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NORTH SHOEBURY: Settlement and Economy in South-east Essex 1500BC–AD1500

East Anglian Archaeology

Archaeology Section, Essex County Council 1995

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EAST ANGLIAN ARCHAEOLOGY

Frontispiece: Brickearth extraction at North Shoebury 1972, showing conditions in which the rescue recording was undertaken. The pointing figure is D.G. Macleod, who directed the work, standing with L. Helliwell then Southend Borough Librarian and Curator (photo J. Jackson).

To the memory of David Cotgrove, Essex County Councillor 1974–1995, supporter of archaeology and Chairman of the Advisory Committee for Archaeology in Essex.

Excavations at North Shoebury: settlement and economy in south-east Essex 1500BC–AD1500

by J.J. Wymer and N.R. Brown

with contributions from
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Cover illustration
Late Iron Age cremation burial *1232* under excavation, showing cremated bone outside the pot, and articulated pig spinal column along south edge of pit.

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The inception of the excavation was mainly due to the long years of patient observations, collection, recording and rescue excavation made in advance of brickearth quarrying by Mr D.G. Macleod, then archaeologist at Southend-on-Sea Museum. The information so gained made it possible for the County Archaeological Officer, Mr J.D. Hedges, to put forward a reasoned case for the initiation of the project. Mr D.G. Buckley and Miss H. Major prepared a survey of previous discoveries and an assessment of the site's potential prior to the granting of planning consent to the development company.

Permission to excavate was kindly granted by the landowner, Southend-on-Sea Estates, through the collaboration of Mr P. Green, Engineer of that company; the Stanley Bragg Partnership; Associated Dairies Limited; and Mr R. Millbank, farmer of Tithe Barn Farm, North Shoebury.

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The excavations were supervised by Nigel Brown and Peter Donaldson; finds processing was supervised by Sheila Raven and Jane Cowgill; Mrs E.M. Wymer was responsible for the clerical and administrative running of the site. We would also like to acknowledge the help of the site assistants: Mike Emery, Dave Hosking, Graham Joyce, Steve Mitchell and Tim Yarnell.

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The illustrations were prepared by Alison McGhie, Roger Massey-Ryan, Hazel Martingell, Sue Holden and Ruth Parkin. The text was prepared for editing by Nigel Brown and Robin Turner and word processed by members of the Planning Department Word Processing Section. This report has been indexed by Peter Gunn.

The Central Museum Southend-on-Sea, provided working space, conservation work and other facilities during the 1981 excavation season (5.1.81–30.10.81) and later post-excavation time. This was a major contribution to the project, to be added to the financial support received from the Borough Council. Conservation work was undertaken by Marian Mann and Mr K. Crowe's local archaeological knowledge was of great help. The curator of the museum, Mr A.C. Wright, is gratefully thanked for making all this possible. Thanks are also expressed to several local people who volunteered information about the locality, especially Mr W. O'Donnell and Mr Dartnell. The respect shown to the site by members of the local Metal Detector Club was appreciated.

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Peter Murphy would like to thank Dr Gordon Hillman for checking certain identifications and for determining or commenting on some species of Cayperaceae and Gramineae.

Summary

This report presents the results of excavations carried out during 1981 in advance of urban development at North Shoebury, near Southend in Essex. The site lay on a brickearth covered gravel terrace. The excavations were adjacent to an extensive area of rescue recording undertaken during brickearth extraction in the early 1970s. The results of this work are also described, providing a body of archaeological evidence extending across about fourteen hectares.

There was evidence for continuous land use from at least the Middle Bronze Age. The development of extensive settlements and/or field systems is described. A reorganisation of the landscape took place in the later Iron Age, when the settlement shifted location and the layout became orientated roughly north-south and east-west. This layout survived and developed throughout the Roman period, and into the early Saxon. The Early Medieval settlement and field system was laid out on different lines. Major elements of the Early Medieval landscape influenced the layout of the rectilinear pattern of land divisions, which survived in the North Shoebury area until the urban development in the early 1980s.

The calcareous nature of the brickearth resulted in preservation of bone and shell, a range of evidence often absent from sites on the river terraces in Essex. The evidence from North Shoebury is discussed in relation to other sites and finds in south-east Essex.

Finally, the nature of the surviving archaeological resource in south-east Essex is briefly described, and the pressures on it assessed.

Preface

The North Shoebury Project was initiated in 1980 by the Archaeology Section of the Planning Department of Essex County Council. It was a response to the accumulating evidence for settlement in the Southend Peninsula during virtually all periods from the prehistoric to the present day, especially widespread and possibly continuous from the Neolithic. The threat of large-scale development at North Shoebury, in an area already known to be rich in archaeological finds, directed attention to the possibility of investigating the site in advance of building works: a long term excavation project that would transcend the immediate exigencies of routine rescue excavation and would be a programme related to academic research. With this in mind, a duplicated report was produced under the direction of the then County Archaeological Officer, John D. Hedges, for restricted circulation to appropriate institutions and sources of possible finance. The following reasons were put forward in support of the project:

1. The fertile soils of the brickearths located at the mouth of the Thames were particularly attractive to new peoples reaching England from the continent. Therefore, the archaeological evidence to be obtained has a special relevance to settlement studies and the introduction of new cultural evidence to the country.
2. Considerable evidence for most archaeological periods has already been recovered from the brickearths.
3. The threat to the archaeology of the Southend area from brickearth working, urban development and farming is so great that the next few years represents a once and for all opportunity to investigate this potentially unique archaeological evidence (Hedges 1980, 1–2).

The proposed project received the encouragement of informed archaeological opinion, and applications for grants were made to the then Inspectorate of Ancient Monuments of the Department of the Environment, to Southend Borough Council and to local industry. In the event, money was forthcoming from all these sources. The majority of the costs were borne by the DoE, but very substantial amounts were given by the Mobil Oil Company. Southend Borough Council also contributed, by direct payment and also by invaluable back-up facilities from their museum. J. Wymer was appointed as Field Director of the project. A team of site supervisors and assistants was recruited, and work commenced in January 1981 and continued until November of the same year. An area of some 24ha was threatened by development, but only about 7ha was actually investigated in 1981. This is now mostly covered by a supermarket, car-parking complex and housing. Selective excavation was planned over the entire area, to be undertaken during a three or four year period, but funds for excavation were unfortunately only forthcoming for one year. However, the results of 1981, when related to the records and material already in Southend Museum, have given a firm foundation for the interpretation of the archaeology of the Southend peninsula since the second millennium BC.

'And indeed nothing is easier... than to evoke the great spirit of the past upon the lower reaches of the Thames'.

Heart of Darkness
Joseph Conrad

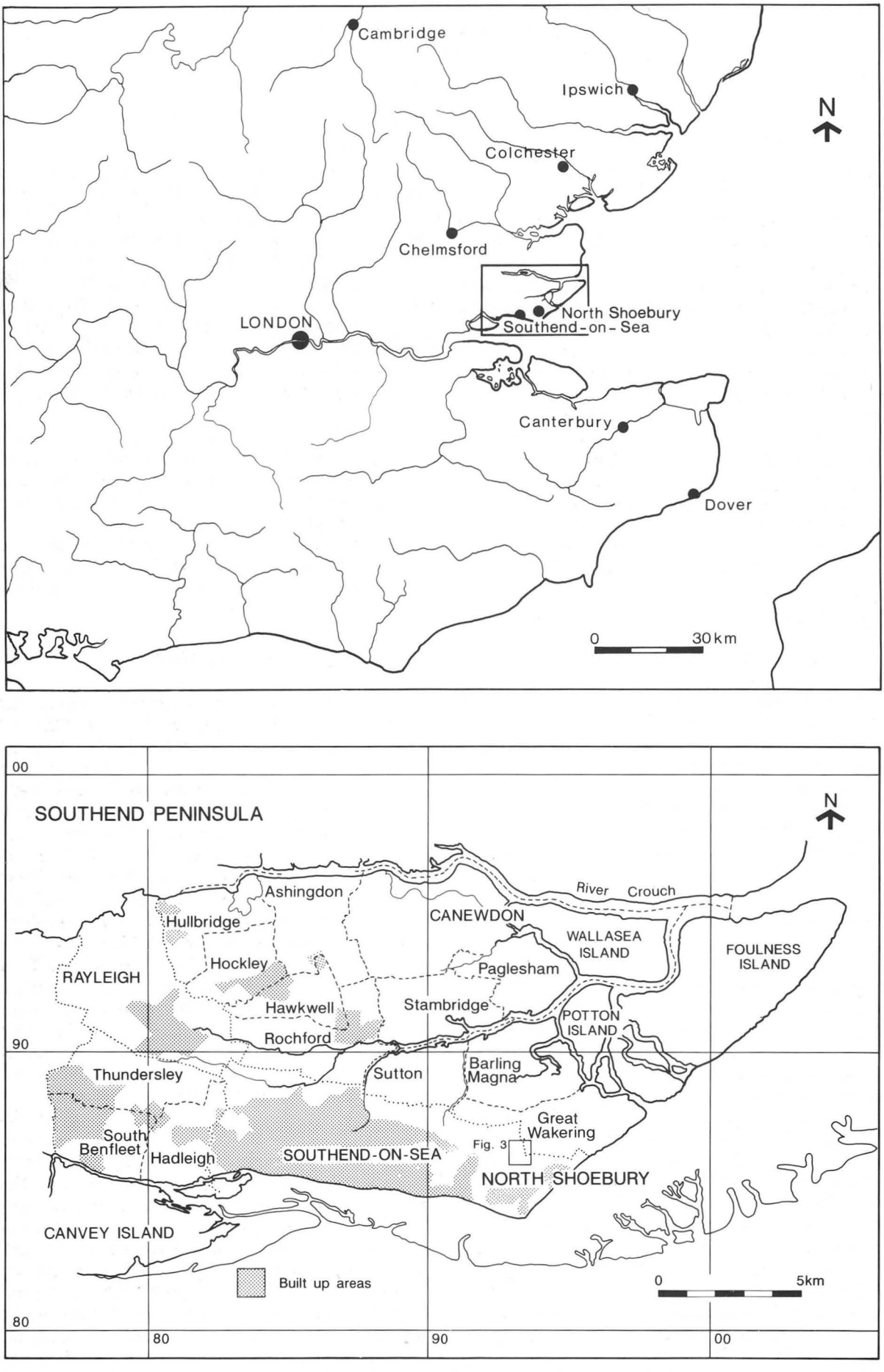

Figure 1 Locations of the Southend Peninsula and North Shoebury.

Part 1. Introduction

I. Summary of work conducted in 1981

In view of the impending construction of the supermarket complex to the south of St Mary's Church and North Shoebury Hall Farm, and the continuation of arable farming on the fields to the north and east of the church, investigations were restricted almost entirely to the southern half of the threatened area, which extended to Poynters Lane. This included hectare squares DE, LV, DP, MF, DZ and MG (Fig. 3). In the absence of any guidance from aerial photographs or geophysical surveys, long, narrow test cuttings were made by machine over the area most immediately threatened by the erection of the supermarket building and car park. This was on the east side of the shallow, ill-drained valley of the so-called River Shoe, slightly beyond the fringe of the brickearth plateau or terrace. This area proved sterile, and attention was focussed on the disturbed but archaeologically rich areas around the site of North Shoebury Hall and Farm. Further test cuttings and area excavations were conducted on the southern part of the arable land in hectare squares DE, LV and LW (Fig. 4).

A palimpsest of medieval and post-medieval pits, gullies and post-holes surrounded or underlay the extant site of North Shoebury Hall. Three sides of an Early Medieval enclosure ditch were found on the farm site, with some associated features. North and east of the church, on the brickearth terrace, were ditches, pits and enclosures, demonstrating settlement and farming activities ranging in date from Middle Bronze Age to late Roman. A small Late Iron Age 'Belgic' cemetery with inurned cremations was found, as well as some other cremations of prehistoric date.

II. Introduction

This published report and its associated archive are concerned primarily with the results of the work undertaken in 1981, in advance of commercial development of the site. However, the records and material from the earlier investigations in the adjacent area have been examined and much has been included. In particular, the features observed by D.G. Macleod during the course of topsoil stripping in advance of brickearth extraction in 1971–1980 have been published, together with some of the associated finds. His scaled plans have been combined with those of the 1981 season and enable a body of evidence to be published which covers a history of settlement spanning four millennia, only exceeded in area within the County of Essex by excavations at Mucking (Jones 1974; Jones and Jones 1975; Clark 1993). This logical expansion of the project, beyond the restrictions imposed by the conditions of rescue excavation funding, has only been made possible by the generous grants received from the Mobil Oil Company.

There has been a long and commendable history of antiquarian study, collection and publication within the Southend Peninsula, associated with individuals, societies and institutions, much of which is relevant to the recent investigations. It has therefore been thought appropriate to include a brief account of it (Section V below). The geological background is also considered, as it is clear that this has had a profound effect upon the areas chosen for settlement. However, the main body of the report is a publication of the archaeological features revealed on a wide area of the brickearth terrace at North Shoebury, with descriptions of the finds made within them. In conclusion, the evidence from North Shoebury is related to the archaeology of the Southend Peninsula as a whole.

Location of material

The area examined in 1981 is referred to as Site 13850–56 in the Essex Sites and Monuments Record held at the Archaeology Section of the Essex County Council Planning Department.

All the finds have been deposited in the Central Museum, Southend-on-Sea, together with the archival material, *i.e.* field plans, finds registers, photographic records, context sheets, *etc.*

III. Location and topography

The area at North Shoebury scheduled for development and the subject of this report, lies 4km east of the centre of Southend-on-Sea, although still within the Borough. It is now connected to it by a spread of post-war suburban residential building. The main A13 road bounds it to the west, and Poynters Lane to the north, the latter just showing in the top left corner of the plans (Figs 3 and 4). Shoeburyness, with its 'Danish Camp', is 2km south, beyond which are the Maplin Sands and the Thames Estuary. The whole development area is on the flat Barling Terrace, *c.* 8m above sea level, apart from a very shallow valley running south from St Mary's Church, near to and parallel with the A13 road. The same Barling Terrace extends north through the parishes of Great Wakering and Barling Magna to the River Roach. Towards the centre of Southend there are a series of fairly well-defined higher terraces and terrace bluffs, whilst to the east, about 2km distant from the church, the land slopes gently down to the marshy, dissected flats around Foulness Island.

Prior to the development which initiated the North Shoebury Project, the threatened area was almost entirely arable or pasture land, with few buildings within or close to it (Plates I and II). There was no village of North Shoebury, in the sense of a nucleated settlement; only a few isolated cottages and houses existed along the roads, dating to the time before the extensive Elm Road Estate and the current construction programme of a superstore, garage, and further residential estates. The focal point is St Mary's Church, a modest but attractive building of the early 13th century with later modifications, including a south aisle built in the same century but demolished probably during the 15th century. North Shoebury Hall stood immediately south of the church until it burnt down in June 1968, described by Norman Scarfe in the Essex

Plate I General view of development area looking north, North Shoebury House behind trees to left of centre.

Shell Guide as 'Tudor brick hall, reduced and the first storey weatherboarded in the early 18th century. Needs care.' (Scarfe 1975, 163). Between the church and the hall is a lane from the main road which, until December 1980, led to a ragged collection of brick, wood and corrugated iron buildings comprising North Shoebury Farm. This was demolished at that time, although one timber-framed barn, listed by the Department of the Environment, has been preserved and incorporated within the development complex. The only other notable buildings on the fringes of the area under consideration are North Shoebury House, an elegant 18th-century residence on the north side of Poynters Lane, and Moat House. The latter is on the opposite side of the road to the new superstore, with a wide and deep moat on three sides. The present, recently renovated, house is of late 18th or early 19th century date, but is on the site of an earlier building referred to in historical records (below pp 7–8). It possessed an unusual gateway, which was demolished in the 1930s (plans in Southend Museum).

By the west side of the church boundary is a spring, at the head of the shallow valley which widens towards the south. This source of water was presumably one of the major factors influencing the position of the historical and earlier settlements. At some time a pond was dug in the angle between the main road and the lane to the church and hall. It is difficult to reconstruct the original topography of this shallow valley, for the spring water has obviously had a long history of being channelled in one place and filled in another. Excavation west of the hall showed that a boggy area had been covered and levelled in about the 13th century (Archive: Section S18). A temporary section to the south (Archive: Section S1 in Grid Square FE) showed an apparently natural truncation of the brickearth and an accumulation of silt within the shallow channel. Local tradition speaks of a 'River Shoe' with 'barges going up to the church', but this seems very unlikely. A Mr Lester recalled cobbles across Chelmer Way at its junction with Ness Road, in South Shoebury, which flooded at times, and was considered to be the original course of the 'River Shoe'. This could not be verified.

Gravel crops out near the church and along the edges of the above mentioned shallow channel but, elsewhere, a mantle of brickearth up to 4m thick covers this same gravel. The brickearth is less than 1m thick near the church and generally thickens rapidly towards the east. An old pit bluff (Fig. 3) marks the limit of the quarrying in the 1970s. Later quarrying has been north of Poynters Lane, closer to the Milton Hall Brickworks in Star Lane, within the parish of Great Wakering.

The north part of the area threatened by development was still being farmed by Mr Roy Millbank during the course of the 1981 excavation, producing a good yield of barley. There have been considerable changes to the field boundaries in the last hundred years. Those on the estate map of 1703 (Plate XIII, Fig. 102) are shown on Figure 3.

IV. Geological setting and formation of the present landscape

The Southend Peninsula is defined as that area between the Rivers Thames and Crouch, coincident in 1981 with the Rochford District, Castle Point District and the Borough of Southend-on-Sea (Fig. 1). This area is bounded on the west by the relatively high ground from Benfleet to Hockley, where the Tertiary rocks of the London Basin crop out along a ridge aligned south-west

Plate II Work in progress in grid square LW looking south, Parson's Barn in top right hand corner.

to north-east. These rocks are mainly London Clay, Claygate Beds and, on the highest ground in the area at Thundersley about 84m OD, Bagshot Beds. The sandy Bagshot Beds, in part capped by the oldest river gravels in the district, give rise to podsolised heaths, as at Daws Heath and Hadleigh. Being in the centre of the London Basin, the dip slope of the Tertiaries is negligible.

East of the Tertiary ridge there is a flight of descending river terraces, much dissected by later erosion except for the lower terraces. The Rivers Crouch and Roach cut through these terraces and have contributed little to their formation. The sands and gravels upon the terraces reflect a long history of the development of the major rivers, the Thames and Medway, reacting to glacial episodes, changing sea levels and local subsidence. The highest and earliest gravels, preserved in small patches on the Rayleigh Hills, are of Middle or possibly Early Pleistocene date. They contain 30% of Lower Greensand chert and other Wealden rocks, and thus clearly relate to the Medway and not the Thames. The gravels pre-date the Anglian Stage of the British Quaternary sequence (Mitchell *et al.* 1973). At this time the Thames flowed along a very different course, through the Vale of St Albans (Wooldridge and Linton 1955: Gibbard 1977 and 1979). The Medway flowed east of the Benfleet–Hockley ridge. This drainage pattern was drastically altered by the advance of the Anglian ice sheet, which dammed the Thames and eventually diverted it into its present valley. The combined Medway/Thames flowed towards the Blackwater Estuary and presumably along the edge of the ice sheet. Gravels at 21m OD at Southend may also pre-date this stage, for a tooth of Mastodon was found at Hobleythick Lane, west of Prittlewell Priory (Gruhn *et al.* 1974). Mastodon is only known from Early Pleistocene contexts in Britain.

When the ice receded, the combined Thames/Medway developed into a mature river system. Gravels at 15m OD may belong to this stage, but the order of deposition of the various sands and gravels underlying the different terrace levels is very difficult to determine. However, erratic rocks which are characteristic of Thames deposits are not found in the gravels east of the Benfleet–Hockley ridge above the 28m OD. Gruhn *et al.* (1974) recognised and named five terraces below 21m OD, whereas a more recent survey by the Institute of Geological Sciences identified only four (nos. 1–4 on the Geological Map sheet 258/259 1:50,000 series, published 1976). The alternative terminologies are tabulated below (Table 1).

Some of these terraces are wide and well preserved, and there are clear bluffs in between them where head deposits have developed. This can be seen particularly well along the A13 road between Southend and Shoebury, with a marked rise from the wide expanse of the Barling Terrace (Terrace 1) to the Asheldham Terrace (Terrace 3) west of Bournes Green. Southend airport utilises the extensive spread of the Rochford and adjacent terraces (Terraces 1–3). There are several discrepancies between the mapping of the terraces by Gruhn *et al.* and the Institute of Geological Sciences, mainly due to the composite nature of the terrace deposits, with those of one terrace sometimes overlapping those of another. A detailed survey has also recently been made by Bridgland, with particular reference to the lithological composition of the various gravels and the longitudinal profiles of the terraces (Bridgland 1980; 1994). These studies adequately demonstrate the frequent differences in lithology of deposits at the same height, and contradict the notion of a

simple sequence based on the order of descending altitudes of the terraces. There are, for example, deep buried channels underlying Terraces 1–3 which probably relate to a low sea level of the Anglian Stage, whereas the gravels and brickearths above them are more recent (Lake *et al.* 1977). Another complication is that relative changes in the levels of land and sea have resulted in different gradients to the major rivers at different times, so that the longitudinal profile of one period has sometimes crossed with that of another. This means that the relative positions of two terrace deposits in the Southend area may be inverted upstream. Such appears to be the case with the Barling Terrace, on which the whole of the North Shoebury site under consideration is situated. Local subsidence has also been an important factor in the history of river development and coastal changes in this area. The question of the Pleistocene succession is only directly relevant to considerations of the Palaeolithic period, but the complexity of it explains the variety of sediments and corresponding soil types that are found within the Rochford district.

The Barling Terrace (Crouch first Terrace of the Geological Survey) extends from the Crouch to the Thames between Paglesham and Shoeburyness. For the most part yellow brown silt referred to usually as brickearth covers about 4m of fluviatile sand and gravel, with its bench level at about 0m OD. North Shoebury church is on the north side of a buried channel which descends to at least -15m OD. The brickearth is partly if not entirely a blanket cover of fine sediment probably with a loessic component and it extends westwards on to the higher terraces. It was mainly deposited during the last glacial episode in Britain, termed the Devensian Stage. Gruhn *et al.* (1974, 65) considered that a buried parabraunerde (*i.e.* an intastadial) soil was present in a section of brickearth at Cherry Orchard Lane on their Rochford Terrace, at a depth of 1.22m. This implies a phase of warm, temperate climate between upper and lower sediments, but it could be the result of groundwater leaching (Lake *et al.* 1977). The presence of brickearths dating to earlier glacial stages is very likely, but there is no dating evidence and, apart from the section mentioned above, there is a distinct lack of visible buried palaeosols as are found so frequently in northern France.

The brickearth at North Shoebury is calcareous and contains small nodules of calcium carbonate. Considerable variations occur locally because of the mobile nature of the calcium carbonate. Weathering has produced the grade A agricultural soil of the area and it was undoubtedly the fertility of this soil, its relative ease of working and reasonable drainage properties that attracted prehistoric settlement. Also, it is the calcareous nature of the soil which has been so conducive to the preservation of archaeological evidence in the form of bone and shell food refuse, rarely surviving on the more acid, gravelly soils. From North Shoebury church to Shoeburyness a shallow valley has removed the brickearth and exposed the underlying gravel. The thickness of the brickearth increases eastwards from the church from about 1m to 4m, with little or no effect on the soil fertility but some on the drainage.

About 2km to the east and north-east of the church the Barling Terrace slopes gently down to the extensive low-lying flats of Foulness and adjacent islands, separated by tidal creeks; a very fresh topography created on a spread of marine or estuarine alluvium. Some understanding of the changes that have occurred here during the last five or six millennia is critical for interpreting the settlement changes indicated by the archaeological evidence from North Shoebury. Changing coastlines have prevented or encouraged access by water, and land surfaces have either been drowned or reclaimed. There has been a considerable study of Foulness and the Flandrian history of the Lower Thames Estuary in the last decade, much of it precipitated by the danger of a rise in sea level (3.4mm per year at Southend) and the necessity for a Thames Barrier. The changes are of a greater magnitude than expected.

A borehole at the north end of Foulness, referred to as Ridgemarsh 2, penetrated 22m of clays and shelly sands (Greensmith and Tucker 1980). A radiocarbon date of 5566 ± 250 bc (Bim.242) was obtained from peat at -18.50m OD. This rapid Flandrian transgression was certainly influenced by subsidence. Apart from the general downwarping towards the North Sea Basin, hinged along a line running approximately north-east to south-west between Braintree and Colchester, Greensmith and Tucker (1980) postulate a further fold axis running parallel from the eastern end of the Blackwater Estuary, through Bridgemarsh Island on the Crouch, and possibly continuing towards Tilbury. Devoy (1979 and 1980) has demonstrated the differential warping along the Lower Thames that has taken place since about 5000 BC. This movement is still active and has presumably been so during much of the Pleistocene, although not necessarily continuous or at the same rate. It has clearly been a major factor in the development of the North Sea Basin, the English Channel and the present configuration of the coastline of the Southend peninsula. For example, the land surface of *c.* 2000 BC is -2.00m at Crossness, Erith, -6.00m at Tilbury, and -8.30m at Foulness. The present annual rise in sea level of 3.40mm at Southend is nearly twice that at the mouths of the Stour and Orwell in north Essex, which lie much closer to the line of the 'hinge'.

The detailed sequence of climatic, geological and geomorphological events in the Southend Peninsula since the end of the Devensian Stage (*c.* 8350 bc) is still not complete, but our present knowledge is summarised on Table 1. For the reasons noted above, the changes in sea level apply only to the Thames Estuary/Foulness area and not the coastline further north.

Another factor which has caused major changes in the topography of the area through prehistoric times and to the present day is the unstable nature of the London Clay, and its vulnerability to erosion. London Clay crops out in the cliffs between Leigh and Southend. It is likely that this cliff has receded several hundred metres since the Neolithic period. Under natural conditions, prior to the

Terrace identified by Gruhn *et al.* 1974	Approx. height OD	Terraces as mapped by B.G.S. (Lake *et al.* 1986)	Approx. general surface height OD
Asheldham	21m	Terrace 4	27–51m
Southminster	15m	Terrace 3	15–24m
Rochford	12m	Terrace 2	5–27m
Barling	8m	Terrace 1	2–9m
Shoeburyness	5m	Terrace 1	2–9m
Buried channels	to -31m	Buried channels	-33.9m

Table 1 Terraces of the Southend Peninsula

building of sea defences and urban consolidation, the London Clay cliffs would be constantly subsiding into the sea from the effect of tidal erosion, as they do on the Isle of Sheppey across the Thames today. As recently as 1887 it was recorded that 'the houses [west of the Royal Terrace in Southend], New Town and all, would very shortly subside into the sea. Great masses of the cliff were constantly subsiding.' (Pollitt 1957). The hummocky slopes of the public gardens flanking the Western Esplanade preserve something of the original topography of the cliff line. At present (1984) the Westcliff Pavilion is threatened by subsidence. A large area at Milton was lost to the sea in AD 1327 (Francis 1932).

These changes in the coastline, with gradual loss and perhaps occasional gain of low-lying fertile land to the east and south-east of North Shoebury will have had a profound influence on settlement. The geography of this eastern end of the Southend Peninsula was very different in the Pre-Boreal and Boreal zones, with land surfaces extending several miles into what is now the North Sea, and a sea level some 30–40m below the present. Much has been written on the combination of the post-glacial rise in sea level and the localised subsidence, resulting in the inundations of ancient land surfaces (Akeroyd 1972, D'Olier 1972, Devoy 1979, 1980) and is summarised by Greensmith and Tucker (1971 and 1980).

Devoy (1980, 143) relates the so-called Lyonesse surface in the outer part of the Thames estuary (Warren *et al.* 1936; Akeroyd 1972; Wilkinson and Murphy 1995) to his radiocarbon-dated, stratified biogenic sequence at Tilbury, where he has identified five phases of marine regression, TI–TV. He states:

> 'The continued direct use by man of these coastal environments can be judged from artifact finds associated with the surface of T113 and deposits of T IV. The habitation phases of the Lyonesse surface in the outer estuary shows persistent occupation from 4700 years bp through to inundation of the area by 3800 bp evidencing the attraction of the coastal zone. ...During marine transgressions, particularly, the intertidal area presented a productive salt-marsh and mudflat ecosystem. Chenopodiaceae, Salicornia spp. and other edible plants occurred here, in an environment naturally suited to livestock grazing as well as to providing a source of crustaceans and fish.'

The settlements at North Shoebury must be considered against such a background. Apart from these geographical changes, settlers also had to adapt to the general deterioration of the climate after about 1200 BC. During the first millennium BC, the coastline would have assumed something of its present form, with numerous tidal creeks and inlets, rendering much of the peninsula very accessible by watercraft, and producing a rich habitat for many types of shell-fish in addition to marine fish. Akeroyd (1972) concludes that the sea level during the Roman period was about 1.60–2.60m below the present, so what now remains as Foulness would have been relatively dry at that time. The gradual transgression of the sea, which is still continuing, would have had a serious affect upon Foulness were it not controlled by the erection of sea defences.

V. History of local archaeological discoveries

The history of local archaeological discoveries begins in the 19th century, with the activities and interests of Philip Benton, who was born in 1815 at North Shoebury House. He lived all his life in the area, at Shopland and Little Wakering Hall, returning to North Shoebury House in 1886. Philip Benton was a gentleman farmer who led an active life, and is well known for his *History of Rochford Hundred* on which he worked from 1867 to 1888. This was published in parts, some of which have been recently reprinted with additional notes. Unfortunately he was unable to finish this work as he was partly paralysed in 1888, before he could finish the section on North Shoebury (now reprinted, see Baker (1981), and obituary (Anon 1898)). His antiquarian interests were known to local people, who drew his attention to any discoveries that were made, and these were plentiful as brickearth was being extracted on a fairly large scale by hand in Great Wakering and North and South Shoebury. He thus amassed a considerable collection of antiquities, including the Shoebury I Bronze Hoard. This collection he eventually presented to the British Museum, the Colchester Museum and the Borough of Southend-on-Sea. Some may have gone into private hands, but the Borough gladly accepted its portion of the antiquities and, as recorded at the time, 'these have been carefully set out with instructive labels in the Technical Schools, to wait for the time when such Municipal Buildings as shall be built in Southend shall include a proper museum'. Thus was laid the basis of the town's official commitment to the conservation of its archaeological record, epitomised by the present museum.

The Technical Schools were opened in 1883, adjoining the Mechanic's Institute in Clarence Road. Benton's collection was certainly there in 1889 for, in that year, the members of the Essex Field Club made a special visit to see it (Anon 1889). A report of this visit draws attention to an arrowhead found near a 'kitchen midden' at South Shoebury in 1886, and pottery from South Shoebury brickfield. When the Central Library opened in 1906 the collection was transferred there, and the first volume of Museum registers lists 187 items, being the initial entries recorded as numbers 1 to 187 on 12th July 1906. There this material, including much from around North Shoebury, remained until Prittlewell Priory opened as a museum in 1922. William Pollitt, F.S.A., F.L.A. was appointed Borough Librarian and curator. In 1925 he published the first museum handbook *An introduction to the prehistoric antiquities of Southend-on-Sea and district.* This was very general, but in 1935 he published the first detailed survey of the archaeology of the district (Pollitt 1935), with a gazetteer of sites and finds not confined to the Southend Museum collections. This was reprinted with additions in 1953 (Pollitt 1953).

Brickearth extraction continued throughout the first half of the 20th century, and many further discoveries were made. In 1932 the Milton Hall Brick Co. acquired Townfield, Star Lane, Great Wakering and, since then, their diggings have extended across Poynters Lane to North Shoebury. The limit of these commercial excavations is shown on Figure 3, clearly visible in 1981 as degraded pit faces. Local interest remained strong and many discoveries found their way to the new museum, either as records or the actual objects. In 1920, the

Southend-on-Sea and District Historical and Antiquarian Society was formed (see Chessher 1971, for a history of this society). However, no actual excavation work took place in the brickearth pits. It was not until the late 1950s that some formal recording and controlled excavation was undertaken. Mr L. Helliwell, M.B.E., F.L.A. had succeeded Mr Pollitt as Borough Librarian and Curator, and a full time archaeologist, D.G. Macleod, M.A. was appointed. Emergency excavations were conducted at the Tithe Barn, North Shoebury (around TQ 936866) in 1958–9 and recording of features exposed by topsoil clearance prior to brickearth extraction continued at times throughout the 1960s. In 1971–2 rescue excavations were conducted in the area immediately adjacent to the area excavated in 1981. The 1971–2 excavations, directed by D.G. Macleod, are referred to here as 'Milton Hall Brickfields'. Some work was also done to the south at Elm Road during the construction of a large new housing estate. After 1972, recording and some limited excavation continued. The large body of evidence that accumulated was one of the major factors in deciding to undertake large-scale rescue excavation in 1981 in advance of building development. It was clear that settlement extended back at least as far as the Neolithic and that the calcareous nature of the brickearth had preserved bone and shell in most of the periods represented.

VI. Documentary background

by P.M. Ryan

The history of North Shoebury has received attention in the general works on Essex published in the 18th century (Salmon 1749: Morant 1768) and later in greater detail by Philip Benton, who published his History of Rochford Hundred in parts (1867–1888). Benton appears to have relied heavily on Morant prior to the acquisition of North Shoebury by George Asser and thereafter used the deeds.

1086

At the time of the *Domesday Survey* Shoebury (Essoberia) was divided into two manors, the one held by Suen of Essex but formerly by Robert FitzWimarc which became known as Great or South Shoebury; and the other also held by Suen of Essex, which had been the property of an unnamed freeman and later was known as Little or North Shoebury.

In *Domesday* North Shoebury was described as a manor and four hides with four villains. At the time of the conquest there were six bordars but when the survey was made eight. Previously there had been two slaves. In 1066 there were two ploughs on the demesne but three were recorded in 1086. The men had two ploughs. There was woodland for 12 pigs and pasture for 100 sheep. In 1066 there was one horse, two cattle, and forty sheep but one horse, six cattle, a pig and one hundred and fifteen sheep were recorded in 1086. It was valued at £6 but at the time of the survey the value had risen to £8. (Victoria County History of Essex, Vol. 1, pp.485–6).

1271

According to the inquiry into the lands held by William de Woodham Ferrers on his death in 1271, in addition to a messuage, 240 acres of arable, 4 acres of meadow and 16 acres of wood in Woodham Ferrers and 30 acres of wood in Hadleigh, he held 80 acres of arable, half an acre of pasture and 17s 3d rents in Little Sobiri *i.e.* North Shoebury. (Calendar of Inquisitions Post Mortem Vol. 1, p.249).

1280

On the death of William de Wodeham in 1280 the inquiry into his lands listed the manor of Little Shobyre, that is a messuage, 4s 1d rents, 132 acres of arable, 1½ acres of pasture which he held of the king of the barony of Rayleigh by service of half a knights fee, 12d hidage at the hundred of Rochford and suit at the court of the barony of Rayleigh; 4 acres of marsh held at the fee of Agnes de Abingdon paying 2s 8d yearly and 50 acres of wood and heath held of the heirs of John de Brich for ½d. He also held land in Woodham Ferrers and Great Benfleet. William was succeeded by his son Thomas, who was seven years old at the time of his father's death (Calendar of I.P.M. Vol. 2 p.203).

1300

There appears to be some discrepancy in the recording of Thomas de Wodeham's age. On 28th March 1300 Henry de Gynges aged 50 years said that Thomas was 22 years old on the third day before the Nativity of St John the Baptist last (26th August 1299) for he was born at North Shoebury on that day in the 5th year of Edward I (1277) and baptised in the church there on the eve of the said feast, and this he knew because he married Katherine, daughter of John de Thorpe in the second year after the said heir's birth (Calendar I.P.M. Vol. III p.497).

1329

On his death in 1329 Thomas de Wodeham held 140 acres of arable, rents and works in Little Shoebury of the honour of Rayleigh by service of a quarter of a knight's fee, suit at the hundred court of Rochford every three weeks and at the barony court of Rayleigh monthly, and 16d rent. He also held a wood in Hadleigh, 5 acres in Prittlewell 10s. rent in Hockley. His holdings in Woodham Ferrers totalled 140 acres, in Benfleet over 20 acres and 3 marshes. In Chigwell (Schikewelle) he held a hall, kitchen, *etc.* of Nicholas Barnton by service of 3s 6d yearly and a pair of gilt spurs priced 6d, 40 acres of arable and 2 acres of meadow also held of Nicholas, 18 acres held of the earl of Warenne for 2s 6d; 30 acres of land and 6 acres of meadow of John — 20d and 14s 4d rents. His son and heir William was sixteen years old (Calendar I.P.M. Vol. VII p. 125).

1336

William had died before 1336 for in that year an inquiry was made into the age of his brother Edward, whose lands were in the wardship of Oliver de Bohun, knight. Thomas Gobioun, knight aged 60 years, said that Edward was born at Chigwell and was baptised in the church there and was 21 years of age on Sunday next after St Luke's last. John de Hollon aged 46 years agreed because it was on the Saturday next after the birth of the said Edward he came to the house of Thomas de Woodham at Chigwell and paid him 100 shillings which he owed. The evidence of John de Purlee appears to be slightly conflicting. He agreed it was the same date but gives as his reason for remembering that on the same day he was at the castle of Haugley (Hagelehe) with the father of the said Edward and King Edward II in the 8th year of his reign (1314–15) lifted

Edward from the sacred font and he, John, was present (Calendar of I.P.M. Vol. VIII p.30).

1387

In 1387 at the inquisition post mortem of Edward it was reported that he had died five years previously and that his son John de Wodeham was 30 years old. He held lands in Little Shoebury, North Benfleet and Hadelegh which included — a messuage, 160 acres of arable, 1 acre of meadow, 30 acres of wood and 20s rent. All held of the King as of the barony of Rayleigh by a quarter part of a knights' fee (Calendar I.P.M. Vol. XVI p.179).

1419

In 1419 Edward son of Edward Wodham of Little Shoebury granted to Nicholas FitzSymond all his rights on the lands called Barbours and all the lands which had belonged to his father (*i.e.* Edward Wodeham and Agnes his wife) in Little Shoebury, Southchurch and Wakering (Cal. of Close Rolls Vol. II p.54). The FitzSimon family had connections with North Shoebury from at least 1294 when John de Lovetot held 11 acres of land of John son of Simon (Cal I.P.M. Vol. III p.131). In 1346 Edmund FitzSimond, knight was answerable for all the feudal aid charged on one fee in Little Shoebury which Adam son of Simon, Thomas de Wodeham, Agnes de Shoebury and Henry Gyne formerly held (Feudal Aids Vol. 2 p.161). At the inquisition *post mortem* into his lands in 1363 he was said to have held one third of the manor of Little Shoebury (Calendar I.P.M. Vol. XI p.261)

1474

According to Morant (1768) Robert FitzSymond died in 1474 holding the manor of West Hall in North Shoebury. This appears to have been the first time the manor was recorded by the name of West Hall. Joan, Robert's daughter, wife firstly of Robert Tymperley and then Henry Wentworth was his heir (Morant 1768, Vol. I pp 300–303).

1522

In 1522 the manor was held by Nicholas Wentworth (Morant 1768, quoting I.P.M. 13 Edw. IV and 14 Henry VIII).

1664

It has not been possible to follow the history of West Hall from the time of the Wentworths until 1664, when a trust was drawn up by John Cage of Maidstone, the owner, settling the rents and profits of West Hall then in the occupation of Gilbert Smith on his son Robert for his life (ERO D/D Mq.T2/1).

1692

In 1692 Charles Gandy and his wife Eleanor, the only daughter of Robert Cage were owners of the property (EROP D/D Mq T24).

1696

Four years later Eleanor Gandy sold the property to Thomas Collins, who bequeathed it to his wife Elizabeth (ERO D/D Mq T2/14,18,19). On his death she married Charles Russell, orange merchant of London (ERO D/D Mq T2/22,23).

1715

West Hall was leased to Thomas Lewin of Eltham, yeoman, for 31 years (ERO D/DU 560.70/1).

1722

Elizabeth Russell sold the manor house and lands in North and South Shoebury and Great Wakering to Mr George Asser of Southchurch in 1722 (ERO D/D Mq T2/23, 24, 26).

1726

In 1726 Thomas Lewin assigned the remainder of his lease to John Rosbrooke (ERO D/DU 560/70/3).

1738

George Asser died in 1738. His daughter Elizabeth married Rev. John Davies, curate of South Shoebury. Their only surviving daughter Elizabeth Asser Davies, married Thomas Drew of Fitzwalters, Essex in 1746 (ERO D/DU 560/12/1, 2).

1751

Christopher Parsons, who was in occupation of West Hall in 1751, leased the farm for a further 16 years (ERO D/DI 560/70/6).

1763

A further lease was drawn up in 1763 for 21 years and an agreement to build a new barn was made (ERO D/DS 83/32, 89). The specification for the barn can be found in the Essex Record Office under the catalogue number D/DS 83/37.

1795

On Thomas Drew's death in 1795 he was succeeded by his daughter Frances Asser Drew who had married Thomas White and had a daughter Frances Asser White. She married John Gregory Welch (ERO D/D Mq T27/1).

1854

Their eldest son George Asser White Welch succeeded his father in 1854, who was followed by his son of the same name (ERO D/D Mq T8/6).

1903

The property remained in the same family ownership, on occasions via the female line, from 1722 until 1903 when it was sold to Margaret and Mary Knapping of Kent (ERO D/D Mq T26/5).

The Parson family were tenants from the mid 18th century until *c.*1882. The diaries of Christopher Parsons 1828–1882 span the greater part of the 19th century. He was an enthusiastic naturalist and recorded many interesting incidents (ERO D/DS 67/1–55).

A deed of 1228–9 (Feet of Fines for Essex Vol. 1 p.83) refers to four acres of land described as 'lying between the land of Robert de Rokele and the land of Gilbert Welsh in the field of Parva Shobyre (North Shoebury) towards the east'. Descriptions such as this are suggestive of common field farming, or at least some common field farming.

Morant suggests Kents manor had been detached from the capital manor in or before the reign of Edward I but no direct evidence for this statement has been found. Richard Kent of Shoebury is named as a party in a final concord

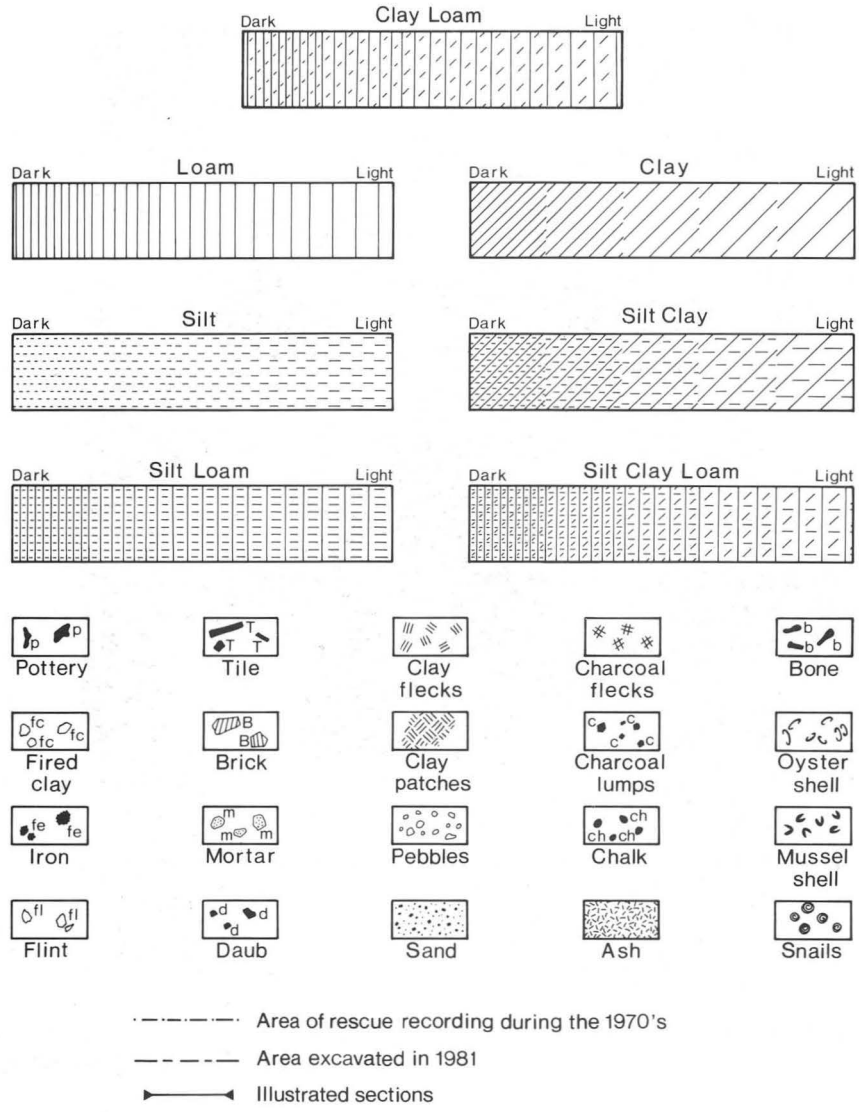

Figure 2 General key to sections and plans.

connected with 18 acres of land in Shoebury and Rayleigh in 1388 (Feet of Fines for Essex Vol. III, p.210) and the manor of Kentys was the subject of another Final Concord when it was granted to Jasper Tyrell and his wife Margaret in 1501 (Feet of Fines for Essex Vol. IV, p.97). Kents or Moat House was also purchased by George Asser before 1783 and continued in the same ownership as West Hall until the 20th century.

VII. Excavation policy and method

The North Shoebury Project was originally planned to cover three or four years of continuous investigation. The first years work was intended to assess the nature and extent of the archaeological evidence in the extensive area due for development north east of North Shoebury church, and to examine the available areas around the site of the Hall which were most immediately threatened by development. In the event funding for fieldwork was terminated after one year, excavation was therefore confined to this preliminary work and took place between January and November 1981.

During the course of the fieldwork Mr Millbank reported two features on his land at TQ 938 866. These proved to be short lengths of Roman ditch surviving on an unquarried patch of brickearth. The features were recorded (details in archive) and comments on the pottery have been included (p.99).

A major difficulty was the absence of any photographic record of cropmarks of buried features. Few cropmarks have ever been reported from this part of North Shoebury, although two ring-ditches and linear features are known on the north side of Poynters Lane (Appendix 1). Gravel does crop out each side of the shallow valley running south of the North Shoebury church and there are cropmarks of two ring-ditches, a sub-rectangular enclosure and linear features west of the A13 road in Grid Squares NL, NM, NV and NW. The aerial photograph showing these features was not available at the time of excavation. Aerial photography has certainly been inhibited by the site lying beneath the flight path to Southend Airport, and the proximity of the military installations at Shoeburyness and on Foulness, which impose restrictions. However, Capt. E.A. Clack of the Southend Flying Club, who has taken many high quality oblique aerial photographs of archaeological cropmarks in the vicinity, has frequently observed the area around North Shoebury church but never seen any cropmarks (Clack, pers. comm.).

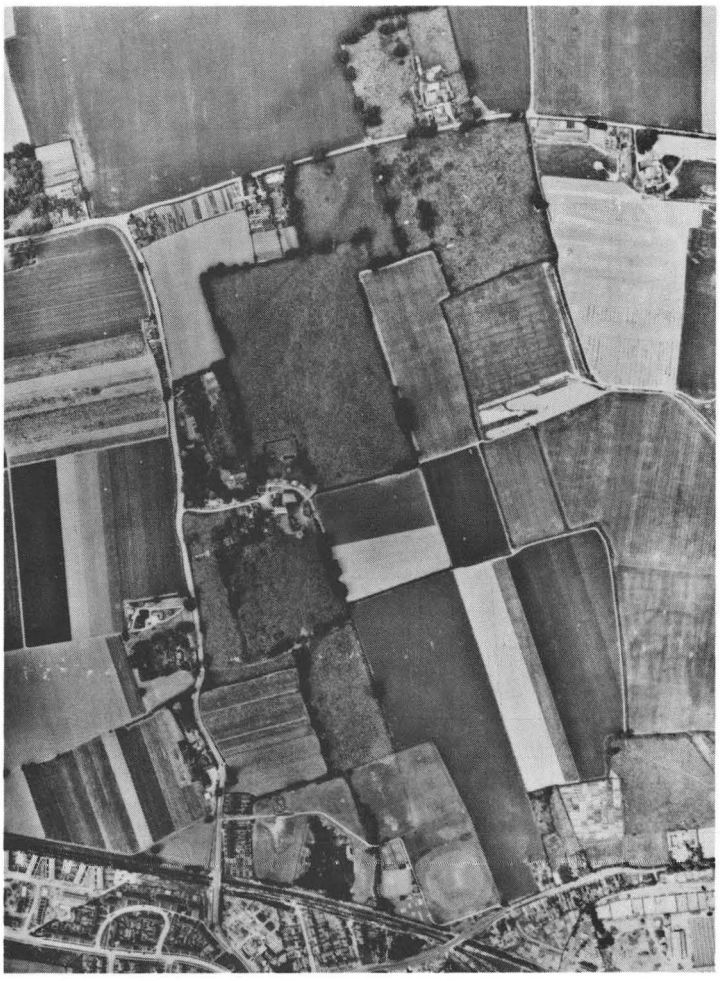

Plate III Vertical aerial photograph of the area in 1960, showing the depressed settlement pattern. The church/hall complex and Moat House are either side of North Shoebury Road (now A13), and left of centre.

For recording purposes, a grid of 100 metre squares was surveyed on to the site, in alignment with the National Grid. Each hectare was distinguished by two capital letters which represent a six figure grid reference, *i.e.* indicating 100m squares, thus allowing the addition of two, four or six figures to indicate 10m, 1m and 10cm squares respectively. For example, the co-ordinates LW 234567 pinpoints the 10cm square which, on the National Grid System, would be expressed as: TQ 931234 862567.

The lettering of the hectare grids runs alphabetically, AA, AB, AC, *etc.*, to AZ with the omission of AI, from west to east and north to south, across each kilometre square. The initial letter thus changes every 25ha, making four such changes in each kilometre square. Parts of four kilometre squares cover the site, and those hectares relevant to the investigation are lettered on Figure 3.

Excavation technique basically involved the stripping of topsoil by bulldozer or JCB, hoeing and trowelling (Plate III) to discern the topmost fills of features, and selective excavation. Measurements of depth have their points of origin at the level of the machine-cleared surface, usually 30–50cm below the modern surface, as have all the sections figured in this report unless otherwise stated.

All exposed features were recorded before and after excavation at a scale of 1:20 (Archive: Plans P1–P135), and excavated sections were drawn at the same scale (Archive: Sections S1–S116).

Features were numbered consecutively, with a few gaps, from *0001* to *1669*. Segments or excavated sections of larger features were given separate numbers within this sequence. Layers within features were distinguished by letters in alphabetical order following the feature number concerned, *e.g.* 1564A, 1564B, *etc.* In order to prevent confusion, existing feature numbers relating to work during 1971–72 were given the prefix M (for Macleod) and those relating to the period 1973–80 were prefixed M2.

Portable finds were recorded in the field. They were numbered consecutively in two categories: Bulk Finds, *i.e.* quantities of material from one feature or layer all given the same number, and Small Finds, *i.e.* individual objects. The numbers have a suffix B or S respectively.

Field Record Books, preserved in the Archive, include:
Plan List
Section List
Photographic Record
Small and Bulk Finds Lists, Nos 1–1513 in 6 books
Box numbers for finds

For facility of reference, feature numbers, section numbers, finds numbers, *etc.*, are cross-indexed and tabulated on the Site Archive Feature Cards and Finds Cards.

All excavated and archival material is at the Central Museum, Southend-on-Sea. Finds bear the Museum Accession Number A 81.1 plus the site find number within a triangle.

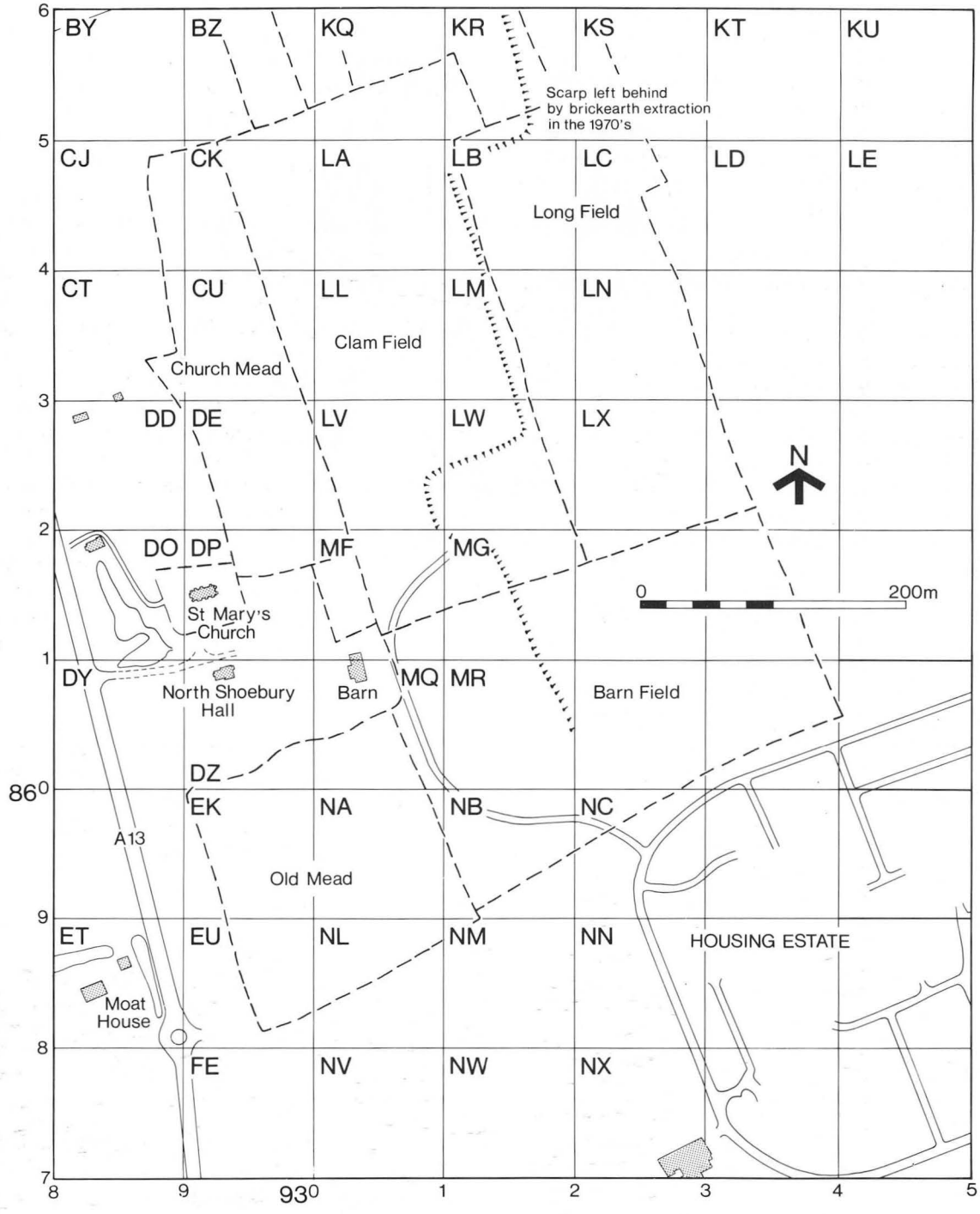

Figure 3 Site grid plan. Each square represents one hectare. The grid is aligned on the National Grid, the reference numbers of which are shown. Roads and buildings as at 1980. Dashed lines represent major field boundaries shown on an estate map of 1703.

