, Northumb 10, 68
 York 69, 70

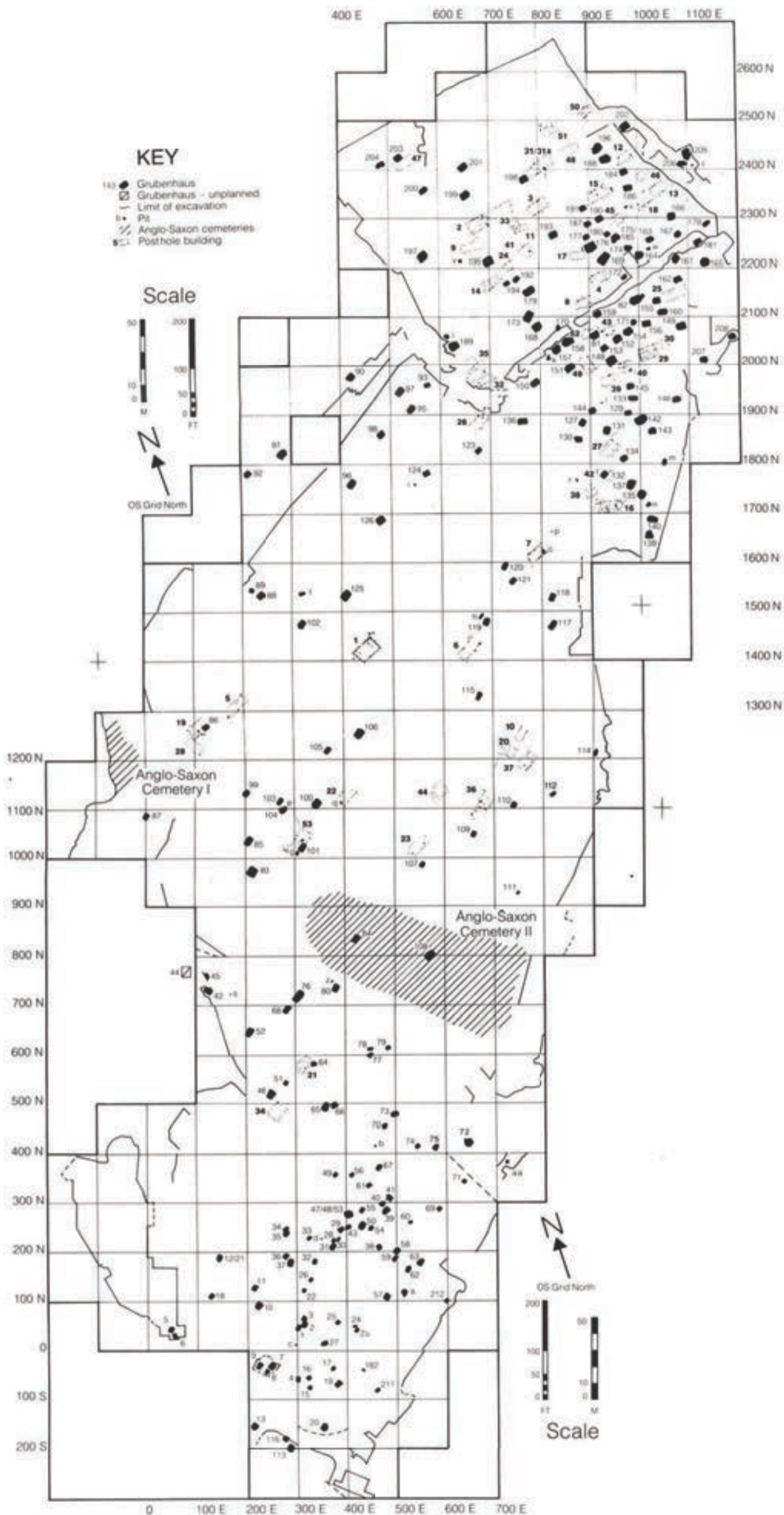


Fig 195 The Anglo-Saxon settlement

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Front cover

The conjectural reconstruction by George Taylor of the Mocking Anglo-Saxon settlement depicts the north-east sector of the settlement, looking south-east across the reed marsh towards the river. The building reconstructions are modelled on those suggested for West Stow, Suffolk, and Cowdery's Down, Hants. The artist is grateful to Richard Darrah for his assistance.