Rescue Recording Prior to 1981

The recording work undertaken by D.G. Macleod for Southend Museum took place in two phases. During 1971–72 the topsoil was removed from areas in LW and LX and the southern parts of LM and LN, and brickearth extracted using a dragline, this can be seen underway west of Long Field in Plate III. This relatively slow process enabled a reasonably complete plan to be prepared and some excavation of features to take place. However from 1973 the brickearth was extracted using three or four box scrapers operating continually allowing little time for archaeological recording or excavation. This is clearly reflected in the plans of Grid Squares LB, LC, LD, LE, KT, KU and the northern halves of LM and LN (Fig. 4),

resulting in a disjointed pattern of recorded features lacking the coherent plan of the area to the south. Moreover even the limited excavation which took place in the southern area could rarely be undertaken in the areas to the north, so almost all the features from the northern area lack sections or any datable finds.

Most of the features which were excavated between 1971–1980 lack any detailed descriptions and where sections exist these are generally schematic. All surviving details of features recorded by Macleod and mentioned in this report are reproduced here. Section drawings relating to phase 1:1 are printed with the text to indicate the nature of the surviving evidence, the rest may be found on the microfiche.

Although the area of Grid LW examined in 1981 lay beyond the area of previous brickearth extraction, Mr Macleod had persuaded the farmer Mr Millbank to bulldoze parts of this area to check the extent of the small Saxon cemetery examined in 1972. A few features were planned and some box sectioned at that time. These were revealed and recorded during the 1981 excavation. However their positions as recorded in 1981 do not exactly match their positions on the 1971–72 plans, the shift in position is slight but in one case there is a substantial apparent overlap between gully M881 (which did not in fact appear in the area examined in 1981) and ditch 1015 (Fig. 15).

Features as exposed or excavated

Seven plans (Figs 5–11) depict the archaeological features, irrespective of age, revealed by topsoil stripping or excavation within the majority of the area at North Shoebury that has been investigated. They include all the major features recorded since 1971, plotted in the field by Mr D.G. Macleod of Southend Museum, necessitating the reduction of his plans to a common metric scale. In order to allow an overall view of the relatively large area concerned, a small scale has been used and, obviously, minor features such as stake-holes cannot be shown.

The position of the plans and their relation to each other can be ascertained by reference to the code letters of the hectare grid (Fig. 3). The positions of St Mary's Church, North Shoebury Hall and the listed barn are also shown on the relevant plans. A broken line (long dash/short dash) has been used to indicate the areas examined in 1981. A broken line (dot/dash) indicates limits of archaeological recording prior to 1981. On the phase plans a broken line (dashes only) marks the continuation of excavated archaeological features where surface indications and/or the similarity of profiles and dating evidence seem sufficient to warrant it.

VIII. Outline chronology

The relegation of the multitude of archaeological features at North Shoebury to a sequence of periods and phases has not been a straightforward task, for none of the ditches and pits remained open in antiquity for anything more than a small fraction of the time during which the site was occupied. Thus, nowhere was there a succession of fills spanning several periods which would have given a yardstick for at least part of the sequence. The only exception was the continuity of some of the field boundary ditches which did remain in use during more than one phase. This is, of course, a normal situation with rural settlement of this nature. Occasionally, stratigraphic relationships indicate the relative date of particular features, but most of the features have had to be dated by a study of the finds, mainly pottery, contained within their fills. In many cases, with sparse material and the problem of residual sherds, it has been impossible to conclude with certainty into precisely which period or phase a feature may belong.

There is clearly a subjective element in such interpretations. In an attempt to separate this interpretation from the evidence as recorded in the field, the first part of the next section contains plans of all excavated and exposed features, dated or undated, as recorded in 1981 and by Macleod prior to this (Figs 5–11). Finds on the basis of which features have been allocated to a particular phase are outlined in the feature descriptions (cross referenced where appropriate to the relevant specialist report) together with any observed stratigraphic relationship (fiche). In order to relate all the finds to every feature by number it would be necessary to consult the detailed 1:20 field plans and finds lists held in the archive at Southend-on-Sea. It would be impossible to insert individual feature numbers, other than those regarded as critical for establishing the sequence of periods and phases as outlined below, at the only practicable scale for publication of these plans covering a wide area. The calendar dates for most of the periods described below are merely those based on the conventional, current assessments of the British sequence.

Pre-Period I

Although nothing was found in 1981 that could be regarded as evidence for settlement prior to the Middle Bronze Age, one feature recorded in 1976 produced Neolithic pottery and flintwork. A few, mainly abraded Beaker sherds have also been recorded.

Period I *c.* 1500–300 BC

Phase I.1 c. 1500–1000 BC

The earliest evidence for actual settlement at North Shoebury, at least in the area investigated in 1981. Small, rectilinear enclosures and pits with domestic refuse. Corresponds to Middle Bronze Age (MBA).

Phase I.2 c. 1000–600 BC

Abandonment of the small, rectiliner enclosures and the beginning of a field system to the east and south. Corresponds to Late Bronze Age (LBA).

Phase I.3 c. 600–300 BC

Extensive development of the existing field system with accompanying drove-ways and rectilinear enclosures. Corresponds to Early Iron Age (EIA).

Period II *c.* 300 BC–AD 43

Phase II.1 c. 300 BC–50 BC

Abandonment of the EIA field system. Little revealed beyond a few parallel ditches and one round-house, but shift of settlement to the west unmistakable. Corresponds to Middle Iron Age (MIA).

Phase II.2 c. 50 BC–AD 43
Development of existing field system with addition of large boundary ditch. Small cremation cemetery at eastern boundary.

Period III *c.* AD 43–410 Roman

Phase III.1 c. AD 43–200
Continuity of existing system.

Phase III.2 c. AD 300–410
Some reorganisation of field system, establishment of rectangular enclosure at eastern boundary.

Period IV *c.* AD 410–1066 Saxon

Phase IV.1 c. AD 410–700 Early Saxon
Saxon sherds in upper fills of some Phase III.2 ditches. Small inhumation and cremation cemetery at eastern boundary of Roman field system.

Phase IV.2 c. AD 700–1066 Late Saxon
Very little indication of activity at North Shoebury.

Period V *c.* AD 1066–1500 Medieval

Phase V.1 c. AD 1066–1300
Occupation centred on large enclosure south-east of present church.

Phase V.2 c. AD 1300–1500
Enclosure abandoned, indication of occupation in vicinity of the later North Shoebury Hall.

Period VI AD 1500–Present
Occupation centred on North Shoebury Hall which was destroyed by fire in 1968.

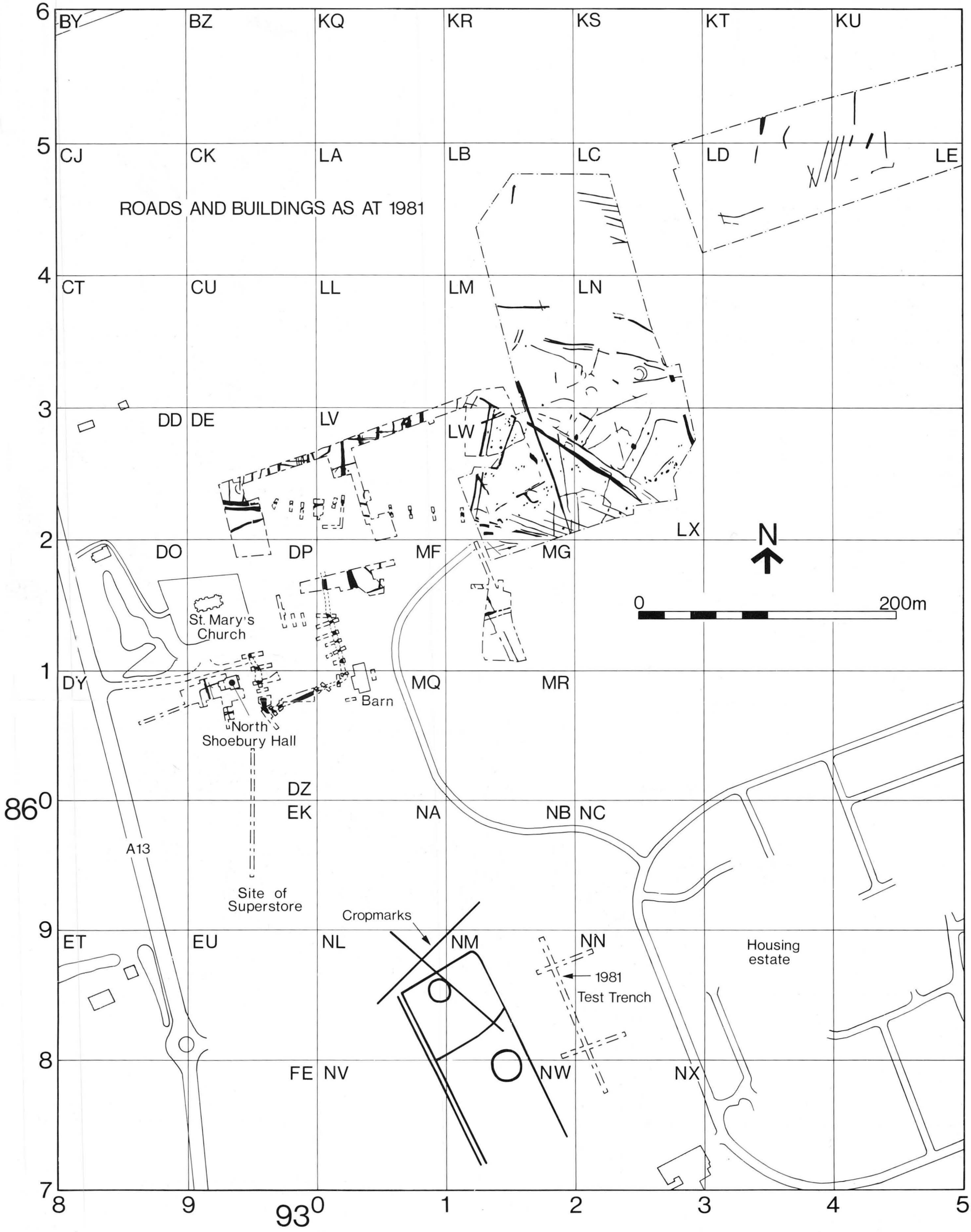

Figure 4 General site plan showing all excavated areas with major features and cropmarks. Roads and buildings as at 1980.

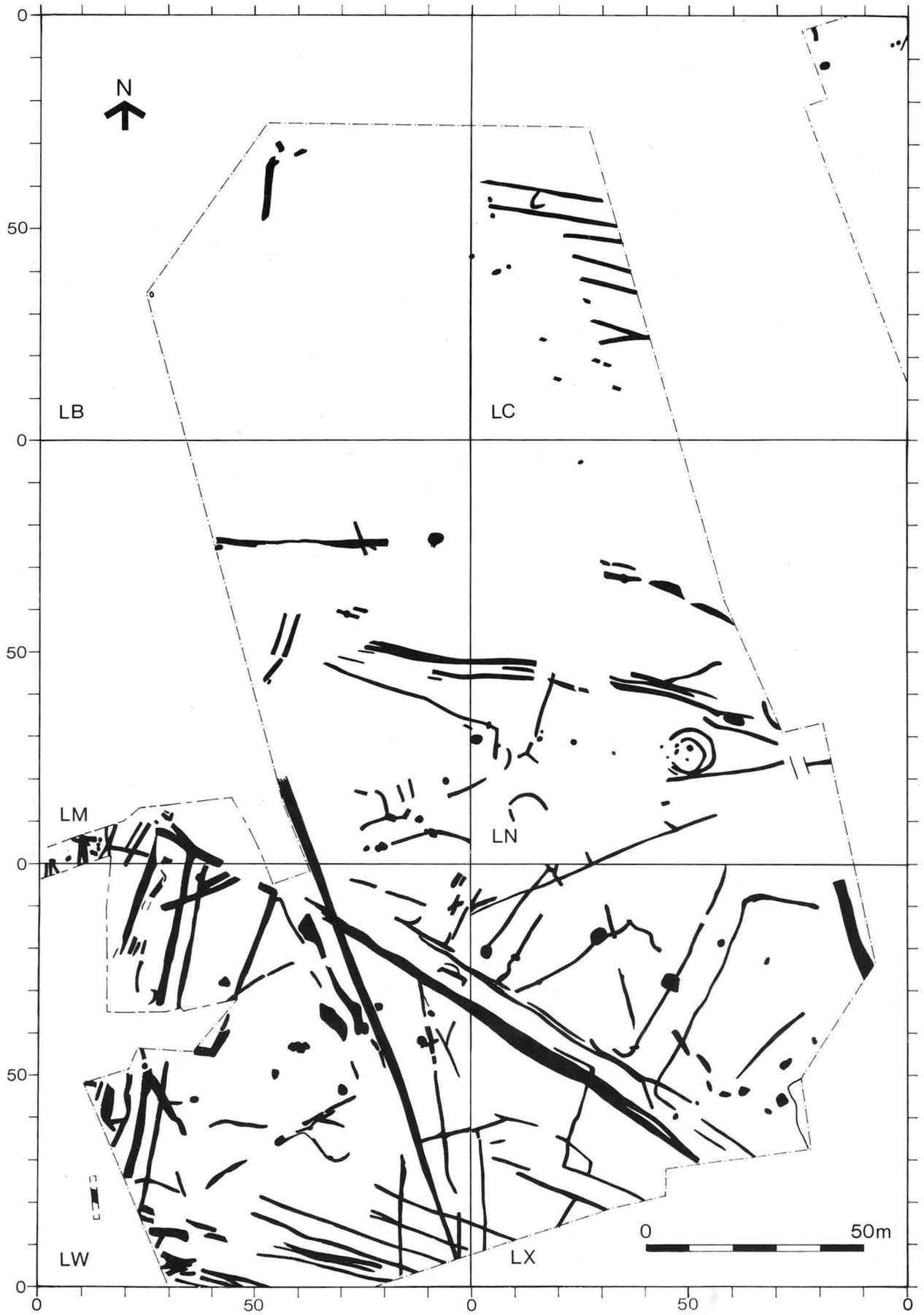

Figure 5 Plan of major features in grid squares LB–LX.

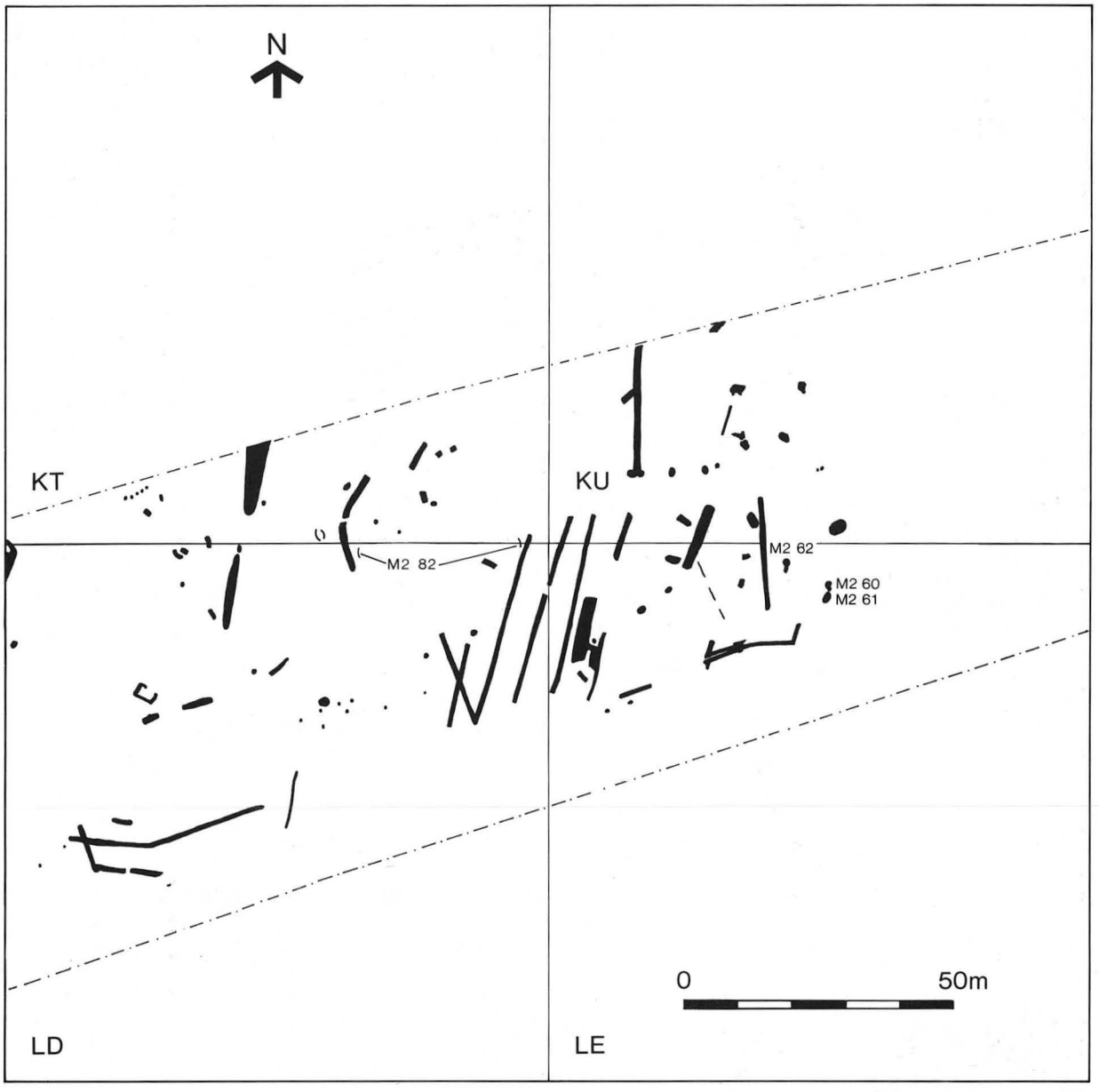

Figure 6 Plan of major features in grid squares KT–LE.

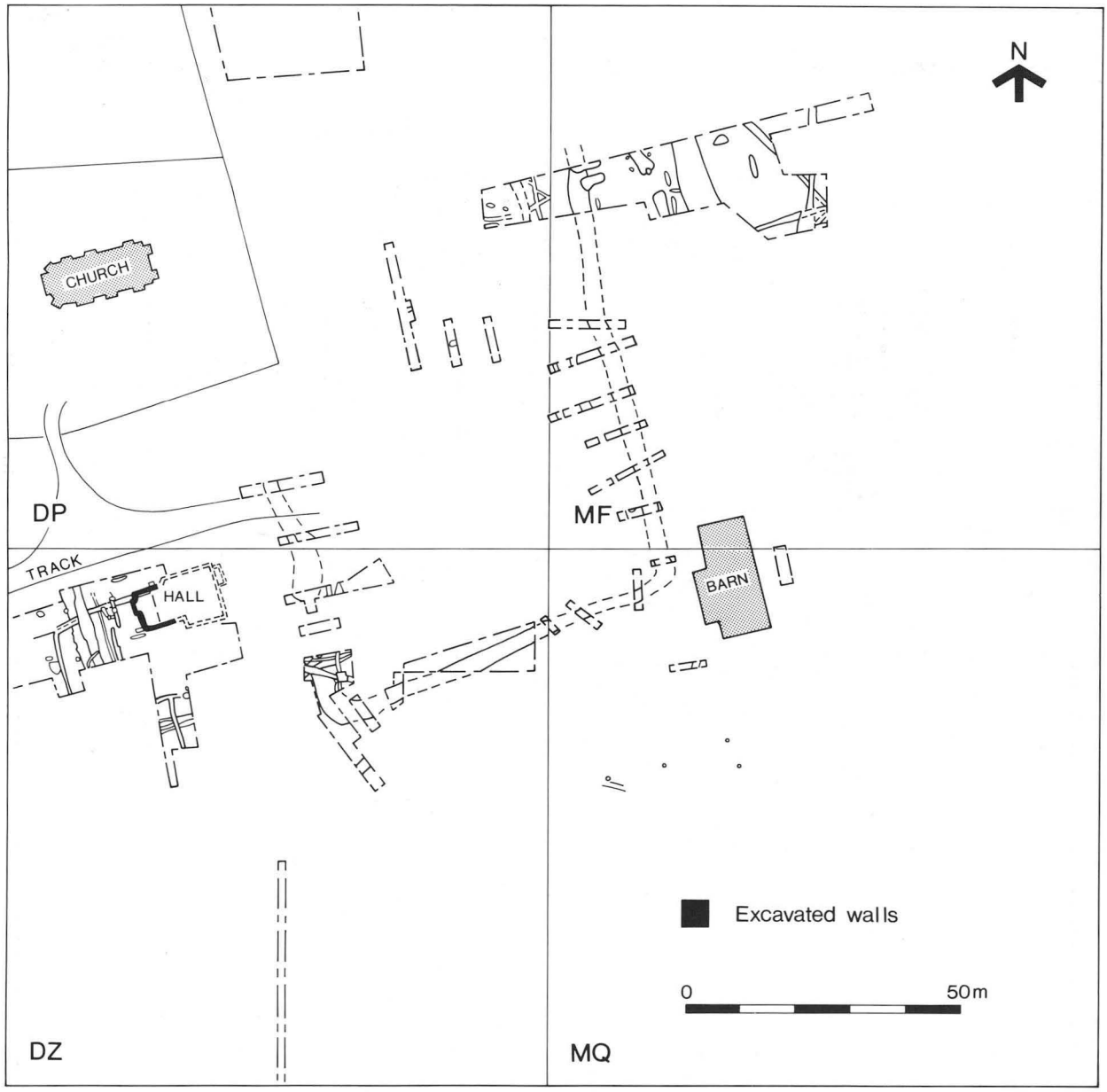

Figure 7 Plan of major features in grid squares DP–MQ.

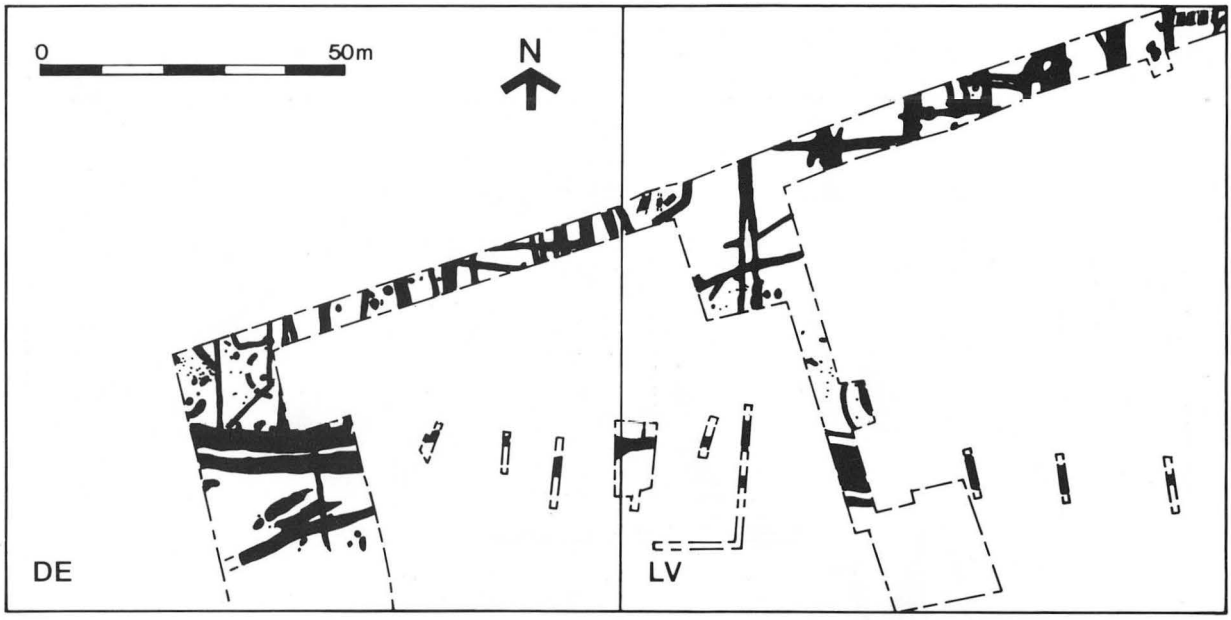

Figure 8 Plan of all major features in grid square DE–LV.

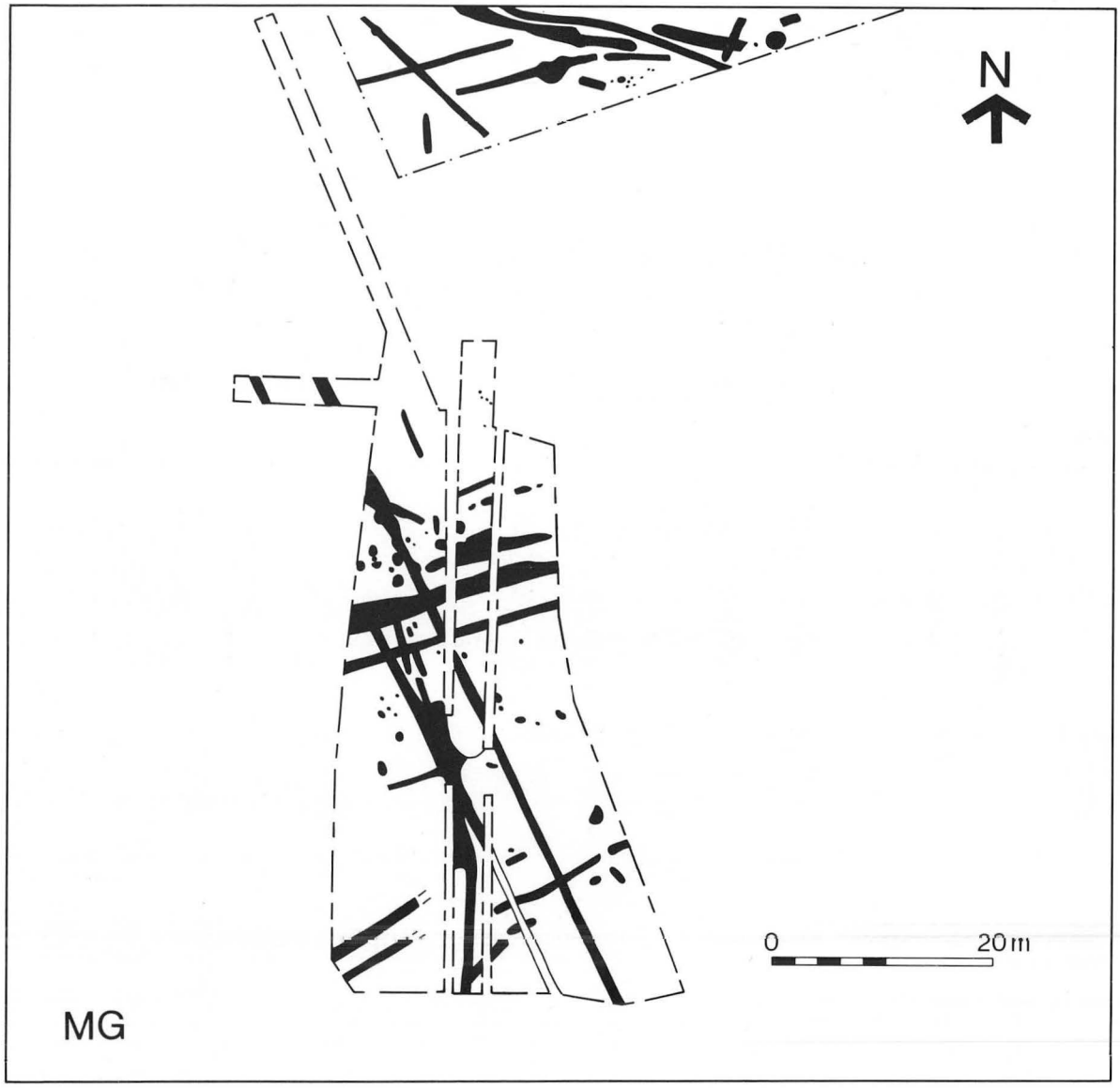

Figure 9 Plan of all major features in grid square MG.

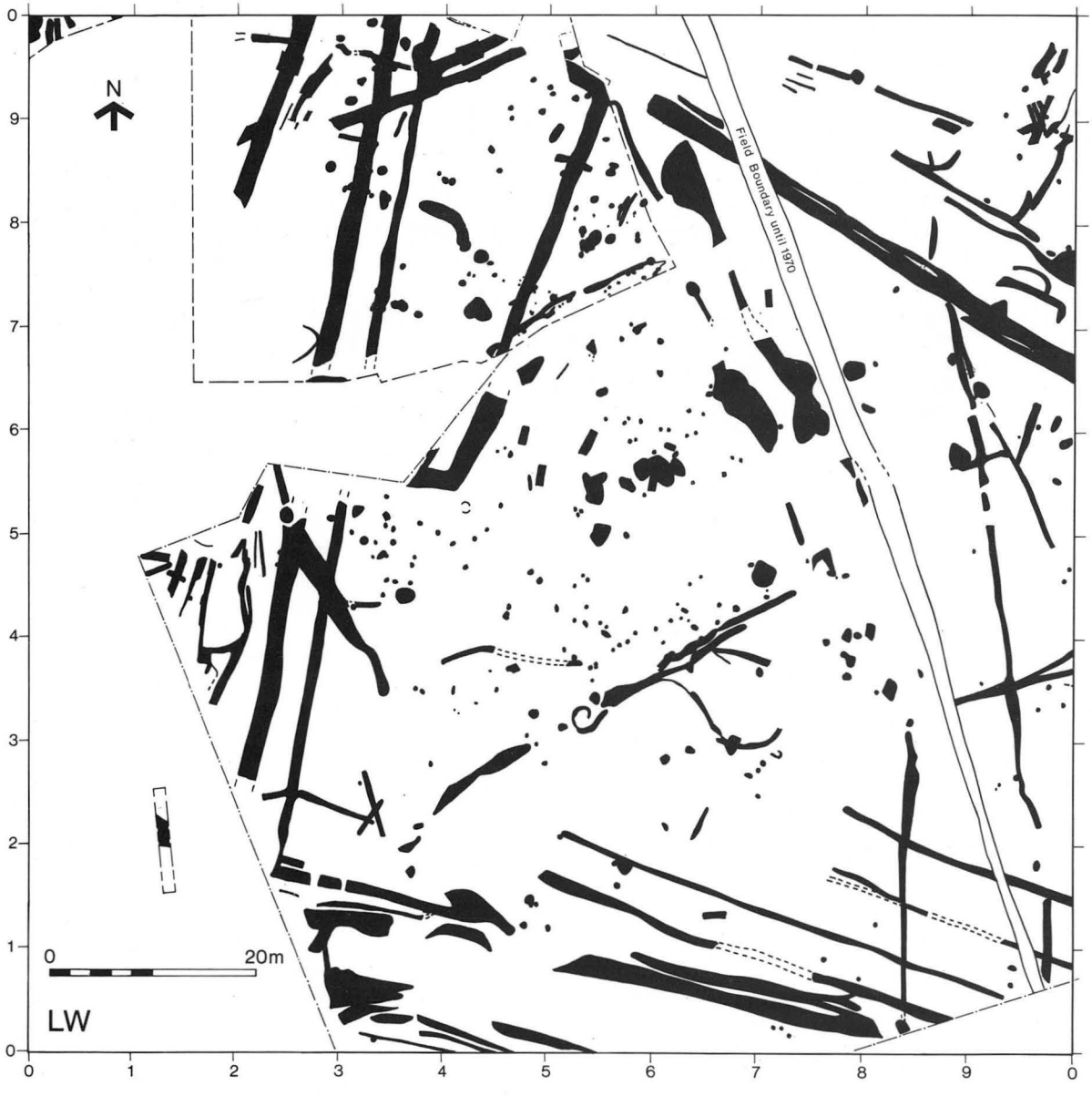

Figure 10 Plan of all features in grid square LW.

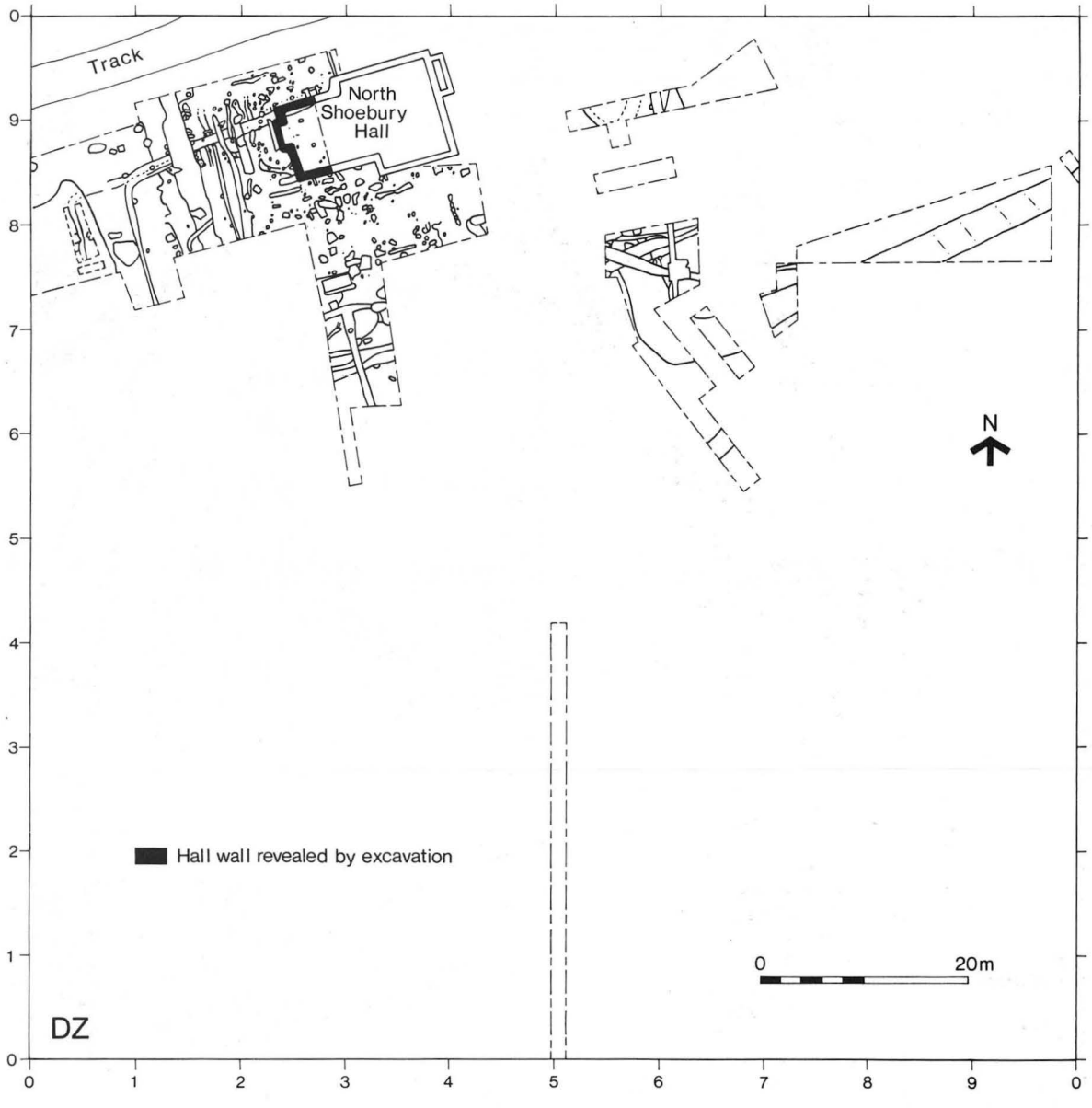

Figure 11 Plan of all features in grid square DZ.

Part 2. The Excavations

The excavated features are summarised below by period. Details of those features mentioned here, in the Discussion (Part 6) or in the specialist reports, are on fiche, sections of those excavated in 1981 are shown on Figs 17, 24, 29, 34, 45, 50, 51, 53; sections of those recorded during the earlier rescue work are on Figs 105–118 (microfiche), with the exception of Phase I.1 features shown on Fig. 18.

Pre-Period I

There is only one feature (*M2.82*) that can be attributed with confidence to settlement prior to the Middle Bronze Age. This was recorded by Macleod in Grid Square LD 720990, apparently in the section of a brickearth quarry (fiche Fig. 105). No plan was obtained, but the section shows an irregular layer extending for approximately 30m, 0.06–0.15m thick and thickening in the centre into a series of interleaved layers about 0.45m thick containing frequent charcoal and some burnt clay, interpreted at the time of excavation as a series of hearths. Associated pottery and flintwork was uniformly of Neolithic type. The only other indication of pre-Period I occupation were a few small abraded Beaker sherds mainly residual in later features.

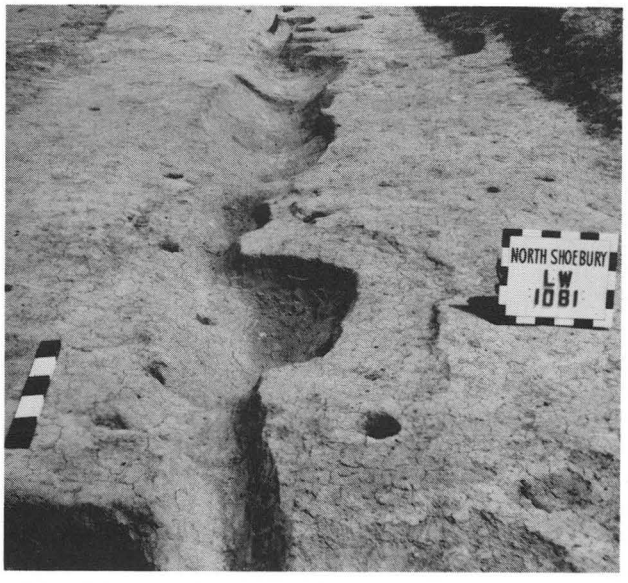

Plate IV Phase I.1: Middle Bronze Age. Part of linear feature *1081*.

Period I *c.* 1500–300 BC

Figure 12 shows the features within the majority of the area examined in 1981 and 1971–72 that can be attributed to the thousand years preceding the end of the Early Iron Age. Plans (Figs 14, 19 and 22) separate those features containing MBA and LBA pottery and those with mainly EIA pottery; Phases I.1, I.2 and I.3 respectively.

The sequence of development has been assessed from the dating evidence derived from artefacts, the orientation of the major features, and their stratigraphic relation to each other. In several cases few artefacts were recovered, and there was often little stratigraphical demonstration of the actual relationship of features thought to belong to different phases.

Phase I.1 c. 1500–1000 BC

The Middle Bronze Age settlement comprised a series of fragmentary rectilinear enclosures found in Grid LW and MG (Figs 13–16). The main settlement area in Grid LW is shown on Fig. 15. The features excavated in Grid LW in 1981 are shown on Fig. 16. Sections of features excavated in 1981 are illustrated on Fig. 17 and those during 1971–2 on Fig. 18. The enclosures in LW are bounded on the north (ditch *1222*) and west side (ditch *M538*) by substantial V profiled ditches, up to 2m wide and 0.8m deep (Figs 15, 16, 17 and 18), but otherwise marked out by quite slight gullys (*M364/362, M346, M412, M844, M881* and *1081*, Figs 15, 16, 17). In one case (*1081/1046/1004/1000*) a very irregular gully was accompanied by numerous stake-holes (Plate IV) possibly the result of successive erections of temporary hurdling. The fills of all these linear features were generally pale and similar in texture to the surrounding brickearth (for details see Fig. 17 and fiche). Finds were sparse and those associated with *1081/1046/1004/1000* may well have been deliberately placed (see below p.153). Ditch *1222* contained a distinct dump of mussel shell (Fig. 17 and fiche).

Set within these enclosures were small clusters of pits and post-holes. These included the truncated bases of distinctive beehive shaped storage pits (*e.g. 1202, 1209* Fig. 17; *M707* Fig. 18).

The pit fills were again largely pale and similar to the natural brickearth (for details see Fig. 17 and fiche), the exceptions being the very dark upper fills of pits *1202* and *1209* (Fig. 17 and fiche). Three of the pits, *1202, 1204* and *1209* appear to have been provided with clay linings (Fig. 17). Quantities of finds although not large were rather greater than in the linear features. Again the finds appear to relate to structured deposition, rather than simple rubbish disposal (see below p.153). In the area excavated in 1981 the pit groups lay in the western part of the enclosures, the eastern area was largely blank. No traces of roundhouses were recovered, but it is possible such buildings had once occupied the apparently blank areas. If so they must have been constructed in a manner which did not require features deep enough to cut the subsoil.

The settlement may have been a linked group of compounds, set within a wider field system rather like the better preserved and intensively investigated sites on the chalk downs of southern England (Drewett 1982). The linear features (Fig. 14, *0636, 0653, 0663, 0695, 0720*) in Grid MG were all very shallow (Fig. 17 and fiche), and finds were confined to scraps of flint tempered pottery. No contempory pits were identified, although pit *0672* which contained a few small Beaker sherds lay in this area (Fig. 13). It may be that the features represent agricultural activity to the south of the settlement in Grid LW.

Two unurned cremation burials were found. One, of a child (*0021*, Figs 17 and 93, below p.129 and fiche), was recovered 250m to the south east of the main settlement area. The other, (*0600*, Figs 17 and 93, below p.129 and fiche) a burial of an adult woman, lay 400m to the south of the settlement and close to two cropmark ring-ditches (Fig. 93). Charcoal from this feature yielded a calibrated radiocarbon date of Cal BC 1855–1400, at two standard deviations (Har-4634).

Phase 1.2 c.1000–600 BC

Apart from two pits, one certainly (*1008* Fig. 21) the other (*1428* Fig. 19) possibly of this period, no features of Late Bronze Age date were recorded during the 1981 excavations. However extensive evidence of occupation in this period was recovered during the rescue recording in 1971–2.

Of the two features excavated in 1981, pit *1008* lay quite close to features of Late Bronze Age date recorded in Grid Square LW in 1971–72 (Fig. 21) and the pit had itself been examined at that time (see p.11). It provides a clear indication of the methods used during the 1971–2 work. A narrow box section had been cut through the centre of the pit (*M1154*) and continued well below the base of the feature into the natural brickearth. The portion of the pit remaining to the east of the box section was then excavated, no finds were recovered; the feature was planned, but no section drawn or record of the fill made. The western half of the pit remained intact, to be excavated in 1981 as *1008*. The upper fill of the pit appeared similar to the surrounding brickearth, and sealed a much darker layer which contained the lower half of a fine bowl placed on the base of the pit (Figs 23, 24, Plate V and fiche).

Pit *1428* appeared to be isolated in Grid Square LV well to the west of the other Late Bronze Age features (Fig. 19). The pit was an irregular feature with a dark upper fill sealing a layer of mussel shells (for details see Fig. 24 and fiche).

The majority of Late Bronze Age features recorded during 1971–2, occurred within Grid Square LW (Fig. 19 and fiche), to the south and east of the Middle Bronze Age settlement area. It may be that the earlier settlement was deliberately avoided (see below p.155).

A series of ditches and narrow shallow gullies *M84, M97, M253* and *M257* (Fig. 21, fiche and Fig. 109) defined a trackway running north-west/ south-east, just 'missing' the south-west corner of the Middle Bronze Age settlement. Also aligned north-west/ south-east, not quite parallel with the trackway but again just 'missing' the Middle Bronze Age settlement (Figs 19 and 21), was a ditch feature *M13*. The sections of *M13* show a fairly narrow shallow V profiled feature recut many times, giving a 'braided' appearance in plan (Fig. 21 and fiche). Bags of finds from *M13* had Late Bronze Age and Early Iron Age ceramics and sometimes a mix of both. However, there is nothing to indicate from which of the many recuts particular bags of finds derived.The evidence would appear to suggest that *M13* originated in the Late Bronze Age, and remained in use for a considerable time, it formed the major axis of the Early Iron Age settlement (see below).

The pits are mostly of quite small size, with little information recorded (fiche and Figs 107–109). In many cases the section drawings consist of little other than the bare outline of box sections (fiche and Fig. 107). However,

Plate V Phase I.2: Late Bronze Age pit *1008*, with base of fine bowl *in situ*, 1971–2 box section on right.

some of the larger pits over 1m in diameter and up to 0.8m deep, are constricted neck storage pits (*e.g. M327, M330* and possibly *M329* fiche, Fig. 107).

A series of post-holes south of *M13* (Fig. 20) appear to define a roundhouse with a south-east facing porch. There are no written descriptions of these features, no section drawings, and no finds, they only appear on the site plan. It would seem likely that none of the features were excavated, it is therefore impossible to be certain of their nature and date. However, the general arrangement is consistent with a roundhouse which might well be of Late Bronze Age date. There are many excavated examples of Late Bronze Age post-built roundhouses of comparable plan from sites elsewhere in Essex (*e.g.* Springfield Lyons, Buckley and Hedges 1987 fig. 7; Lofts Farm, Brown 1988a fig. 9). Alternatively the building could be of Early Iron Age date, particularly in view of the proximity of Early Iron Age pits *M39, M56*, and gullies *M19, M22* and *M173* (Figs 20 and 22).

Phase I.3 c.600–300 BC

As with the preceeding phase, few features of this date were revealed by the 1981 excavations, although extensive settlement evidence was recorded during the 1971–72 rescue work in Grid Squares LW, LX and LN (Fig. 22).

Features recorded during 1981 consisted of two scatters of small pits/post-holes in Grid Square LW (Figs 22, 23) and a ditch, curving length of gully and shallow ?hearth in Grid Square LV (Fig.22).

One of the groups of features in Grid Square LW included four post-holes (*1006, 1009, 1026, 1030* Figs 23, 24 and fiche). These were sub-circular and steep sided, some with distinct post pipes (*1009, 1030* Fig. 24) or slightly deeper post sockets (*1006, 1030*, Fig. 24). These features define a four post structure about 3m square, typical of those which occur on a variety of later prehistoric sites in south-east Britain (Ellison and Drewett 1971), frequently interpreted as storage facilities. One of the post-holes cut a narrow shallow gully *1023* (Figs 23

and 24). A further post-hole (*1033*) lay just to the north of the four post structure and may have been related to it.

The second group comprised smaller, shallower features (*1071, 1072, 1073, 1075, 1043* and *1044* Figs 23, 24 and fiche) of which two (*1072* and *1075*) may have been been post-holes of a two post rack.

Ditch *1422*, which ran roughly north-south across the excavated area in Grid Square LV, was a U profiled feature, which became narrower and more shallow to the south (Figs 22, 24 and fiche). All features of this phase lay east of ditch *1422*, which despite its slight appearance may have marked a major division in land use. The two other features of this phase in Grid Square LV were, a short length of very shallow slightly curving gully *1485* (Figs 22, 24 and fiche), and a shallow hearth base, *1412*, (Figs 22, 24 and fiche) which consisted of a scoop lined with burnt brickearth. This feature produced a large quantity of carbonised peas (below p.146).

The main area of settlement lay within the area recorded in 1971–2 in Grid Square LW and LX (Fig. 22 and fiche). Ditch feature *M13* appears to have determined the layout of settlement.

Ditch *M13* seems to have been in existence in the LBA, appears to have been recut several times (above and fiche Figs 106, 108) and remained in use throughout the life of the LBA and EIA field system. It formed one side of a trackway which ran NW SE across the site. Traces of two other ditched trackways (*M67, M91, M95*, and *M50, M173* Fig. 22 and fiche) running roughly parallel were also recorded. The recorded ditches and gullys indicate that enclosures had been laid out to either side of the central trackway. At least one trackway led off to the north east (*M392, M262* Fig. 22 and fiche). The ditches were narrow and quite shallow, generally with V shaped profiles (*e.g. M50, M67, M162* fiche Fig. 112). It seems likely that their main purpose was to act as boundaries for the enclosures and trackways, drainage being only a secondary purpose. Scatters of pits, post-holes and other small features occurred around the enclosures, particularly in the south east of the recorded area (Fig. 22). Parts of two round structures were recorded in Grid Square LN (*M1001, M931* and *M932* Fig. 22 and fiche Figs 116 and 117). It is clear that the settlement underwent changes during its lifetime. For instance gully *M162* (Fig. 22), blocks the junction of two trackways, and a number of pits occur in the middle of trackways (*M47, M56, M156, M393* Fig. 22 and fiche). These pits must presumably pre- or post-date the trackways. However, the site records do not facilitate detailed discussion of these changes.

Many of the pits appear to be typical storage pits like those of the previous phases (*e.g. M246* fiche and Fig. 113; *M56, M126* and *M154* fiche and Fig. 111). A number of pits are much larger (*e.g. M399, M590* fiche and Fig. 113; M778 fiche and Fig. 115) up to 4m wide and 1.5m deep. These features are of comparable size to the wells and soakaways at Fengate (Pryor 1984, 114), and in some instances appear to be associated with ditches, *e.g.*, ditch *M392* and pit *M399* (Fig. 22, fiche and Fig. 113). Ditch *M360* is also apparantly associated with large pit (Fig. 5), this pit is not shown on Fig. 22 as it lacks any dating evidence, or recorded stratigraphic relationships.

However, the section of pit *M399* shows ditch *M392* (fiche Fig. 113) cutting the upper fill of the pit, indicating *M399* was completely filled before *M392* was dug. Moreover, given the free draining nature of the brickearth at North Shoebury, such pits would only have functioned as wells during the wettest weather. These pits are therefore best regarded as particularly large storage facilities, as such they are comparable to the large pits known from hillforts on the chalk of southern England (Smith 1977, fig. 20, Cunliffe 1984 fig. 4.98).

Parts of three ovens were recorded in the EIA settlement (*M152, M671* and *M1058* fiche Figs 111, 112, 114). *M152* consisted of an oval feature with a black fill containing frequent fired clay fragments and a single pedestal. *M671* appears to have been the best preserved of these features, however the only information about it is that contained on the section drawing (fiche Fig. 114). The fired clay walls appear to have been rebuilt at least once. This feature was interpreted by the excavator as a kiln, which seems reasonable in view of the quantity of overfired EIA pottery recovered from the fill together with two 'tournettes' (Barford p.125). *M1058* (fiche Fig. 112) was another oval feature with fired clay walls and three pedestals, it contained a large amount of overfired pottery and may also have been a kiln.

Two burials occurred within the phase I:3 settlement, a contracted inhumation of an adult in a storage pit (*M1063* fiche Fig. 117), and an apparently disturbed burial of a child in the butt end of trackway ditch *M162* (Fig. 22 and fiche Fig. 117).

Two round structures were defined by gullys, the best preserved was marked by 10m diameter circular gully *M931* (fiche Fig. 116). This appears to have replaced an earlier oval structure defined by a discontinuous gully *M923* approximately 8m by 6m, both had very wide (*c.*5m) west facing entrances. The width of these gaps may indicate use as byres or barns rather than houses. Unfortunately no details were recorded of the various pits and post-holes shown on the plan, so it is uncertain which, if any, belong with the building. Part of the other structure (*M1001* fiche Fig. 117) had been quarried away before it could be recorded. The surviving evidence shows a U profiled gully, apparently more polygonal than circular, defining an area of approximately 7–8m in diameter with a 1.3m wide north west facing entrance.

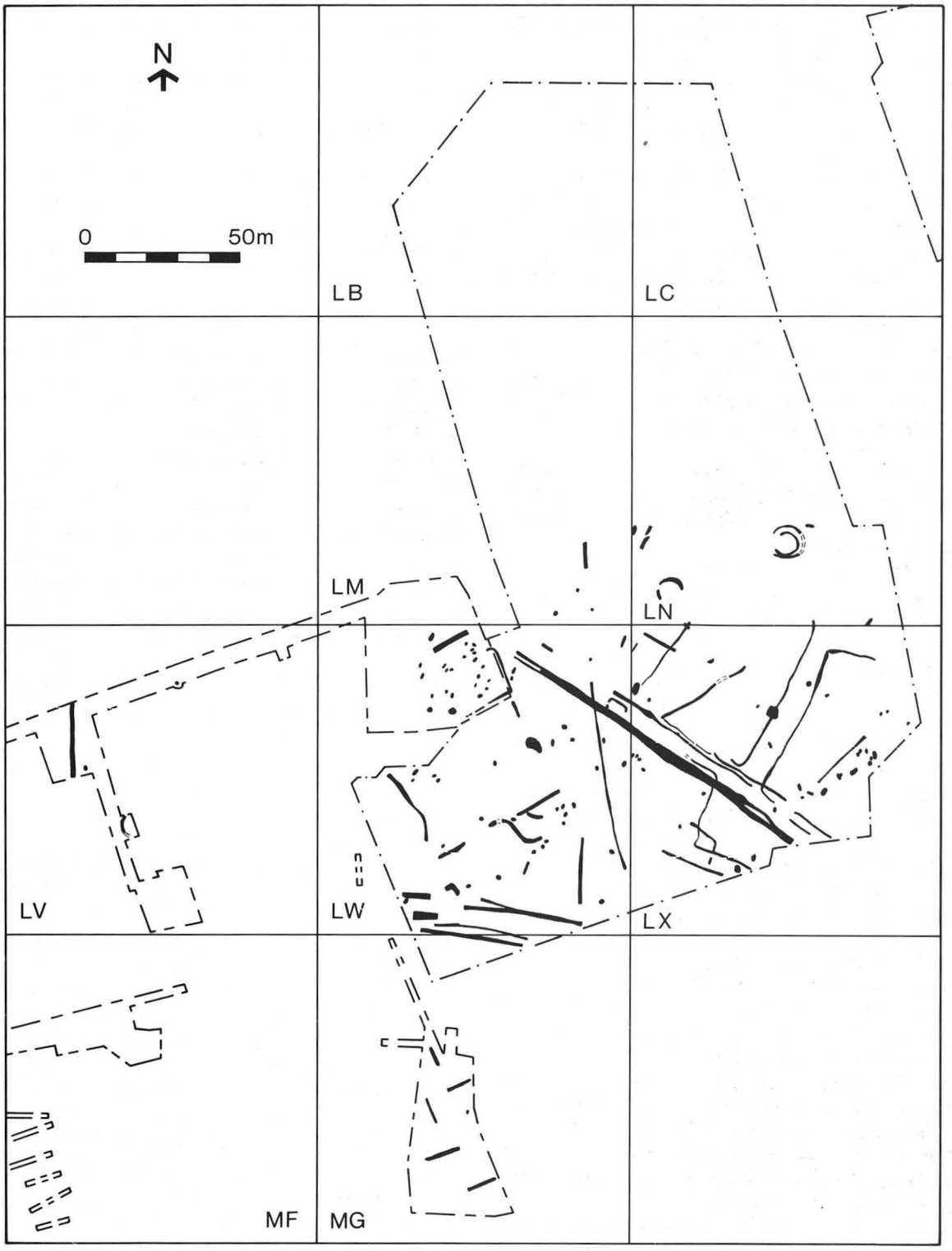

Figure 12 Plan of all major Period I features.

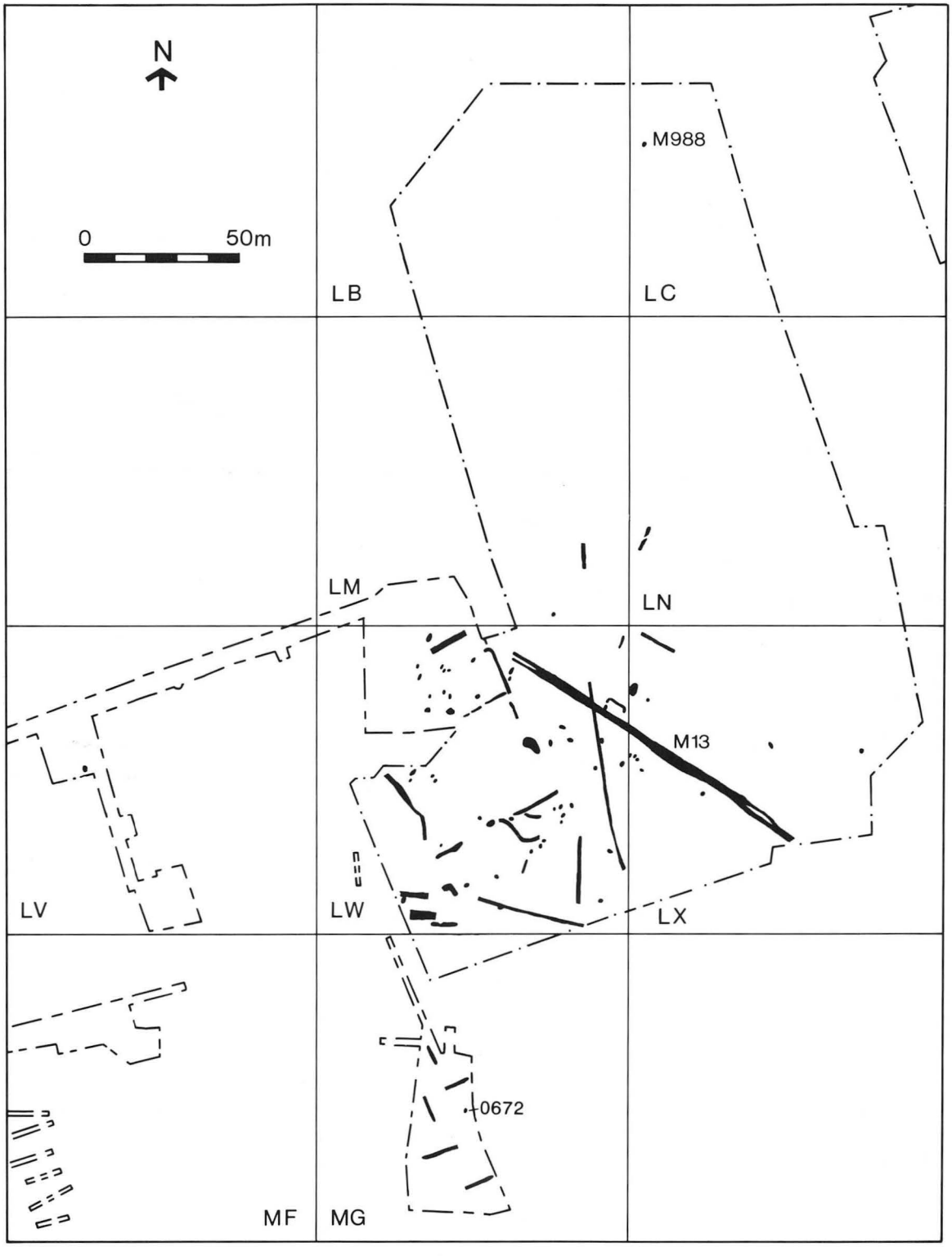

Figure 13 Plan of all major Phase I.1–I.2 features.

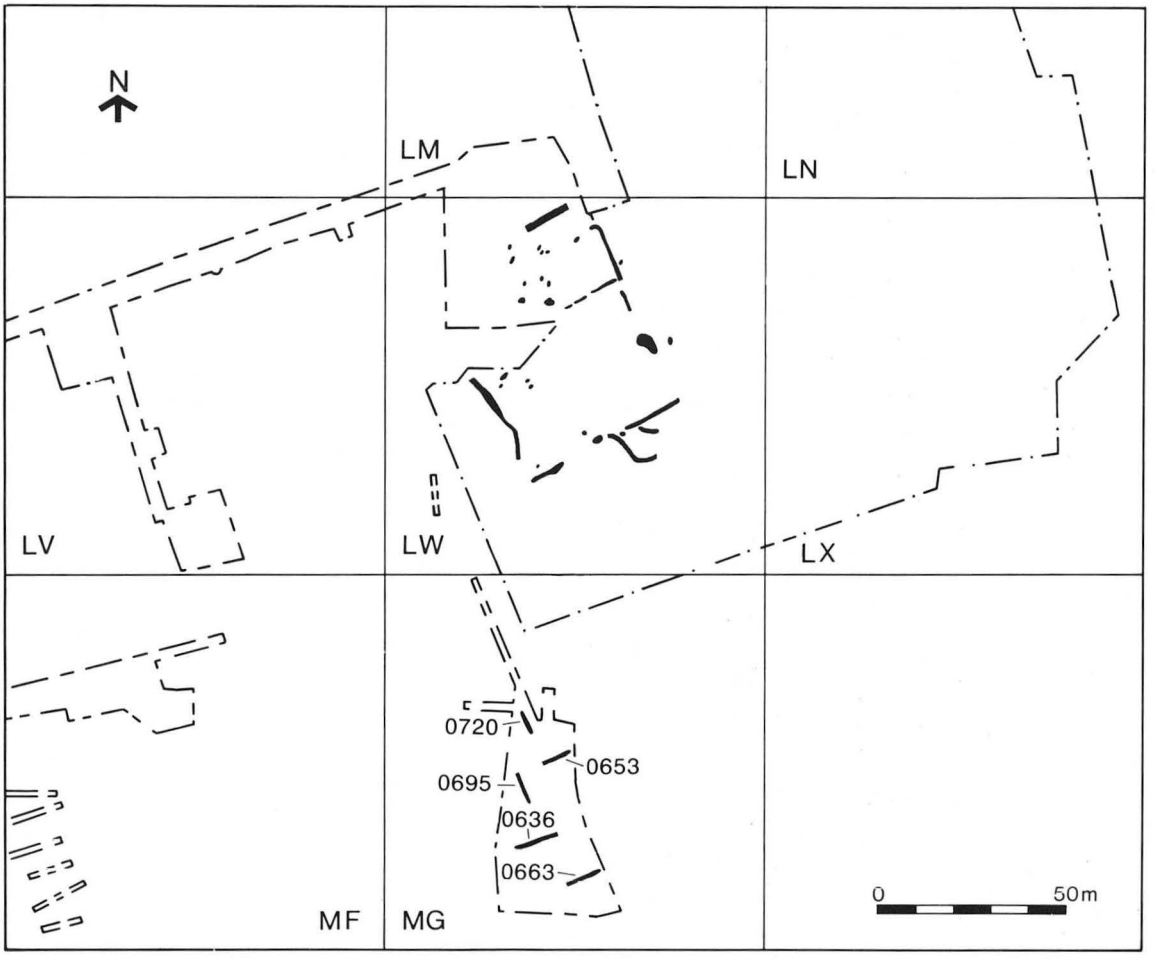

Figure 14 Plan of all major Phase I.1 features in grid squares LW and MG.

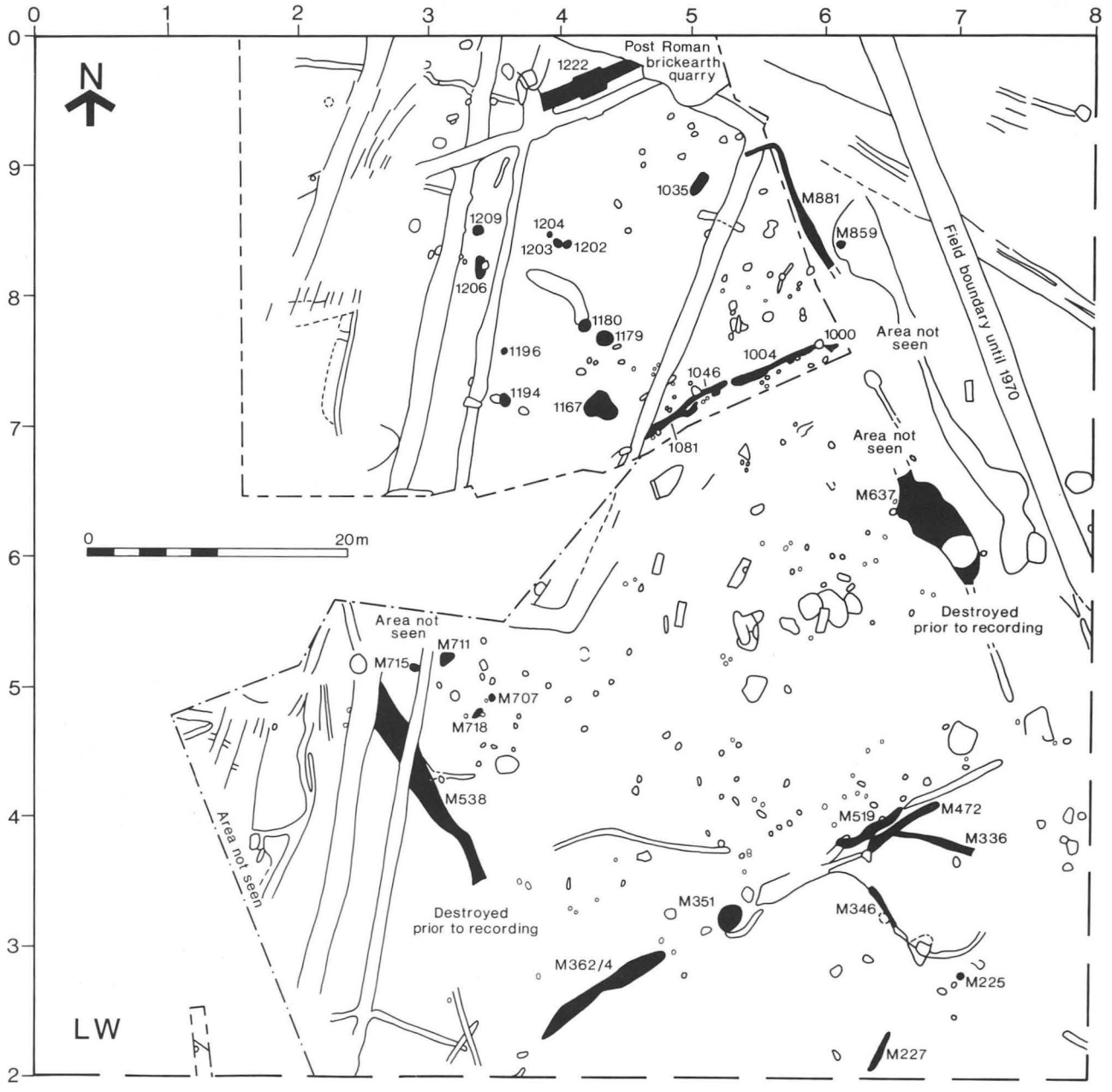

Figure 15 Plan of all Phase I.1 features in grid square LW.

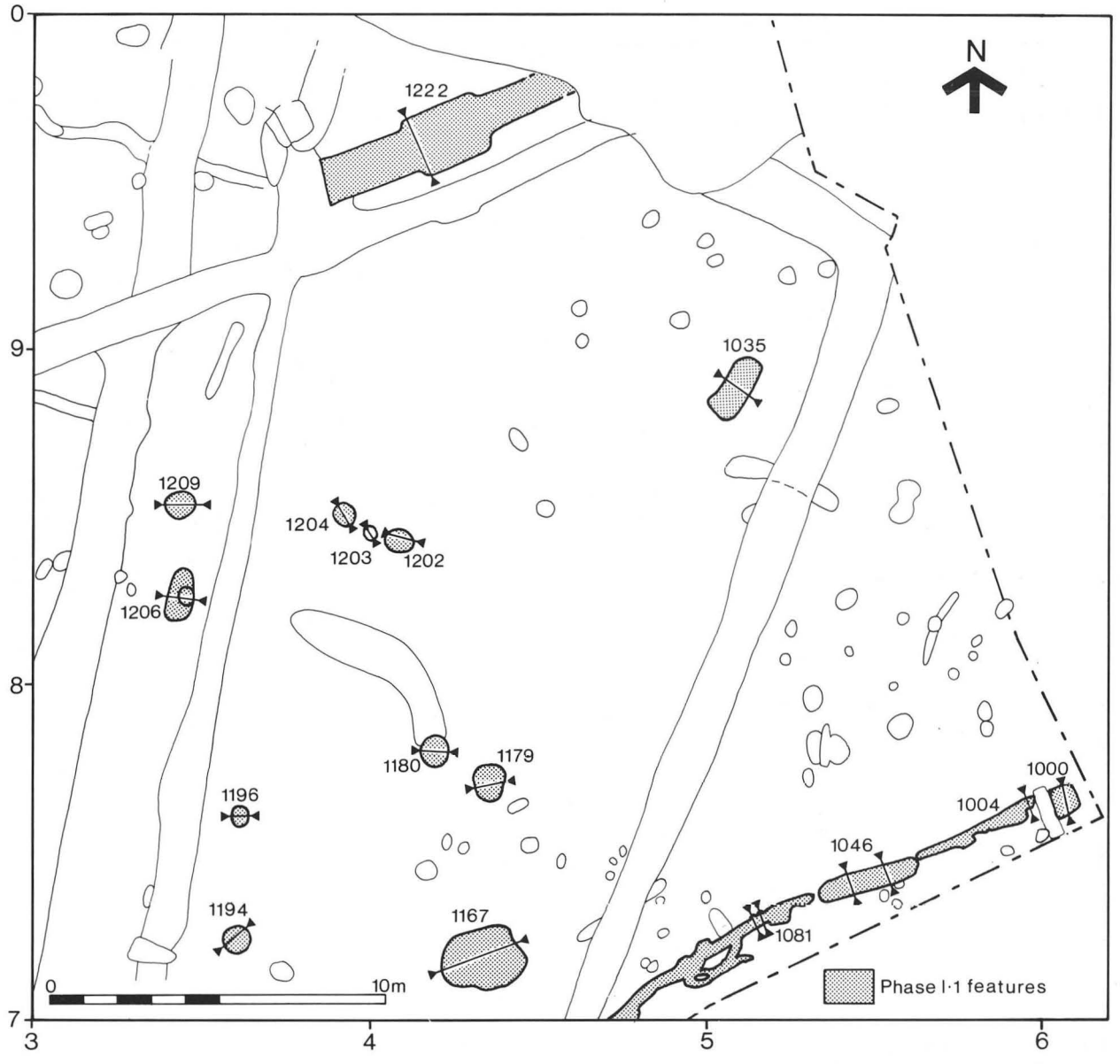

Figure 16 Plan of all Phase I.1 features in grid square LW excavated in 1981.

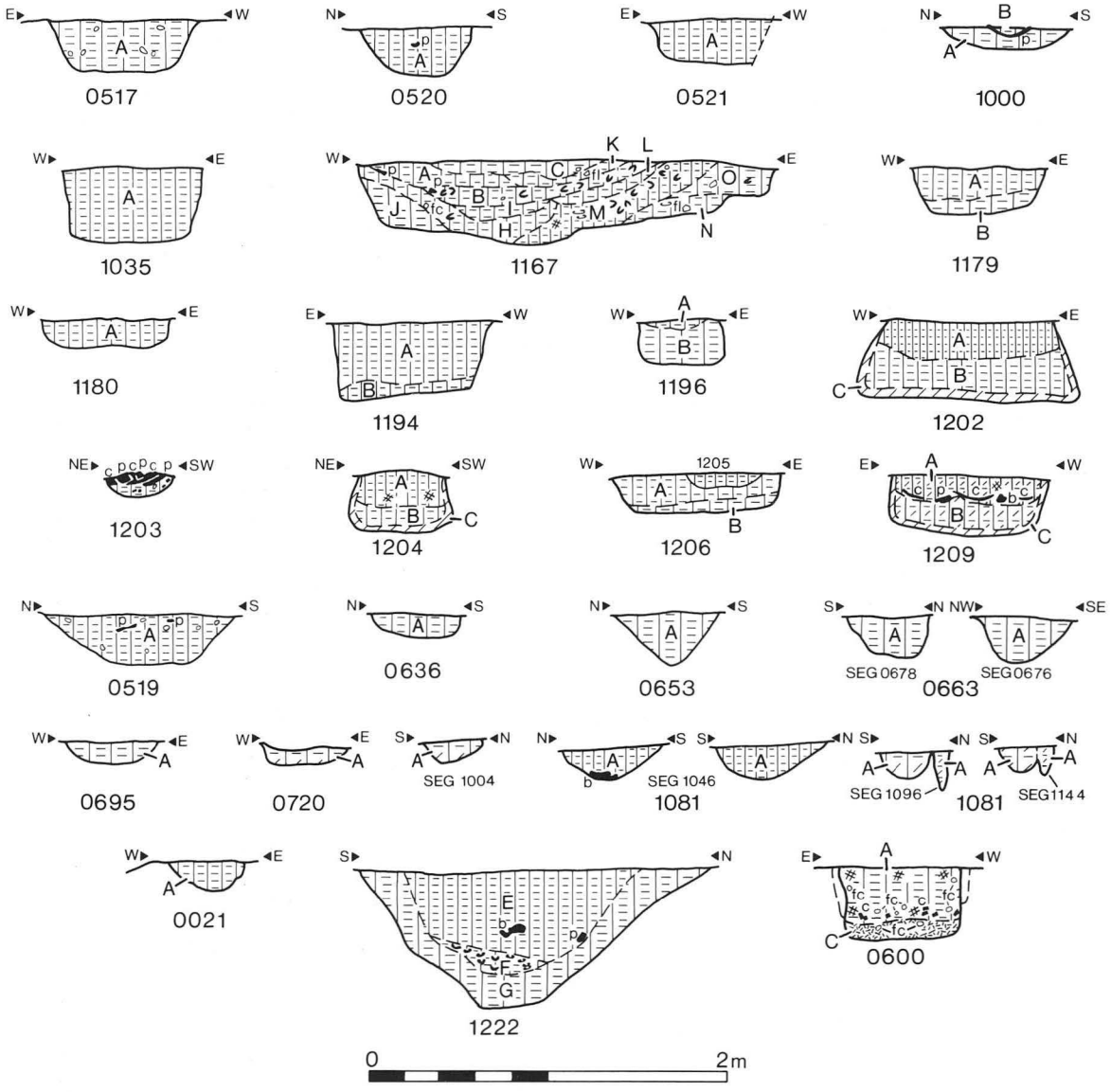

Figure 17 Phase I.1 sections.

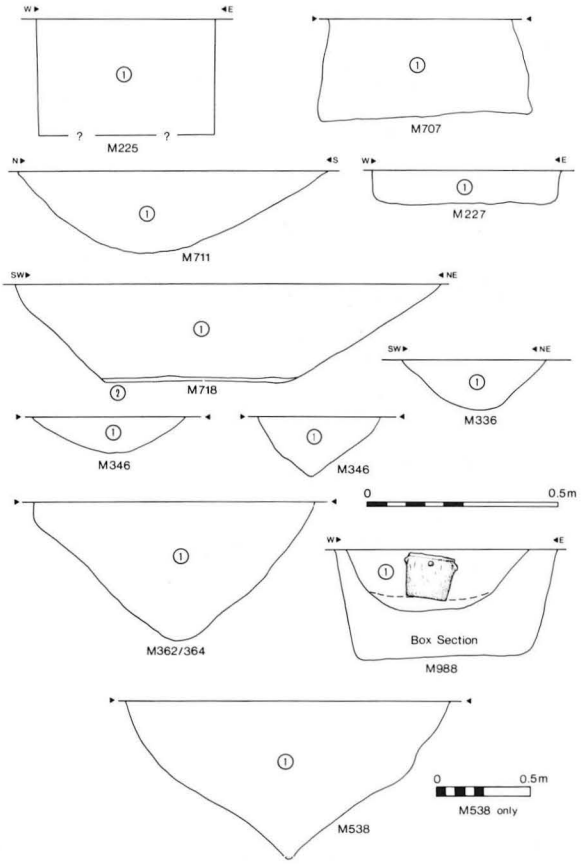

Figure 18 Phase I.1 sections of features excavated during 1970s rescue work.

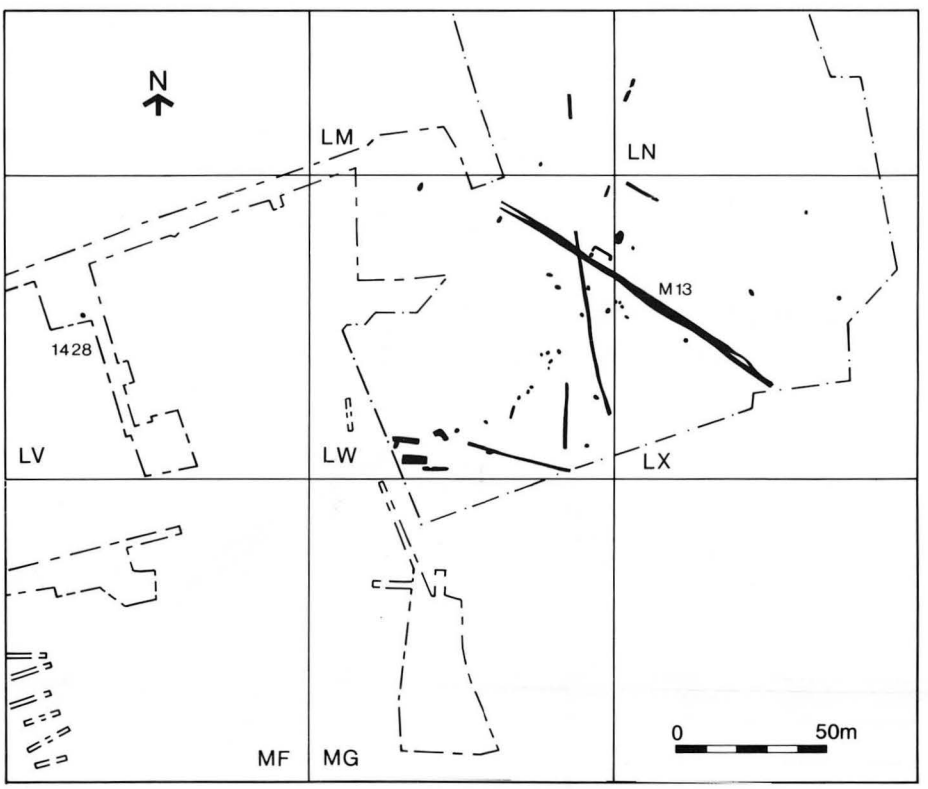

Figure 19 Phase I.2 plan of all major features.

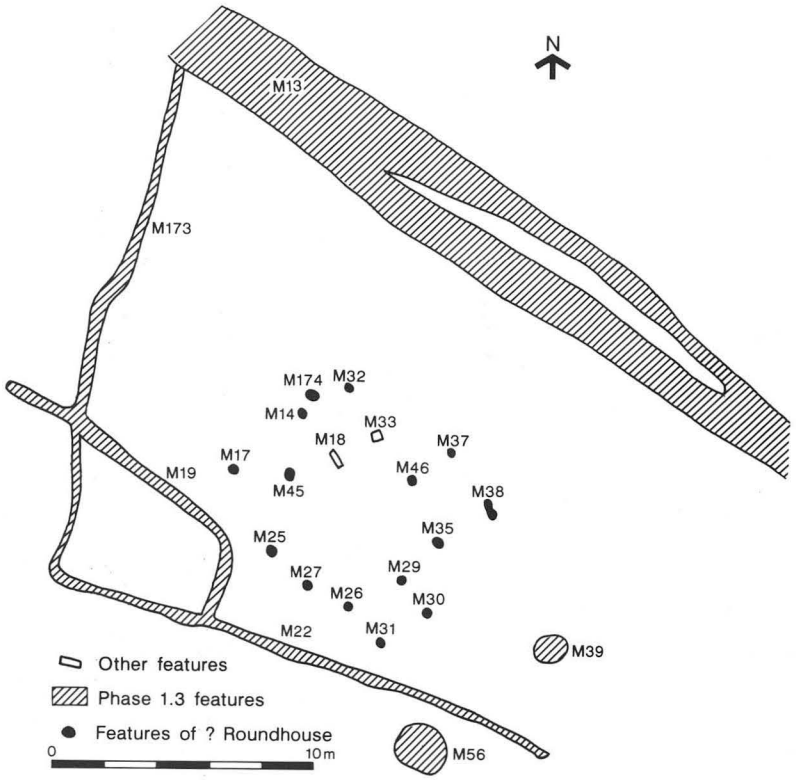

Figure 20 Phase I.2 possible roundhouse recorded during 1970s rescue work.

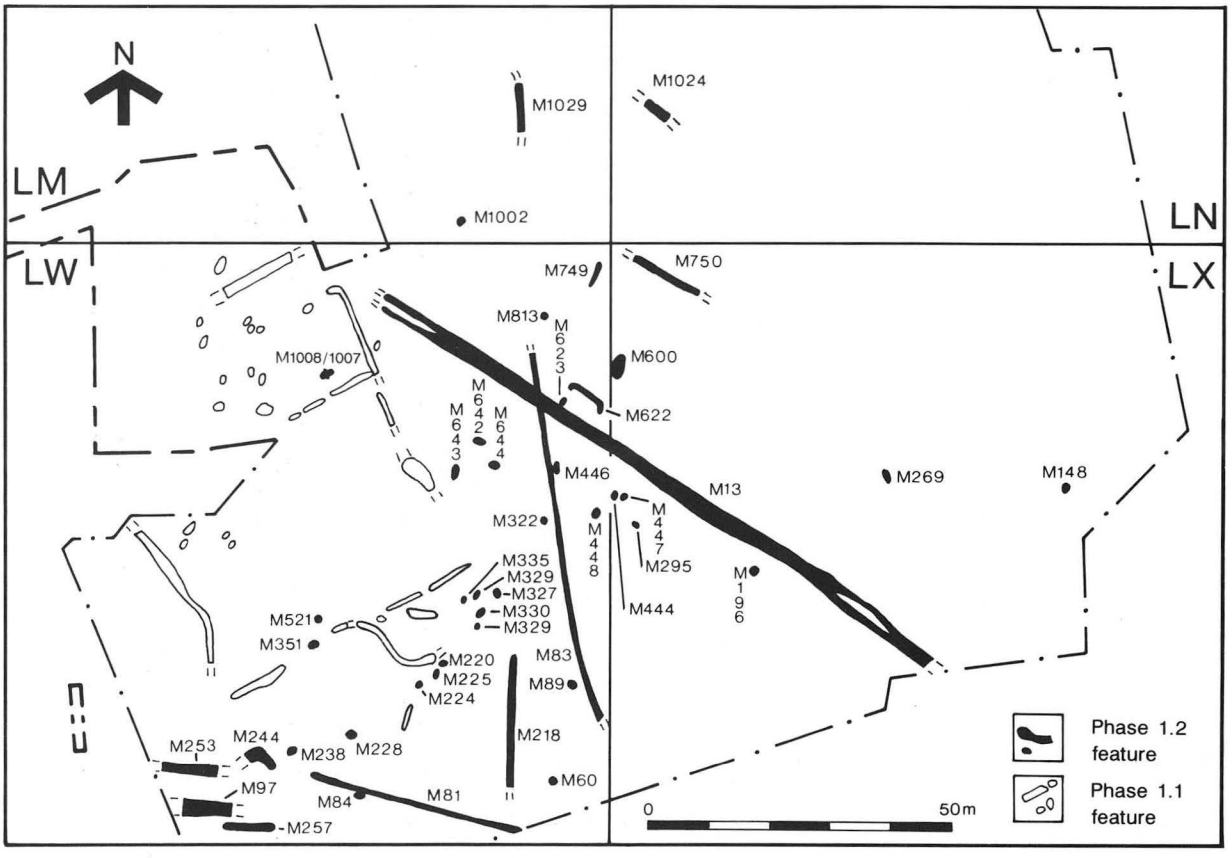

Figure 21 Phase I.2 features in main settlement area.

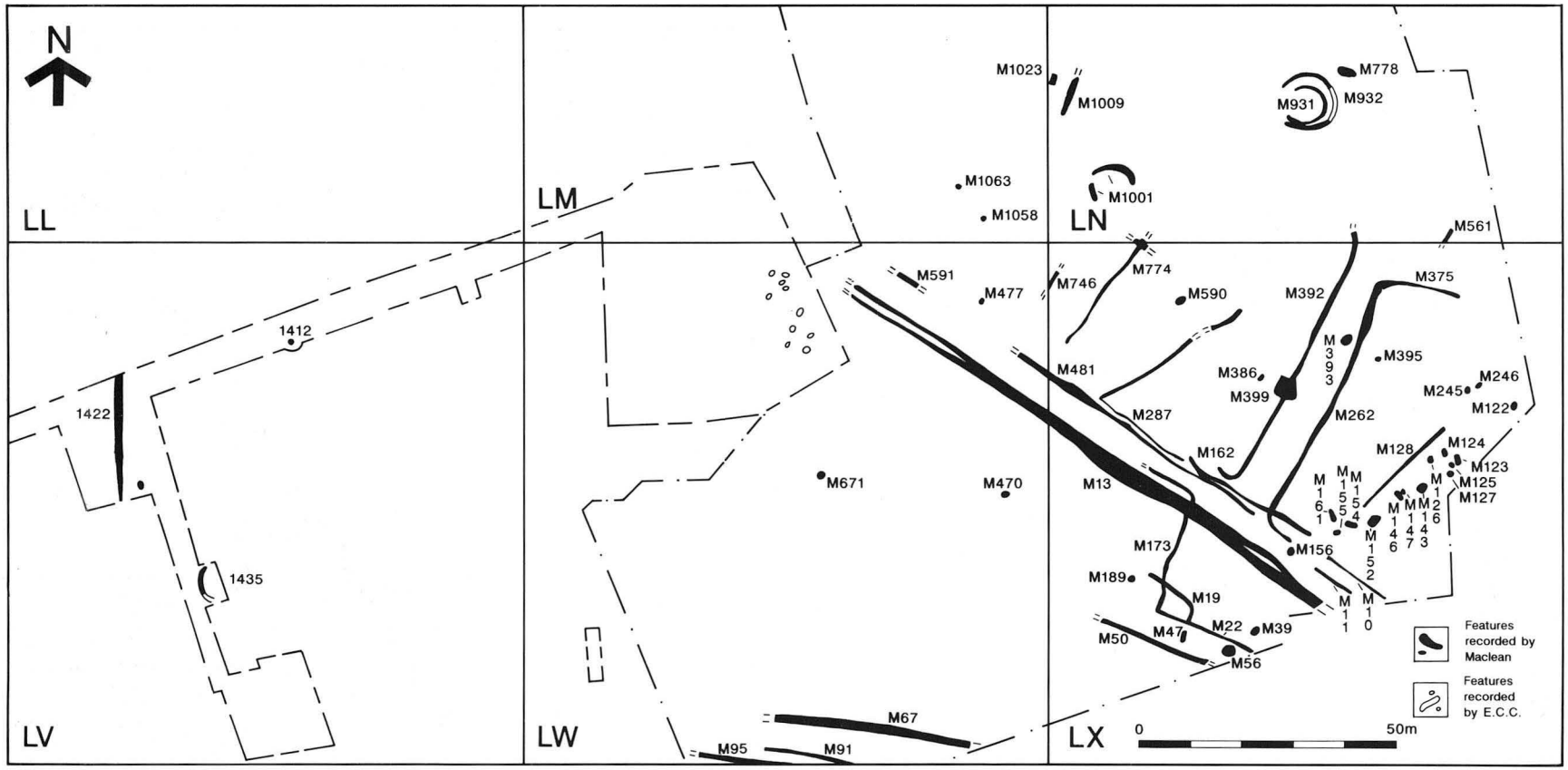

Figure 22 Plan of major Phase I.3 features recorded during 1970s rescue work.

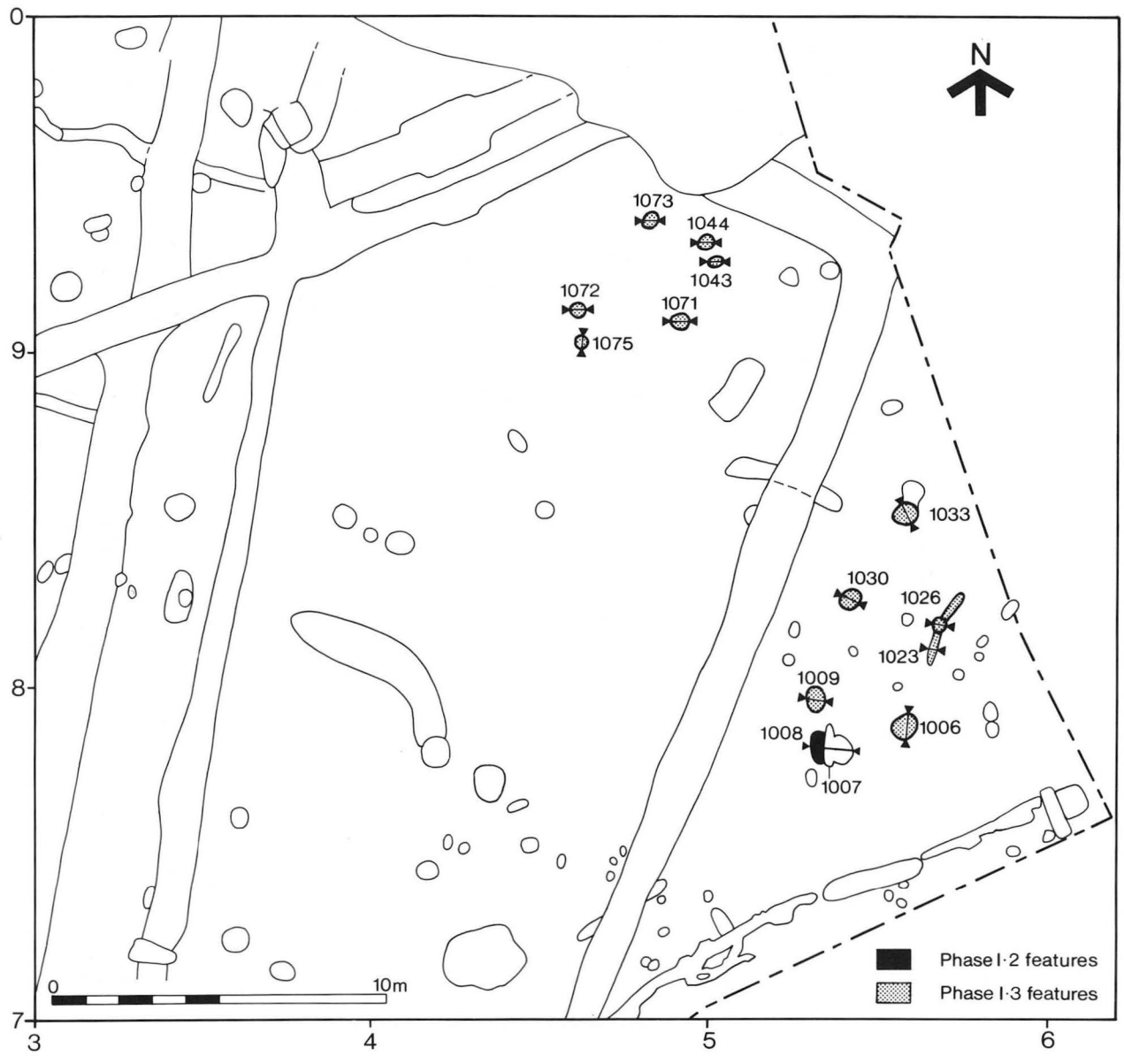

Figure 23 Phase I.1 and I.2 excavated in grid square LW in 1981.

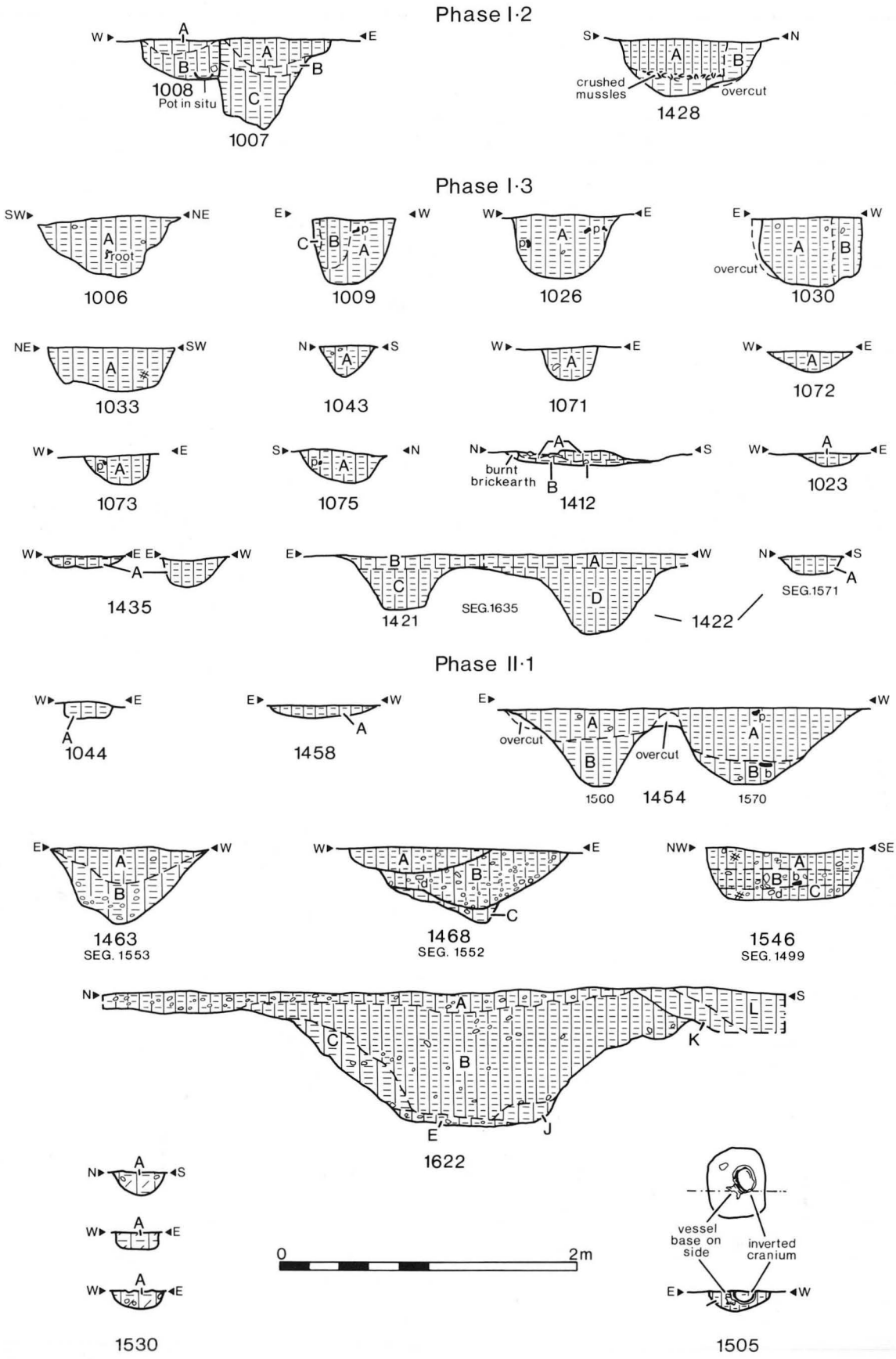

Figure 24 Phase I.2, I.3 and II.1 sections.

Period II *c.*300 BC–AD 50

The LBA/EIA field system was abandoned and a new series of ditches dug in a broadly north south alignment. The main centre of occupation appears to have been in Grid DE, a small cremation cemetery was established in Grid LW (Fig. 25). Period II can be sub-divided into two phases, although there is no reason to suspect anything but continuous occupation. The earlier phase corresponds to the Middle Iron Age and the later one to an apparent expansion during the time when 'Belgic' pottery was in use.

Phase II.1 c.300–50 BC

Settlement of this phase is concentrated in Grid DE (Fig. 26). On present evidence it is difficult, given the limited area excavated, to know whether the settlement was very extensive. However, it does seem likely that it may have extended north of the small area examined.

Apparently the earliest feature of phase II.1 was structure *1530* (Figs 24, 26 and fiche). This was defined by a discontinuous curving gully, possibly part of a circular drainage gully around a roundhouse. Outside the gully a shallow pit *1505* (Figs 24 and 26) contained the top of an inverted human skull (the lower part having been ploughed off) together with the footring base of a bowl (Fig. 68 No. 139). Structure *1530* was cut by ditch *1463/1468*, this ditch appears to have been maintained for some time. The stepped profile of this ditch revealed in segment *1552* (Fig. 24 and fiche) seems to indicate three recuts. The ditch may originally have come to a butt end within the excavated area (Fig. 26 and fiche) but was later extended on a shallower narrower line to the north, beyond the limit of excavation. In phase II.2 this ditch was cut by a major east west ditch *1469* (Fig. 26). As *1463/1468* did not continue beyond *1469*, the latter may have followed the line of a phase II.1 boundary. The only feature of phase II.1 south of *1469* was the deep amorphous feature *1622* (Fig. 25 and fiche). A further ditch *1454* (Figs 24, 26 and fiche) was recorded, aligned north south roughly parallel to, and about 18m west of, *1463/1468*. The curving butt end of a possible east west ditch, *1499* (Figs 24, 26 and fiche) occurred just within the excavated area.

A small shallow pit *1458* (Figs 24, 26 and fiche) contained a complete triangular loomweight (Fig. 84.8). A second small pit, *1606*, which partly lay beyond the excavated area (Fig. 26 and fiche) was not excavated but MIA pottery was recovered from the cleaned surface (above p.87).

Phase II.2 c.50 BC–AD 43

Nearly all the features and material of this phase came from the same area in Grid DE as those of Phase II.1 (Fig. 26) and appear to be a development of the same settlement.

The major east west boundary ditch *1469*, was laid out at this time. The stepped profile of this substantial ditch, in segment *1525* (Figs 26, 29 and fiche), indicates it was recut. The ditch originally came to a butt end within the excavated area in Grid DE, but was later extended east, beyond the excavated area (Fig. 26 and fiche). It seems to have formed the southern boundary of a system of north south ditches and gullies (*1467, 1607* Figs 26, 29 and fiche) which apparently continued the arrangement of the previous period. A series of narrow steep sided gullies (*1464, 1465, 1466* Figs 26, 29 and fiche) defined a small rectilinear compound, which extended beyond the excavated area. Three pits were also present within the settlement area in Grid DE (Fig. 26). Further to the east a ditch in Grid LV (*1425* Fig. 25 and fiche) ran close to, and roughly parallel with, early Iron Age ditch *1422* (Section Fig. 24). It therefore appears possible that *1421* was dug along the line of a boundary established in the EIA. Although the earlier ditch *1422* was quite a slight feature, it may have marked the western edge of the early Iron Age settlement (above p.22) and might therefore have been accompanied by a substantial hedge. A narrow shallow gully 7.5m long (*1473* Fig. 29 and fiche) running parallel to and in part abutting *1421*, may have been a bedding trench for a fence accompanying the ditch.

Cremation Cemetery

The cemetery (Figs 25, 27, 28) consisted of three pits set in a line, equally spaced at 7m apart (*1161, 1232* and *1367*). Remains of narrow and shallow gullies, with a few LIA sherds within them, are seen as a small rectangular enclosure surrounding the central pit (*1232*), which contained more vessels than the other two pits. The cemetery appears to have marked the eastern boundary of the phase II.2 settlement, the area to the east being largely devoid of Late Iron Age features.

Cremation Pit *1232* Grid LW 3192 Pl. VII Figs 27 and 70

Length 0.66m; Width 0.60m; Depth 0.30m

Fill: grey brown silt loam.

A sub-rectangular pit containing five pottery vessels and one lid. A quantity of cremated human bone lay outside and under the pottery vessels. There was no evidence for duplication or for the number of individuals present, all of the bones were, where ascertainable, adult, and there was at least one male among the remains (below p.130). Animal bones included part of a cow metatarsal, some fragments of a large ungulate and some of a small animal such as sheep or roe deer. At the bottom of the southern edge of the pit was the near complete, articulated spinal column of a pig. The small pot, No. 680, lay on top of these bones at an angle, unlike the vertical position of the other vessels, suggesting it may have been placed on the butchered carcase. A very small scrap of metal was identified as a copper alloy (793). There were no cremated human bones in pots 681 and 684, and very few in pots 679, 680 and 682. No. 679, the largest pot, also contained a dog tooth and three vertebrae from a small mammal the size of a mouse. Two probable chicken vertebrae had been put beneath pot 679.

Cremation Pit *1367* Grid LW 2985 Pl. VIII Figs 27 and 69.4–7

Diam. 0.60m; Depth 0.16m

Fill: grey brown silt loam.

A sub-circular pit containing four pottery vessels. The majority of cremated human bone lay outside the vessels, to the east side of pots 912 and 913. There was no evidence for duplication or for the number of individuals present and the bones were assessed as adult (below p.130). Some burnt animal bones were included: vertebrae fragments and epiphyses and tooth of a small ungulate such as sheep. A very small quantity of human bone was found in each of the four pots. Pot 913 also contained some chicken bones, there was a small mammal rib in pot 912, and most of the skeleton of a mole in pot 911, presumably intrusive. At the base of the pit were the part-articulated and scattered remains of pig vertebrae.

Cremation Pit *1161* Grid 3399 Pl. VI Figs 27 and 69.1–3

Diam. 0.60m; Depth 0.17m

Fill: grey brown silt loam.

A sub-circular pit containing three pottery vessels placed on the east side, with a pig skull on the west. Human cremated bone was scattered within the silty loam fill (Find Nos 485, 1510, 1511) but only a very small quantity was present. Even less was found actually within the three pottery vessels (Find Nos 443, 444 and 445). There were insufficient remains to determine whether the bones were of more than one individual. The pig skull was somewhat decayed and in a poor state of preservation, in contrast to the good condition of the majority of unburnt bones found within the silty loam fillings of pits or ditches at North Shoebury, and it may have been in a poor state when deposited in the pit (see Ross 1974, 395). Machining had removed the top few centimetres of the undisturbed pit filling, but no trace of cremated bone was found in the spread soil.

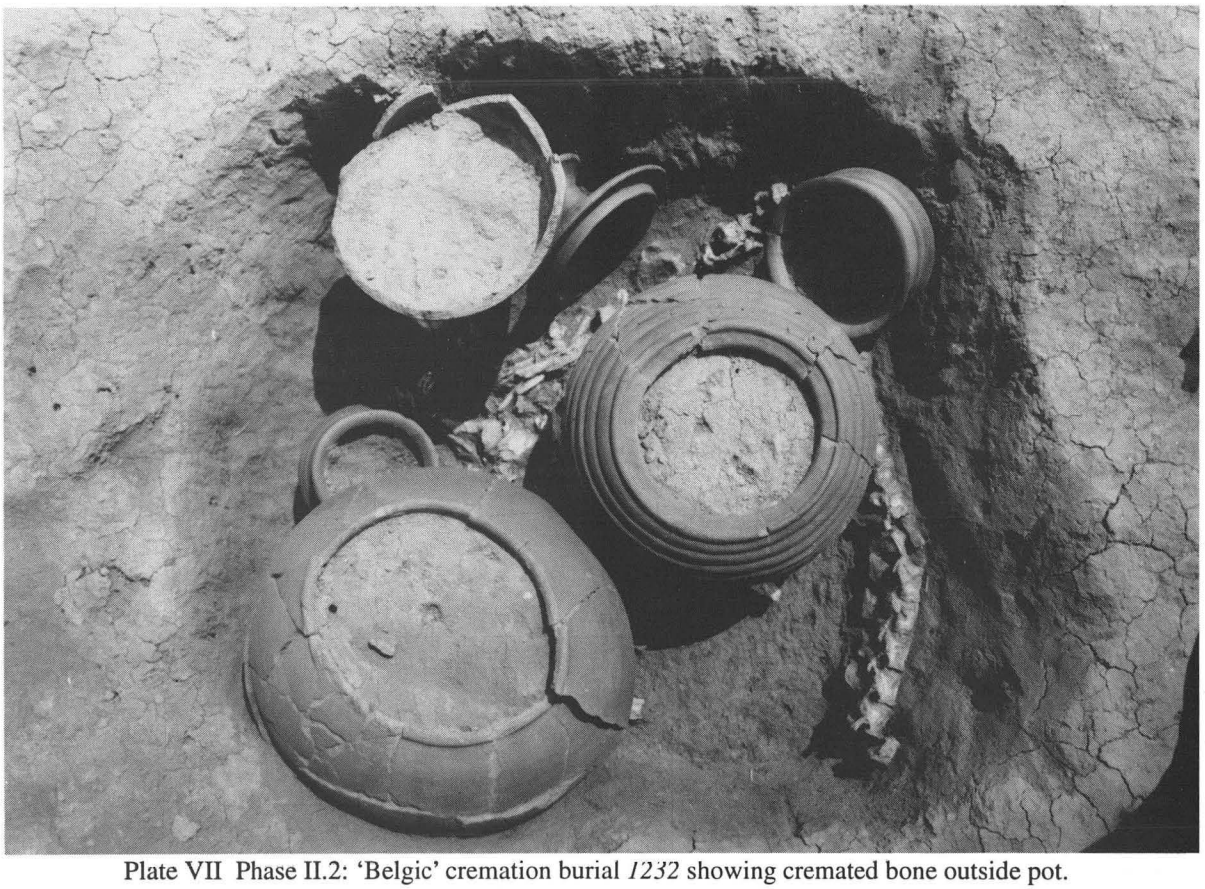

Plate VII Phase II.2: 'Belgic' cremation burial *1232* showing cremated bone outside pot.

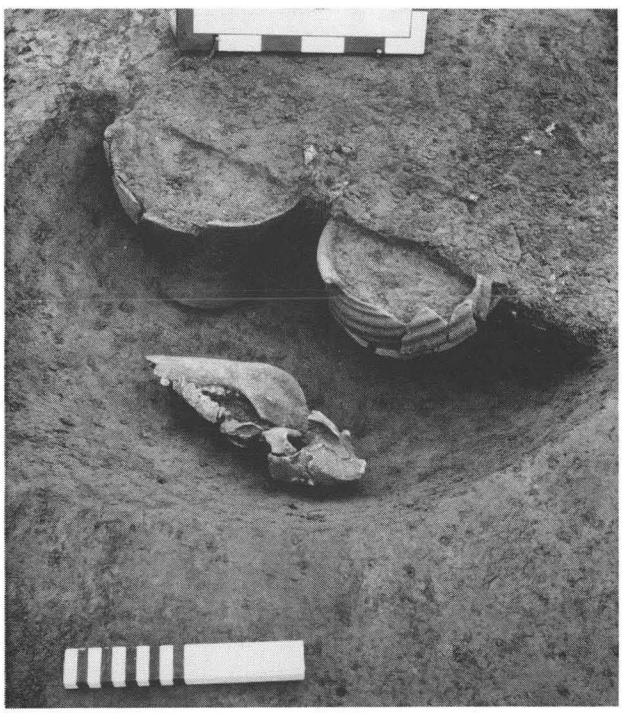

Plate VI Phase II.2: 'Belgic' cremation burial *1161* showing pig skull.

Plate VIII Phase II.2: 'Belgic' cremation burial *1367* showing cremated bone outside pot, and pig vertebrae.

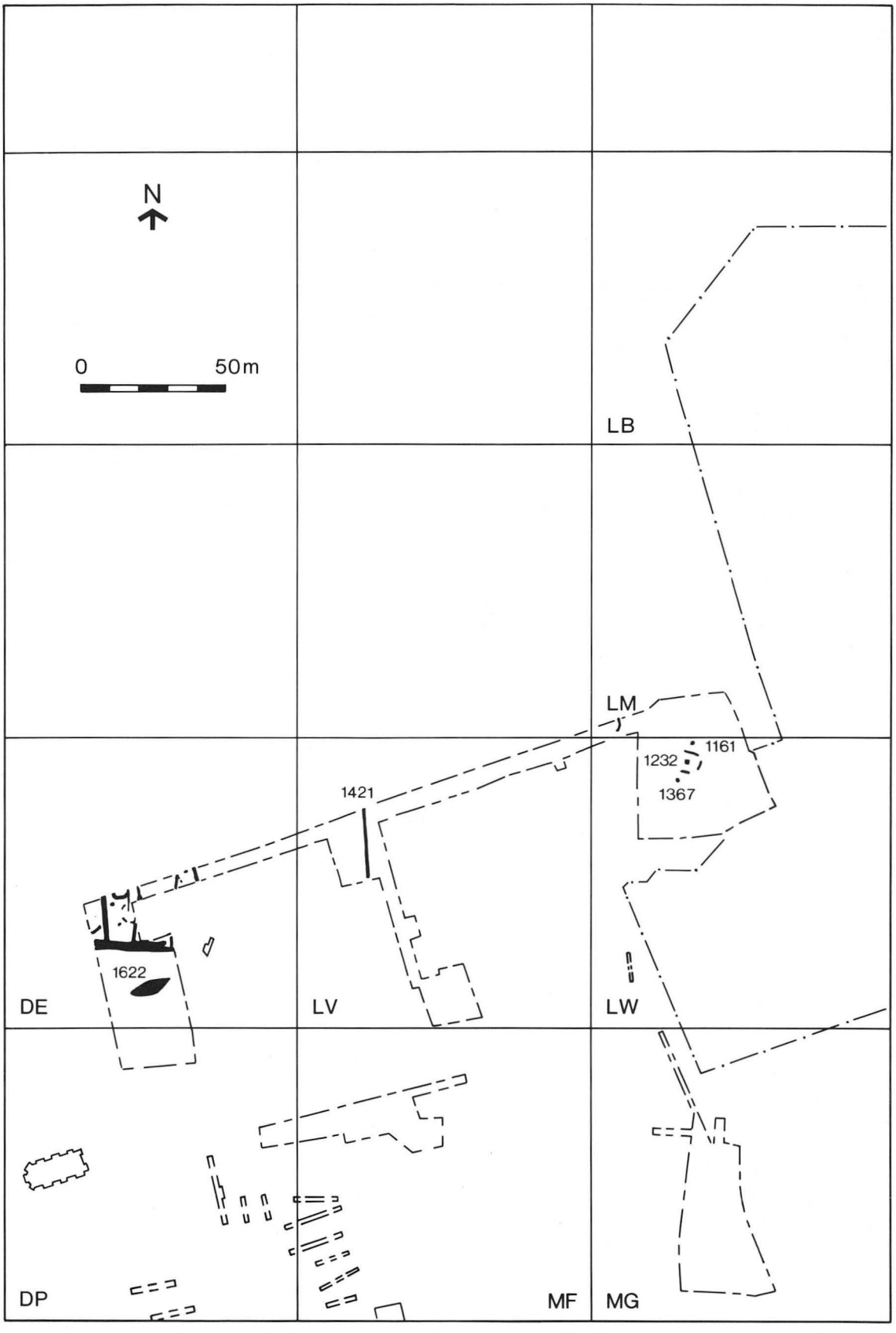

Figure 25 Plan of all major Period II features.

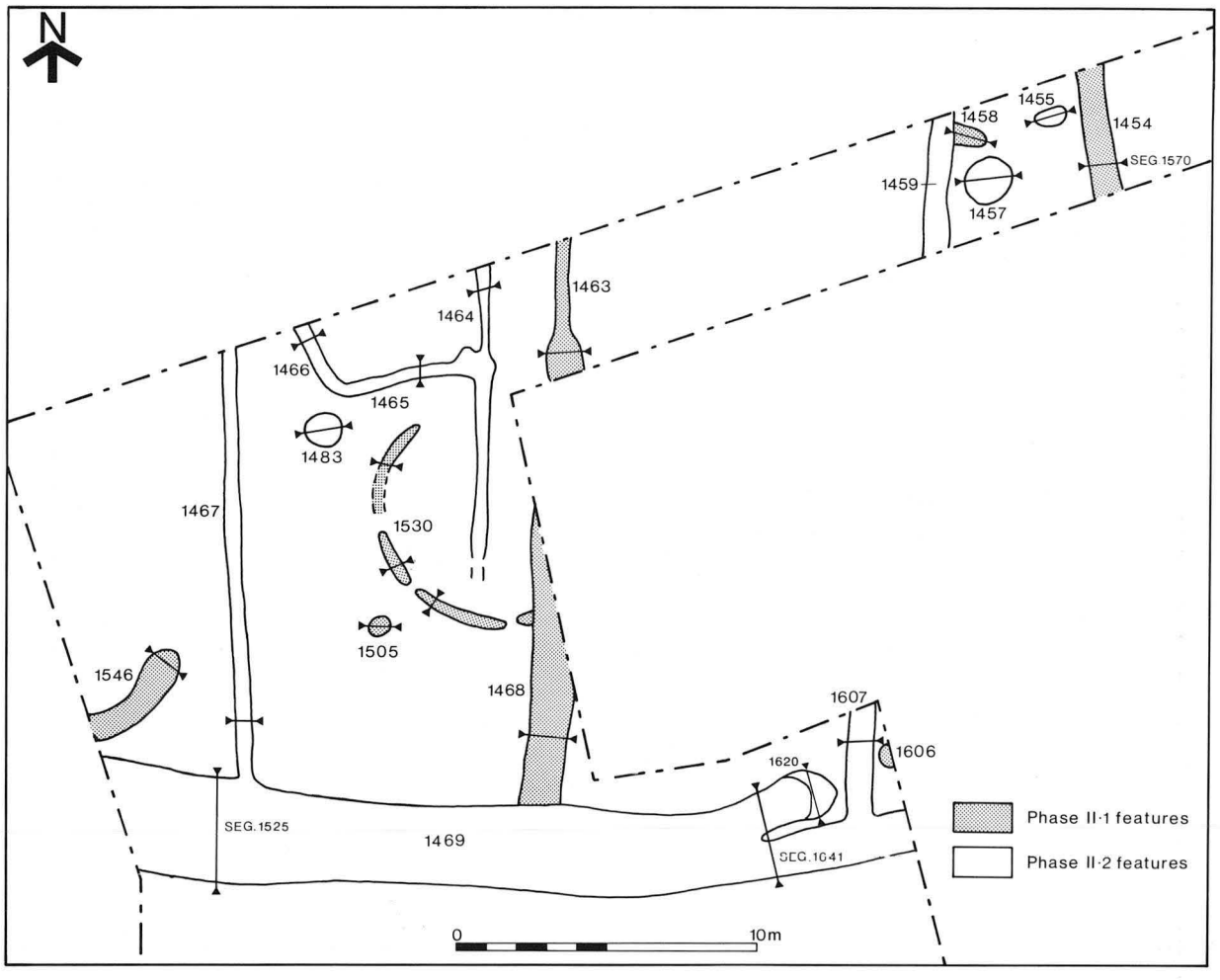

Figure 26 Plan of all Period II features in grid square DE.

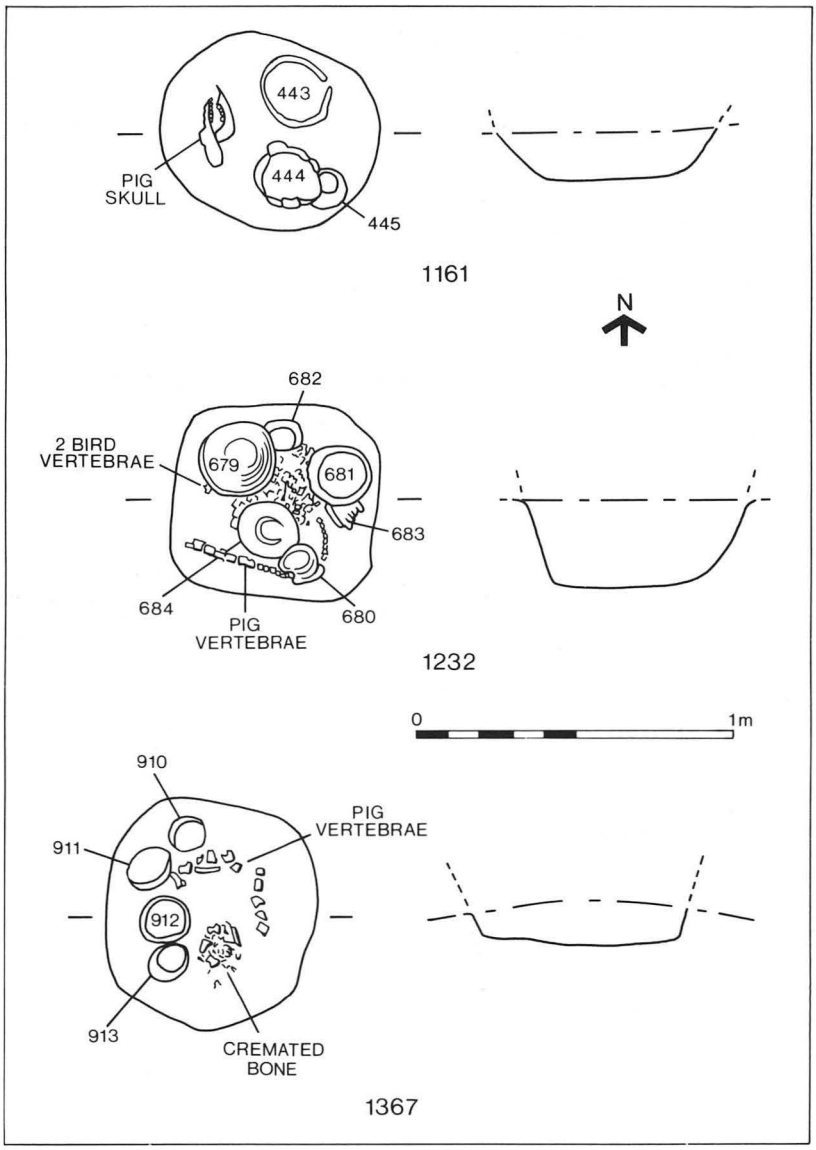

Figure 27 Plan of each of the Period II.2 cremation burials.

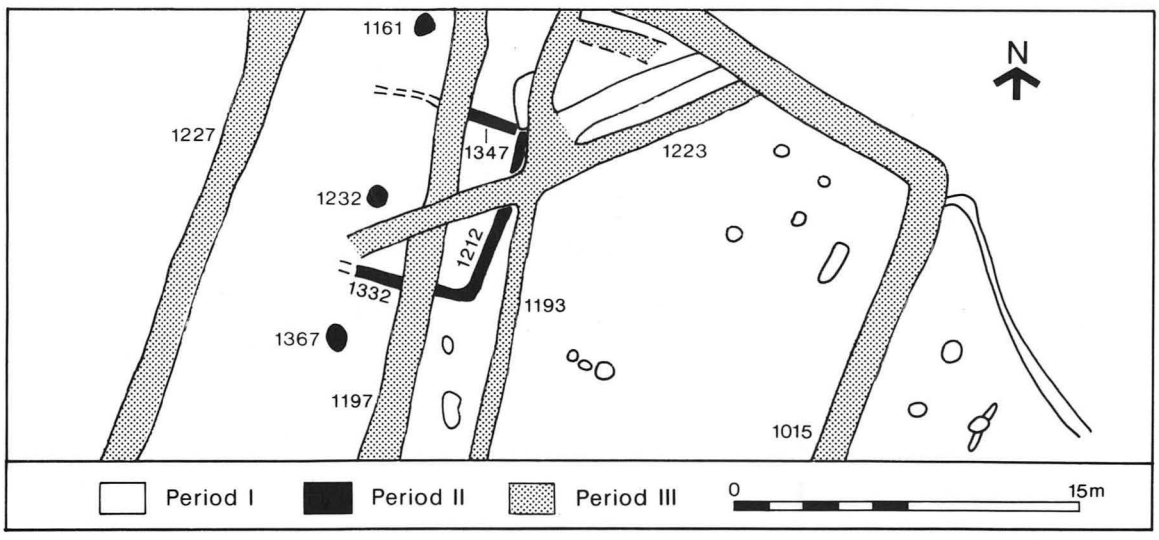

Figure 28 Period II cremation cemetery, in relation to Period I and Period III features.

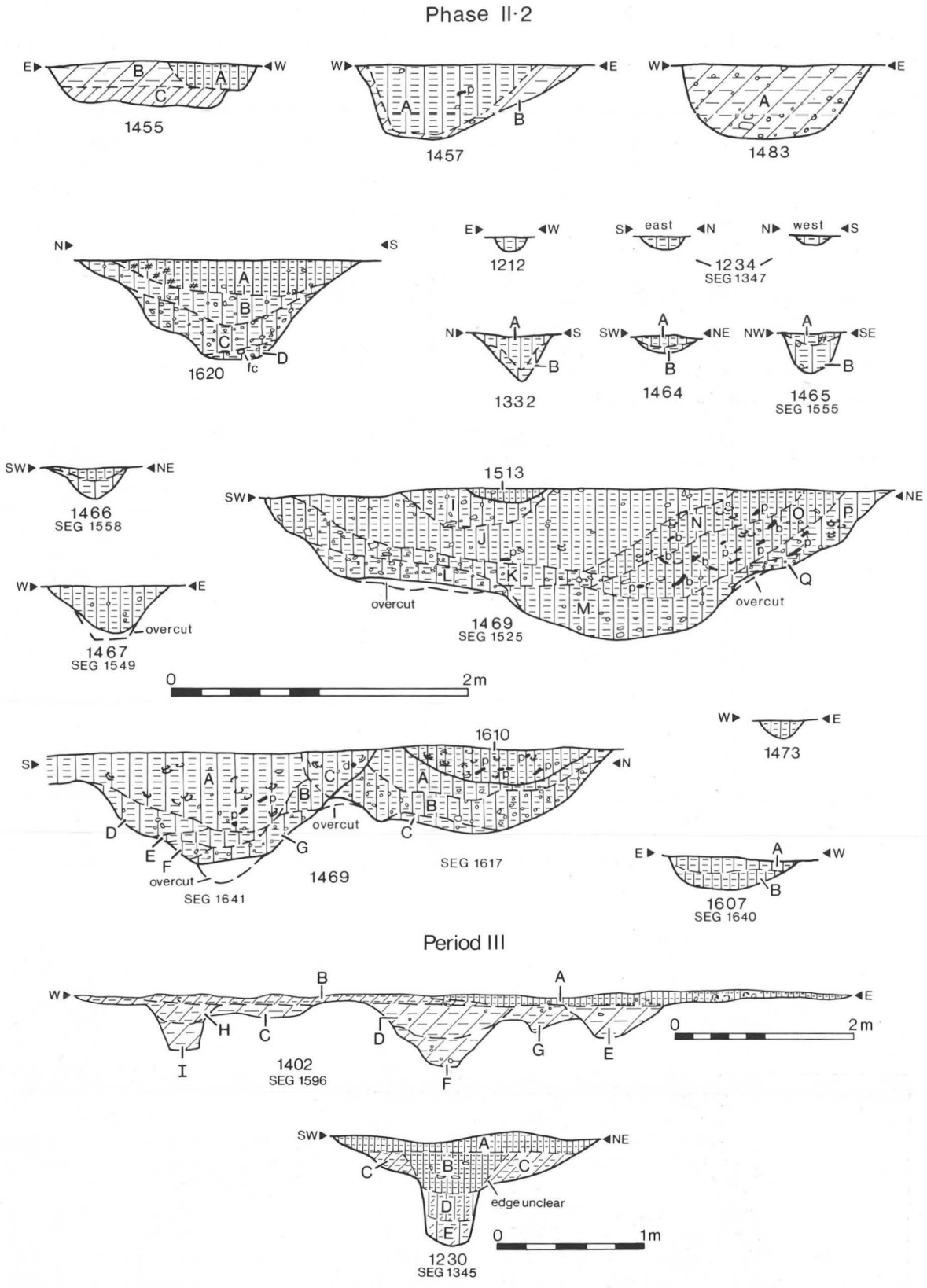

Figure 29 Phase II.2 and Period III sections.

Period III *c.* AD 43–410

Occupation during this period lay almost entirely within Grid Squares DE, LV and LW Fig. 30. The period has been divided into two phases (Fig. 31); phase III.1 saw the maintenance and development of the system of the north-south ditches, phase III.2 saw some reorganisation of the field system with the addition of major east-west ditches and a large rectilinear enclosure, there is also an increased variety of artefacts from the ditch fills.

It is possible to further sub-divide the features of this phase on the basis of the date of the pottery they contain. Figures 32 and 33 show the Period III features which contain pottery of Leary's phases 1–5 (below p.94). The presence of ceramic refuse of a particular date in the ditches may simply reflect shifting patterns of rubbish disposal and ditch cleaning. Clearly the absence of later ceramics from some ditches does not necessarily imply that they were no longer used. This is particularly the case if, as seems likely, drainage was not the primary function of the ditches. The line of a largely silted up ditch, particularly if accompanied by a hedge, would still have served as a boundary or field division.

Period III Unphased

A trackway running north west to south east in Grid Square MG, is shown on the general plan of Period III features (Fig. 30). The ditches of this feature cut Bronze Age features and produced a few abraded Roman sherds. Whilst this trackway may be of Roman date, it seems to run at variance to the general alignment of the Roman field system, and may be later possibly, even post medieval in date. It certainly fits well with the alignment of the field boundaries shown on the estate map of 1703 (Fig. 103).

Part of the flue and chamber of a 'corndryer' *1424* (Pl. X, Fig. 35 and fiche), were recorded in Grid Square LV (Fig. 30). The walls and flue of this feature cut into the natural brickearth were hard fired to a depth of up to 0.1m. The only finds recovered from this feature were a few very large pieces of *tegula.*

Phase III.1 AD *43–300*

The eastern boundary marked during period II.2 by the cremation cemetery, seems to have been maintained during the Roman period. Ditch *1193* (Figs 28, 31, 34, Plate VIII and fiche) was dug just outside the west edge of the small enclosure around the central cremation burial *1232*, almost no Roman material or features were recorded west of *1193*. A wider, deeper ditch *1197* (Figs 28, 31, 34 and fiche) runs parallel to *1193* (Fig. 31). Ditch *1197* does not appear to respect the period II.2 cremation cemetery, as it cuts through the small enclosure around *1232*. Ditch *1197* contained pottery of ceramic phase 2. It may be that *1197* represents a recut of the boundary line slightly further to the west. Alternatively if *1193* was still marked by a hedgeline *1197* may have been dug parallel to *1193*, to create a trackway along the eastern edge of the field system. In only one case can a north south feature (ditch *1462/1609* Fig. 31 and fiche) be shown to extend beyond the line of major period II.2 ditch *1469* and it may be that this boundary line was maintained during the Roman period.

The ditches vary considerably, from wide frequently recut features (*e.g. 1405, 1431* Fig. 34 and fiche) to shallow narrow ditches with largely homogenous fills (*e.g. 1193, 1354, 1462* Fig. 34 and fiche). Although the stepped profiles of some of the smaller features (*e.g. 1462* Fig. 34 and fiche), may indicate these were also occasionally recut. Finds comprise almost entirely dumps of domestic refuse, bone, shell and pottery. Very few coins were recovered (below p.68). A bronze finger ring was found in *1193* (below p.68), whilst this could well be a casual loss it may have been a deliberate deposition on the eastern edge of the settlement.

In contrast to earlier periods pits were not common, only two were excavated *1404* and *1643* both in the north-east corner of Grid Square LV (Fig. 31). Pit *1404* was an oval feature with a shallow depression to the west, and steep slightly undercut sides, with a lightly burnt brickearth lining (Fig. 34 and fiche). Pit *1643* was little more than a shallow oval scoop (Fig. 34 and fiche).

Phase III.2 AD *300–410*

During the 4th century AD the site appears to have undergone some reorganisation. A large ditch *1470* (Figs 31, 34 and fiche) was dug parallel to the Late Iron Age ditch *1469*, perhaps indicating that this boundary was still respected. Ditch *1470* could be traced in a test trench east of the main excavated area in Grid DE (Fig. 31) and ditch *1437* may be its continuation in Grid LV (Fig. 31). Another substantial ditch *1603* (Fig. 34 and fiche), cut south of and converging with *1470* in Grid DE (Fig. 31), may represent the establishment of an east west trackway along the southern edge of the field system. Although ditches *1193* and *1197* had clearly gone out of use at this time, other elements of the north south ditched system of phase II.1, probably continued in use. Some north south features (*1448, 1402* Figs 29, 31 and fiche) containing only pottery of ceramic phase 5, may have been added to the system in phase III.2.

At the eastern end of the settlement/field system, a rectilinear enclosure was laid out across ditches *1193* and *1197* (Figs 28, 30, 31), indicating that the possible trackway had gone out of use. The form of the enclosure ditches is very variable. The western side was deep with stepped profile and large V-shaped recut, filled with dumps of domestic debris (*1227* Fig. 34 and fiche). A long handled iron ladle, and a bronze bracelet came from ditch *1227*. The eastern side was much shallower, again with a stepped profile, and a recut filled with a dump of domestic debris (*1015* Fig. 34 Plate IX and fiche). The northern side presents a marked contrast, here a broad shallow ditch was recut, with a steep sided slot, possibly a palisade slot (*1230* Fig. 29 and fiche). The lower jaw of a horse had been placed at the bottom of the slot, with a cow's skull lacking the lower jaw placed higher in the fill. The presence of these animal deposits, particularly the horse mandible, recalls Iron Age practice (Wait 1985, 125).

The enclosure ditch also produced a fragment of human skull, which is an indication of the continued deposition of human remains at the eastern end of the site. A cremation burial (*1586*) was placed at this eastern end of the field system (Fig. 31) south of the enclosure. Besides some rearrangement of the field systems at this time there are also changes in the artefact assemblage. The quantity of fragments of brick and tile increases, and part of a bone comb was recovered from the rectangular enclosure as were a number of sherds of a glass vessel.

Two pits *1390* and *1610* were excavated (Fig. 31). Pit *1390* was a shallow oval feature, with a dark upper fill (Fig. 34 and fiche). Pit *1610*, was an oval sloping sided

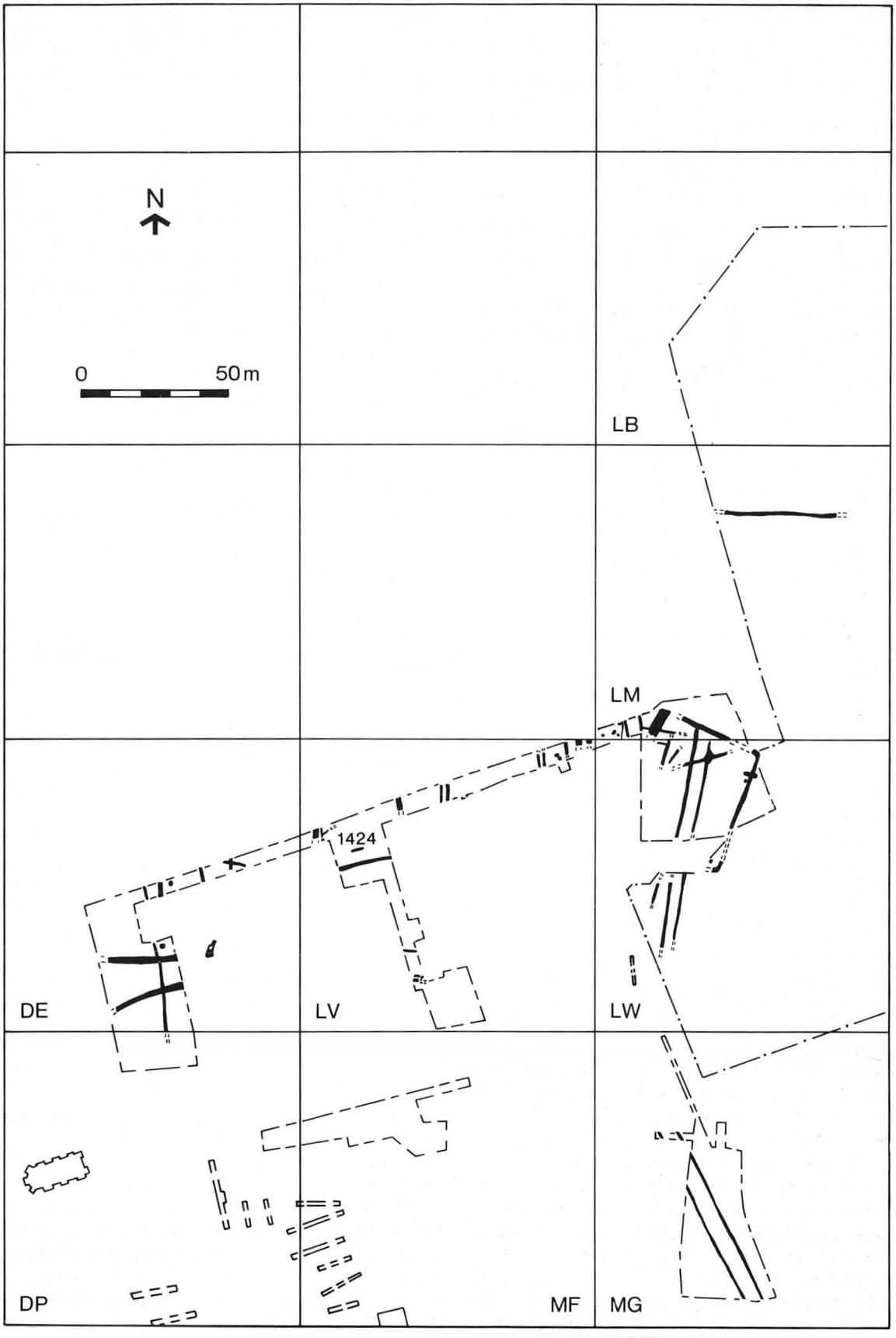

Figure 30 Plan of all major Period III features.

Plate IX Phase III.2: Ditch of enclosure *1015* (segment *1036*), showing oyster shells and stepped profile.

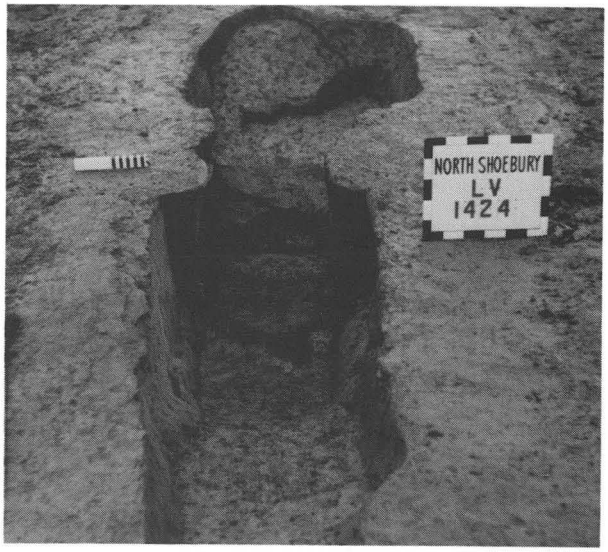

Plate X Period III: Flue and oven of drying kiln *1424*.

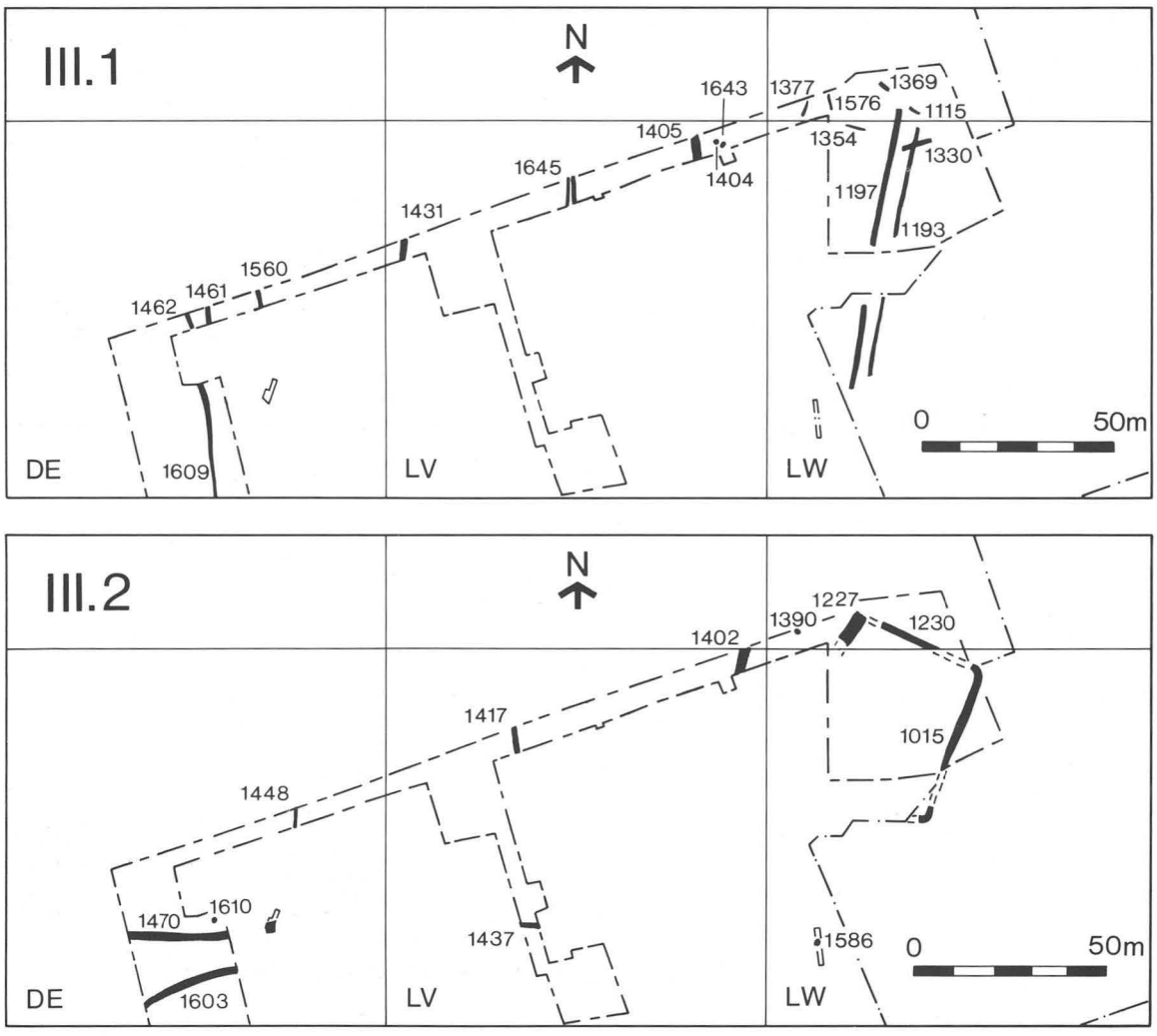

Figure 31 Plan of all features of Phases III.1 and III.2.

feature, cut into the upper fill of LIA ditch *1617* (Fig. 34 and fiche) and filled with domestic debris comprising oyster shell and pottery.

The latest pottery of this phase (ceramic phase 5) cannot be dated much beyond 350AD and it may be that the site was abandoned before the end of the 4th century. However the presence of Early Saxon sherds (below p.46) in upper fills of phase III.2 ditches (Fig. 36), together with positioning of the Early Saxon cemetery just outside the rectangular enclosure; may indicate that the field system was still in use, or at least still visible in the early 5th century.

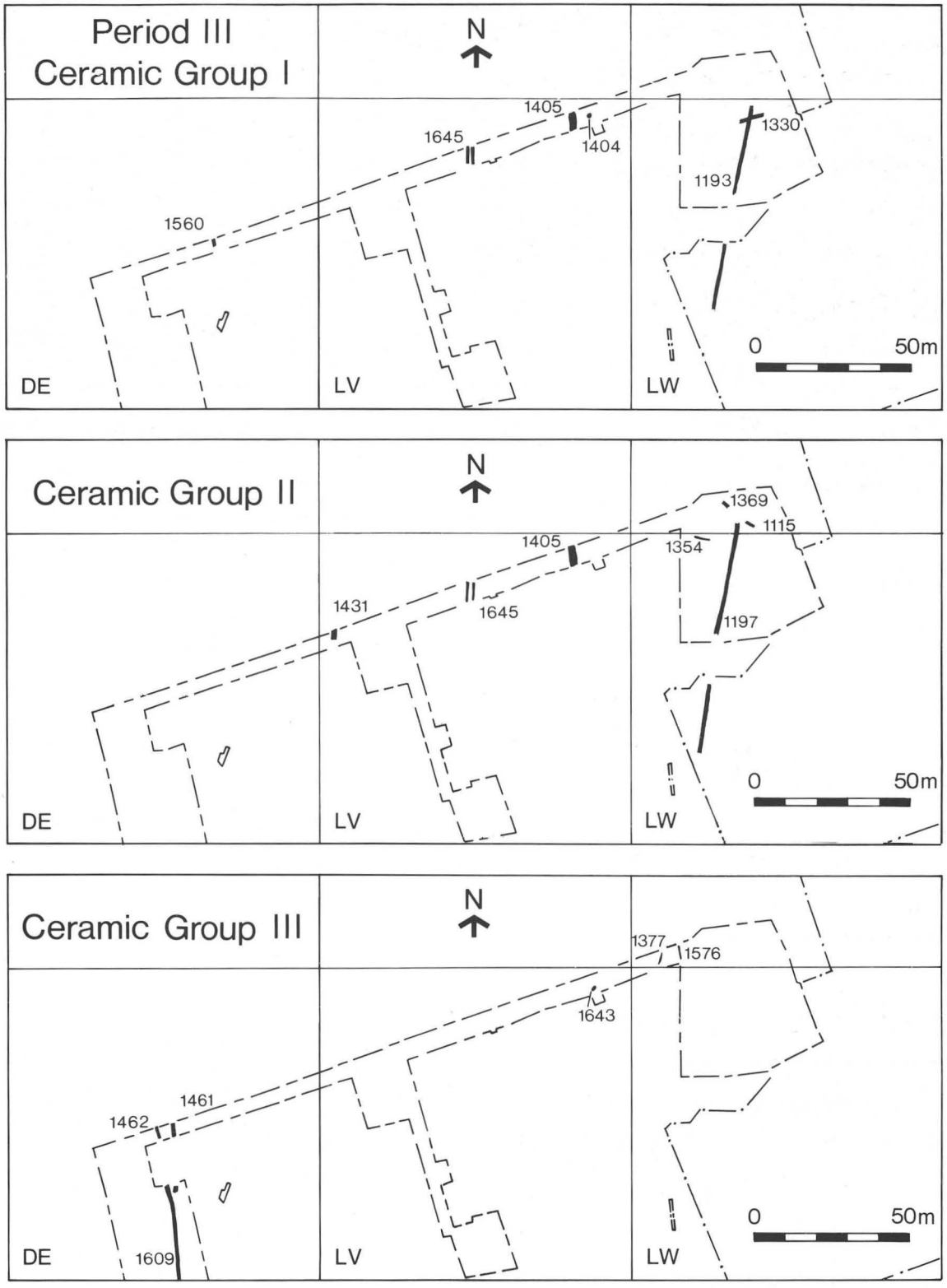

Figure 32 Plans of features producing pottery of Period III ceramic groups 1–3.

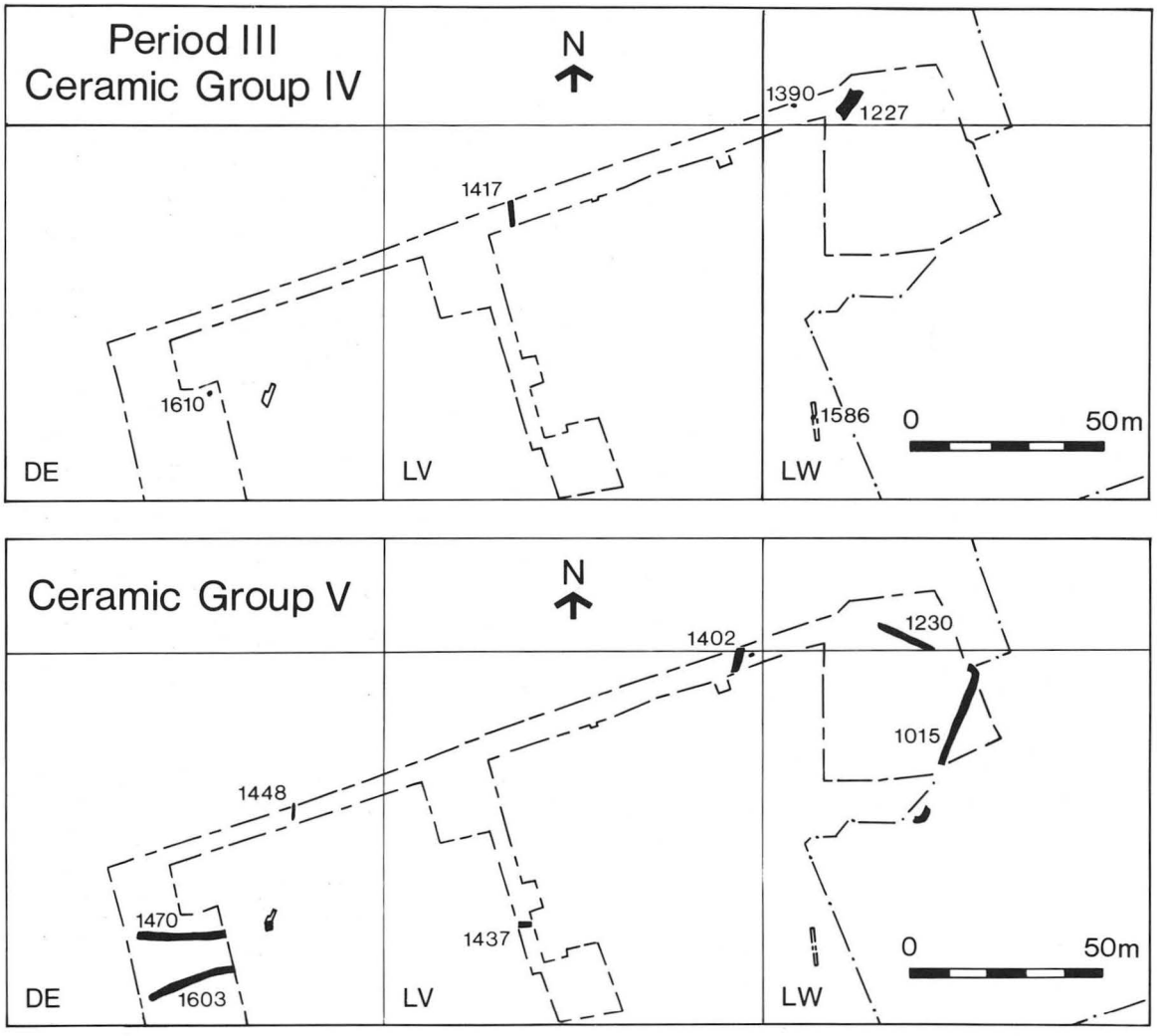

Figure 33 Plans of features producing pottery of Period III ceramic groups 4 and 5.

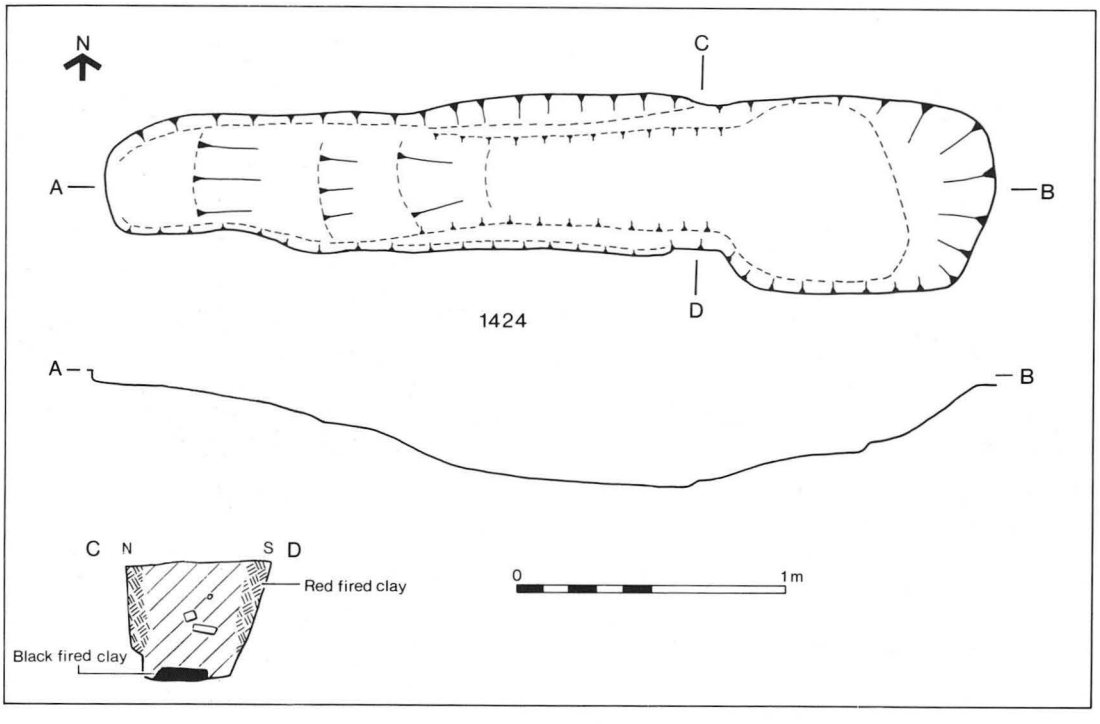

Figure 35 Plan and section of Period III corn dryer.

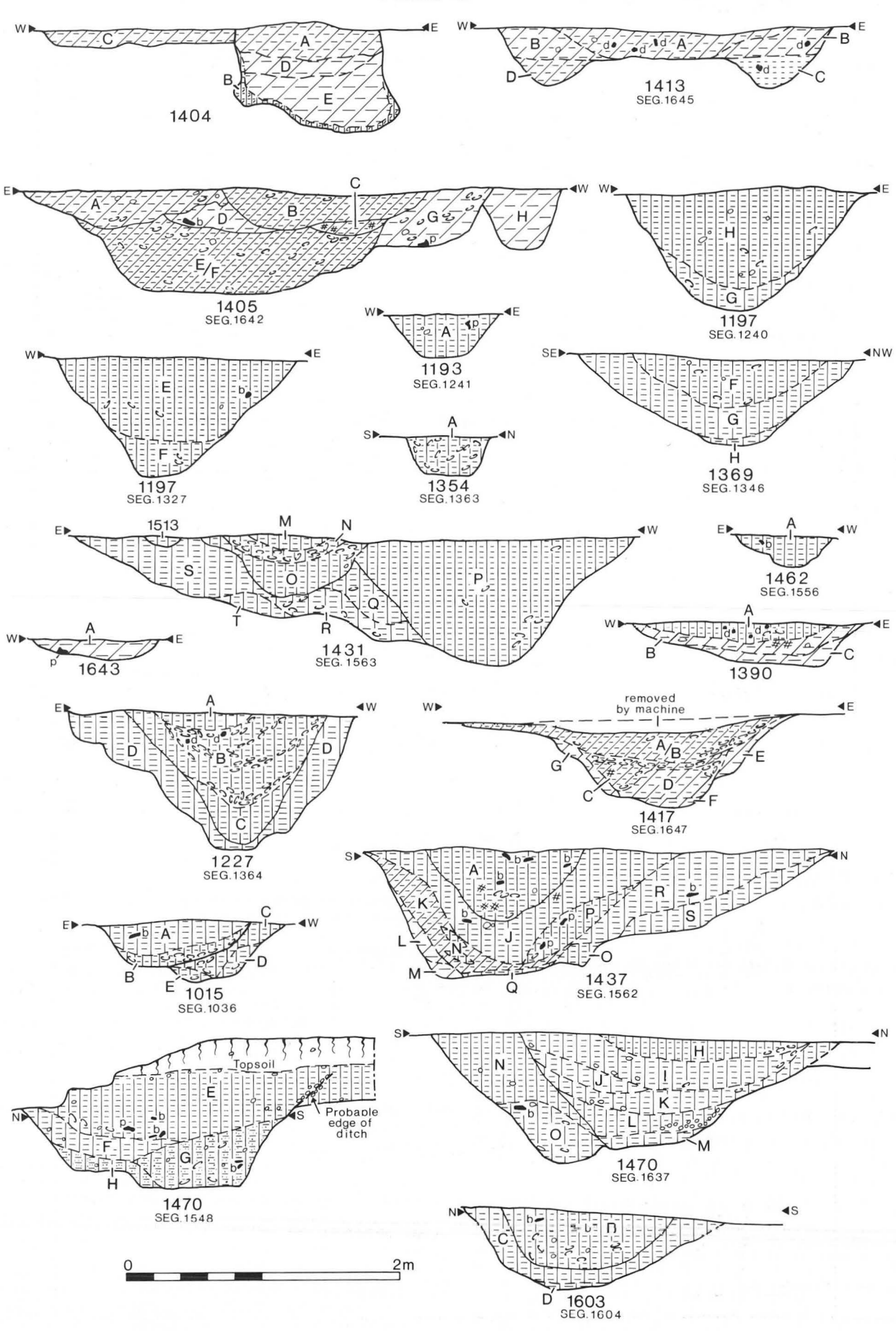

Figure 34 Period III sections.

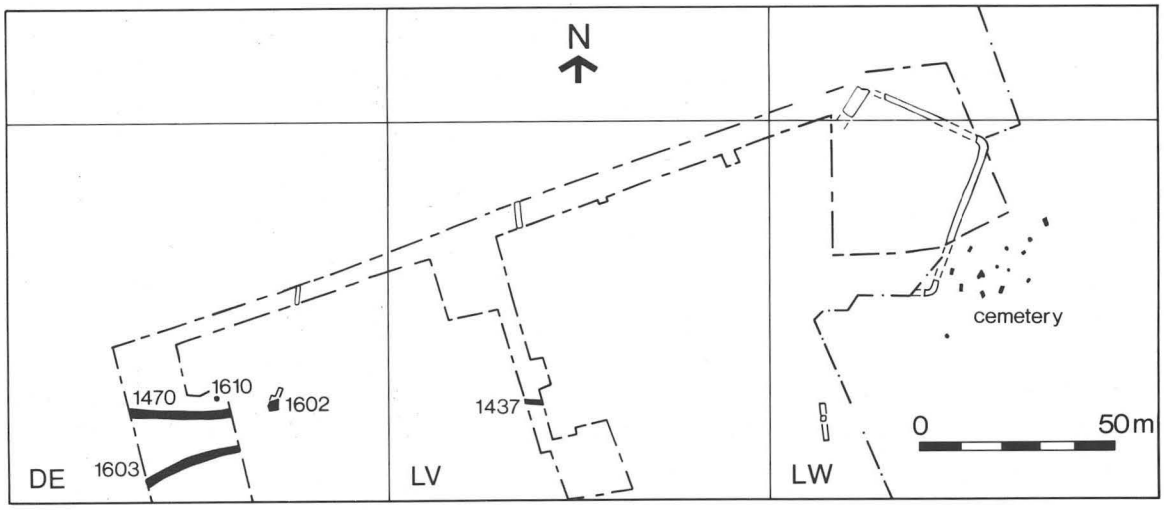

Figure 36 Plan of Period IV Saxon cemetery in relation to Phase III.2 features. Phase III.2 features producing Saxon pottery from their upper fills are shaded.

Period IV *c.*AD 410–1066 Saxon

Phase IV.1 AD 410–700

The evidence for occupation within this period is slender, and restricted to a few sherds, recovered from the upper fills of Roman ditches (Fig. 36 and below), and a small cemetery.

The small cemetery (Figs 36 and 37) was discovered and recorded by Macleod for Southend-on-Sea Museum, between December 1971 and April 1972. The cemetery lay immediately south-east of the Late Roman ditched enclosure situated at the east end of the Roman settlement (Fig. 36). Several inhumations and cremations were exposed during bulldozing of topsoil in advance of brickearth extraction. Their positions were plotted and planned and as much information as possible was recorded in difficult circumstances. The burials are listed below, based on the site records, together with reports on the two best preserved skulls by P.R.J. Bush and G.W. Cowley, and on the majority of the post-cranial bones by J. Going (Reports: Archive).

The Early Saxon cemetery

by Susan Tyler with skeletal identifications by P.G. Bush, G.W. Cowley and J. Going

Introduction

The Early Saxon cemetery was discovered and recorded by D.G. Macleod. It lay immediately south-east of the Late Roman enclosure in Grid LW (Fig. 36). Eight inhumations and nine cremations were recorded, referred to respectively as North Shoebury Cemeteries II and IV in Southend Museum records. Of the inhumations, two *(M162A, M1063)* are regarded as very unlikely to be connected with the Saxon cemetery, on the grounds of their distance from the main concentration, and their association with the EIA settlement. They appear to be of Iron Age date and are described (above p.22) and illustrated on fiche Fig. 117.

One of the main interests of this cemetery is that it appears to have been small. Observation of soil stripping in 1971 and 1972 has shown that the area to the east and south was devoid of any other burials, and excavation in 1981 of most of the remaining area to the west and north did not produce a single further inhumation or cremation that could have been associated.

Catalogue of burials

The catalogue is based on Macleod's excavation record, with notes on the skeletal remains by P.G. Bush and G.W. Cowley, J. Going, and cremated bone by D. Szondy.

Inhumation *M682*

Grave: Rectangular, 1.83 by 0.76m; infilling of grey clay. Contained residual prehistoric pottery.

Burial: Male, 25–30 years (Bush and Cowley).

Near complete skeleton, orientated north-south, extended but legs bent with left foot over right. head slightly twisted to right. Arms placed straight down side, with finger bones over pelvis. Full dentition. No grave-goods.

Inhumation *M683*

Grave: Vertical edges. Hole of possible marker post to south-west of skull. Cut into fills of ?pits *M673* and *M673A*, the latter containing Iron Age sherds.

Burial: Juvenile, *c.*7 years (Going).

Fully extended with right lower leg and ankle lying over the left leg. Bones poorly preserved. No grave-goods.

Inhumation *M684*

Grave: 1.63 by 0.61m, possibly with lower portion cut through by ?pit *M674*.

Burial: Adolescent female on basis of skull (Bush and Cowley).

Bones poorly preserved, although part of right humerus, femur and upper part of tibia survived. Oblique fracture of lower border of mandible but not possible to determine whether pre- or post-mortem (Bush and Cowley). No grave-goods.

Inhumation *M685*

Grave: Rectangular, *c.*1.60 by 0.80m.

Burial: Adult.

Bones extensively decayed and incomplete (Going). Crouched burial, lying on left side. Head twisted to face backwards over shoulder. No trace of bones between skull and pelvis, but head of femur in socket.

Grave-goods

(Fig. 38)

A. Copper alloy buckle. Hawkes and Dunning (1961, 26–8) type 1A: D-shaped loop; straight hinge-bar. Cast in one piece. The loop is formed by the flattened bodies of a pair of stylised confronted dolphins, with a pellet between their open jaws. The dolphins are very stylised with prominent crests and open jaws but no eyes, and the only indication of their tails is a thickening at the ends of the hinge-bar. Pin in position; back folded over hinge-bar, front

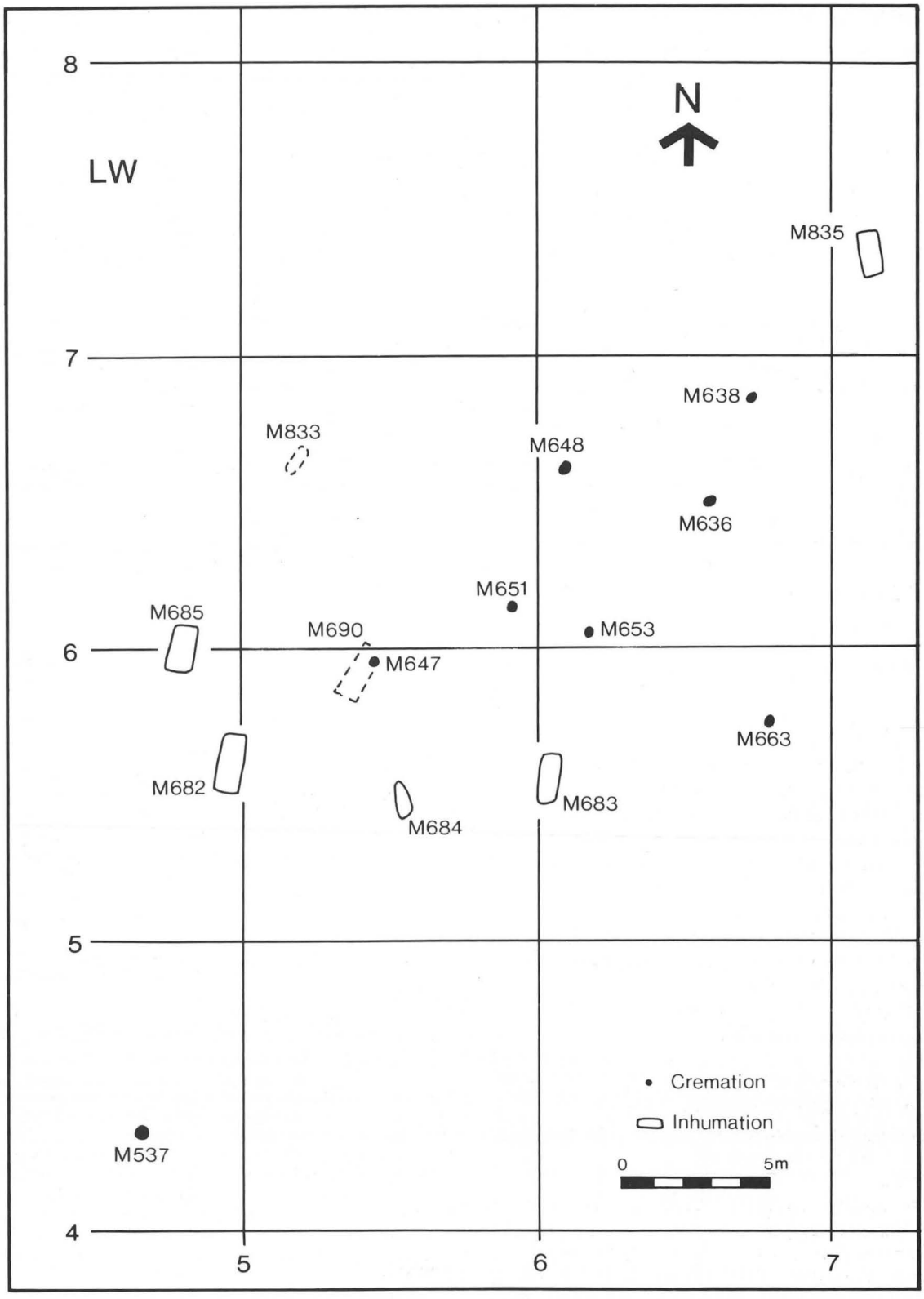

Figure 37 Plan of Saxon cemetery.

lying to one side of pellet. Buckle in fair condition; *c.*50% of surface pitted. Found at the waist with B. Length 44.5mm; max. width 28mm.

B. Copper alloy buckle-plate. Rectangular plate with two rivet-holes at one end; other end curved over. Upper surface decorated with an outer border of two parallel lines of small stamped crescents in between which are a series of stamped segmented ovals (one stamp used). The inner panel has four roundels (pairs) formed by two concentric incised circles with central dots; the inner circle is defined by a series of punched dots; the panel between the two concentric circles is infilled with punched lines. The back is plain. The plate is in poor condition with 13 detached pieces which no longer fit; edges badly chipped, surfaces pitted. Length (incomplete) 63mm, max. width 31mm; max. thickness 1.5mm. *B562*

C. Iron knife. Böhner (1958, 214) type A (back and cutting edge of blade incurving to a point). Point and edges of blade damaged; part of tang broken off. No visible wood or horn handle remains. Length of blade 118mm; length of tang (incomplete) 36mm; max. width of blade 20mm; max. width of tang 10.5mm; max. thickness of blade 3mm. *B563*

D. Pot. Globular; rounded base. Plain. Irregular rim slightly everted. Vegetable-tempered; common large voids; fabric incorporates sparse, large quartz particle. Outer surface patchy dark brown over light reddish-brown; core and inner surface dark brown. Found above the right shoulder. Max. diam. of base 80mm; max. diam. of rim 125mm; max. diam. 150mm; height 120mm. *B564*

Inhumation *M833*

Burial: Bones scattered by bulldozer over wide area. Ribs found in position indicate a south-west to north-east burial.

Grave-goods

A. Iron nail. Possibly associated.

Inhumation *M835*

Grave: Rectangular, 1.60 by 0.60m.

Burial: Probably male. Middle-aged, probably over 40 years, but no evidence of senile decay. Osteo-arthritis of lumbar spine and hips. Advanced disease in left ankle. Distal humerus and proximal radium 'extensively eroded' and coloured green, possibly representing pathological condition during life. Damage on right mandible, but not possible to determine whether pre- or post-mortem (Going). The green discolouration may represent a copper 'remedial' arm-band corroded away since burial, *cf.* copper plates with ivy leaves on arm of skeleton of Jack of both Side cemetery, Reading, Berkshire (Stevens 1896, 54). Extended burial with legs slightly bent, lying on right side. Left arm bent at elbows; right arm straight.

Grave-goods

(Fig. 38)

A. Copper alloy buckle. Kidney-shaped with straight hinge-bar. Slight thickening of loop at ends of hinge-bar. Pin missing. Fair condition; both surfaces (particularly the under surface) pitted. No textile remains adhering. Found by elbow with B. Height 34mm; width 23mm. *B698*

B. Copper alloy buckle-plate. Rectangular plate with beginnings of upward curve of hinge-bar attachment loop at one end. Rivet-hole in one corner; other corners missing. In extremely poor condition; surfaces very pitted; *c.* 75% extant. Length (incomplete) 38mm; width 23mm; thickness 1.5mm. *B699*

C. Copper alloy belt-plate. Two square plates rivetted together. Four rivet-holes (one at each corner). One almost complete flat- headed rivet and fragments of two others in position. No leather or textile remains. In fairly poor condition; surfaces badly pitted. Found behind vertebrae. Dimensions 22mm square; thickness of each plate 2mm; thickness of gap between plates 2mm. *B697*

D. Copper alloy buckle-plate. Looped-over plate with cut-out section to allow buckle-pin to pivot. One rivet-hole; remains of domed copper alloy rivet-head on opposing side. In poor condition; *c.* 75% survives; all surfaces badly pitted. Length 16mm; width 17mm. *B699*

E. Copper alloy fragments. Three amorphous pieces; form indistinguishable. (Not illustrated). *B698*

F. Iron cylindrical object. Tapers along length. Incomplete. Wood traces adhering to external surface. Poor condition. Length 42mm; diam. 12mm tapering to 8mm. (Not illustrated). *B698*

G. Iron fragment. Semi-circular in cross-section. Wood traces on all surfaces. Very corroded. Possibly part of F. length 36mm; max. diam. 11mm. (Not illustrated). *B701*

Also mentioned in Macleod's report but not now identifiable:

H. 'Iron rod-like object found by waist, possibly shears'.

I. 'Iron object by right hand'.

J. 'Roman brooch spring'.

Cremation *M647*

Base of urn with cremated bones, found upright. Cremated bone in too poor condition to draw reliable conclusions. Also ?prehistoric sherds.

Grave-goods

(Fig. 38)

A. Base and body sherds. Vessel form indistinguishable. Chalk and vegetable tempered; abundant large particles and voids, giving a distinctly vesicular appearance. Very soft, friable fabric. Outer and inner surfaces dark brown; core reddish-brown. Wt 130 g. (Not illustrated).

B. Copper alloy and iron belt-fitting (disc-attachment). Hawkes and Dunning (1961, 65–6) type VI. Disc-shaped plate with part of suspension loop. Iron rivet passes through centre of disc and remains of suspension loop. Decoration on front of disc (partially obscured by iron corrosion products from the rivet) comprising a series of engraved concentric circles, some infilled with 'chip-carved' rectangles, five engraved transverse grooves at base of suspension loop. Slight indication of notching around edge of disc. In poor condition; edge badly chipped with *c.* 25% of circumference missing; loop broken off, small section remaining around rivet. Max. diam. of disc 21mm; length of rivet between disc and suspension loop (*i.e.* the thickness of the leather belt) 2mm. *B525*

C. Copper alloy and iron belt-fitting (disc attachment). Hawkes and Dunning (1961, 65–6) type VI. Disc-concave plate with part of suspension loop. Iron rivet passes through centre of disc and remains of suspension loop. Edge of disc corrugated. Decoration on concave face of disc comprising four concentric engraved circles (in pairs) infilled with vertical lines to form rectangles; four engraved transverse grooves (in pairs) at base of suspension loop. In poor condition; most of loop missing. Max. diam. of disc 22mm; length of rivet between disc and suspension loop (*i.e.* the thickness of the leather belt) 4mm.

D. Copper alloy hook, ?part of belt fitting. Small ring suspended from hook. Length (fragment) 11mm; max. diam. of ring 5mm.

E. Copper alloy bracelet or belt fitting fragment. Perforated at one end. Semi-circular in cross-section. Undersurface plain; upper surface has cast diagonal segments. Length (fragment) 12mm; max. width 4mm.

F. Copper allow fragment, ?part of belt stiffener. Length (fragment) 17mm; max. width 5mm.

G. Copper alloy belt stiffener. Narrow, slightly tapering rectangular plate with pronounced shoulders at either end beneath two sets of deeply engraved lines. Two rivets in position at either end of the plate, one complete with rectangular retaining plate. In poor condition; edges badly chipped. Length 30mm; max. width 6mm; length of rivet 2mm. *B525*

H. Fragment of glass pendant. Piece of tapering, flat transparent glass overlain with ?gold foil. Perforated at narrow end. Both ends damaged. Length 21mm; width 7mm tapering to 5mm. (Not illustrated).

Cremation *M648*

(Fig. 39)

Cremated bone in too poor condition to draw reliable conclusions.

A. Base: Part of a wheel-turned footring base. Decorated with three concentric grooves. Tempered with abundant quartz-sand; small well-sorted particles. Very soft orange-brown ware. Max. diam. of base 50mm. Wt 16g. *B526*

Associations: Iron Age and Roman sherds.

Cremation *M651*

(Fig. 39)

Cremated bone in too poor condition to draw reliable conclusions.

A. Pot. Pedestal-footed sub-biconical pot. Decorated with five deeply-incised necklines, forming four cordons (two with diagonal slashes). Below this is a panel of bossed and incised line-and-dot decoration comprising four round bosses, each defined by two deep concentric grooves infilled with diagonal slashed lines and an outer circle of stamped dots. Beneath and flanking each round boss is a panel of linear decoration comprising four vertical lines, the central two infilled with slashed diagonal lines. Between the round bosses are four long bosses decorated with six vertical grooves, the central two infilled with diagonal slashes; either side of the vertical grooves are two rows of fingertip impressions. The fabric is quartz-sand tempered, with abundant small to medium particles. Outer and inner surfaces dark brown; core reddish-buff. 75% of pot survives; rim missing. Height (incomplete) 216mm; max. diam. 22.5mm; diam. of base 90mm.

Associations

(Fig. 39)

B. Sherds: Rim, neck and shoulder sherds from a Frankish wheel-turned pot. Everted, flattened rim. Corrugated neck with two plain cordons above and below a 'dimpled' cordon. Sharply carinated shoulder. Incised diagonal lines on body beneath neck cordons. Quartz-sand tempered fabric; abundant small particles, sparse large particles. Outer surface orange-brown, apparently deliberately roughened beneath cordons, possibly by the application of a slip containing large quartz-sand particles; core and inner surfaces orange-brown. *c.*25% pot survives. Wt 115g. *B528*

C. Sherds: Neck and body sherds from a Frankish wheel-turned vessel. Neck decorated with one 'dimpled cordon' above which are two plain cordons. Sharp carination beneath the neckline, demarcated by an incised concentric groove. Uniform light grey

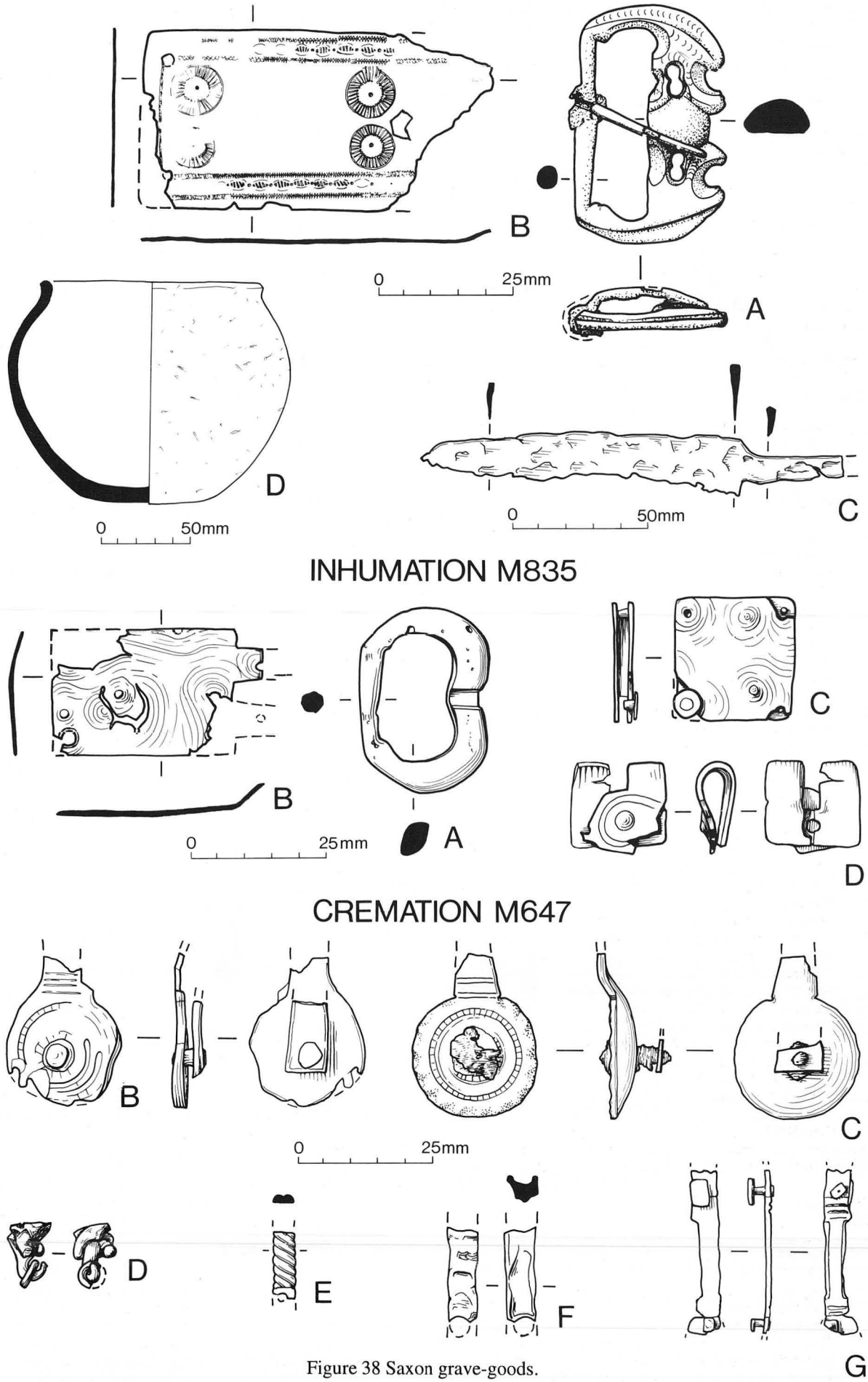

Figure 38 Saxon grave-goods.

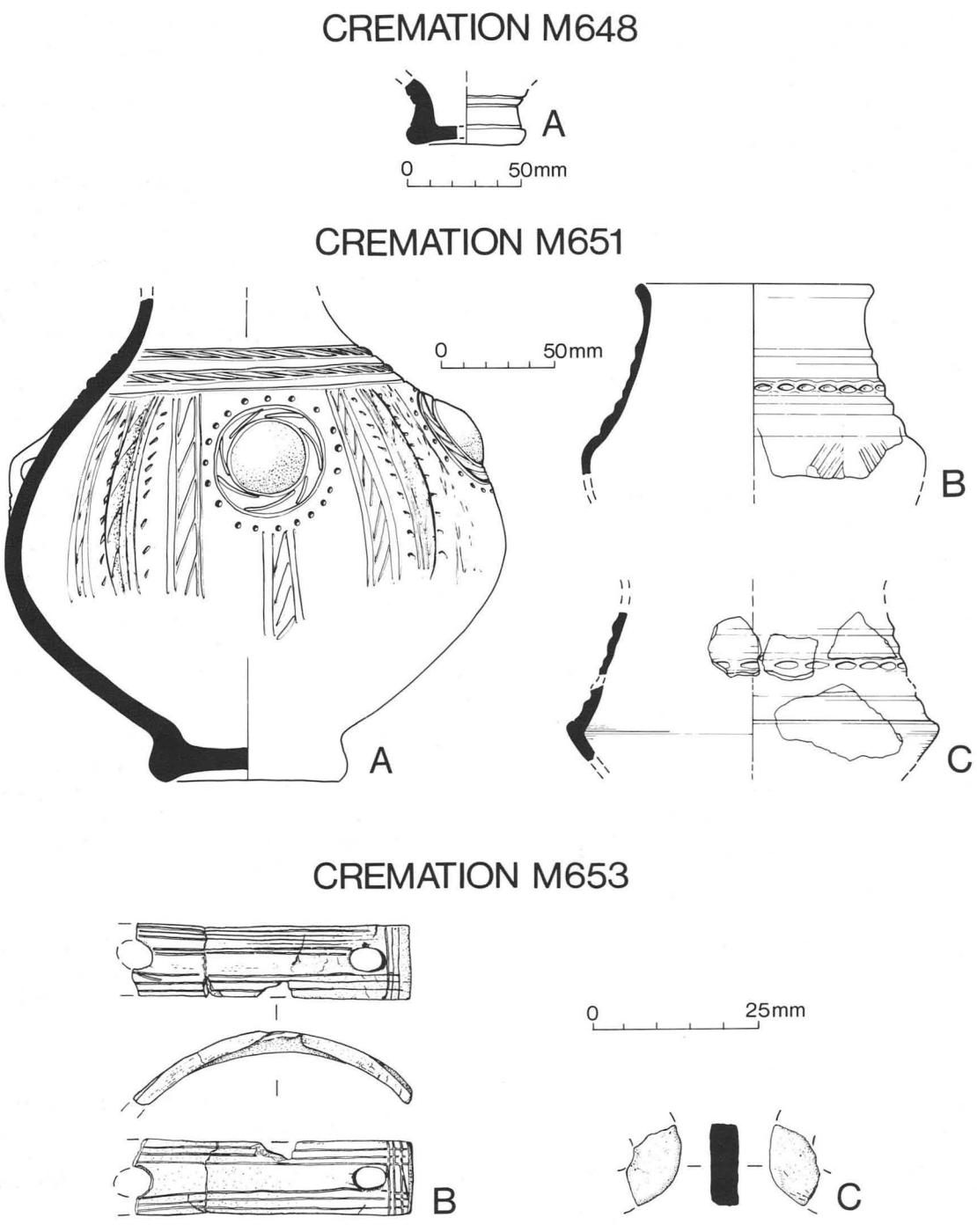

Figure 39 Saxon grave-goods.

fabric; quartz-sand tempered with a high proportion of mica present. Wt 29g. *B528*

Cremation *M653*

Base of cremation urn with cremated bone still present. Charcoal spread beneath base of urn.

Cremated bone indicates an adult possibly affected by osteoarthritis.

Grave-goods

(Fig. 39)

A. Base and body sherds. Large vessel; form indistinguishable. One sherd has a single incised horizontal line. Fabric tempered with abundant quartz-sand, small to large particles, with a high proportion of mica. Outer surface light grey with dark grey patches; (?cloth wipe marks); inner surface and core light grey. Wt 378 g. (Not illustrated). *B533*

B. Bone strip. Curved rectangular strip with two large perforations. Both surfaces decorated with rows of incised lines running parallel with the edges. Incomplete: one end broken off.

C. Fragment of bone. Flat surfaces, one edge curved. Thickness 4mm.

D. Burnt clay, twenty pieces. Wt 15 g. (Not illustrated).

Cremation *M636*

Cremated bone indicates an adult.

Lower part of urn and sherds. Urn lying on its side. Cremated bones lying over urn.

Grave-goods

(Fig. 40)

A. Base and lower body sherds. Pedestal-footed; sub-biconical. Most of upper body and rim missing. Decoration: plain cordon around neck defined by five necklines (two above and three below).

Round bosses (of which only one survives) on shoulder defined by three concentric grooved arches alternate with long bosses. Vertical grooves (in groups of nine) infill the panels between the bosses. Fabric tempered with abundant small chalk particles, with sparse large chalk particles and vegetable voids. Dark brown. *c.* 50% of pot survives. Max. diam. of base 87mm; max. diam. of body 225mm; height (incomplete) 190mm. *B504*

B. Bone bead. Disc plano-convex. Central perforation. Fair condition; *c.*25% of circumference damaged. Diam. 15mm; thickness 5mm.

Cremation *M638*

Cremated bone indicates young adult.

Remains of urn partly destroyed by machine. Cremated bones separated from base of urn by a small amount of clean brickearth.

Grave-goods

(Fig. 40)

A. Pot: Plain globular. Base and lower body sherds only. Fabric tempered with abundant small to medium quartz-sand particles; sparse large vegetable voids. Outer surface dark brown; inner surface buff; core dark grey. max. diam. of base 105mm. *B506*

B. Bone comb fragment. End fragment of single-sided comb, probably of triangular form. Remains of five graduated tooth-segments are visible. Length 24mm; height 13mm.

C. Copper alloy miniature shears. Manufactured from one piece of metal, the ends of which have been twisted and hammered to form shear blades. Simple looped back. Good condition. Scored lines on all surfaces, particularly on the shear blades — ?filemarks. Height 62mm; length 62mm (blades 33mm); max. width of blades 12mm.

D. Copper alloy needle. Circular in cross-section at centre; flattened at head to accommodate oval-shaped eye. Longitudinal grooves run along body from eye on both sides. Complete and in good condition; point sharp. Length 58mm; max. diam. 2mm; length of eye 4mm; width of eye 1mm.

E. Copper alloy pin. Shaft circular in cross-section; head ribbed. Poor condition; point broken off. Length (incomplete) 52mm; max. diam. 2.5mm (shaft), 3.5 mm (head).

F. Cremated beads. Nine globules of melted glass beads: (not illustrated).
(i) Melted glass beads. Several (three or more) glass beads fused together. One is white opaque glass with pale blue translucent glass stripes. Other colours present in mass: opaque red, opaque green, opaque black. Cremated bone incorporated.
(ii) Melted glass bead. Colours: opaque red, opaque yellow, opaque green.
(iii) Melted glass bead. Opaque black. Cremated bone fused into glass.
(iv) Melted glass bead. Opaque red. Cremated bone incorporated.
(v) Melted glass bead. Translucent green and opaque red. Cremated bone incorporated in glass.
(vi) Melted glass bead. Opaque dark blue with opaque white strips.
(vii) Melted glass bead. Opaque pale blue. Cremated bone incorporated.
(viii) Melted glass bead. Opaque black. Includes cremated bone.
(ix) Melted glass bead. Opaque pale green.

Discussion of the grave-goods

Bronze

i. Buckles and belt fittings

The buckle and buckle-plate from inhumation *M685* are of Hawkes and Dunning type 1A, datable to the period late 4th to early 5th century (Hawkes and Dunning 1961, 26–8). The North Shoebury buckle is highly stylized; the dolphins have lost their tails and eyes and are barely recognisable. The position of buckle and associated plate in the grave — at the waist — suggests that it was functional when buried. This theory is supported by the fact that the buckle is complete with pin in position. Type 1A buckles are found fairly frequently in Anglo-Saxon graves and in some instances appear to have been functional at their time of deposition; an example of this occurred at another southern Essex cemetery at Mucking, where a type 1A buckle, complete with pin, was found at waist level (W.T. Jones, pers. comm.). There is every probability, therefore, that this is an early 5th-century burial, and the associated grave-goods (globular bowl and iron knife of Böhner (1958, 214) type A) support this supposition.

The fragmentary disc-attachment belt fittings and belt stiffeners recovered from cremation *M647*, along with a fragment of a glass pendant, could be a collection of curios or amulets. Hawkes (1981, 10–11) has postulated that military belt fittings were kept by wives and descendants of *foederati* either as metal for remelting or as charms; this could explain their occurrence in Saxon graves such as those at Colchester (Hawkes 1981, 10–11) and Mucking (W.T. Jones, pers. comm.) and in the North Shoebury cremation. In the Mucking example the belt fitting was clearly re-used as a pendant. Such graves are generally accepted as belonging to the 5th century. Continental examples occur in cemeteries in Belgium, Germany, France and Holland, and can be shown to post-date AD 375 (Ypey 1969, 89–127). The North Shoebury disc-attachment belt fittings fall into Ypey's 'Gurtelgarnitur Type B'.

The other buckles and belt fittings from North Shoebury could also belong to the 5th century; the kidney-shaped copper alloy buckle from inhumation *M835* is a common 5th-century form.

ii. Miscellaneous bronze objects

Cremation *M638* contained a pair of miniature shears, a needle and a pin (also in the cremation were glass beads and a fragment of bone comb). This could be the remains of a woman's needlework set, perhaps originally contained in a leather pouch.

Iron knife

The single knife (from inhumation *M685*) is Böhner type A (both back and cutting edge incurve to a point), not closely datable. This form was in use throughout the 5th, 6th and 7th centuries (Böhner 1958, 214).

Bone

Three cremations produced worked bone *(M653, M636 and M638),* comprising a comb fragment, a bead and a decorated curved strip. Little can be said about these pieces, although the curved strip is unusual and could have functioned (with a bone pin) as a hair-slide.

Pottery

See Part 3.VIII, e

The grave-goods from both the inhumations and cremation burials indicate a 5th-century date for the cemetery. The 5th-century buckles and belt fittings occur both in cremations and inhumations, suggesting that the two burial rites were contemporary at North Shoebury. Whilst acknowledging that military belt fittings of Hawkes and Dunning types IA and VI were kept as curios and re-used as pendants many years after their functional life had ended (and thus need not date the burial in which they occur), it is highly plausible that the cemetery is 5th century. Following on from this, it is tempting to see it as the burial ground of a small community of *'laeti'* (Saxon mercenaries and their families) who may have been given land nearby to cultivate in return for military assistance to the depleted Roman army. Certainly, the skeletal evidence indicates a family group, including adults of both sexes,

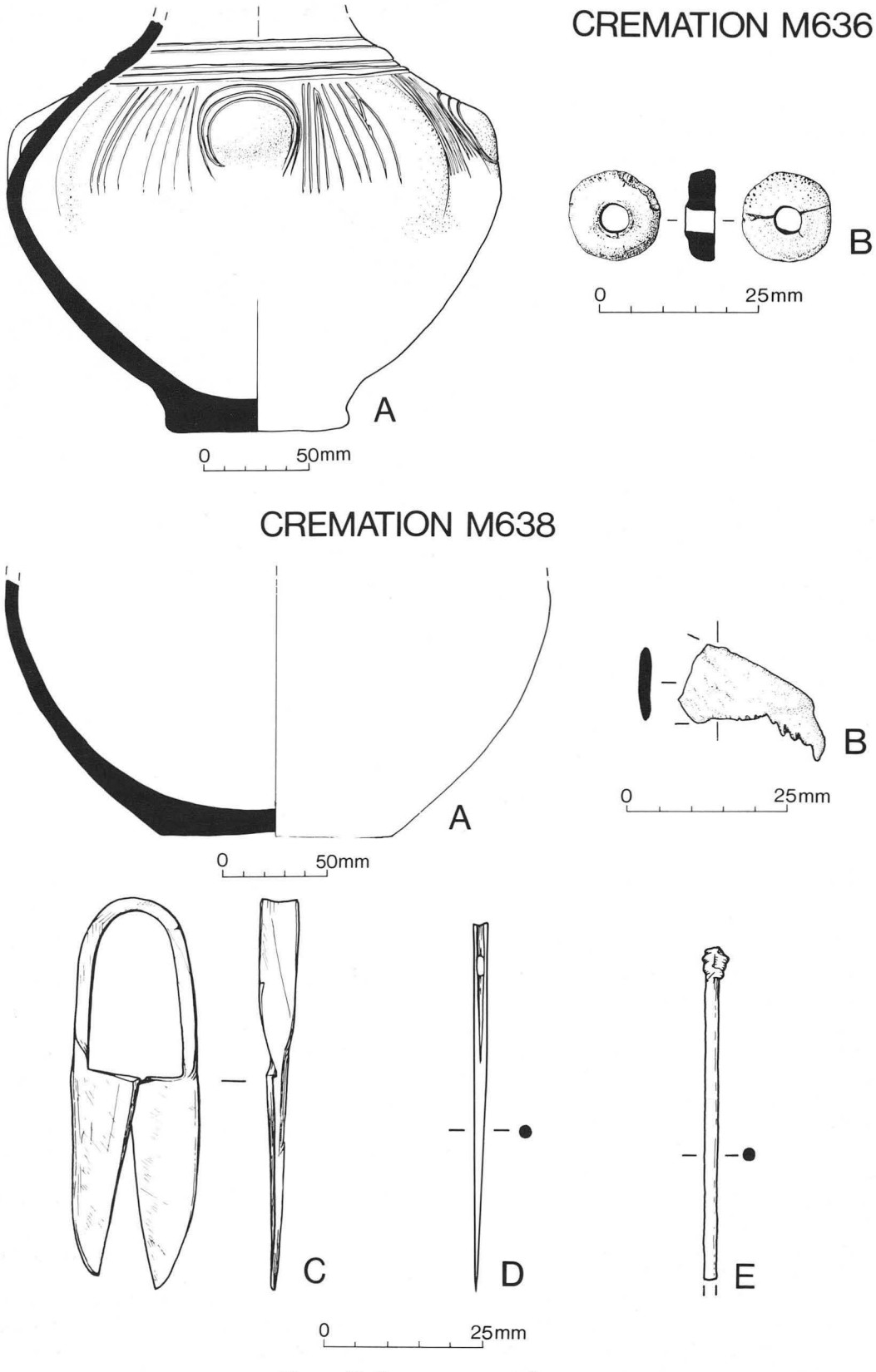

Figure 40 Saxon grave-goods.

and juveniles. As the excavations did not reveal an associated settlement it may be suggested that, as at other Early Saxon sites, the cemetery was situated some distance from the dwellings. However the cemetery was located at the eastern boundary of the Roman settlement/ field system, carrying on a long established association of burial with this boundary (below pp 34 and 40).

Phase IV.2 AD 700–1066

There is little evidence of settlement at North Shoebury during this phase, and none of the excavated features could be attributed to it.

Period V *c.*AD 1066–1500

Phase V.1 AD 1066–1300

The major excavated feature of Period V was a large, sub-rectangular enclosure ditch (*0300* Fig. 41). This was unexpectedly revealed during routine trial trenching within and around the site of North Shoebury Hall Farm; immediately east of the remains of the Tudor North Shoebury Hall which existed as an occupied building until it burnt down in 1968. The farm, which was demolished in December 1980, remained as nothing more than a chaotic spread of concrete, brick rubble, humps and depressions. Sections cut with a JCB showed recent (19th–20th century where ascertainable) disturbance to depths of 50cm and more. Other features of this period were mainly found around the remains of North Shoebury Hall.

As the land immediately around the Hall site was due to be grassed over as a 'Village Green' for the new development, there was a reasonable chance that subsoil features would survive. Therefore, when the decision was taken to end fieldwork earlier than anticipated, excavation was concentrated in Grid Squares DE, LV and LW. In these areas a dense housing development would cause destruction of archaeological features. As a result of this, none of the features shown on Fig. 46 north of the Hall foundations were excavated (with the exception of *0511*), and many of those to the west and south of the Hall were also left unexcavated.

Ditch *0300* (Figs 41, 42, 45 and fiche) formed three sides of what appeared to have been a sub-rectangular enclosure. The southern side was traced along its full length (66m), the eastern side was traced for a length of 80m, the western side for 48m. The line of the western ditch appears to be continued by the eastern boundary of the churchyard (Fig. 41). The northern side did not appear in the trenches in Grid Squares DE and DP (Fig. 41). It may have been removed in casual brickearth quarrying during the post-medieval period, as there were extensive unnatural slopes and hollows on this part of the site. A 7m wide entrance was situated in the south-west corner of the enclosure (Fig. 43). The ditch would originally have been about 4m wide and 1.5m deep, of U-shaped profile. In excavated segments on the east side a deeper slot cut along the bottom of the inside ditch edge, ranging from a shallow scoop (*0309F* Fig. 45, and fiche) to a well defined steep sided slot (*0307C* Fig. 45, Plate XI, and fiche), may indicate a revetment of the internal face of the ditch. In segment *0307* a gravelly layer (Fig. 45 *0307B* Plate XI and fiche) derived from inside the enclosure may be collapsed bank material. Part of two flat based steep sided slots (*e.g. 0313, 0317–9, 0321–2, 0324* Figs 42, 50 and fiche) were traced running parallel to *0300* on the east side. One ran 4m from the inner edge of the ditch the other 3.5 m further west (Fig. 42 and fiche). These features may represent internal revetment for a bank and/or rampart. Alternatively a 4m wide berm with a box rampart might be envisaged, however this seems rather an elaborate construction for such a site, and would be unlikely if layer *0307B* is indeed collapsed material from a bank. The two slots and the lower fills of *0300* produced 11th/12th-century pottery (below p.103).

The south and south-west segments of *0300* (*0301–4* Figs 42, 43, 45, and fiche) show a narrower shallower recut, the fills of which produced large amounts of

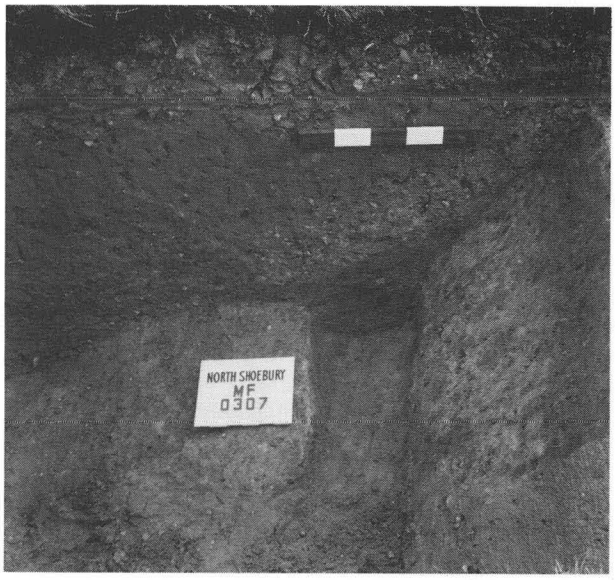

Plate XI Period V: section of Saxo-Norman enclosure ditch *0300* (segment *0307*).

13th-century pottery and domestic refuse. Apparently indicating the enclosure had gone out of use and been backfilled at this time. The butt end of the enclosure ditch south of the entrance (*0345*) was cut by an east-west ditch *0350* (Fig. 44 and fiche). Ditch *0350* had been partially recut, or cleaned out, at various points (*0353, 0358* Figs 44, 50 and fiche); and then fully recut along its entire exposed length as *0343* (Figs 43, 44, 50 and fiche).This recut appears to align with ditch *0448* (Fig. 41), 800m to the east and may well be the same feature. Ditch *0343* may itself have been partially recut towards the west *0357* (Fig. 50 and fiche), although this recut was not recognised in plan but only noted in section. Despite this relatively complex series of recuts, all these features appear to have been backfilled in a single operation in the early 13th century (below pp 108–9). The whole sequence was subsequently cut by 18th-century ditch *0344* (Figs 43, 44, 50 and fiche) running roughly north west-south east.

Extensive recent disturbance and modern building prevented examination of the interior of the enclosure. The small areas of the interior available for excavation within Grid Square DP Fig. 42, revealed two somewhat ill-defined narrow shallow gullies *0102, 0108* (Fig. 50 and fiche), both of which produced 11th/12th-century ceramics. The butt end of another possible gully, *0100* (Figs 42, 50 and fiche), was recorded immediately adjacent to, and south of, *0102*. Further south a small excavation trench revealed a pit, or possibly a ditch butt, *0314* (Figs 42, 50 and fiche), which again yielded pottery of 11th/12th-century pottery.

To the west of the enclosure, around and beneath the foundations of the 16th-century North Shoebury Hall, a scatter of features datable to phase V.1 was recorded.

A shallow ditch (*0007/0019*, Figs 46, 50, and fiche) ran west from beneath the north wall of North Shoebury Hall before apparently turning sharply south (Fig. 46), the excavated segment produced pottery of the 11th/12th century. The western end of the feature appears to have been recut and shortened (*0052*, Figs 46, 50 and fiche) turning south 5m east of the original southward turn of *0007*. This recut produced 13th century pottery (below p.106). The relationship of *0007* and *0052* with 0034 (Fig. 46 and fiche) is problematic, both *0007* and *0052* cut

0034 (Fig. 46) but the excavated segment of *0034* produced 14th/15th-century pottery (below p.113). As the excavated segment of *0034* lay to the south of *0007/0052*, it may be that the southern part of *0034* remained open or was recut in the 14th/15th century. These ditches are part of a sequence of linear features running north/south, which also include *0014, 0038* (Fig. 46, and fiche). These features appear to represent successive shifts of a boundary to the west of the site later occupied by the Tudor hall. The presence of these boundaries close to the later hall may indicate that it occupied the site of an earlier building. To the south, ditch *0448* (Figs 42, 51 and fiche), the possible westward extension of ditch *0343* (above p.53), appears to represent the establishment of a boundary which continued to be respected well into the post-medieval period (below p.63).

To the north of the hall the only excavated feature was a small post-hole *0511* (Figs 46, 51 and fiche). Sherds of 11th/12th-century pottery (below p.106) were recovered from surface cleaning of *0504* unexcavated ?beamslots. These features appear to define a very small rectangular structure about 1m square (Fig. 46 and fiche) immediately adjacent to the north of the later hall wall. Similar pottery was recovered from an unexcavated ?gully *0550* which appeared to run beneath the west wall of the hall (Fig. 46).

The small area excavated within the west end of the hall, revealed *0483* (Fig. 46, and fiche) beneath make up for the hall floor. This feature appeared to be a continuation of ditch *0007/0019*, running beneath the north wall of the hall. It appears possible that it may be related to the unexcavated structure *0504* (Fig. 46). Beneath the south wall of the hall was a short length of gully *0200* (Fig. 46, and fiche), excavation of this feature, which clearly cut *0550* (Fig. 46) produced 13th/14th-century ceramics (below p.106). The only other Early Medieval feature was a very small sub-rectangular post-hole *0515* (Fig. 46 and fiche).

To the south of the hall lay an irregular double row of post-holes *0075, 0414, 0415, 0416, 0455, 0456* (Figs 47–51, and fiche). These features varied in depth from less than 0.3m (*e.g. 0075, 0415* Fig. 50), to almost 0.5m deep (*e.g. 0455, 0456* Fig. 51), with one (*0416* Fig. 50) over 1m deep. Two of the features (*e.g. 455, 0456* Fig. 51) had deeper post sockets, none of the fills had visible post pipes. Indeed, the fills were either homogenous (*e.g. 0414, 0415* Fig. 50 and fiche) or a sequence of more or less horizontal layers (*e.g. 0455, 0456* Fig. 51). It would therefore appear that the posts had been removed and the post-holes backfilled. There seems to be a division between relatively shallow post-holes with homogenous fills to the north (*0075, 0414, 0415* Fig. 49) and deeper features with more complex fills to the south (*041, 0455, 0456* Fig 49). Feature *0416* had apparently been reused, as a narrow shallow slot (*0077* Figs 49 and 50) had been cut through its upper fill adjacent to to the eastern edge of the feature. All these features produced 11th/12th-century pottery, with the exception of *0077* and *0456* which yielded 13th-century material.

To the east of this group of post-holes three shallow sloping sided pits or scoops (*0460, 0083, 0088* Figs 49–51, and fiche), and a small sub-circular post-hole *0470* (Fig. 49, 51 and fiche) were the only excavated features of Early Medieval date.

To the south east a somewhat disparate group of features may represent a rather ill-defined rectilinear structure about 8m x 4m. The eastern end was marked by a narrow shallow slot *0400* which incorporated two post-holes *0469* and *0467* (Figs 48, 49, 51 and fiche). The southern side was only defined towards the west, again by a slot like feature *0418/0429* (Fig. 49 and fiche). The north-west corner appears to be marked by a cluster of post-holes *0085, 0433, 0458, 0459* (Figs 48, 49, 50, 51 and fiche) immediately south of which was an irregular shallow scoop (*0432* Figs 49, 52 and fiche). All these features produced 11th/12th-century pottery, with the exception of *0433* which included pottery of 13th-century date. A gap of about 1.5m seperated feature *0432*, from a pair of large rectangular post-holes *0485* and *0424* (Fig. 49 and fiche). The former produced no datable finds, whilst the latter, although well-placed to form the south west corner of the supposed Early Medieval structure (Fig. 49) yielded 18th-century ceramics.

Any structure which may be represented by these features is unlikely to have been a roofed building; it may simply have been a fenced enclosure. A scatter of features within the centre of the possible structure may represent an internal subdivision, (Fig. 49) the two excavated examples proved to be small oval steep sided post-holes (*0465, 0086*, Fig. 49 and fiche).

In Grid Square DE a V-shaped narrow ditch *1447* (Figs 41, 51) produced 13th/14th-century pottery and cut across the north-south Roman field system. This apparently isolated feature may be a boundary, perpetuating the line of another feature *1446* (Fig. 41), which also ran east-west, 3m north of *1447* and cut the north south alignment of the Roman field system (Fig. 30). Feature *1446* was nearly vertical sided and flat based (Fig. 51 and fiche) and appeared to be a palisade slot, although no post-holes were noted in its fill, it produced 11th/12th-century pottery.

The area recorded by Southend Museum produced little material of this phase. An oval pit *M2.61* (Fig. 6, fiche and Fig. 118), and keyhole shaped features *M2.60* and *M2.62* (Fig. 6, fiche and Fig. 118) in Grid LE associated with burnt material, produced 13th-century pottery. The features were interpreted as ovens. Three groups of narrow shallow linear features in Grid Squares LW, LC, LD and LE (Figs 41 and 6) were interpreted as remains of medieval strip cultivation. The group in Grid LW cut Bronze and Iron Age features and were themselves cut by a field boundary which remained in use until 1970. Besides one small sherd of ?medieval pottery, the finds from these features consisted entirely of a few small and abraded Roman and Prehistoric sherds which seem likely to be residual.

Phase V.2 1300–1499

There is little indication of activity at the site during the 14th and 15th centuries, apart from ditch *0034* (Figs 46 and 53). As noted above (p.53) ditch *0034* was cut by *0007* and *0052* dated to the 12th/13th centuries. However the segment of *0034* excavated south of *0007* and *0052* produced only 14th/15th-century pottery. It may be that the southern part of *0034* was recut at this period. The section (Fig. 53) would seem to indicate that *0034A* could be a V-shaped recut however the pottery was recovered from *0034B*. The enclosure *0300* was largely backfilled in the 13th century and the focus of the phase V.2 site may have shifted away from the previously enclosed area, possibly to the vicinity of the later hall. However there is

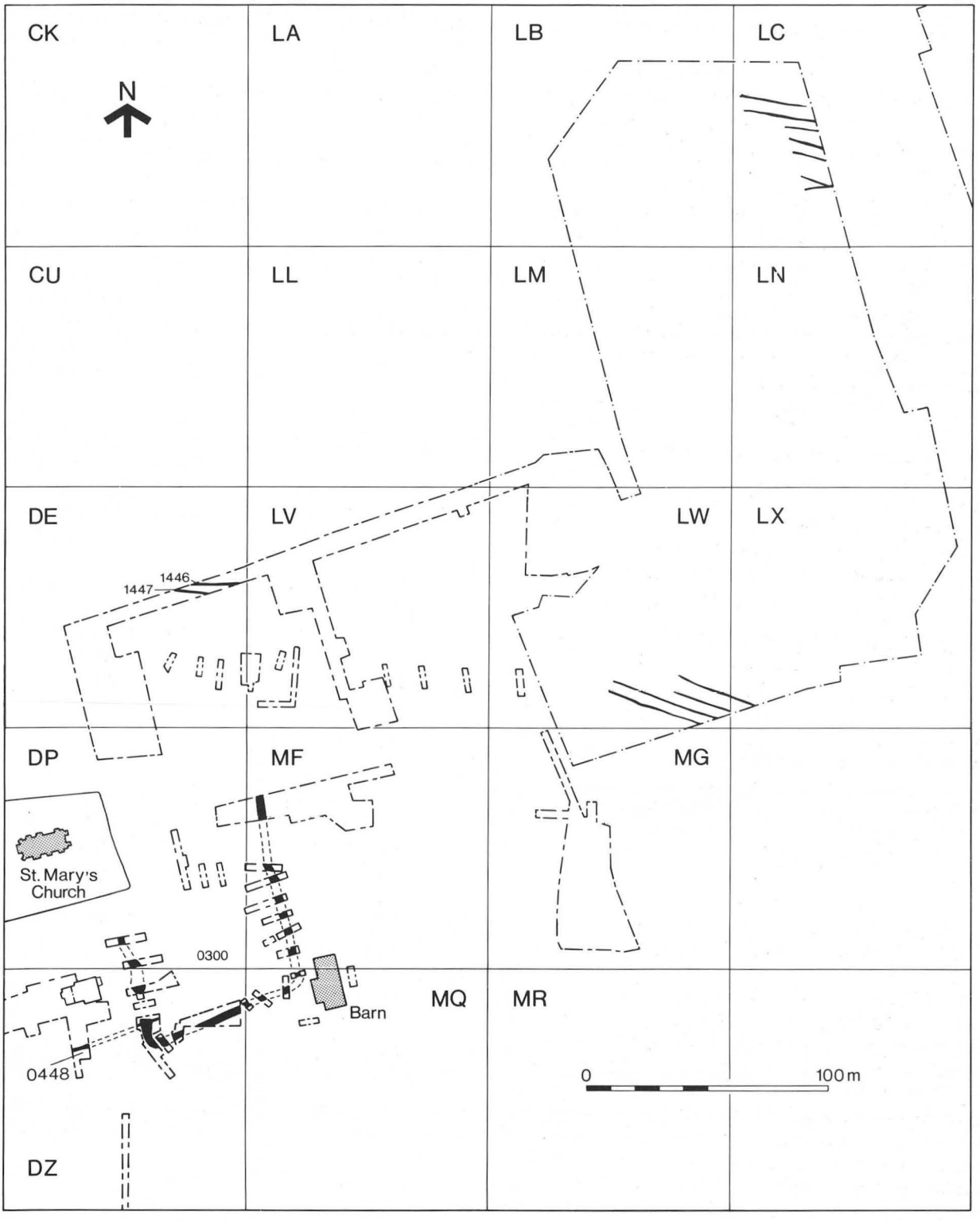

Figure 41 Plans of all major Period V features.

little evidence to suggest it. If this was so it might explain why North Shoebury Hall came to be known as West Hall. However this can only be a tentative suggestion as the first reference to the hall as West Hall does not occur until 1474 (above p.7).

Much of the dating is dependent on pottery, and the apparent lack of phase V.2 features at the site, may be no more than a reflection of the lack of 14th/15th-century pottery (below p.114). It was probably during phase V.2 that the manor was sub-divided, with the manor of Kents (Moat House) being established (above p.8). The manor of Kents prospered and was provided with a moat. A fine gatehouse (now demolished) was built in the 16th century (RCHM, IV 1923, Southend Museum Records).

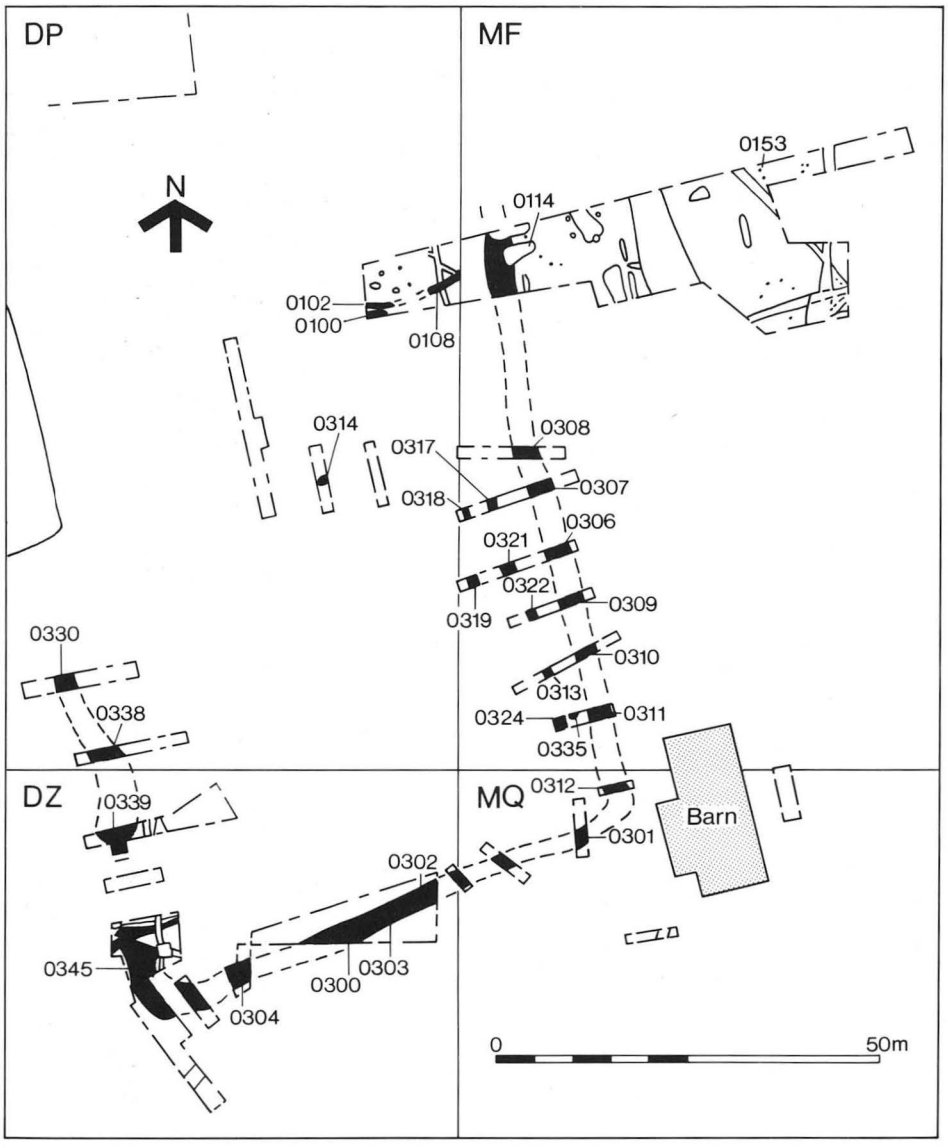

Figure 42 Period V plan of enclosure ditch and associated features.

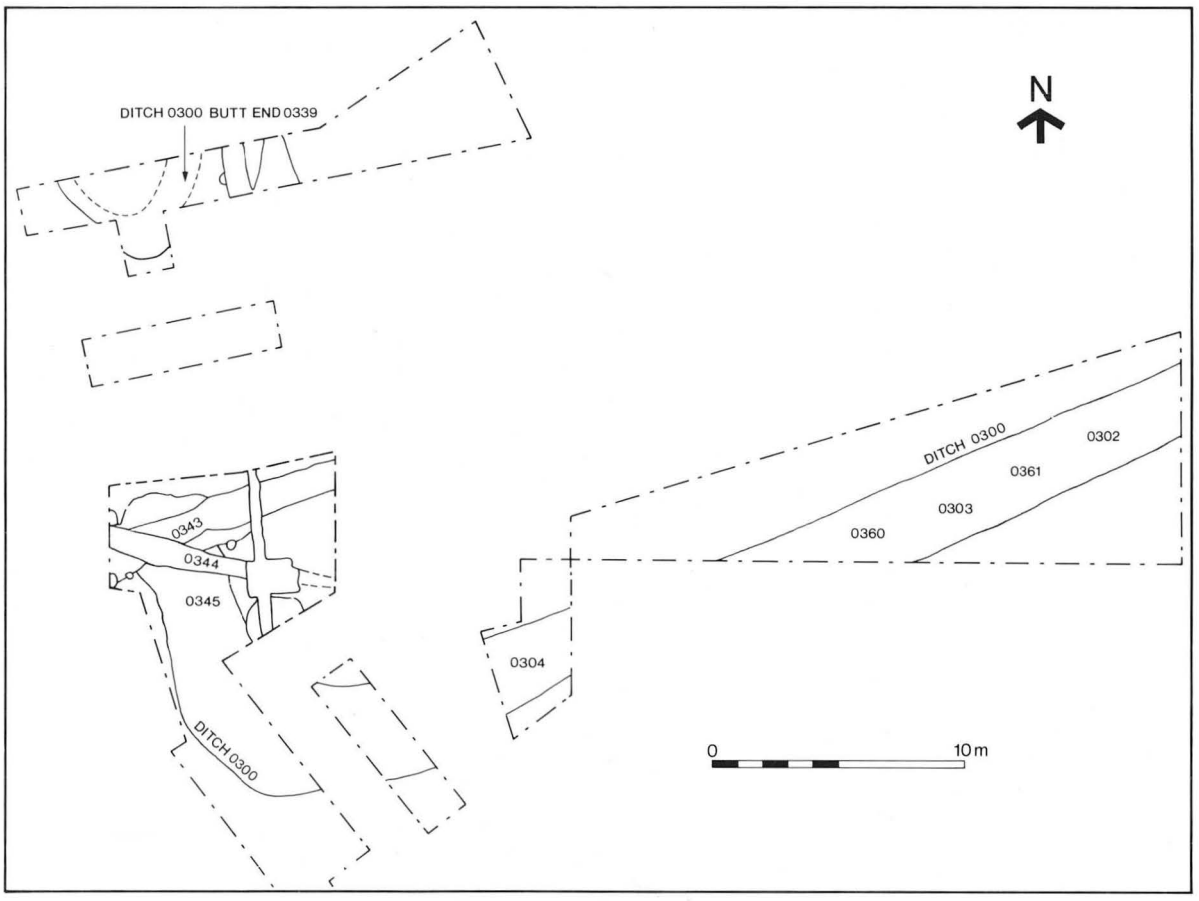

Figure 43 Plan of entrance in enclosure ditch *0300*.

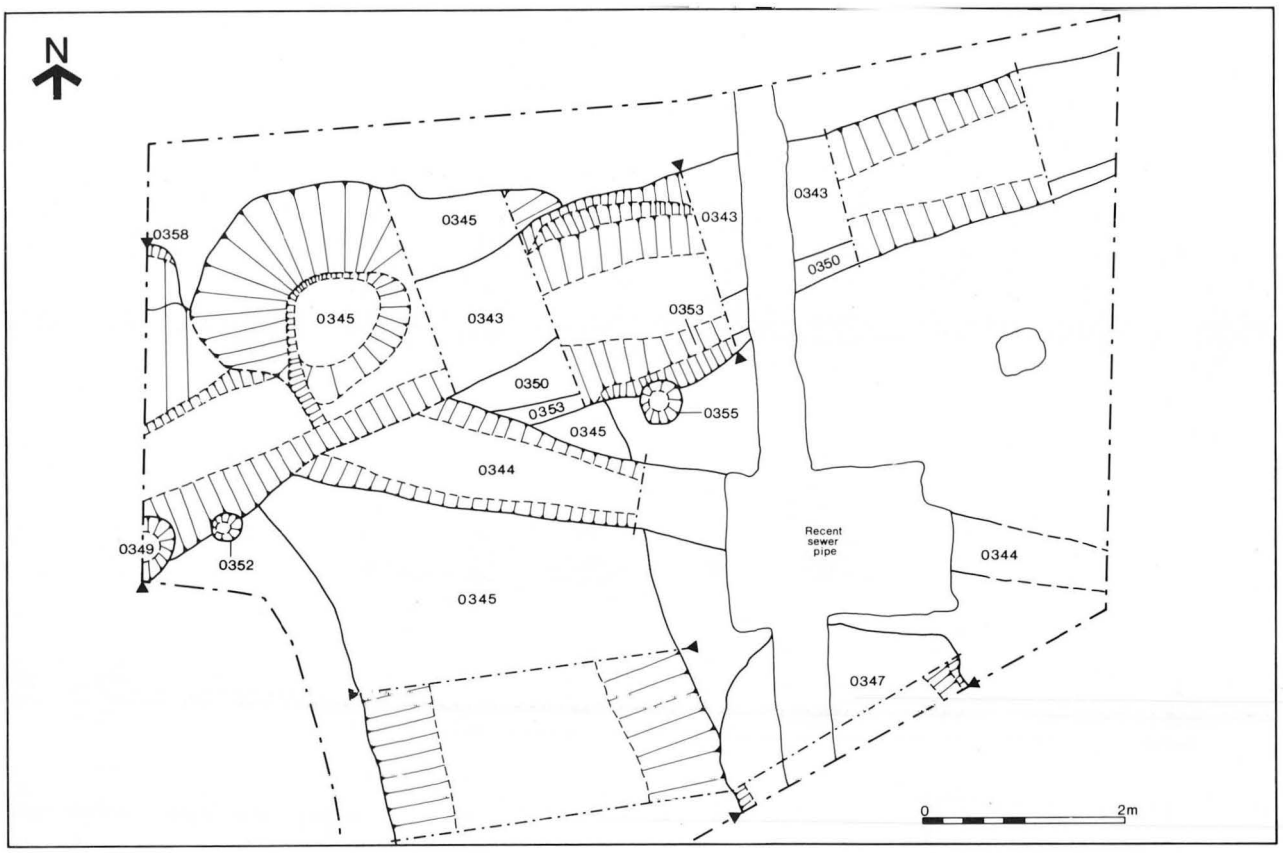

Figure 44 Plan of enclosure ditch *0300*, butt end south of entrance.

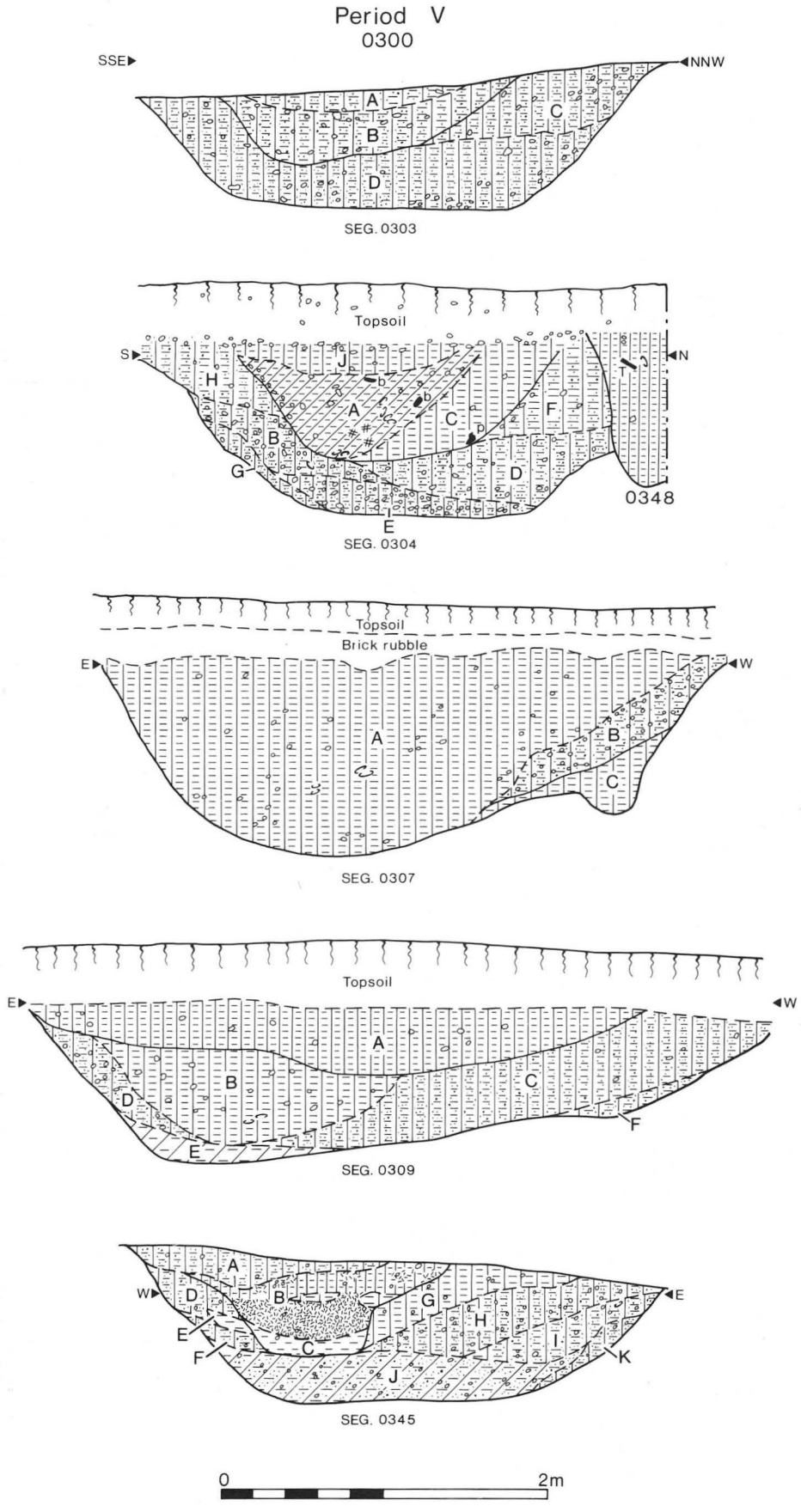

Figure 45 Sections of enclosure ditch *0300*.

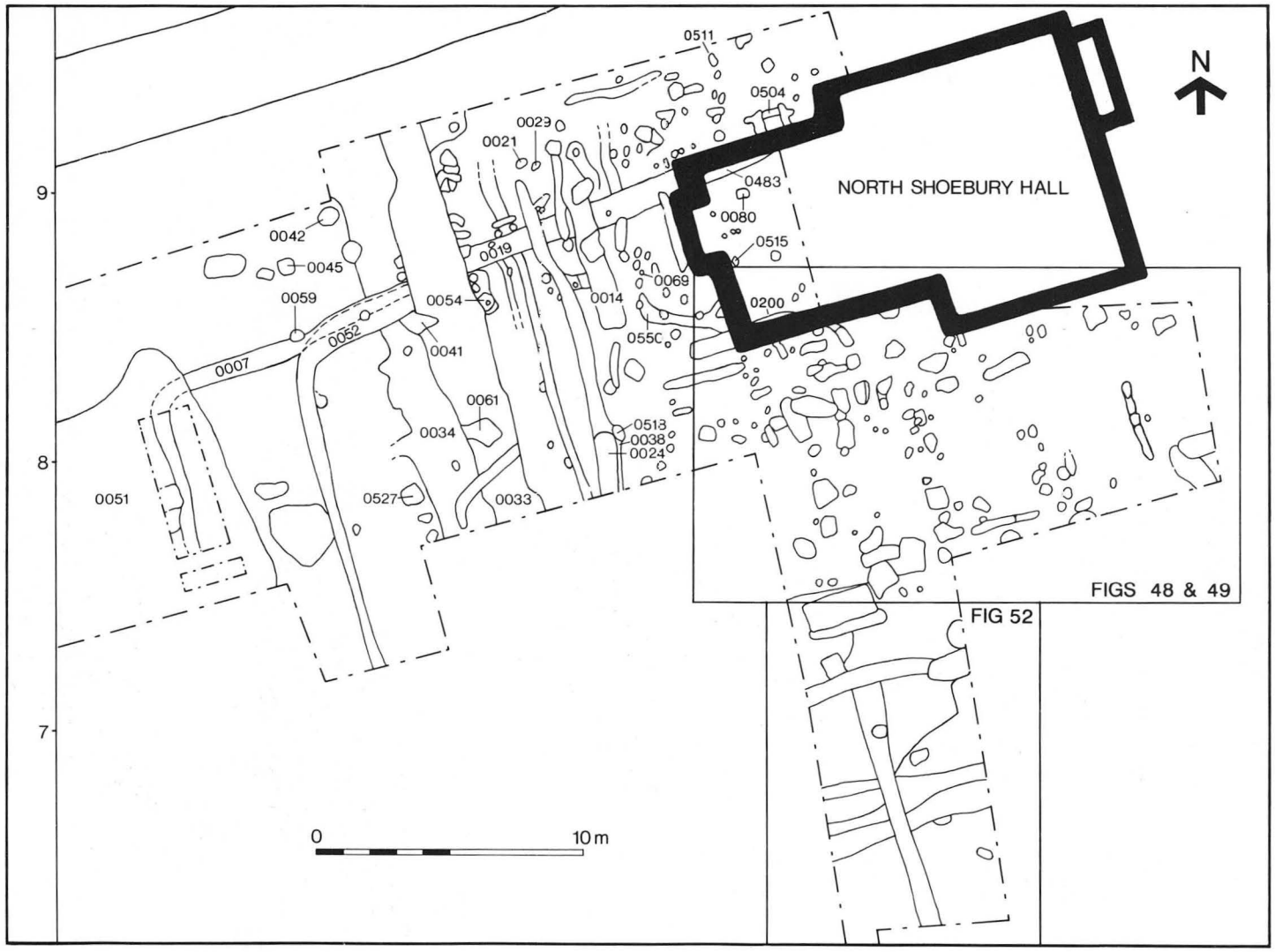

Figure 46 Plan of all features in area around Hall. Features mentioned in the text are numbered.

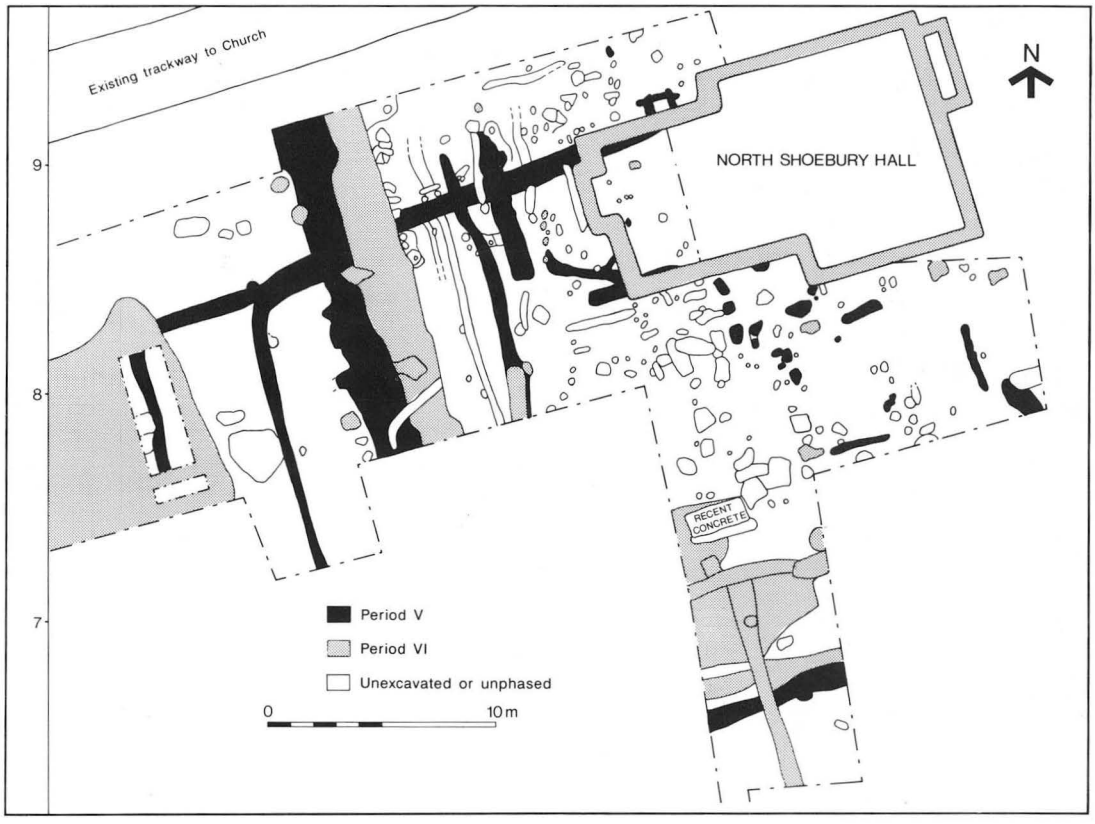

Figure 47 Phase plan of features around the Hall foundations.

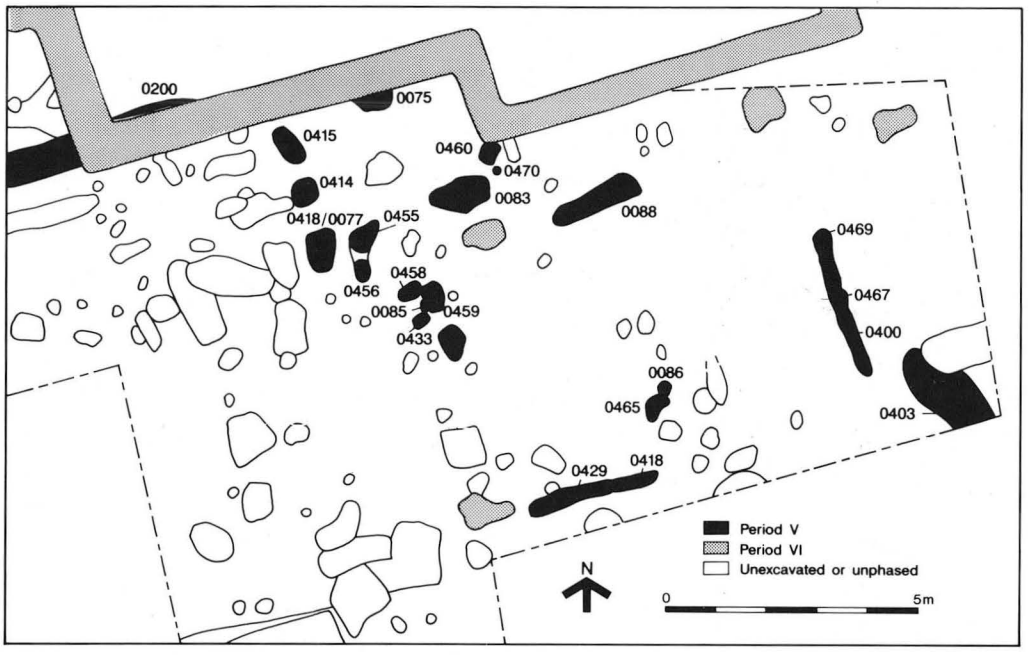

Figure 48 Phase plan of area immediately south of Hall, for location see Fig. 46.

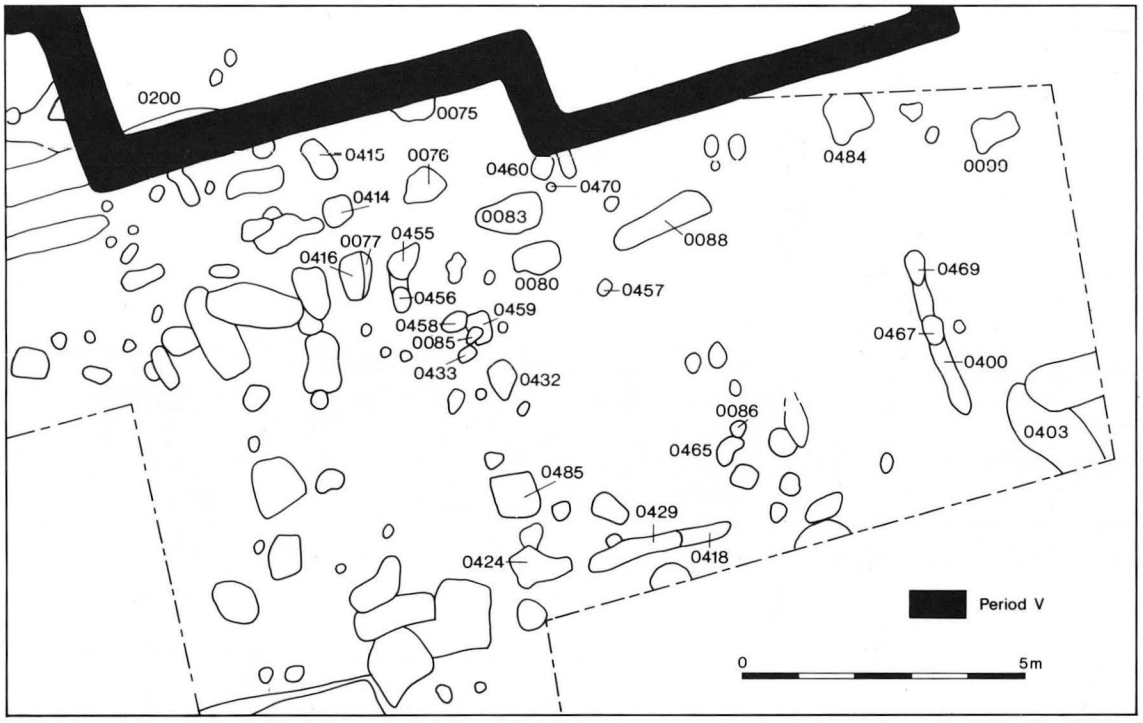

Figure 49 Plan of area immediately south of Hall excavated features numbered, for location see Fig. 46.

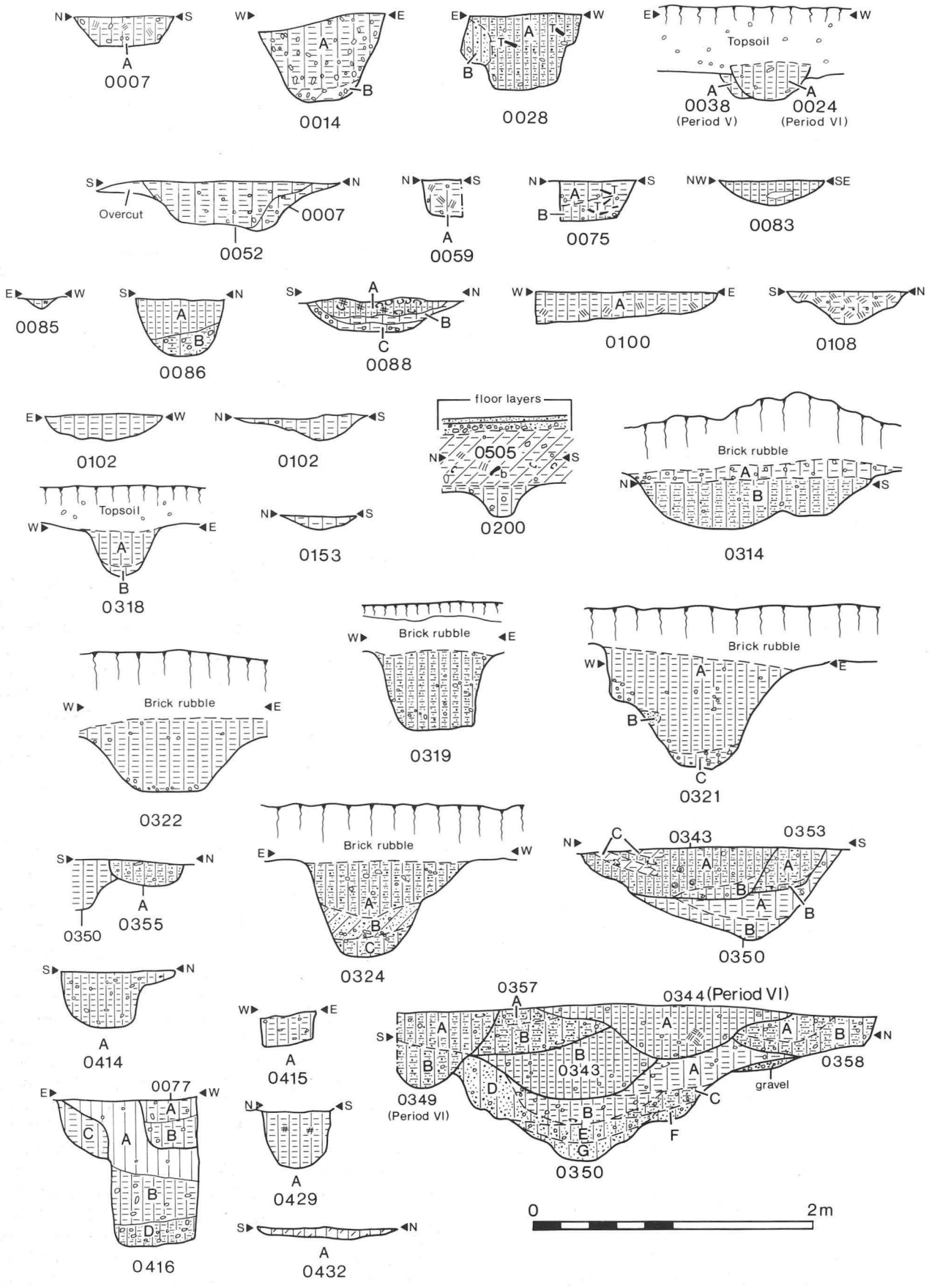

Figure 50 Period V sections.

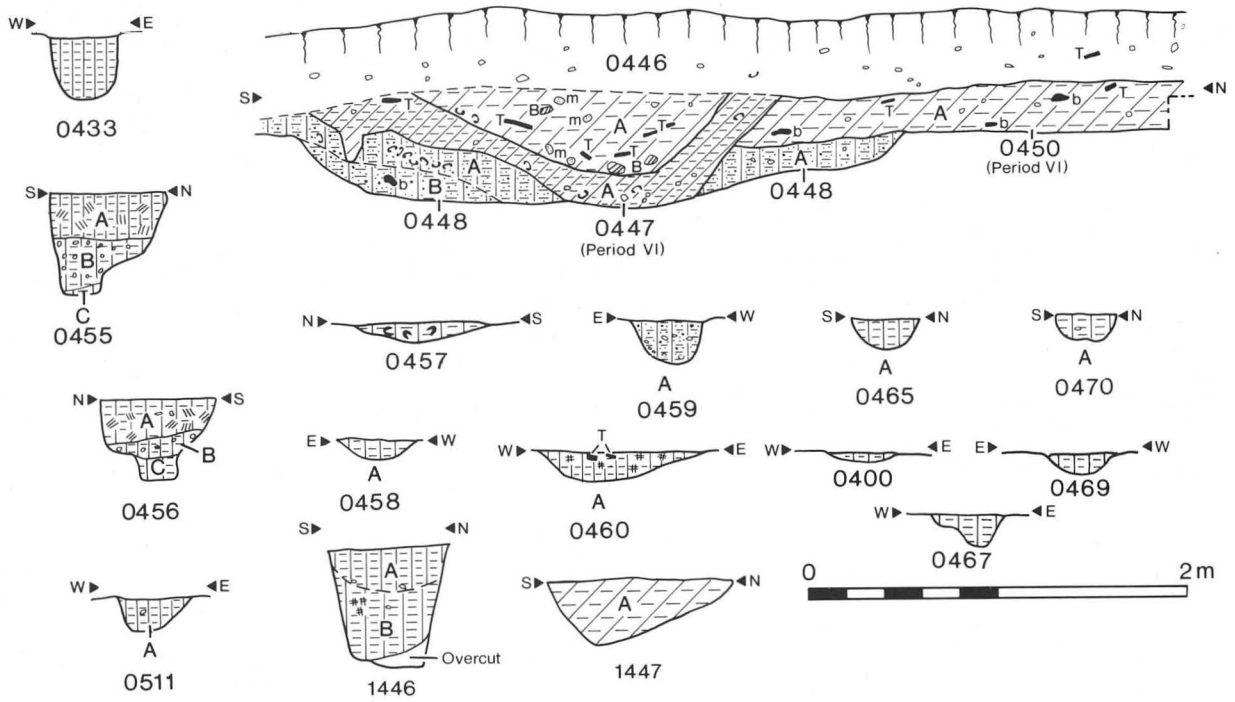

Figure 51 Period V sections.

Period VI *c.*AD 1500–present

Even more than in the previous period the archaeological evidence for period VI is concentrated around the site of North Shoebury Hall (Fig. 47). The hall itself, the brick foundations and lower walls of which were revealed in the excavation, was built in the 16th century (RCHM IV 1923) and stood on the site until burnt down in 1968. Within the hall three layers were excavated, these consisted of a compact yellow brown clay loam (*0010* fiche) with the position of the floor joists clearly visible, above sandy loam (*0011, 0505* Fig. 50 and fiche) and gravel spreads (*0012* fiche) apparently deposited as levelling layers for the floor. These layers contained a few 16th-century sherds as well as some residual medieval material. The hall foundation incorporated large pieces of worked stone (Plate XII). Whilst the stone may have been brought from some distance, an obvious source would be the demolition of the of the south aisle of North Shoebury church (RCHM IV 1923).

Ditch *0024* (Figs 46, 50) contained 16th-century material and may represent the western boundary of a garden/enclosure around the hall, cut along the line of an earlier medieval feature (Fig. 50). Immediately west of the hall foundations a row of five posts, one of which cut Early Medieval feature *0550* (Fig. 46) may belong to this period. The only excavated example *0069* (Figs 46, 50 and fiche) produced 16th-century pottery. These features may represent scaffolding related to the hall construction or some kind of trellis, or other garden feature. There were two areas of dumping, incorporating quantities of domestic refuse dating from the 16th century. An extensive layer (*0051* Figs 46, 47, 53) had been dumped to the west of the hall levelling up the ground, which here slopes away into a shallow valley running south from west of the church. A similar layer (*0074/0450* Figs 47, 52) had been dumped south of the hall, again levelling up the ground where it sloped away south and west into the shallow valley. Layer *0074/0450* (Figs 51, 52 and fiche) extended across the north fill of Early Medieval ditch *0448* (Fig. 51) but did not extend south of it. This may indicate that whilst the ditch was no longer visible, the boundary may still have been in existence probably as a hedgerow. Layer *0074/0450* may have been laid down to level up the ground for a garden associated with the hall, since it would have been at the edge of a sunny south facing area, sheltered to the north by the hall. Ditch *0447* (Figs 51, 52), which was probably filled in the early 17th century (below p.112), was cut along the line of *0448* and supports the notion that the boundary had survived into the post-medieval period. The western part of *0447* was itself recut along the same line, by a shallower ditch of similar profile (*0446* Figs 51, 52 and fiche).

It seems likely that the southern boundary of the garden was subsequently moved nearer to the hall. A steep sided flat based trench *0477* (Figs 52, 53 and fiche) containing 18th-century ceramics in a dark humic loam fill, may be the line of a hedge marking the new southern edge of the garden. A substantial rectangular post-hole (*0437* Figs 52, 53 and fiche), was dug immediately adjacent to the northern edge of *0477*. The east end of *0477*, had been removed by a substantial pit *0438* (Fig 52, 53 and fiche), which yielded 18th-century ceramics, and had cut a large post-hole *0440* (Figs 52, 53 and fiche). About five metres north of *0477*, another large post-hole, *0424*, also yielded 18th-century ceramics, and may have formed a pair with an undated post-hole of similar form *0485* (Fig. 49 and fiche) about 1m further north. A shallow narrow ditch *0444* (Figs 52, 57 and fiche) running south from *0477* and again containing 18th-century finds cut *0447, 0448, 0450* and the butt end of *0446* (Fig. 52). This indicates that the long lived boundary represented by these features was no longer in use. Ditch *0444* may have been a drainage feature emptying into the north ditch of the field known as the Old Mead on the 1703

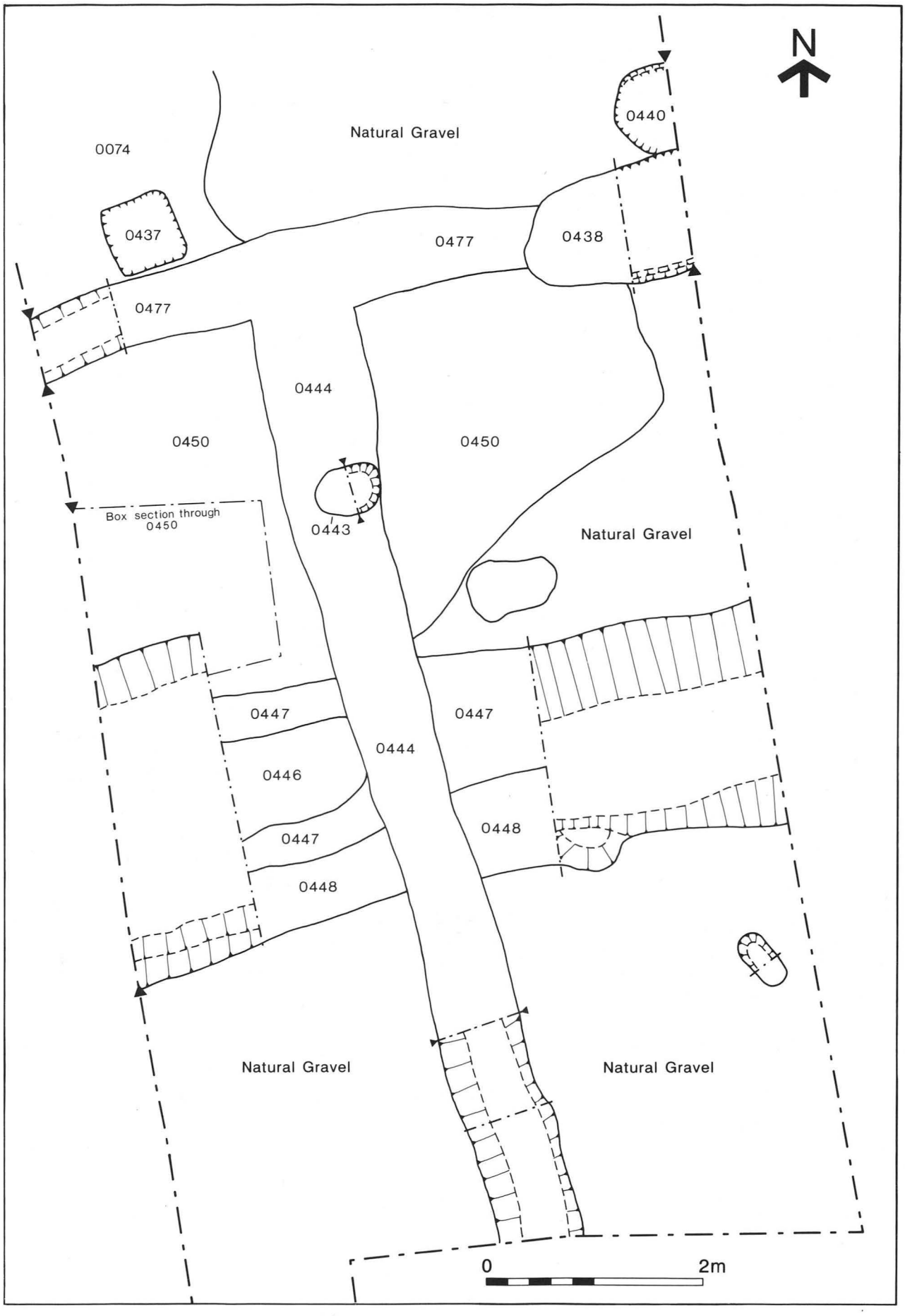

Figure 52 Plan of features south of Hall.

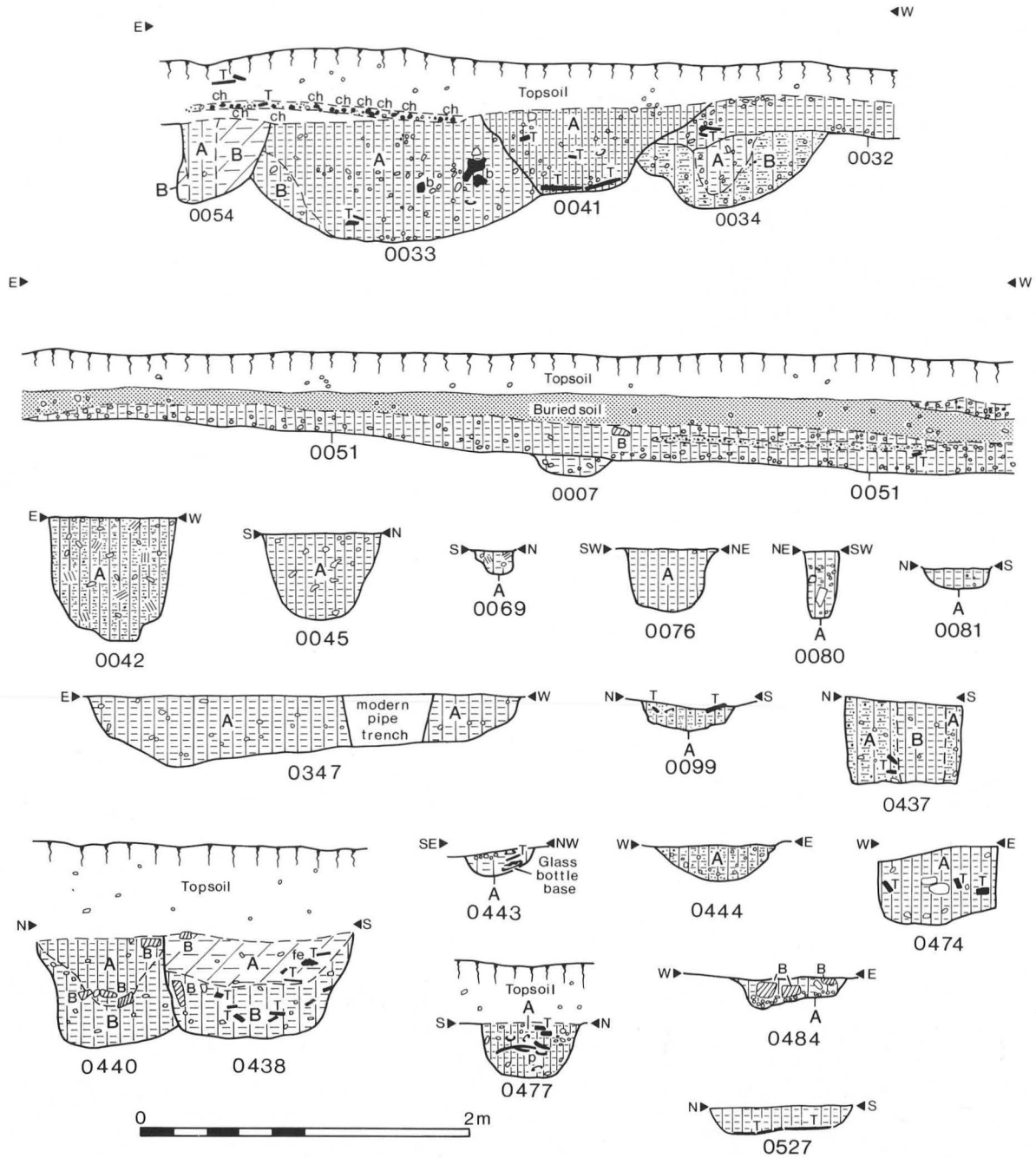

Figure 53 Period VI sections.

Plate XII Period VI: Footings of North Shoebury Hall with carved stone, probably derived from the demolition of the south aisle of the church.

map (Fig. 102, Plate XIII). Prior to the development of the early 1980s. The north, east and south ditches of this field formed part of a ditched stream carrying water south along the shallow valley towards Shoebury.

To the west the reorganisation of the garden enclosure around the hall is represented by the substantial ditch *0033* (Figs 46, 47, 53) cut parallel to, and west of *0024*.

Three sub-rectangular features *0081, 0076* and *0099* (Figs 47, 49, 53 and fiche), excavated south of the hall, yielded 15th–17th century, 18th, and 19th/20th ceramics respectively. All had very dark silt loam fills and may represent shrub holes or other garden features. Another roughly rectangular pit *0484* (Figs 47, 49, 53 and fiche) was almost entirely filled with brick fragments and may have been dug for rubbish disposal.

Nineteenth-century features include two steep sided flat based pits, *0527* and *0041*, situated west of *0033* (Figs 46, 53 and fiche). Both these features had complete peg tiles laid across their bases, the very dark silt loam fills (fiche) seem appropriate to garden beds. The tile would have restricted downward root growth. These pits may be the sites of fruit trees, since prior to the introduction of dwarfing rootstock it was common practice to restrict root growth to prevent the development of a large tap root (Davies 1987, 24–26).

Radiocarbon dates

Two radiocarbon dates were obtained on material from cremation pit *0600*, and hearth *1412*.

Cremation Pit 0600

Charcoal from this feature yielded a date of 3280 ± 90bp (HAR-4634), Cal BC 1682–1450 at one standard deviation, Cal BC 1855–1400 at two standard deviations.

Hearth 1412

Carbonised peas from this feature yielded a date of 2130 ± 80bp (HAR-5104), Cal BC 358–91, at one standard deviation, Cal BC 390-Cal AD 20 at two standard deviations.

The calibration of these dates was carried out by the Ancient Monuments Laboratory using data published by Pearson and Stuiver (1986).

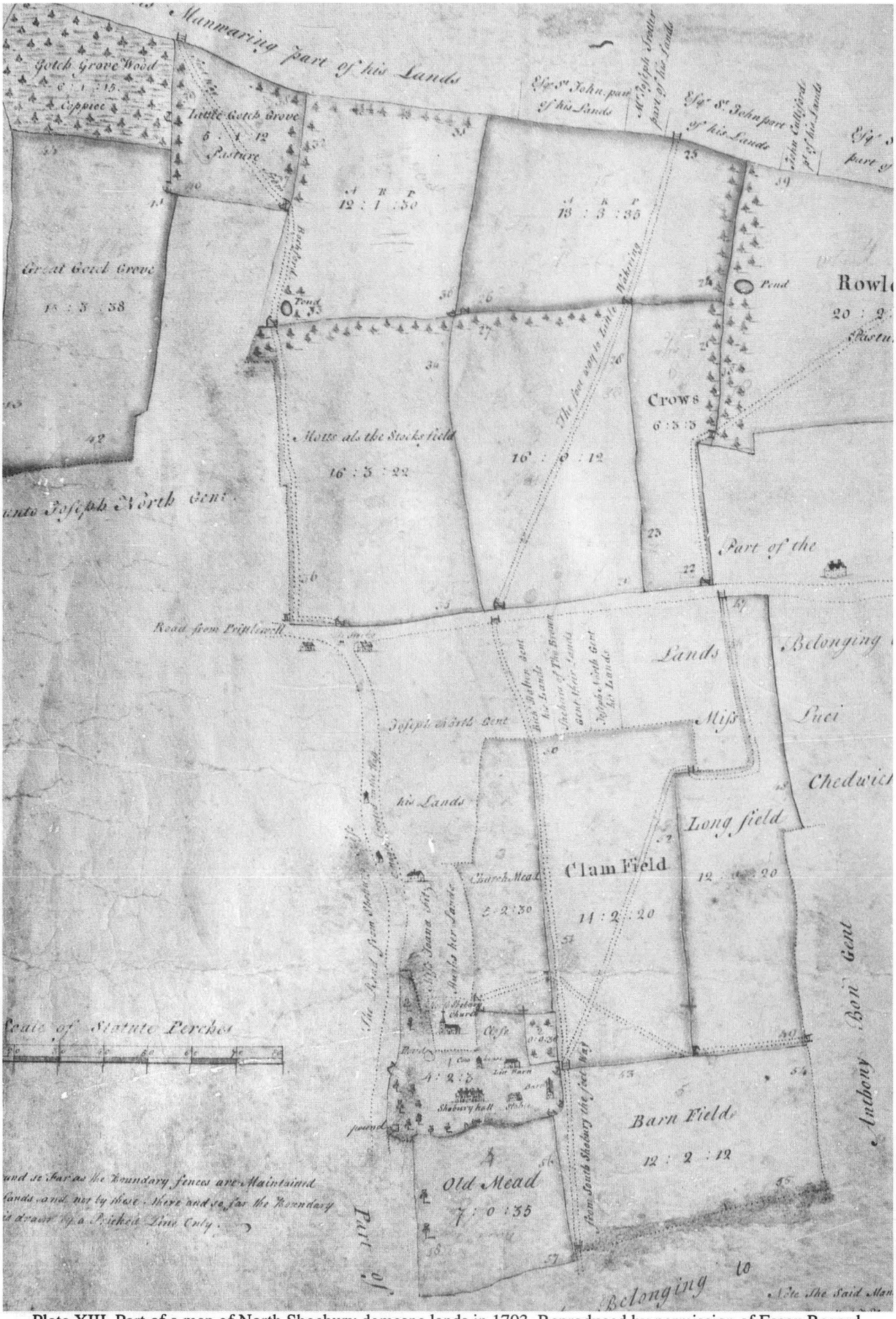

Plate XIII Part of a map of North Shoebury demesne lands in 1703. Reproduced by permission of Essex Record Office.

Part 3. The Finds

I. Coinage
by R.M. Reece

The few coins found have been examined by R.M. Reece and are listed below. None are illustrated. The following abbreviated references have been used:

RIC= *Roman Imperial Coinage*, Mattingly, Syddenham (1923)

HK = *Late Roman Bronze Coinage*, Carson, Hill and Kent (1960), part I

CK = HK, part II

1. British Potin, 1st century BC. L. Sellwood of the Institute of Archaeology, Oxford, kindly reports on this partly disintegrated coin: 'The highly abstract head on the obverse appears to be right facing and seems to comprise, in essence, two concentric circles, with no trace of a raised pellet at the centre of the inner one. If both these observations are correct, then the coin belongs broadly to Allen class I of the British series and can be located more particularly between classes F5 and H4. It is during the currency of the class F coins that the curious phenomenon of papyrus graining first appears. Potin coins were cast in moulds, and at a certain stage papyrus was impressed into the clay before the design was inscribed. Traces of such graining appear on the obverse of this coin, where they run diagonally beneath the head. British Potin coins cannot be closely dated. It seems probable that the earliest coins within class I should have a date early in the 1st century BC. The class II coins belong to the early part of the 1st century AD. It is therefore likely that the date for a coin such as this is somewhere around 50 BC.' *III; 1395A (pit); 1245S*
2. Claudius II, 268–270. As RIC 82. *III.2; 128A (ditch 1015); 407S*
3. Barbarous radiate, 270–290. Rev. standing figure, as ?Fides. *III.2; 647A (ditch 1417); 1257S*
4. Licinius I, 310–317. RIC 7 London 3. *Machining at LW 2692; 926S*
5. URBS ROMA, 330–335. HK 85. *III.2; 1324B (ditch 1177); 617S*
6. URBS ROMA, 330–345. Copy as HK 51. *III.2; 1230 (ditch 1117); 675S*
7. House of Constantine, 345–350. As HK 137 *?Machining at LW 4090; 392S*
8. House of Constantine, 350–360. As CK 256, regular but cut down. *Surface at LM 2808; 641S*
9. Valentinian I, 367–375, CK 1409. *III.2; 1596C (ditch 1402); 1207S*

It may be significant that all of the Roman coins were either minted during Phase III.2 or found in the fills of features of Phase III.2, when there is tentative evidence from the field system and the appearance of building debris that the traditional pattern of farming had been reorganised.

II. Metal objects
by H. Major
(Fig. 54)

Copper alloy

Apart from the pin fragment (Fig. 54.4) no bronze artefacts were found in any Period I contexts during the 1981 excavation, but among the material from the earlier excavations was the socketed axe (Fig. 54.1) from *M351* and one piece of ?copper ingot from feature *M83*. Only recognisable pieces from the small quantity of copper alloy scraps found during machining or within Period III or later contexts are listed below.

n.ill. Fragment from centre of plano-convex copper ingot, showing clear columnar growth and some flow pattern on surface, uneven base with some gas cavities. Wt.279g I.2 (ditch M83).

1. **Socketed Axe** (N. Brown) Straight near parallel sides curving suddenly to a widely expanded cutting edge. Collar, with single moulding below. Side loop begins level with moulding. There is a prominent casting flash and the stumps of three runners from the casting jet survive on the mouth. No internal ribs. There is some corrosion damage to one face. Cutting edge undamaged. For associated pottery and fired clay objects see Figs 56 & 77. The axe is of the South Eastern type and might belong to Schmidt and Burgess (1981, 213) Shoebury Variant.I.2 (pit *M351*).
2. Small **finger ring** with plain bezel: Robinson type 7 (Robinson 1978, Z49). *III.1; 1241A (ditch 1193); 520S.*
3. **Bracelet** fragment with terminals missing: A cut-out strip bracelet with variable rectangular section and wavy edge. Lankhills type D2g (Clarke 1979, 307). Probably later 4th century. *III.2; surface 1227 (ditch); 895S.*
4. **Pin** 1617 B (pit).

Iron

n.ill. Eleven small **fragments**: In their unconserved state they appear to be all strip fragments, c. 8mm wide. Some are straight, others curved. The longest straight fragment is 26mm long. Mineralised wood is visible on several pieces. This may be a staple (or staples), formerly attached to some wooden object. *II.2; 1232A (cremation pit); 643A,*

5. **Hook**: Square-sectioned shaft, probably perforated at the end. Length 85mm. *III.2; 1647A (ditch 1417); 1255S.*
6. **Ladle** with most of bowl missing. Handle shouldered at the bowl end, and terminating in a small knob. It is rectangular in section, with the longer axis of the knob end at right angles to the long axis of the handle end. Knob end of handle constricted in the middle. Shoulder paralleled with a ladle from Winterton (Stead 1976, 222). Handle length c. 215mm. Bowl depth 22mm. *III.2; surface cleaning 1227 (ditch); 765S.*
7. **Spearhead**. Angular blade, lozengiform in cross-section. Short broad shank; long uncleft socket, circular in cross-section. End of socket and tip of blade broken off. In fair condition. Length (incomplete) 260mm; max. width of blade 58mm; max. diam. of socket 36mm. Unstratified.

Three scraps of an iron bar were found in context *1412A*; *1132S* of Period I. The bar is of sub-rectangular section (*c.* 20 by 20mm), the three pieces having a combined length of 100mm. A few other eroded fragments of iron were found in contexts of later date, but none could be confidently identified.

Lead

n.ill. Lump of lead with impression of a pot base on one side. The other side is irregular. Possibly a plug from a pot, or a fragment of molten waste which solidified onto a pot sherd. *III; 1596B (layer); 1212S.*

III. Metalworking

Numerous fragments thought to be slag were collected from features of all periods but, on examination by J. Evans, were found not to be slag but semi-vitrified brick-earth caused by intense heat, such as from burning thatch or straw. A small (35mm diam.), crudely made globular vessel of coarse black ware came from an undated post-hole (*0164*) in Grid MF 4364, associated with four lumps of daub and some charcoal. This may have been a crucible. Barford (p.125) lists a dubious fragment of a metal mould in hard, fired, sandy brickearth from *M205*.

The presence of a fragment of Late Bronze Age copper ingot and an axe in an as cast condition may indicate on site metalworking.

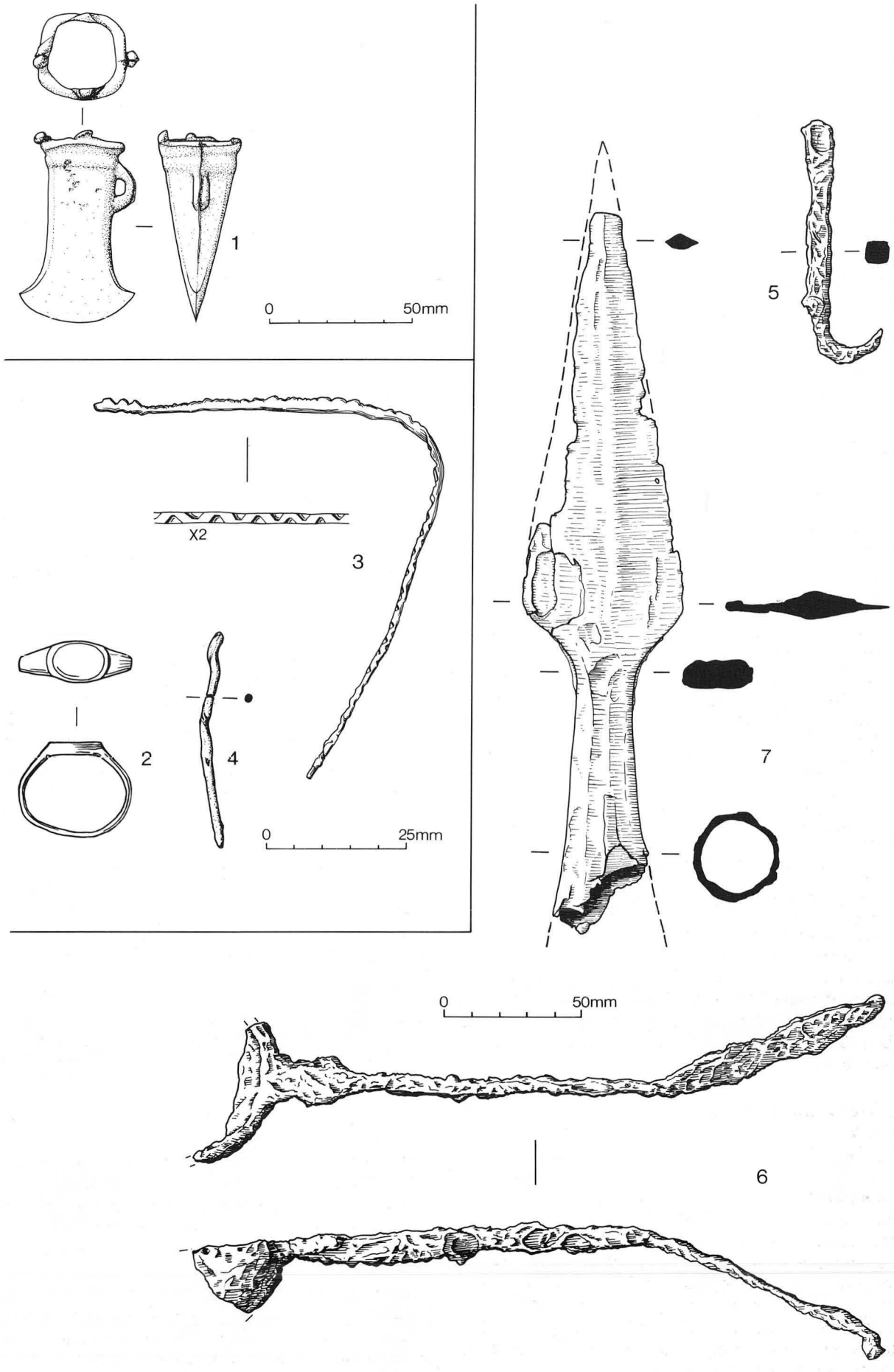

Figure 54 Metal objects.

IV. Flint

by J. Wymer
Written in 1982
(Figs 55 and 56)

Isolated examples or very small numbers of flint flakes were found in numerous features on all parts of the site, with no apparent restriction to any particular period of occupation. The flint artefacts from Period I contexts are described on Table 2.

No single concentration was located, either during surface cleaning or excavation, nor was a single finished tool form that might be assigned to a Neolithic or earlier industry found in 1981. The same is mainly true of the pre-1981 discoveries with the exception of one group of flints found in feature *M2.82*, with numerous sherds of Neolithic plain bowls (p.74). This flintwork is in fresh, unpatinated condition and is clearly the product of a methodical technology entirely consistent with known Neolithic industries. The material available for study comprises fifty-seven flakes and fourteen blades or blade segments, the latter showing soft hammer technique and occasional faceted butts. The raw material is generally of good quality and includes 'bullhead' flint. Finished forms consist of two neatly made rounded scrapers and a large (85 by 40mm) thin flake with bifacial but not invasive retouch along one curved edge. One patinated flake has some irregular unpatinated retouch, and there is a thick, naturally shattered, heavy bar-like piece which has been used as a hammerstone at one end. Of particular interest is a pointed blade-like flake of high quality pale flint that retains one facet with polish remaining from the presumably broken axe from which it was struck. The whole group is in marked contrast to the poorly controlled or haphazard flaking found on the flintwork described below from Middle Bronze Age features. Apart from this group, the flint records kept by Măcleod (Archive) list small numbers of flakes and burnt flints from numerous (mainly Early Iron Age) features, and only one finished tool, a sickle or knife with shallow flaking on a long cortical flake that may be Neolithic. In the absence of anything within the area examined in 1981 that could be dated earlier than the Middle Bronze Age, it would seem unlikely that any of the struck flint that was found, with rare exceptions, was earlier than this phase. The main interest of this material is therefore whether it indicates the occasional use of flint during the Middle Bronze Age, and whether it continued to be used during later phases. The conclusion is that it was used during the Middle Bronze Age, but the paucity of finds makes it impossible to know if people resorted to struck flint in later phases. There is certainly no positive evidence to show that they did, for all the finds could be residual.

The flints in question exhibit the same characteristics. With rare exceptions, as noted above, they have been struck haphazardly from small gravel flints, such as would have been found whenever the digging of ditches, pits or post-holes penetrated the brickearth and exposed the underlying Pleistocene coarse, flinty sediments. The majority have cortex remaining on their dorsal (*i.e.* non-bulbar) surface or striking platform. The bulb of percussion is generally pronounced, showing the use of a hard hammerstone, but there are no large cones resulting from very heavy use. Striking platforms are variable; either flat, faceted irregularly, or untrimmed cortex. Very few flakes exceed 50mm in length or width. Almost all are fresh and unpatinated. Some have traces of irregular secondary working, or macro-wear. The few cores found are pebbles which have been hit clumsily until a relatively flat striking platform has been produced, from which a few flakes have then been removed (*e.g.* Fig. 55.1). It would be misleading to use the term 'industry' for something that was evidently a non-methodical, little-used expedient to obtain sharp or otherwise useful working edges. There is nothing remotely suggestive of any lingering tradition of flint craftsmanship of earlier periods.

In order to determine the associations of the occasional flint flakes, cores and other pieces, their distribution in the excavated features of parts of Grids LM and LW has been plotted (Fig. 56). This area was chosen as it contained a few pits, one (*1167*) quite large, filled with soil and settlement debris including Middle Bronze Age sherds, also gullies and post-holes, and a segment of ditch, all apparently of the same age (Phase I.1). Superimposed

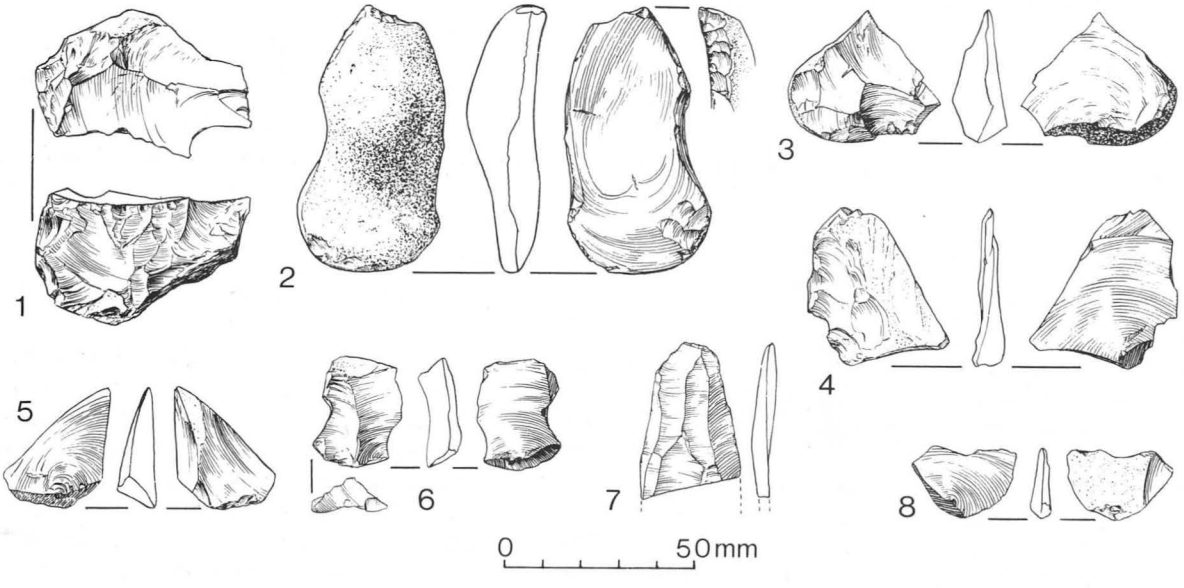

Figure 55 Flint artefacts from pit *1167*.

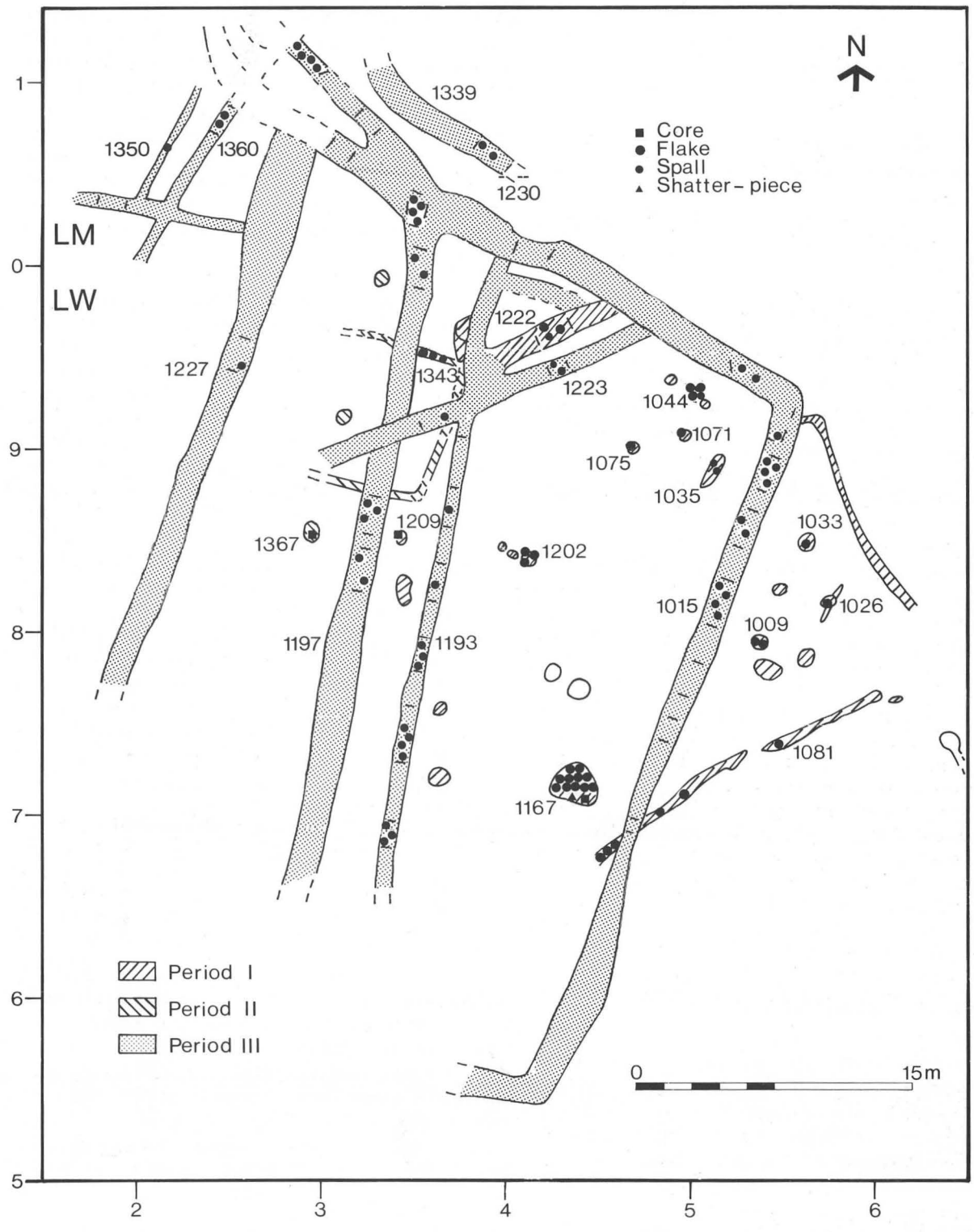

Figure 56 Distribution of flint artefacts in features excavated in 1981 in grid square LW.

upon this was a complex of Roman ditches including part of a rectilinear enclosure. A small Late Iron Age cemetery (p. 34) was also present, and a few pits of the earlier Iron Age. In spite of the sparseness of the flint finds, the greatest number occurred in the large pit *1167*. As no features of any earlier date are known here and there are more flints in this pit than in comparable volumes of material filling other features nearby, it is fairly conclusive that they are contemporary with Phase I.1, and those in the other features are residual from this phase.

Flints of this period are rarely found so securely dated, nor described in any detail in excavation reports, so it is thought useful to describe those from pit *1167*. There are thirteen artefacts comprising eleven flakes, one core and a shatter piece, as described on Table 2.

The broken flint blade (Fig. 55.7), although found in direct association with the remainder of the flints in this pit, is almost certainly a Mesolithic product. Apart from one small, broken blade from Middle Iron Age ditch *1552* in Grid DE, nothing similar was found. Rather than being

Site find number	Description	Length mm	Width mm	Bulb	Platform	Patination	Cortex on dorsal surface (of flakes)
752B	Crude core made from small gravel flint (Fig. 47.1)	30	55	-	Single	Nine	Remaining opposite to struck face
750B	Flake	15	25	Pronounced	Flat	None	<½
780B	Flake (Fig. 47.8)	18	25	Pronounced	Flat	None	>½
726B	Flake	10	30	Pronounced	Flat	None	Nil
726B	Flake	25	20	Pronounced	Negligible	None	Nil
726B	Flake (Fig. 47.6)	26	20	Pronounced	Faceted	None	<½
726B	Flake (Fig. 47.5)	20	25	Diffused	Cortex	None	<½
730B	Flake (Fig. 47.3)	30	40	Pronounced	Cortex	None	<½
730B	Flake (Fig. 47.4)	40	40	Pronounced	Flat	None	<½
730B	Flake	25	18	Pronounced	Faceted	None	<½
589B	Shatter-piece	40	-	-	-	None	<½
589B	Natural, cortical flake, crudely flaked at pointed end and on curved opposite end. Faint trace of polish at each end (Fig. 55.2)	70	30	-	-	None	Entire
589B	Distal end of broken blade from a prismatic core. Treble ridged. (Fig. 55.7)	40 (?80 if complete)	25	-	-	Faint	Nil

Table 2 Flint artefacts from pit *1167* — Period I.1

a residual piece, it may have been found by someone during Period I and brought back to the site. It is made of high quality, grey, translucent flint, and faintly patinated, which sets it apart from the other artefacts, as does its typology.

The use of crudely struck flakes and an occasional scraper during the Middle to Late Bronze Age has been attested from a few other sites in south-east England. At Aldermaston Wharf, Berkshire, a core, end scraper and seventeen flakes came from six of a multitude of small pits, while at Burghfield, 7km distant, there were three scrapers and seventy five flakes (Bradley *et al.* 1980). They are described as made of local flint gravel, mainly cortical and rather unsystematically worked; a description which fits those from North Shoebury. The present state of knowledge concerning the working of flint in the Middle and Late Bronze Age is summarised and discussed by Fasham and Ross (1978) and Pryor (1980, 124–5). The sparse material from North Shoebury does not allow meaningful comparisons to be made with such prolific sites at Micheldever Wood, Hampshire (Fasham and Ross 1978), or at the Newark Road Site, Fengate, Cambridgeshire (Pryor 1980), nor are there any comparable borers or scrapers, but there is nothing at variance with the general conclusion that, during the Bronze Age, there is a trend towards broad, squat flakes; cortical flakes increase; there is a decrease in the standard of workmanship; and that much of the knapping can be fairly described as 'haphazard.'

V. Quernstones

by D.G. Buckley and H. Major

Introduction

The collection includes saddle querns, rotary querns and miscellaneous pieces of stone which may or may not have been querns. Prehistoric, Roman and medieval querns are represented. A full description of all fragments is available in the Archive.

Discussion

The typology, distribution and economic and social implications of British querns have attracted little detailed study since the pioneer articles of Curwen (1937 and 1941). This arises in part from a lack of adequate information. Although museums contain large numbers of querns, the majority are unprovenanced; excavated examples rarely come from well stratified contexts, while poor recording and publication hampers interpretation. The querns from North Shoebury offered little opportunity for testing the validity of accepted theories about querns but they are a useful addition to the corpus of published information.

Prehistoric contexts

Bronze Age and Early Iron Age features produced quantities of Greensand and purple ferruginous sandstone (?Folkstone Beds) which had certainly, or probably, been utilised as saddle querns.

It has been demonstrated elsewhere (Buckley 1979) that saddle querns show consistency in size. Two types may be distinguished: small oval examples and large heavy ones — both with deliberate surface pecking to the required form. Further, as these forms are standardised it was suggested that the saddle querns were produced elsewhere and traded.

In so much as the North Shoebury saddle querns survive, they appear to fall into the small oval class. However, there was no evidence of pecking, and many are roughly shaped and retain natural unworked surfaces. This detracts from the likelihood of the stones having been brought to North Shoebury as ready-finished trade-goods, but they certainly had to be brought some distance. Neither the Greensand or the purple ferruginous sandstone crops out in Essex, and the likely sources are south of the Thames.

Few saddle querns have been published from Essex excavations and there are relatively few in Essex museum collections. The majority of those now recorded (by the writers) are of Greensand. This accords with the

widespread use of this rock type for saddle querns throughout south-eastern England during the later Bronze Age and Early Iron Age.

Roman contexts
Roman features produced lava, Millstone Grit and Greensand rotary quern fragments. A Puddingstone rotary quern fragment (534B) is from a Roman context but may be Iron Age. The querns from recent excavations in Colchester have been published (Buckley and Major 1983), and the trade in Roman quernstones is described therein.
Lava querns: All of the lava quern fragments from Roman contexts at North Shoebury are too small, decayed and fragmentary to provide data for discussion about size and type. However, they are a further addition to the list of Essex Roman sites which have produced lava querns.
Greensand querns: Two fragments of Greensand rotary quern, from an upper and a lower stone, came from Roman contexts. It is not possible to comment on the form.

Greensand was commonly used for rotary querns throughout southern England in the Late Iron Age and continued to be used during the Roman period despite the growth in trade of other stone types, particularly lava and Millstone Grit. However, only a few examples have been recorded from Essex. The majority of these were found in the south of the county reflecting proximity to a source south of the Thames.
Puddingstone quern: Puddingstone querns are of fairly standard form and this fragment produces no evidence of variation.

A provisional gazetteer of puddingstone querns has been published (Rudge 1965) showing a distribution principally confined to Norfolk, Suffolk and Essex. The small number of Puddingstone querns recorded from south-east Essex reflects its position at the end of this trade area.
Millstone Grit: Thirteen contexts, the majority Roman, produced Millstone Grit fragments. Most were clearly derived from rotary querns, although too fragmentary to permit comment on form.

Millstone Grit querns have been found on Roman sites throughout Britain, including a number of Essex sites. A detailed study of trade in Millstone Grit querns had not been carried out at the time of writing. The number of querns reaching North Shoebury is notable.

Medieval contexts
A number of medieval contexts produced fragments of lava rotary quern. Although the trade in lava querns apparently ceased with the earlier Saxon period, it was well established again by the Middle to Late Saxon period (Parkhouse 1977) and continued throughout the Middle Ages. It is common to find pieces of Roman lava quern in later contexts. However, those from North Shoebury, although fragmentary, appear to be Early Medieval querns of a form which, according to Röder, was in use until *c.* AD 1000 (Horter *et al.* 1951; Crawford and Röder 1955) and, on the evidence from Southampton, possibly much later (Platt and Coleman-Smith 1975, 307–311).

The source of these querns continued to be the Eifel region of Germany (for a discussion of the specific origin see Biddle (1964, 82–3)), from where they were transported down the Rhine as blanks to entrepots such as Dorestad (Parkhouse 1976) and then shipped to England. The trade with Southampton was established by the late 7th century if not earlier (Addyman and Hill 1969, 79), and lava quern fragments have been recorded from quite a number of Middle and Late Saxon sites (Parkhouse 1977, fig. 1, 11, 26). This trade was flourishing in eastern England by the 8th–9th centuries (Addyman 1964, 59). A number of querns of this type have now been recorded from Essex, and those from North Shoebury add to the distribution.

VI. Miscellaneous stone objects
by J. Wymer

Apart from a minute scrap of amber from Phase I.1 pit *1209* (Find No. 523S), the only stone object, other than those described in Parts 3.III and 3.IV, was a shale spindle whorl.
The **spindle whorl** (Fig. 57) is complete, and finely made of lathe-turned shale. There are two concentric grooves each side of perforation, and four other grooves. *III.5; surface cleaning 1470 (ditch); 1463S.*

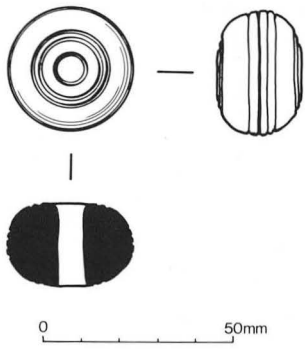

Figure 57 Shale spindle whorl.

VII. Glass

Roman Glass
by N.P. Wickenden
(Fig. 58.1)
Thin pale-green sherd, from just below flange. *1036A (ditch 1015); 406S.*
Small colourless fragment, very light green/colourless with bubbles and faint concentric incisions; from the tubular flange. *1150B (ditch 1015); 416S.*
Thin light green tubular flange, many fine wheelmarks. Joins 431S.
Thick pedestal base fragment, pale green. *1150 (ditch 1015); 417S.*
Colourless, thin wall sherd. *1149B (ditch 1015); 418S.*
Thin wall sherd. *1150B (ditch 1015); 431S.*
Thick, pale green sherd from near base. *1150B (ditch 1015), 431S*
Two joining sherds with tubular flange, light green. *1150B (ditch 1015); 431S.*

These nine sherds are all from one vessel, a bowl with an apparent pedestal base and a mid-body tubular flange (Boon 1974, 231, fig. 36.7, though with a different base; Isings form 69b). Such a vessel was free-blown, the base formed by blowing a second glass bubble into the first. There are many small pinhead bubbles and fine incised ?wheelmarks (or traces of weathering). Probably 4th-century in date. The drawing was made in the early 1980s, and was believed accurate at the time. Though the vessel form is peculiar, it has not been possible to locate the sherds to confirm this.

The Post-Medieval Glass
by D. Andrews
(Fig. 58.2–7)
A total of 120 fragments of post-medieval and modern glass were found, of which 72 were from wine bottles of late 17th- to 18th-century type, and 20 were from window glass.

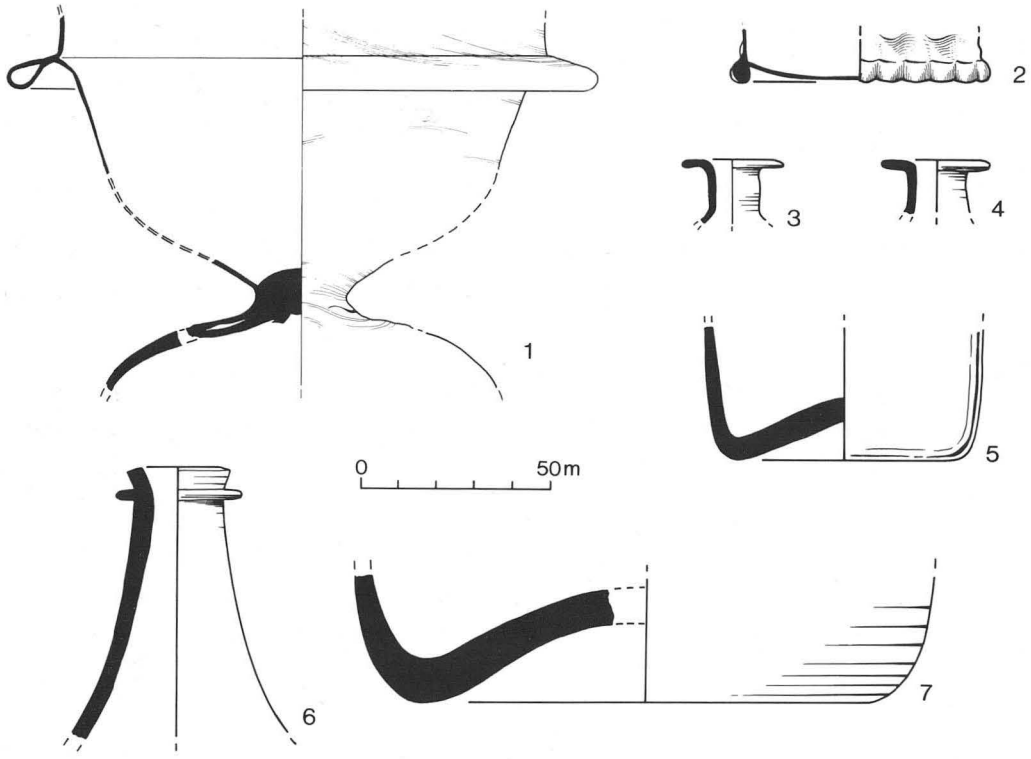

Figure 58 Roman and Post-Medieval glass.

Quite the most interesting piece is a fragmentary beaker base, (Fig. 58.2) probably 16th–17th century in date but residual in the context in which it was found. It has mould-blown decoration in what seems to be a diamond pattern, and an applied indented footring. The glass is iridescent and has a brown laminated weathering. Originally it was colourless. The piece may be described as *facon deVenise*, and may well have been imported, though not necessarily from Venice.

The best group (Fig. 58.3–7) is from a large boundary ditch (*0033*) which was filled at the very end of the 17th century or early in the 18th. It comprises fragments of two small bottles, wine bottles, a case bottle and window glass. The two small bottles are represented by flanged or disc like rims, one (Fig. 58.3,4) in yellowy-green glass and the other in pale green glass, both only slightly weathered. The illustrated bottle rim and base (Fig. 58.6, 7) are probably from the same vessel, a wine bottle with a short neck and a string close to the rim, comparable to Noel Hume's types 7–9, datable to the late 17th or early 18th century (Noel Hume 1961, 102–3, fig. 3). It is in green glass with a laminated surface, golden in colour. Only the base was found of the square case bottle (Fig. 58.5). It is in blue-green glass with only slight weathering. Most of the window glass from this context is badly weathered and is probably 16th/17th-century in date.

VIII. Pottery

Neolithic and Beaker

by N.R. Brown

Written in 1982, minor alterations have been made to refer to material published later.

Neolithic

All of the illustrated Neolithic pottery is from feature *M2.82*, all diagnostic sherds from the feature are illustrated. For fabric descriptions see Section VII.B.

Illustrated pottery

(Figs 59, 60)

59.1. Carinated shoulder: Fabric I. *B70*

59.2. Rolled rim: Fabric S. Thin-walled vessel; finger-nail marks on exterior of rim. *B71*

59.3. Carinated shoulder: Fabric C. Smooth surfaces. *B70*

59.4. Carinated shoulder: Fabric S. Thin-walled vessel. Abraded. *B73*

59.5. Rolled rim: Fabric S. Open vessel. Smoothed surfaces, somewhat abraded. *B80*

59.6. Roughly rolled rim: Fabric I. Open vessel. *B80*

59.7. Rough plain rim: Fabric I. Thin-walled, open vessel. Two joining sherds. *B80*

59.8. Upright flat-topped rim: Fabric A. Open, ?round-bodied bowl. *B66*

59.9. Carinated shoulder: Fabric S. Thin-walled vessel. Smoothed surfaces, somewhat abraded. *B66*

59.10. Upright flat-topped rim: Fabric C. Rim slightly expanded. *B66*

59.11. Upright flat-topped rim: Fabric S. Smoothed surfaces. *B66*

59.12. Slightly everted rim: Fabric C. Open vessel. *B66*

59.13. Flat-topped rim: Fabric S. Slightly expanded rim. Smoothed surfaces, somewhat abraded. *B67*

59.14. Flat-topped slightly expanded rim: Fabric S. Smoothed surfaces; slightly abraded exterior. *B67*

59.15 Flat-topped slightly expanded rim: Fabric S. Smoothed surfaces; slightly abraded exterior. *B67*

59.16 Rolled rim: Fabric B. 'Grass-wiped' exterior. Slightly abraded. *B67*

59.17 Carinated shoulder: Fabric I. Smoothed interior; abraded exterior *B66*

59.18 Rounded rim: Fabric I. Concave neck. Slightly abraded. *B69*

59.19 Rounded rim: Fabric C. Slightly expanded rim. *B68*

59.20 Rolled rim: Fabric S. Smoothed surfaces. *B68*

59.21 Rolled rim: Fabric S. Smoothed surfaces. *B68*

59.22 Carinated shoulder: Fabric S. Slightly abraded. *B69*

59.23 Carinated shoulder: Fabric A. *B69*

59.24 Carinated shoulder: Fabric largely temperless, with sparse small flint grit. Thin-walled vessel. See also Fig. 00.31. *B69*

59.25 Carinated shoulder: Fabric B. Ledge-like carintion. *B69*

59.26 Concave neck: Fabric S. Carinated bowl. Smoothed surface, somewhat abraded. *B69*

59.27 Flat-topped expanded rim: Fabric S. Smoothed surfaces, somewhat abraded. *B69*

59.28 Rounded rim: Fabric A. Closed vessel. *B69*

59.29 Rounded rim: Fabric A. Finger-wiping below rim on exterior. *B69*

59.30 Rolled rim: Fabric A. Abraded. *B69*

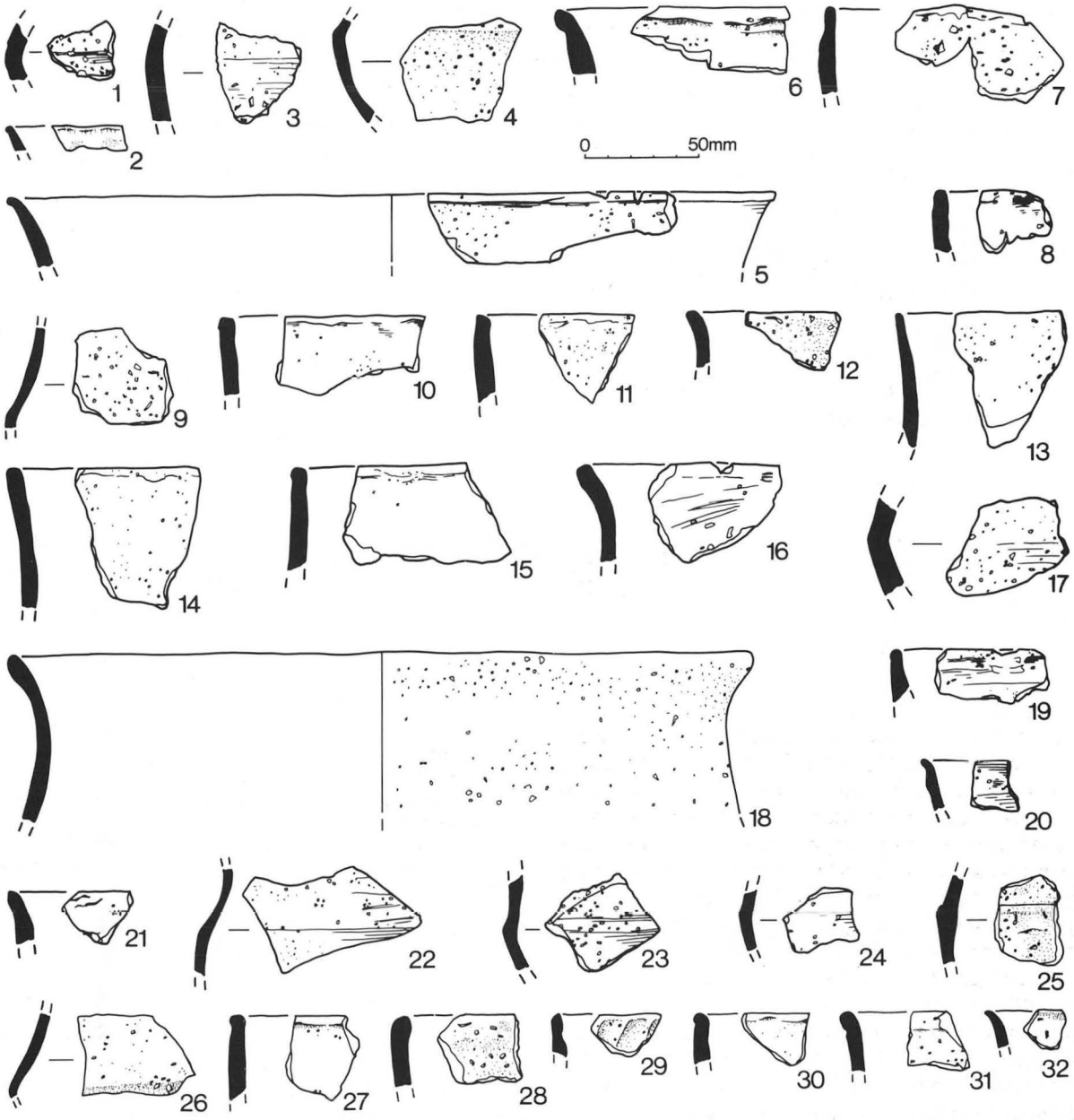

Figure 59 Neolithic pottery.

59.31 Rolled rim: Largely untempered, with sparse small flint. Thin-walled vessel possibly same as Fig. 59.24. *B69*

59.32 Rolled rim: Fabric C. Slightly abraded. *B69*

60.33 Carinated vessel: Fabric I. Rolled rim. Exterior somewhat abraded; interior smoothed. *B73*

60.34 Carinated vessel: Fabric S. Surfaces smoothed, possibly once burnished. Somewhat abraded. *B66, 70, 71, 74, 80, 89*

60.35 Rolled rim: Fabric S. Concave neck. Smoothed surfaces, somewhat abraded. *B66*

60.36 Carinated shoulder: Fabric S. *B67*

60.37 Everted rim: Fabric S. *B66*

60.38 Rolled rim: Fabric C. Open vessel. *B66*

Discussion

The material from *M2.82* belongs to the Grimston/Lyles Hill series (Smith 1974), or Whittle's (1977) Eastern Style. Pottery of this type is known in small quantities from a number of Essex sites (Hedges 1980; Priddy 1983). The Shoebury pottery is a welcome addition as it is one of the largest collections of Grimston style pottery from Essex.

There are few details of feature *M2.82* (p.26 Fig. 105, fiche), but it seems to represent domestic occupation. The pottery, consisting of well made vessels with smoothed or burnished surfaces together with coarser pots, including one extremely large vessel, may accord with this. The assemblage is undecorated (apart from No. 59.2 and No. 59.29), lacking the more rounded profiles and thickened necks of material from Fengate (Pryor 1974, 9) and Sparham, Norfolk (Healy 1984, 100). Macroscopic examination of the pottery reveals nothing to suggest a non-local origin.

A radiocarbon date of 3170 ± 130bc (HAR-1087) was associated with ?Grimston pottery at Little Waltham, Essex (Drury 1978, 10). Dates from elsewhere indicate that this style represents the earliest pottery in the British Isles (Smith 1974).

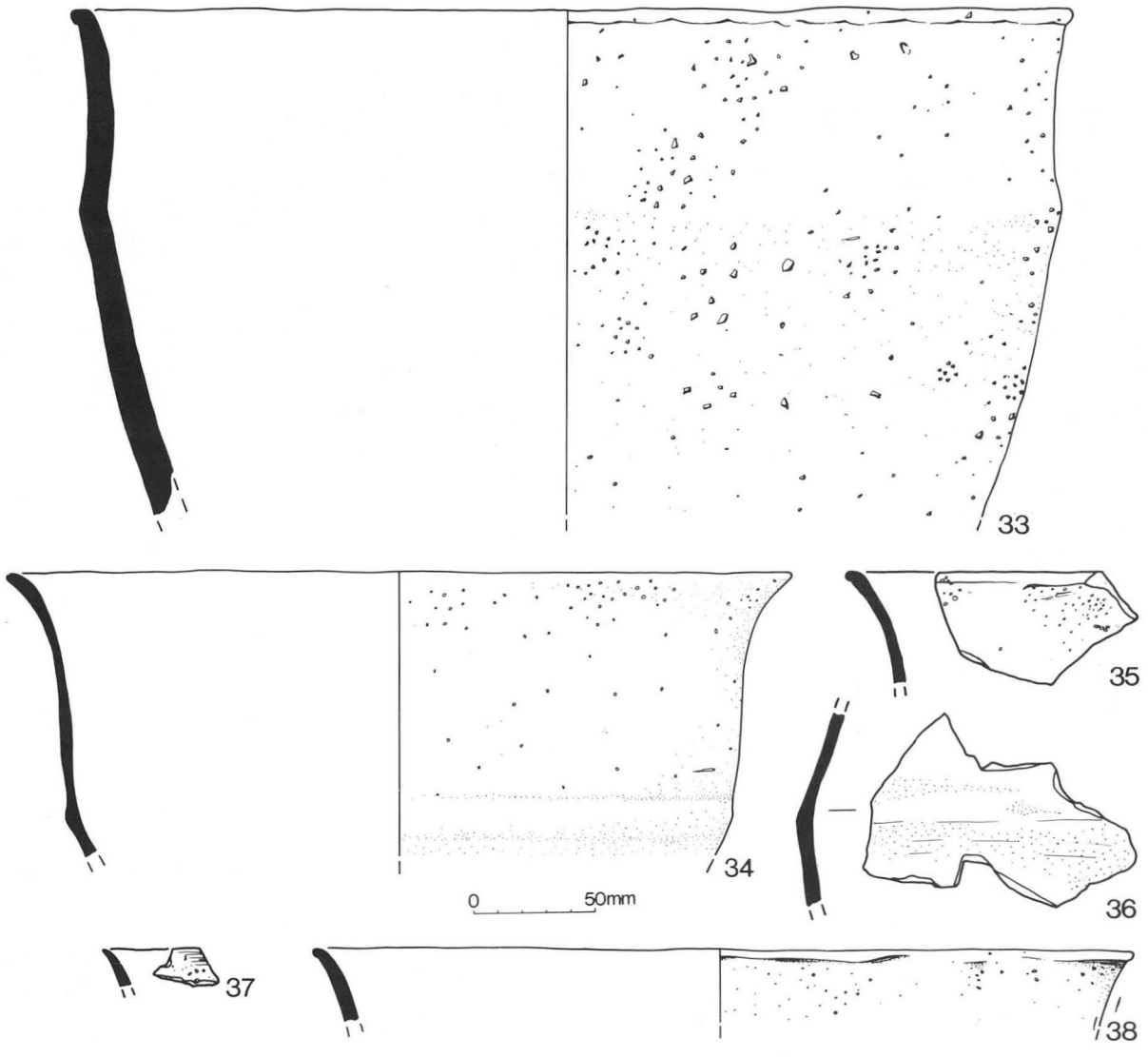

Figure 60 Neolithic pottery.

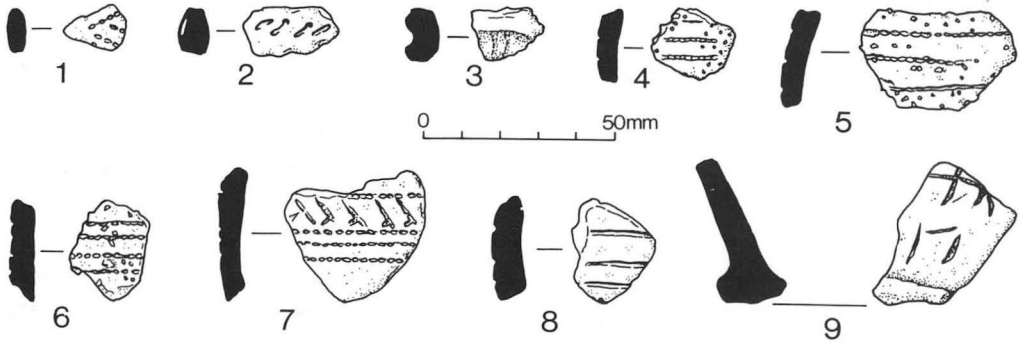

Figure 61 Beaker pottery.

Beaker

Illustrated pottery
(Fig. 61)

61.1 Body sherd: Sparse fine sand and small flint-temper. Part of a comb-impressed lozenge on exterior. Abraded. *O672B (pit); 505B*

61.2 Body sherd: Sparse fine sand and small flint-temper. Single raised cordon with ?finger-nail impressions. Abraded. *0672B (pit); 505B*

61.3 Body sherd: Sparse fine sand and small flint-temper. Two raised cordons with finger-nail marks between. Abraded. *0672B (pit); 505B*

61.4 Body sherds: Fabric I. Horizontal rows of ?cord impressions on exterior. Abraded. *M60 (pit); B45*

61.5 Body sherd: as No. 4 above. *M59 (pit); B60*

61.6 Body sherd with horizontal rows of ?cord impressions. *M59 (pit); B60*

61.7 Body sherd: Sparse fine sand and small flint-temper. Horizontal comb-impressions and stabbed ?chevrons on exterior. Abraded. *M25 (pit); B64*

61.8 Body sherd: Sparse fine sand temper; occasional small flint and grog. Horizontal rows of incised lines. Abraded. *M60 (pit); B62*

61.9 Body sherd with part of flat base: Sparse sand and flint temper. Two rows of vertical finger-nail impressions, cut across by a curving horizontal line produced by close-set finger-nail impression. *M852 (Pit?); B705*

Discussion

The above, together with a few sherds from *0672, M399* (Fig. 66) and possibly *M637* (Fig. 63.32–34) represent all the Beaker material recovered during excavations at North Shoebury. All is residual, with the possible exception of that from *0672*. The scarcity of this material probably reflects a sporadic or unintensive use of the site in the 3rd to early 2nd millennium BC.

The decorative scheme of No. 61.9 is of interest: close-set finger-nail impressions used to produce lines, and curvilinear patterns are present on Peterborough ware from the Springfield Cursus, Essex. The use of horizontal finger-nail impressions to cut across or interrupt a vertical decorative scheme is seen on a beaker from Brandon, Suffolk (Clarke 1970, no. 852), and on two beakers from Orsett 'Cock', Essex (Brown 1987b).

Later Bronze Age and Early to Middle Iron Age pottery

by N.R. Brown

Written in 1982, minor alterations have been made to refer to material published later.

Introduction

A considerable quantity of pottery identified as belonging to the late 2nd and early to mid-1st millennium BC has been recovered from North Shoebury. The 1981 excavation produced a series of pits in Grid LW which contained distinctively Middle Bronze Age (MBA) pottery. Similar material was recovered from features recorded during the 1971–72 rescue work which were clearly part of the same complex. A few scattered features revealed during work 300m to the south-west in Grid MQ, also yielded MBA pottery. Most of the Late Bronze Age (LBA) and Early Iron Age (EIA) pottery was recovered during 1971–72. Indeed, most of the pottery associated with the features planned at that time is of LBA or EIA type. Unfortunately, much of this material was collected from the surface of features or from narrow box sections and is therefore highly fragmentary and of dubious association. However, some of the features excavated in 1971–72 produced reasonable groups of material, although even these sometimes lack detailed stratigraphic information. All the material from this rescue work has been examined: only a selection of groups from relatively clear contexts will be discussed here. Selected groups of each period are illustrated below, this material is representative of the range of fabrics and forms present.

All rim sherds and decorated sherds are illustrated in their feature groups. Bases are illustrated where they have characteristics of particular interest. The pottery has been divided into twenty-four fabric groups. Too much should not be made of difference in size and density of temper; some of the fabric groups used here are very probably no more than slight variations on one of the other fabrics. However, some broad fabric groups do appear to be significant.

Fabric groups

The following definitions have been used:

(a) size of temper

small	<0.6mm approx. dia.
medium	0.6–1.5mm approx. dia.
large	>1.5mm approx. dia.

b) frequency of temper, grits per cm^2

sparse	<6
medium	6–10
dense	>10

Fabrics

The following descriptions indicate the range of body wall thickness, temper and colour for each fabric.

A. Body walls 7–12mm. Well-sorted, dense, medium-sized flint grits. Buff through orange-brown to grey-brown.

B. Body walls 8–16mm. Fairly well-sorted, sparse, medium to large flint grits. Exterior buff; core and interior grey-brown.

C. Body walls 6–10mm. Well-sorted, medium density flint grits. Buff through grey-brown to black.

D. Body walls 5–10mm. Fairly well-sorted, sparse, medium flint grits. Orange through buff to grey-brown.

E. Body walls 5–10mm. Well-sorted, sparse, medium-sized flint grits. Orange through buff to grey-brown.

F. Body walls 6–10mm. Hard, vegetable tempered. Buff to grey-brown.

G. Body walls 9–14mm. Sparse, well-sorted large flint grits. Red-brown through grey-brown to black.

H. Body walls 4–9mm. Sparse, well-sorted, small flint grits. Red-brown through buff to black.

I. Body walls 5–13mm. Medium density, fairly well-sorted medium to large flint grits. Buff through grey-brown to black.

J. Body walls 4–8mm. Well-sorted, medium density, small flint grits. Grey-brown to black.

K. Body walls 9–12mm. Well-sorted, dense, small flint grits. Grey to black.

L. Body walls 5–7mm. Well-sorted, dense, small, flint grits. Grey to black.

M. Body walls 5–7mm. Medium density sand and grog temper, with occasional small flint. Buff to pink-grey.

N. Body walls 7–12mm. Sparse, medium to large shell temper. Exterior buff; core grey-brown; interior buff or grey.

O. Body walls 5–9mm. Sparse, medium-sized shell temper. Exterior buff; core grey-brown; interior buff or grey-brown.

P. Body walls 6–12mm. Sparse, medium to large shell temper. Grey-brown to black.

Q. Body walls 4–8mm. Surfaces smoothed or burnished. Sparse small to medium shell temper. Grey-brown to black.

R. Body walls 6–10mm. Medium density, small to medium flint grits. Exterior buff to orange; core and interior grey-brown.

S. Body walls 4–6mm. Surface smoothed, sometimes burnished. Medium density small flint grits. Grey to black.

T. Body walls 5–7mm. Medium density small to medium shell temper. Smoothed surfaces. Pale grey to pale buff.

U. Body walls 10mm. Sparse large chalk and shell. Surfaces buff; core grey-brown.

V. Body walls 6–12mm. Sparse medium to large shell temper. 'Brittle' highly fired/over-fired fabric. Pale grey to buff.

W. Body walls 5–9 mm. Sparse shell temper with some grog and sand. Orange-buff.

X. Body walls 5–10mm. Vegetable, sand and some shell temper. Buff to grey-brown.

(*n.b.*: The shell-tempered fabrics sometimes contain some vegetable temper).

Middle Bronze Age (Phase I.1)

Illustrated material

(Figs 62, 63)

62.1 Fabric ?M. Finger-pinched exterior; row of paired impressions on smoothed interior. *1239A (pit 1167); 731B*

62.2 Fabric I. Two rows of finger-tip impressions. Smoothed surfaces. *1236A (pit 1167); 450B*

62.3 Everted rim of ?bucket urn: Fabric C. Faint finger marks on interior as a result of rim formation. *1239A (pit 1167); 728B*

62.4 Sherd of bucket urn: Fabric B. Applied finger-impressed cordon. *1237 (pit 1167); 649B*

62.5 Rim of bucket urn: Fabric B. Row of finger-tip impressions on top of rim. *1236A (pit 1167); 522B*

62.6 Rim: Fabric J. Thin-walled vessel. *1263A (pit 1167); 522B*

62.7 Rim of ?bucket urn: Fabric I. *1263 (pit 1167); 450B*

62.8 Rim of bucket urn: Fabric I. *1046A (gully); 303A*

62.9 Part of stamped globular vessel: Fabric S. Carefully smoothed but unburnished surfaces; one incised line survives above stamped circlets; cylindrical ?pre-firing perforation. *1209A, (pit); 624S*

62.10 Rim of bucket urn: Fabric D. *1209A (pit); 527B*

62.11 Rim of bucket urn: Fabric B. Finger-tip impressions on top of rim. *1209A (pit); 578B*

62.12 Bucket urn: Fabric M. Finger-wiped exterior; faint finger marks below rim as a result of rim formation. *1000A (pit); 487S*

62.13 Sherd of biconical vessel: Fabric B. Finger-tip impressions on shoulder. *1365B (ditch 1222); 908B*

62.14 Rim of bucket urn: Fabric B. Finger-tip impressions on top of rim. *1203A (pit); 721S*

62.15 Lower part of slightly biconical vessel; Fabric I. Applied plain bosses on shoulder. *1203A (pit); 655S*

62.16 Rim of bucket urn: Fabric I. Two conical post-firing perforations. *1204A (pit); 656S*

62.17 Bucket urn sherd: Fabric A. Row of finger-tip impressions applied directly to body. *1202B (pit); 544B*

62.18 Rim of bucket urn: Fabric A. Finger-tip impressions on top of rim and applied directly to the body. *1202A (pit); 548B*

62.19 Rim of ?jar: Fabric I. *1196 (pit); 514B*

62.20 Rim of bucket urn: Fabric D. Rows of round-toothed comb-impressions on exterior. *1035A (pit); 493S*

62.21 Rim of jar: Fabric E. Impressions on neck. *0519A (ditch); 254B*

62.22 Rim of jar: Fabric E. *0519A (ditch); 254B*

62.23 Rim of ?jar: Fabric E. *0517 (pit); 230E*

62.24 Rim of ?bucket urn: Fabric I. *0521A (pit); 239B*

62.25 Rim of ?bucket urn: Fabric I. *0521A (pit); 239B*

62.26 Rim of bucket urn: Fabric A. Finger-tip impressions on top of rim; two cylindrical pre-firing perforations below rim. *M148 (pit); B162*

62.27 Rim of bucket urn; Fabric A. Two cylindrical pre-firing perforations below rim. Residual in EIA feature. *M470 (pit); B537*

63.28 Everted rim with internal bevel, of large vessel: Fabric I. Finger-impression on exterior of rim; pair of post-firing perforations below rim. *M859 (pit); B753*

63.29 Complete, slightly biconical vessel: Fabric M. Applied plain bosses on the slight shoulder. Rim has internal bevel. *M988 (pit); B820*

63.30 Rim of jar: Fabric I. *M227 (pit); B244*

63.31 Everted rim with internal bevel: Fabric I. *M227 (pit); B244*

63.32 Fabric F. Decorated with horizontal incised lines, finger-nail impressions and irregular circular impressions. ?Beaker. *M637 (ditch); B513*

63.33 Irregular flat base: Fabric F. ?Straight-walled vessel. *M637 (ditch); B516*

63.34 Rim: Fabric F. *M637 (ditch); B539*

63.35 Rim of biconical vessel: Fabric I. Row of finger-tip impressions on top of rim; applied finger-impressed cordon at shoulder; single post-firing perforation on body. *M637 (ditch); B539*

63.36 Bucket urn sherd: Fabric G. Applied finger-impressed cordon, see also 2.37. *M637 (ditch); B512*

63.37 Bucket urn sherd: Fabric G. Applied finger-impressed cordon, part of which has broken off. ?Same vessel as 2.36. *M637 (ditch); B512*

63.38 Shoulder of biconical vessel: Fabric B. Finger-tip impressions. Applied directly to shoulder. *M637 (ditch); B517*

63.39 Bucket urn rim: Fabric I. *M637 (ditch); B539*

63.40 Shoulder of biconical vessel: Fabric I. Finger-tip impressions on shoulder. *M637 (ditch); B513*

63.41 Fabric D. Applied finger-impressed cordon. *M637 (ditch); B513*

63.42 Sherd of ?biconical vessel: Fabric A. Applied finger-impressed cordon. *M637 (ditch); B516*

63.43 Rim of bucket urn: Fabric J. Two cyclindrical holes on body which do not completely pierce the vessel wall. *M637 (ditch); B517*

63.44 Rim of ?small bucket urn: Fabric A. *M637 (ditch); B514*

63.45 Rim of ?small bucket urn: Fabric I. *M637 (ditch); B514*

63.46 Rim of jar: Fabric I. *M225 (pit); B240*

63.47 Rim of ?jar: Fabric H. *M225 (pit); B240*

63.48 Rim of jar: Fabric J. *M225 (pit); B240*

Discussion

Most of the pottery can be assigned to a local variant of the Deverel-Rimbury range of ceramics. The assemblage is paralleled in south Essex at Mucking and Barling (Couchman 1977a), and generally in lower Thames Valley Middle Bronze Age assemblages. It lacks the profusion of finger-tip decoration and frequent applied horseshoe 'handles' characteristic of the Ardleigh group of North Essex (Erith and Longworth 1960, Couchman 1975).

The distinctive bossed vessels Nos 62.15 and 63.29 are of a form widespread in Deverel-Rimbury assemblages. They occur in Essex at Mucking (Jones 1978, 50), Ardleigh (Couchman 1975, fig. 14), ?Colchester (Colchester Museum Ann. Rep. 1908) and Harlow (Brown and Bartlett 1984–5). The comb-impressed decoration of No. 62.20 is less common, but is present at Ardleigh, White Colne and an old find from Shoebury.

The stamped vessel (No. 62.9) is of particular interest. The form, fabric and decoration provide a close parallel for a nearly complete pot from Birchington, Kent (Rowlands 1976, 216: O'Connor 1980, 325, fig. 12a: Champion 1982, 34, fig. 12). The Birchington pot contained a hoard of Palstaves. Two other features, *M711* and *M861*, contained similar stamped pottery, together with fragments of bucket urn (Brown, 1984–5).

Figure 62 Phase I.1 Middle Bronze Age pottery.

The post-firing perforations on Nos 62.16 and 63.35 are best regarded as repair holes. Those below the rim of the large vessel No. 63.28 may be for suspension or provision of a rope handle. Rows of pre-firing perforations just below the rim as on Nos 62.26 and 62.27 may be for securing fabric or leather lids. The two holes which do not completely pierce the vessel walls on No. 63.43 are harder to interpret, but may have served a similar function. Bucket urns from Rook Hall Farm, Essex (Adkins *et al.* 1984–5) have rows of non-piercing holes below the rim.

Three sherds (Nos 63.32, 33 and 34) are the only material from the site in the distinctive Fabric F. The form of the rim (No. 63.34) and base (No. 63.33) would not be out of place in an MBA context. However, the decorated sherd (No. 63.32) resembles Beaker material (Bamford 1982, figs 1 and 5); these sherds may therefore be residual. One fragment (Fig. 62.1) appears to have been pressed against a flat surface when plastic leaving a smooth surface with regular impressions, its purpose is uncertain.

The pottery appears to represent a domestic assemblage comprising large storage vessels, smaller storage and cooking pots, and occasional finer vessels. There is some evidence for deliberate deposits. The pottery from *1203* (Nos 62.14 and 15) was laid flat, almost entirely filling a shallow depression (15cm deep) reminiscent of a 'slab' burial (Dacre and Ellison 1981, 159–162). The complete bossed vessel (No. 63.29) was found upright in a small pit (*M988*) together with numerous fired clay fragments and charcoal flecks, some 300m north of the main concentration of MBA settlement. The bucket urn from pit *1000* (No. 62.12) was probably complete when buried on its side, but was severely damaged by the plough. There was no sign of an accompanying cremation, indeed the fill of this feature was largely sterile and difficult to differentiate from the natural brickearth.

No radiocarbon dates are available for the North Shoebury MBA material. Deverel-Rimbury pottery from Barling, 3–4km to the north of North Shoebury, has a date of 1335 ± 85 bc (BM 1631) (Eddy and Priddy 1981). This date was one of those affected by the error in British Museum radiocarbon results, unfortunately no independent check is available on the counting efficiency of the second liquid scintillation counter, for early 1980. All that can be said is the date may be too young by an amount between 0 and 250 radiocarbon years. If the parallel between the stamped globular vessel No. 62.9 and that found with the Birchington hoard is accepted, then the hoard of palstaves found in the Birchington vessel would place this type of pot in the MBA (Rowlands 1976, 33, 40; O'Connor 1980, 276). Barrett (1980, 306) has shown that Deverel-Rimbury material in the Thames Valley does not appear to continue in use beyond the end of the 2nd millennium BC. The Phase I.1 pottery probably dates to the second half of the 2nd millennium BC. As this pottery is the earliest recovered in large quantity from the site, the establishment of the North Shoebury settlement would fit in well with the phase of settlement expansion identified at this time in the Middle and Lower Thames by Barrett and Bradley (1980, 255).

However, several sherds (Nos 62.19, 22–23 and 63.46–48), apparently from jars with upright rims, may belong to Barrett's 'Post-Deverel Rimbury pottery' (Barrett 1980). A slightly later date, at the beginning of the 1st millennium BC, would be appropriate for this material.

Late Bronze Age (Phase I.2)

Much of the material from the 1971–72 site belongs to the range of pottery assemblages characteristic of the Late Bronze Age (Barrett 1980). As far as possible, Barrett's division of the pottery into five classes will be followed here.

The material from three pits (*M330*, Fig. 63.49–59: *M351*, Fig. 64.65–69: *M664*, Fig. 65.71–80) is illustrated together with a selection of other sherds to indicate the range of forms and decorative techiques present.

Illustrated material

(Figs 63–65)

63.49 Jar rim: Fabric C. Class I. *M330 (pit); B326*

63.50 Everted jar rim: Fabric R. Class I. *M330 (pit); B326*

63.51 Rim: Fabric R. Class I. *M330 (pit); B326*

63.52 Jar rim: Fabric S. Smoothed surfaces, possibly burnished. Single incised line survives above break. Class II. *M330 (pit); B326*

63.53 Everted rim: Fabric S. Smoothed surfaces. ?Class IV. *M330 (pit); B326*

63.54 Fabric S. Smoothed surfaces. Two zones of horizontal incised lines. Class IV or V. *M330 (pit); B326*

63.55 Fabric S. Smoothed surfaces. *M330 (pit); B326*

63.56 Fabric S. Zone of incised lines. *M330 (pit); B326*

63.57 Neck of jar: Fabric S. Smoothed surfaces. Complex incised decoration. Somewhat abraded. Class II. *M330 (pit); B158*

63.58 Carinated shoulder: Fabric D. ?Class I. *M330 (pit); B326*

63.59 Shoulder: Fabric R. Slight finger-impressions on neck. Class I. *M330 (pit); B326*

64.60 Base of bowl: Fabric S. Somewhat abraded. Class IV. *1008B (pit); 289S*

64.61 Neck of jar: Fabric S. Burnished. Zone of combed decoration. Class II. *M228 (pit); B256*

64.62 Fabric S. Burnished exterior. Large part of globular vessel. Single perforated boss. *1428B (pit); 1150S*

64.63 Upright rim: Fabric C. Finger-impressed neck cordon; finger wiping on exterior below surface. Class I. *M1002 (pit); B844*

64.64 Fabric G. Plain applied neck cordon, part of which has broken off. Class I. *M83 (ditch); B510*

64.65 Fabric R. *M351 (pit); B345*

64.66 Fabric S. Burnished exterior. Class IV. *M351 (pit); B345*

64.67 Fabric J. Class I. *M351 (pit); B342*

64.68 Fabric S. Smoothed exterior. ?Class I. *M351 (pit); B342*

64.69 Round-bodied bowl: Fabric A. Class III. *M351 (pit); B345*

64.70 Fabric A. Occasional scratchmarks below shoulder, vertical finger-moulding on interior of neck. Class I. *M253 (ditch); B265*

65.71 Everted rim: Fabric C. 'Grass' wiped surfaces. Class III. *M644 (pit); B522*

65.72 Fabric R. Class I. *M644 (pit); B522*

65.73 Fabric A. ?Class I. *M644 (pit); B522*

65.74 Fabric A. Class I. *M644 (pit); B522*

65.75 Fabric D. Class IV. *M644 (pit); B522*

65.76 Fabric A. ?Class I. *M644 (pit); B522*

65.77 Fabric R. Finger-tip cabling on top of rim. Class I. *M644 (pit); B522*

65.78 Fabric I. Class I. *M644 (pit); B522*

65.79 Fabric R. Applied cordon below rim. Class I. *M644 (pit); B522*

65.80 Fabric I. Class I. *M644 (pit); B522*

Discussion

The Late Bronze Age pottery has clear parallels amongst other assemblages in the south-east. In Essex, comparable material occurs at Mucking North and South Rings (Jones and Bond 1980), Orsett (Barrett 1978), and from a circular enclosure similar to those at Mucking, at Springfield Lyons near Chelmsford (Buckley and Hedges 1987).

The Class I jars occasionally have applied cordons at the neck. These are generally plain (*e.g.* Nos 64.64 and 65.79), though examples with finger-tip decoration also occur (*e.g.* No. 64.63). Rims occasionally have finger-impressions producing a cabled effect (No. 65.77). Sometimes finger or grass-wiping is used on the surfaces,

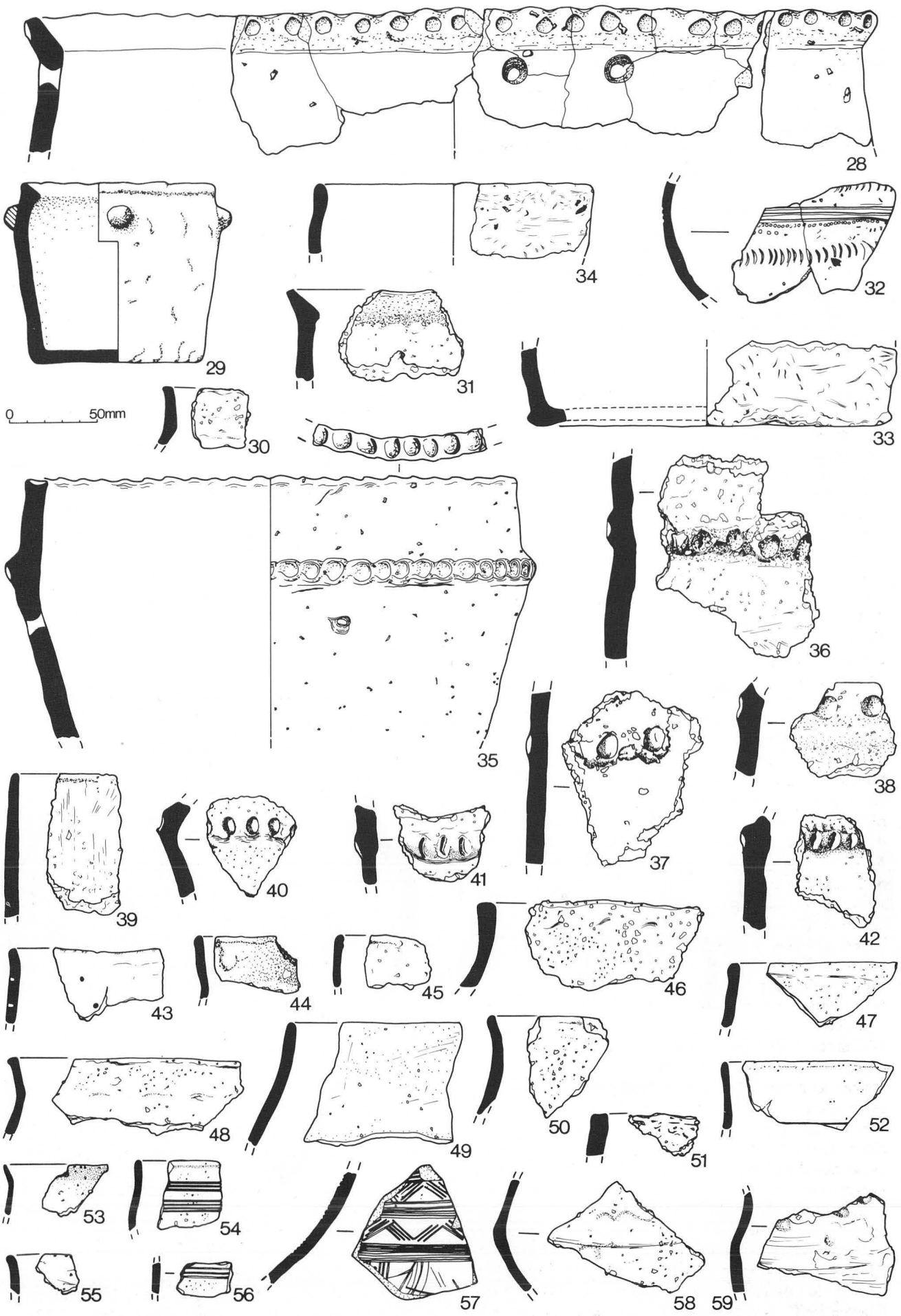

Figure 63 Phase I.1 Middle Bronze Age and I.2 Late Bronze Age pottery.

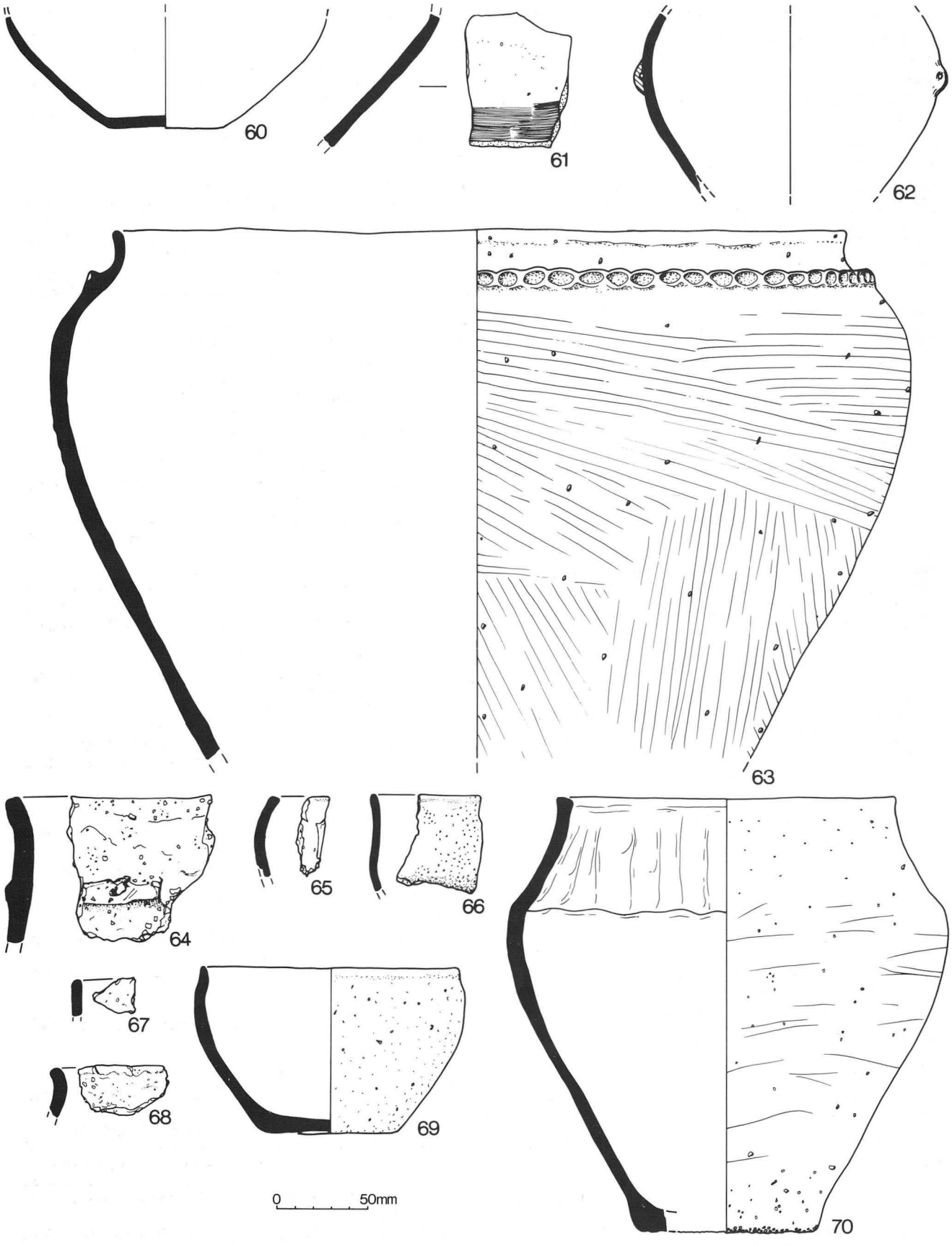

Figure 64 Phase I.2 Late Bronze Age pottery.

but only in one case (No. 64.63) does this occur in a widespread and uniform pattern. The presence of neck cordons is of interest, as these occur at Mucking and Springfield but not at Orsett.

The finer vessels are usually plain, often with burnished surfaces. Where decoration does occur it takes the form of zones of incised or combed lines (Nos 63.54, 57, 56 and 52). The complex decoration of No. 63.57 is unusual. The decorated rim sherd (No. 63.54), of a fine bowl or cup, has a close parallel with rim sherds from Springfield Lyons (Brown unpublished, contra Brown 1984–5), a sherd from Orsett (Barrett 1978, 285, fig. 42.110), one from Mucking North Ring (Barrett and Bond 1988, fig. 21, 25), and more general similarities with combed fine wares from the Mucking South Rings (Jones and Bond 1980, fig. 3.6, 9). Two other features (*M1024* and *M825*) produced closely similar sherds, associated with fragments of perforated clay slabs (Brown 1984–5). Numerous fragments of perforated clay slabs (p.126) were recovered during the 1971–72 excavations associated with LBA pottery. The pottery from *M351* (Fig. 64.65–69) was associated with a group of such fragments (Fig. 77) and a complete socketed axe (Fig. 54.1).

The globular vessel from pit *1428* (Fig. 64.62) is in a fine burnished fabric similar to the LBA fine wares. However, the form is unusual and may be more appropriate to Deverel-Rimbury globular urns. The upper fill of pit *1428* contained an abraded Belgic or early Roman sherd, thus the ?LBA vessel may be residual.

Close dating of the LBA Shoebury pottery is problematic. The pottery from Mucking South Rings was associated with three radiocarbon dates 820 ± 110 bc (HAR-1634); 860 ± 70 bc (HAR-1708); 840 ± 90 bc (HAR-1630): Jones and Bond 1980), whilst the dates from the Mucking North Ring are 680 ± 110 bc (HAR-2893) and 750 ± 80 bc (HAR-2911). It seems likely that the North Shoebury pottery is of similar date, and there seems little reason to assume any significant hiatus between the MBA settlement and the expanded LBA occupation. It is unclear whether the features with decorated pottery are later than the plain ware groups, or whether this difference represents functional variation within the site.

There are a number of changes in vessel form, accompanied by a change from predominantly flint-tempered to predominantly shell-tempered fabrics (Fig. 119 fiche). These developments may be dated on typological grounds to perhaps the 6th century BC. They are assigned to Phase I.3, conventionally the Early Iron Age, and discussed below.

Early Iron Age (Phase I.3)

The diagnostic material from *1412*, *M126* and *M399* is illustrated together with selected sherds from other features excavated in 1971–4, to indicate the range of forms and decoration present.

Illustrated material

(Figs 65–68)

65.81 Bowl: Fabric O. Tripartite, pedestal based. Somewhat abraded. *M126 (pit); B115*

65.82 Bowl: Fabric T. Tripartite, pedestal based. Somewhat abraded; where they survive surfaces are well-smoothed. *M126 (pit); B114*

65.83 Jar rim: Fabric R. *M126 (pit); B114*

65.84 Bowl: Fabric Q. Interior burnished; burnishing on exterior confined to shoulder. Row of neat ?finger-tip impressions on interior, below which are three grooved lines. *M126 (pit); B115*

65.85 Shoulder of jar: Fabric J. *M126 (pit); B115*

65.86 Bowl rim: Fabric R. Some finger-wiping on exterior. *M126 (pit); B115*

65.87 Bowl: Fabric P. Occasional wipe-marks on exterior. Somewhat abraded. *M126 (pit); B115*

65.88 Shoulder of jar: Fabric N. Row of finger-tip impressions on exterior. *M126 (pit); B114*

65.89 Rim: Fabric D. Slightly expanded on exterior. *M126 (pit); B114*

65.90 Footring base: Fabric P. *M126 (pit); B114*

65.91 Rim: Fabric R. Finger-tip impressions on top of rim. *M126 (pit); B114*

65.92 Pedestal base: Fabric W. *M126 (pit); B109*

65.93 Jar rim: Fabric N. Slack shoulder. Irregular row of finger-tip impressions. *M143 (pit); B172*

65.94 Jar rim: Fabric O. Thumb groove below rim. Vertical finger-wiping on body. *M143 (pit); B172*

65.95 Jar rim: Fabric N. Irregular row of finger-tip impressions on exterior of rim; single finger-tip impression on slack shoulder. *M143 (pit); B172*

65.96 Jar rim: Fabric N. *M123 (pit); B108*

65.97 Jar rim: Fabric N. *M123 (pit); B108*

65.98 Pedestal base: Fabric ?U. *M47 (pit); B43*

65.99 Bowl: Fabric ?U. *M47 (pit); B43*

66.100 Bowl: Fabric Q. *M399 (pit); B393*

66.101 Rim: Fabric Q. *M399 (pit); B393*

66.102 Rim: Fabric Q. *M399 (pit); B393*

66.103 Rim: Fabric Q. Slightly expanded. *M399 (pit); B393*

66.104 Bowl: Fabric O. *M399 (pit); B393*

66.105 Everted rim of jar: Fabric Q. Two incised lines on neck. *M399 (pit); B393*

66.106 Pedestal base: Fabric Q. *M399 (pit); B393*

66.107 Bowl: Fabric Q. Furrowed decoration above shoulder. *M399 (pit); B400*

66.108 Footring base: Fabric Q. *M399 (pit); B400*

66.109 Rim of large jar: Fabric P. Flat-topped expanded rim. Burnished on top. Plain neck cordon; row of close-set finger-nail impressions on shoulder; finger-wiping on interior. *M399 (pit); B399*

66.110 Footring base: Fabric S. *M399 (pit); B400*

66.111 Jar rim: Fabric N. Row of finger-tip impressions on shoulder. *M399 (pit; B386*

66.112 Rim: Fabric. *M399 (pit); B400*

66.113 Rim: Fabric O. *M399 (pit); B399*

66.114 Fabric N. All-over finger pinching. *M399 (pit); B388*

66.115 Cup: Fabric O. Frequent faint finger-marks as a result of manufacture. *M399 (pit); B400*

66.116 Fabric N. Fairly regular rows of finger-impressions. *M399 (pit); B388*

66.117 Fabric N. Grooved decoration. ?Shoulder of bowl. *M399 (pit); B402*

66.118 Fabric T. Regular lines of close-set finger-tip impressions. *M399 (pit); B399*

66.119 Rim: Fabric Q. Expanded. *M399 (pit); B399*

66.120 Fabric T. Finger-pinched rustication. *M399 (pit); B399*

67.121 Jar: Fabric N. Rough bead-rim. The exterior, particularly below the shoulder, is finger and grass-wiped. *1412A (pit); 951S*

67.122 Shoulder of jar: Fabric P. Single finger-tip impressions on shoulder. *1412A (pit); 950S*

67.123 Jar: Fabric X. *1412A (pit); 1483S*

67.124 Jar: Fabric R. Row of finger-impressions on shoulder. *M470 (pit); B537*

67.125 Jar: Fabric N. *M470 (pit); B537*

67.126 Jar: Fabric P. *M470 (pit); B537*

67.127 Jar: Fabric Q. Part of perforated lug on exterior. *M470 (pit); B537*

67.128 Sherd of jar: Fabric N. Scored exterior. *M123 (pit); B108*

67.129 Sherd of jar: Fabric U. Scored exterior; part of a row of finger-impressions surviving at shoulder. *M154 (pit); B189*

67.130 Jar: Fabric N. Regular horizontal finger-wiping below shoulder, vertical finger-moulding on interior of neck. *M1058 (?oven); B873*

68.131 Jar: Fabric O. Slightly expanded rim with thumb groove below; vertical finger-wiping. *M147 (pit); B153*

68.132 Bowl: Fabric Q. Patches of red colouring (shaded) on exterior. *M1023 (pit); B189*

Discussion

The EIA pottery carries on the same range of bowls and jars as the LBA assemblage. Besides the above mentioned preference for shell-tempered fabrics, a number of

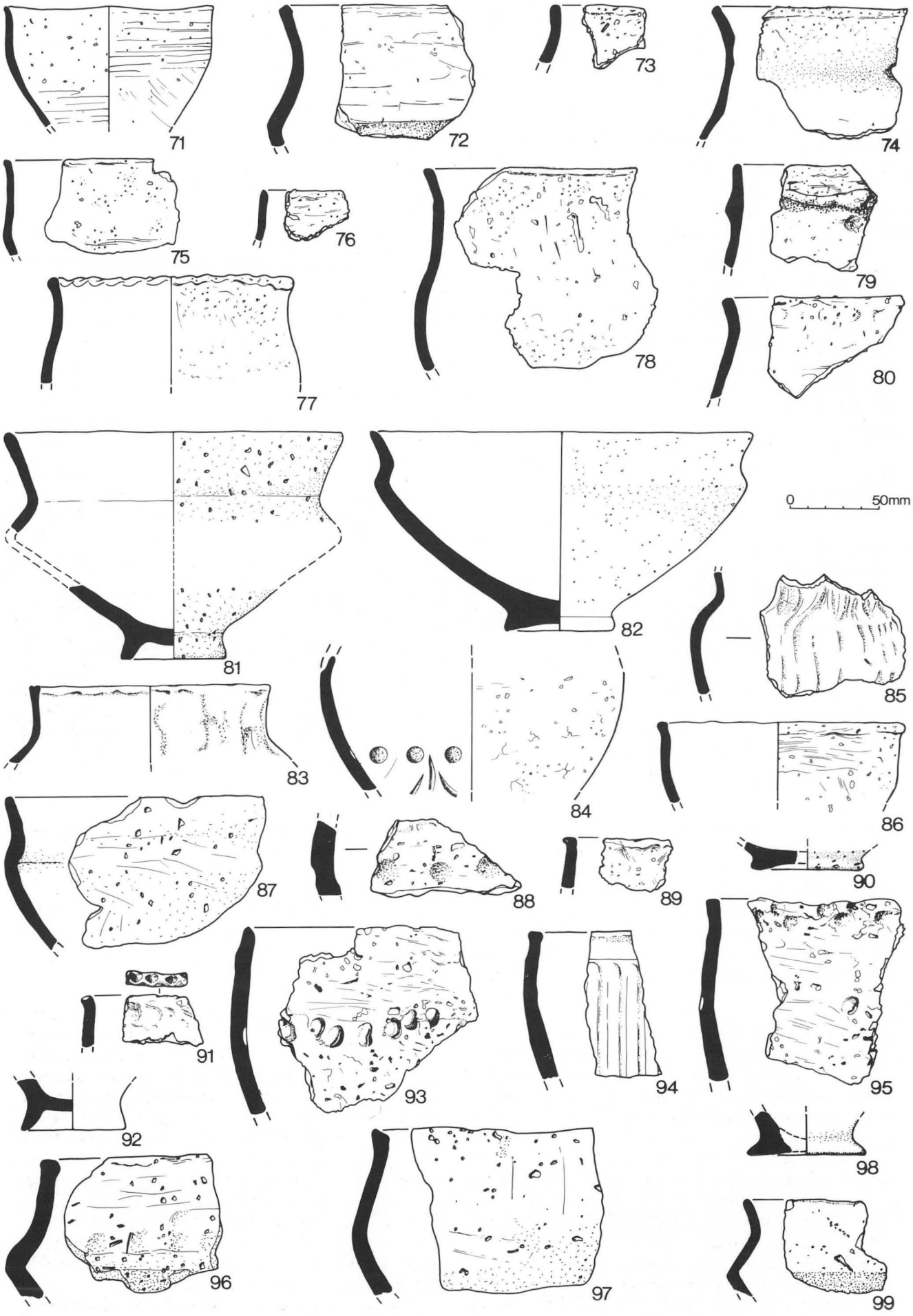

Figure 65 Phase I.2 Late Bronze Age and Phase I.3 Early Iron Age pottery.

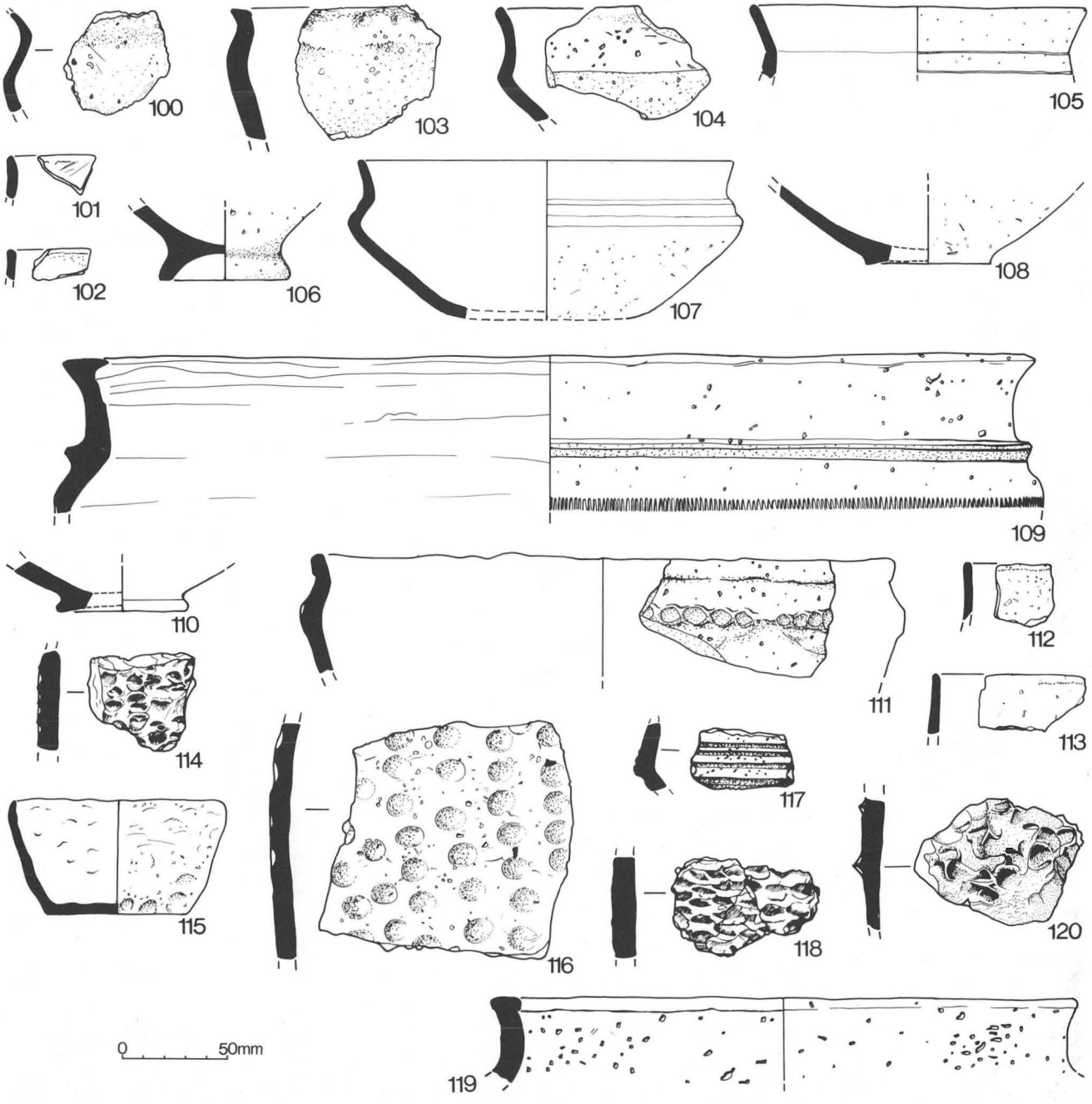

Figure 66 Phase I.3 Early Iron Age pottery.

changes are discernable. Most striking is the presence of tripartite carinated bowls with pedestal or footring bases. The coarse jars are frequently slack or round-shouldered, often with rows of finger-impressions on the shoulder and/or rim. The bodies may be scored or have regular zones of finger-wiping. Some of the flat-topped rims are slightly expanded.

The pottery from *M399* contains a number of possibly residual sherds. No. 66.116 is one of seven large sherds with fairly regular lines of finger-impressions made with the ball of the finger, which may be from a large straight-sided vessel, although none join. There is some similarity with the Ardleigh material of North Essex. However, a very similar sherd which Hawkes describes as belonging 'to a grilling plate or closed grid' (Hawkes 1935, 54, fig. 13G) was recovered from Plumpton Plain B. Another possible parallel is part of a jar from Linton, Cambridgeshire (Cunliffe 1974, fig. A.11), the lower walls of which seem to have similar impressions. The finger-pinched or impressed sherds Nos 66.114, 118 and 120 may be Beaker coarse ware. However, such sherds frequently occur in the EIA pottery groups from North Shoebury. Comparable material is known from West Harling (Clark and Fell 1953, fig. 13, no. 26); from the LBA enclosure at Springfield; and amongst a large group of Darmsden-Linton pottery from Lofts Farm, Essex (Brown 1988a). An EIA date is therefore quite possible. The section of pit *M399* (fiche Fig. 113) shows it apparently cutting ?two earlier features, the possible Beaker sherds may derive from these.

The pedestal-based carinated bowls from Shoebury are paralleled at Orsett, where a date possibly in the 6th

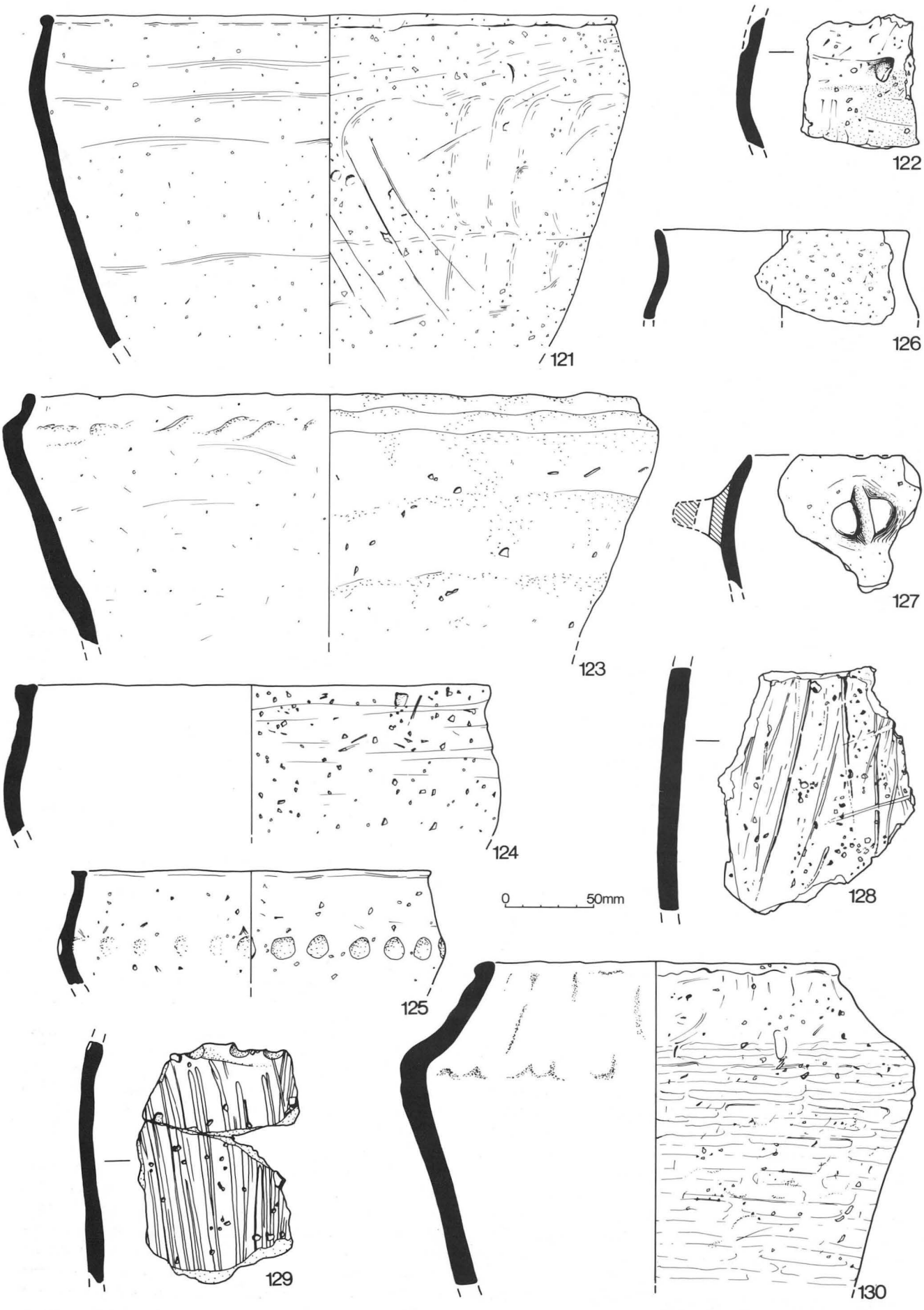

Figure 67 Phase I.3 Early Iron Age pottery.

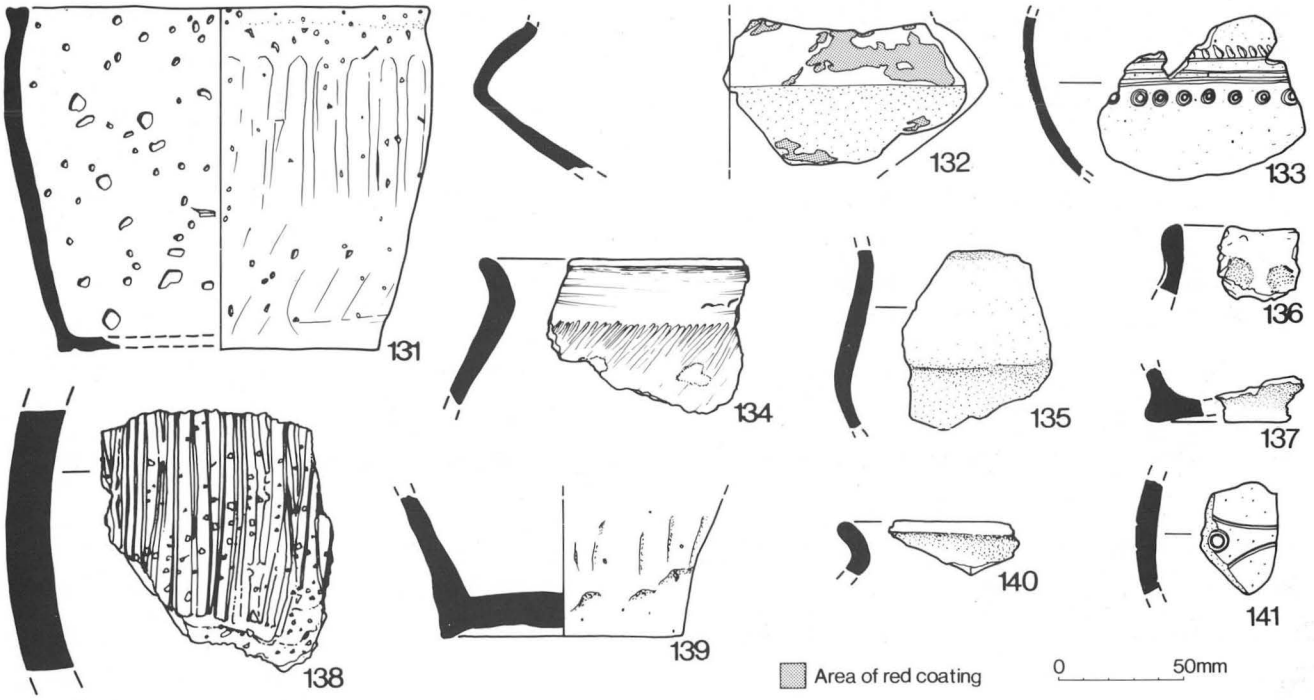

Figure 68 Phase I.3 Early Iron and Phase II.1 Middle Iron Age pottery.

century BC, but more probably 5th–4th century has been suggested (Barrett 1978). The predominance of shell-tempered pottery at North Shoebury is of interest. Shell temper is common in the small assemblage from Rainbow Wood, Thurrock (Potter 1974). However, the Orsett pottery is entirely flint-tempered, unless a T-shaped rim is accepted as EIA in date (Hedges and Buckley 1978, fig. 36.101), and flint temper has hitherto been taken as characteristic of EIA pottery in Essex (Drury 1980). Two sherds have red coatings (Nos 66.98 and 68.132) which may be related to haematite coating. Drury (1978) dates the occurrence of possible haematite-coated sherds in Essex to the 6th century BC. The Shoebury assemblage may be compared with the pottery from Ashville, Oxfordshire (DeRoche 1978): the suggested date for the Ashville assemblage is 6th/3rd-century BC. A group of coarse jars very similar to the Shoebury examples with finger-tip decoration on shoulders and/or rims was recovered from the upper ditch fill at Springfield (Buckley and Hedges 1987). The bowl No. 66.107 and ?shoulder No. 66.117 may be related to Cunliffe's (1974) Darmsden-Linton style, although it is clear that the grooved decoration above the shoulders of bowls characteristic of the style is largely absent from the Shoebury assemblage. This is in marked contrast with presumably contemporary large EIA assemblages from Rook Hall Farm (Adkins *et al.* 1984–5) and Lofts Farm (Brown 1988a) in central Essex. The sherds of straight-sided jars (Nos 65.94 and 68.131) are similar to Little Waltham form 10 (Drury 1978, fig. 38), and to one of the vessels from a votive deposit at Stock (Couchman 1977a, fig. 16.2); a 4th/3rd-century BC date would therefore be appropriate for these sherds. A date range between the 6th and 4th centuries is therefore suggested for the Phase I.3 pottery. The coarse jars Nos 59.121, 122, and 123 were associated with a calibrated radiocarbon date of Cal BC 390–Cal AD 20 (HAR-5104). It is interesting that the large jar No. 67.123 is one of the few examples of sand-tempered fabric amongst the Phase I.3 pottery. In the Upper Thames at Ashville (De Roche 1978) and Farmoor (Lambrick 1978), shell-tempered EIA pottery gives way to sand temper in the Middle Iron Age, and a similar pattern occurs in Essex (Drury 1978; Brown 1987b, 1991).

Middle Iron Age (Phase II.1)

Illustrated material

(Fig. 68)

68.133 Globular bowl: Fabric S. Row of stabbed impressions; horizontal incised lines; row of stamped circlets. *1044A (pit); 329S*

68.134 Bowl: Fabric A. Lightly tooled lines on exterior. *Unstratified, Grid DE; 1512B*

68.135 Bowl: Fabric. Fine sand and 'glauconite' inclusions. *Unstratified, Grid DE; 1513B*

68.136 Jar rim: Fabric S. Two finger-impressions below. *1499B (ditch); 1012B*

68.137 Footring base: Fabric A. *1505A (pit); 968B*

68.138 Fabric A. Scored exterior. *1606A (?pit); 1194B*

68.139 Footring base: Fabric tempered with fine sand and 'glauconite' inclusions. Smooth surfaces. *1499A (ditch); 997B*

68.140 Everted rim: Fabric tempered with fine sand and 'glauconite' inclusions. Smooth surfaces. *1499A (ditch); 1002B*

68.141 Fabric S. Single stamped circlet between two curving tooled lines, probably part of interlocking arc design. *1570B (ditch); 1094*

Discussion

There is apparently a change in preferred fabric types between the Early and Middle Iron Age phases. Shell temper still occurs, but flint and sand-tempered wares, including sherds with distinctive 'glauconite' inclusions, are more prevalent. However, the small quantity of pottery recovered makes the significance of this hard to assess. There is a shift of settlement focus from Grids LM LN LW and LX to Grid DE. Exterior scoring (No. 68.138) occurs on some coarse jars as in the Early Iron Age. Pit *1505*

yielded the lower part of a vessel with a footring base and finger-wiped exterior (No. 68.139). This pit also contained an inverted human skull. Ditch *1499* produced sand, 'glauconite' and flint-tempered body sherds, some with burnished surfaces, together with a small footring base and a burnished flint-tempered rim. Various other small pits and gullies in Grid DE produced 'glauconite' and sand-tempered sherds. Bronze Age ditch *M881*, and two features of which no detail survives *M830* and *M863* from the EIA settlement area, produced a few small 'glauconite'-tempered body sherds associated with shell-tempered wares. The occurrence of everted rims probably from round bodied bowls, and sand and 'glauconite'-tempered wares places this small group of pottery within the MIA material defined by Drury (1978), which appears to date from the 3rd century BC. The stamped and curvilinear decorated sherd (No. 68.141) supports such a date; it belongs to Cunliffe's Mucking-Crayford style, probably of the 2nd or early 1st century BC (Cunliffe 1982, 42). Comparable material is widespread in south Essex, and north Kent (Elsdon 1975, 18–24, fig. 13: Cunliffe 1982). No. 68.133 may be from a similar vessel. However, the decorative scheme cannot be closely matched in the al Mucking-Crayford style (Elsdon 1975). The sherds were recovered from a small shallow pit (*1044*) in the area of the MBA settlement. In view of the presence of MBA stamped sherds on the site, No. 68.133 may belong with the MBA pottery, in which case its decoration could be seen as a combination of the schemes employed on two vessels from Kent (Champion 1982, fig. 13, nos 3 and 4). Unfortunately, pit *1044* contained no other material.

The limited evidence derived from the small area of MIA settlement excavated in 1981 does not allow much to be said of the duration and development of the MIA pottery.

Manufacture and trade

The majority of the pottery discussed above appears to have been locally made. The thick brickearth deposit upon which the site developed would have provided suitable potting clay. Burnt flints were regularly recorded from the excavated features and dumps of shell occur from the MBA onward; therefore the basic tempering materials were freely available. Occasionally pots from all periods show signs of coil building. This is particularly clear on No. 121. Rectangular sherds, the result of the breakage of slab-built vessels, occur more rarely; No. 123 is the clearest example. Rare evidence for clay preparation seems to be provided by a lump of fired clay (p.125 Fig. 84). The presence of several complete or fragmentary 'tournettes' (p.125 Fig. 84) in EIA features may be significant if these are, indeed, related to pottery manufacture. The recovery of two 'tournettes' together with a quantity of overfired EIA shell-tempered sherds from *M671*, a feature described as a 'kiln or oven', seems to indicate relatively sophisticated firing techniques.

In general, the prehistoric pottery displays similarities with other Lower Thames Valley assemblages, and presents a number of differences with pottery from further north in Essex. The MBA pottery presents a clear contrast to the heavily decorated and frequently very large vessels of the Ardleigh group — a pattern apparently repeated in the EIA with the absence, at Shoebury, of the distinctive grooved decoration on bowls characteristic of the Darmsden-Linton style. The stamped MBA vessels exhibit clear affinities with Kent, a pattern repeated and emphasised in the distribution of the Iron Age Mucking-Crayford style.

There is little evidence for trading of pottery, but the chalk-tempered fabrics are unlikely to be of local manufacture. A source in north Kent, the Grays-Thurrock area of Essex, or the chalky boulder clays of north-central Essex appears most likely. The MIA sherds with apparent 'glauconite' inclusions are also likely to be of non-local origin.

'Belgic'

by Isobel Thompson

The grog-tempered Late Iron Age pottery from North Shoebury comprises thirteen vessels from three burial groups, and a number of sherds from various types of vessel included in the Late Iron Age settlement features. Full explanation of forms and parallels is to be found in Thompson (1982).

The following abbreviations have been used:
Cam.: Hawkes and Hull 1947
AB : Birchall 1965

The burial groups

These are classic 'Belgic' cremation burials, related to others long known in south Essex but found for the most part in confused or mysterious circumstances; it is useful to have these three new groups from a controlled excavation.

Group 1: (feature *1161*):

Three pots, none of which is now complete (Fig. 69, 1–3)

69.1 Cordoned squat wide-mouthed pedestal urn, form F2: Very well made on wheel; very squat, with deep sharply detailed cordons, and strongly angled body. Good grey-brown grog-tempered fabric; slightly pink below darker grey-brown surfaces; smoothed; worn to pink in patches especially at the rim. Some grog shows on the outside surface; once burnished. Has the commonest form of pedestal base, A1, but is well made. *444S* This splendid vessel is of an unusual form, but two from Billericay (AB 219, 220) provide close parallels; but may, like this example, have been shaped with a template of some kind. None of the F2 vessels are Romanised in any way, but Kent examples may indicate a 1st-century AD date.

69.2 Plain pedestal urn of the commonest form, A1. The foot here is stubby and warped. Grey core, coarse black grog visible; orange-pink below patchy worn dark brown-grey surfaces, once burnished dark grey outside. Strong turning lines inside. The top has been ploughed off. The walls are quite thin, but the pot is not as well made as No. 1. This sort of pedestal urn has no particular dating significance. *443S*

69.3 Small cup, form E2–3: Coarse; poorly made, apparently by hand. Dark grey fabric, with coarse grog and rubbish-temper including small sandy grits; red inside surface, patchy dark brown-grey outside. Smoothed. Worn off above girth to orange-red on the rippled shoulder. The pot is not symmetrical. This form is often hand-made and is most common in cemeteries in Kent, with a date range from the end of the 1st century BC to the conquest period but no later. It is quite common as a small vessel accompanying larger ones in graves, at Aylesford, Swarling, and Deal. In Essex there is one from Kelvedon and one from Great Baddow, without contexts, and a Romanised example from the Wick Farm cemetery at Canewdon. *445S*

Group 2: (feature *1367*):

Four vessels (Fig. 69, 4–7)

69.4 Small plain carinated cup with waist — form E1-1: Complete but for part of rim and upper body. Thick hard grey, with fine grog. Smooth hard grey surface, not shiny. The rim is wider than the carination, and the waist cordon is lacking: these may be indications of a late date in the series. This is a common form, found widely in Essex and Hertfordshire (but not in Kent); it has origins in the late 1st century BC but is usually of the first half of the 1st century AD. In Essex it covers the whole date range at

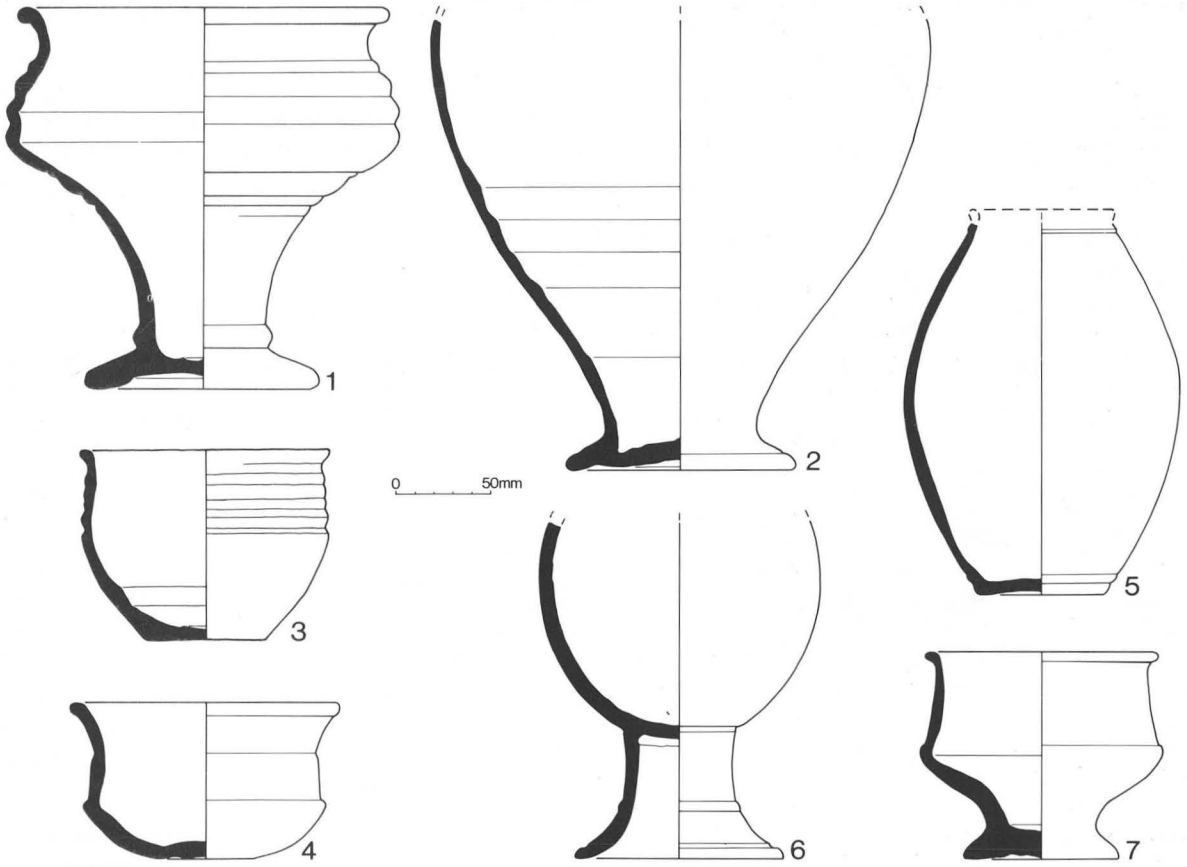

Figure 69 Phase II.2 cremation pottery from burials *1161* and *1367*.

Sheepen, and occurs at Creeksea, Canewdon, and Prittlewell, but without any good indication of date. One from the Roots Hall cemetery at Prittlewell has the same rounded carination, and one in the Martin Collection in Thurrock Museum, possibly from Orsett, has a similar exaggeration of rim diameter. *910S*

69.5 Plain barrel jar with small cordon remaining below missing small upstanding rim; form B5-2: Hard sandy-feeling. Matt grey, with fine grog, some showing at surface; smooth evenly-coloured dark grey surfaces, without any change to orange or pink just beneath. Probably a late grog-tempered fabric. Neatly made with shallow cordon at base to match the rim. Plain barrel jars are not uncommon in native burials; there are two of this form at Wick Farm, Canewdon, and in the old Shoebury burial (AB 138). *911S*

69.6 The 'trumpet' pedestal and part of the body of an A5 pedestal urn: Hard dark grey fabric. Some fine grog and a few grits visible; dark grey surfaces, burnished. Well made with neat cordons around the base; broken from body at the join. The angle of what remains of the body, and the coarse unfinished and cracked surface of the inside base of the body indicate a tall closed jar form of the usual pedestal urn type, rather than an open bowl (which is rare). The A5 is the standard Essex 1st-century AD form of the pedestal urn; it is unknown in Kent. After the conquest it continues to be made in Roman fabrics, but many native grog-tempered examples are known of pre-conquest date, including specimens from Canewdon, Prittlewell, and Shoebury (AB 136). Some of these are in a possibly Romanised fabric; that from Great Wakering grave 3 (AB 160) is Roman. This new example is unusually tall, but so is the previous Shoebury example (AB 136). One with very similar cordons, from Shenfield, is just post-conquest in date. *912S*

69.7 Plain carinated cup with pedestal base: Technically it belongs to form F3-1, which is rare; this specimen is unparalleled as it is clearly a pedestalled version of the more common plain carinated cup, E1-4. It is complete but for a slightly chipped rim and broken foot; good grey grog-tempered fabric, a slightly mean rim but neatly made; dark grey surfaces once burnished, with brown firing patch. E1-4 itself is rare in Essex: Sheepen has some (Cam. 214B); there is one in the conquest-period grave at Shenfield; and another from the Wick Farm cemetery at Canewdon, very close in shape to this Shoebury specimen, which is Roman in fabric and has itself a close parallel in a cemetery at Broadstairs with late 1st-century AD samian. *913S*

Group 3: (feature *1232*):

6 vessels (Fig. 70)

70.8 Cordoned pedestal urn, form A3: The usual 'quoit-shaped' foot is here short and stubby and somewhat dished on the underside. The fabric is hard, thick, dark grey, with grog and some sand and white grits; hard-fired, with grey surfaces, smoothed and burnished outside. The cordons on the shoulder and the burnished decoration in the zone between them relate this pot very closely to one from Hamborough Hill, Rayleigh (AB 164), which is wider in girth but otherwise very similar. Exactly the same pattern of burnishing occurs on a wider-mouthed cordoned pedestal urn from Billericay (AB 179). The only other certain A3 from Essex is the rather different vessel from the old Shoebury burial (AB 134): it is not an Essex form but is the commonest pedestal urn variety in Kent, where the all-over cordoning of AB 134 is usual, and extra burnished decoration of any kind rare and unlike that of south Essex. *681S*

70.9 Globular wide-mouthed barrel jar with bead rim, form B5–4: Has a rising base like an omphalos, with a false foot in the dish of the base. Hard brown fabric, grog-tempered, with red-pink below smooth grey surface. Much cracked but complete. A native burial form originating in late 1st-century BC graves. Its distribution is scattered; in Essex there are some in the Colchester area (Cam. 249A and F; Lexden) and a small one in the Southminster burial (AB 145). There are no examples directly associated with anything post-conquest. *679S*

70.10 Cordoned lid-seated bowl, form D3–4: A squat shape, with nine cordons from rim to below the girth. Complete but much broken. Neatly wheel-made of grey-brown grog-tempered fabric,

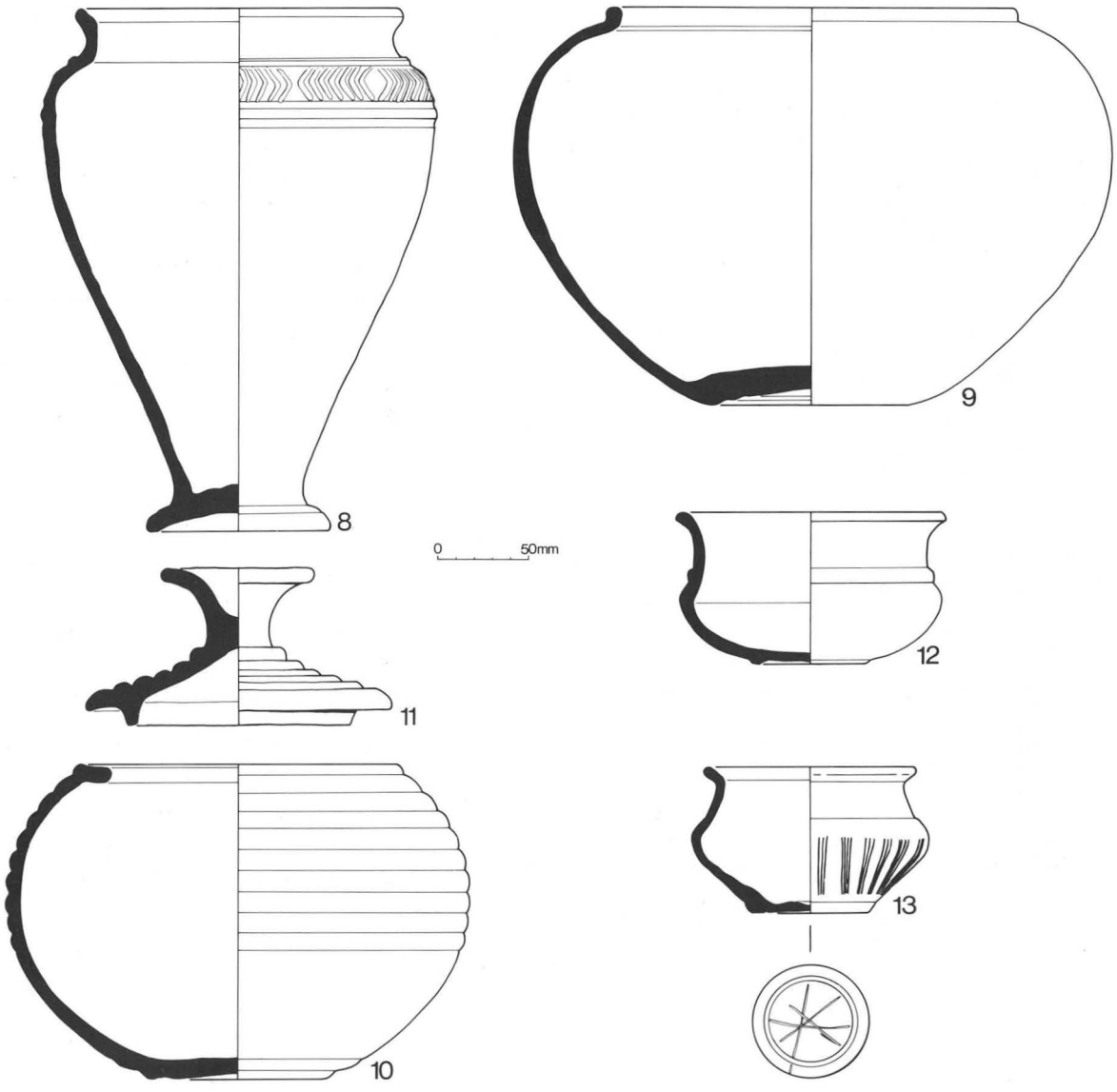

Figure 70 Phase II.2 cremation pottery from burial *1233*.

brown-pink below burnished surface. Would have been covered by the lid, No. 11. Essex examples of the form are from Sheepen, Lexden cemetery, Braintree, Danbury, Creeksea, and Southminster; outside Essex it is only to be found much further afield and less commonly in burials. Dating of the Essex burial examples seems to be at least partly late 1st-century BC, and always pre-conquest. None have a continuous band of cordons, usually having them spread out at intervals. *684S*

70.11 Flanged lid with continuous cordons and a high knob: The form is L4, which is the form most commonly found with D3–4. This lid, however, is hand-made; the rim and flange are not symmetrical and the knob is far too large in proportion to the body, which is covered by deeply-cut cordons. The fabric is softish brown, grog-tempered, with grey surfaces. The form is almost entirely confined to north Essex (*e.g.* Braintree, AB 207) where it is wheel-made, more neatly. *683S*

70.12 Wide-mouthed rounded cup with a shoulder cordon, form E3-1: Grey core with grog; dark grey-brown surfaces, patchy but smooth outside; wheel made and neatly detailed; complete. A small version of very common and widespread jar and bowl forms, without any dating bias; but other Essex examples are often late (Romanised at Prittlewell and Southchurch, and Sheepen (Cam. 221B); with Roman at Orsett; in Roman fabrics at Little Waltham, Little Laver, Sandon). *680S*

70.13 Another example of form E3–1, but thinner and with an exaggerated profile: Grey; grog-tempered; smooth grey surfaces, once burnished outside. Light vertical scoring in groups of lines on the body below the girth. The shape is very similar to an example from Daines Way, Southchurch, with a similar exaggerated profile and yet thinner walls. The decoration is very like that on another grog-tempered cup from Daines Way, apparently found at the same time. Neither has any firm context. *682S*

Dating

There is no Gallo-Belgic or Roman presence in these groups, but in south Essex Gallo-Belgic imports are rare and copies are confined to the few most common forms (plain platters; butt-beakers). These groups are typical of the 'Belgic' burials of the area, for some reason concentrated in the south-east corner of pottery zone 2. However, several instances have been noted above of the very close similarity between these Shoebury pots and others in the same zone: Billericay, Rayleigh, and Southchurch in particular. Some of the forms are distinctive to north Essex (D3–4; the trumpet pedestal) while others link the area to those popular in Kent (the A3 pedestal urn; the F3–1). The absence of influence from imported forms does not, in this area, necessarily mean a

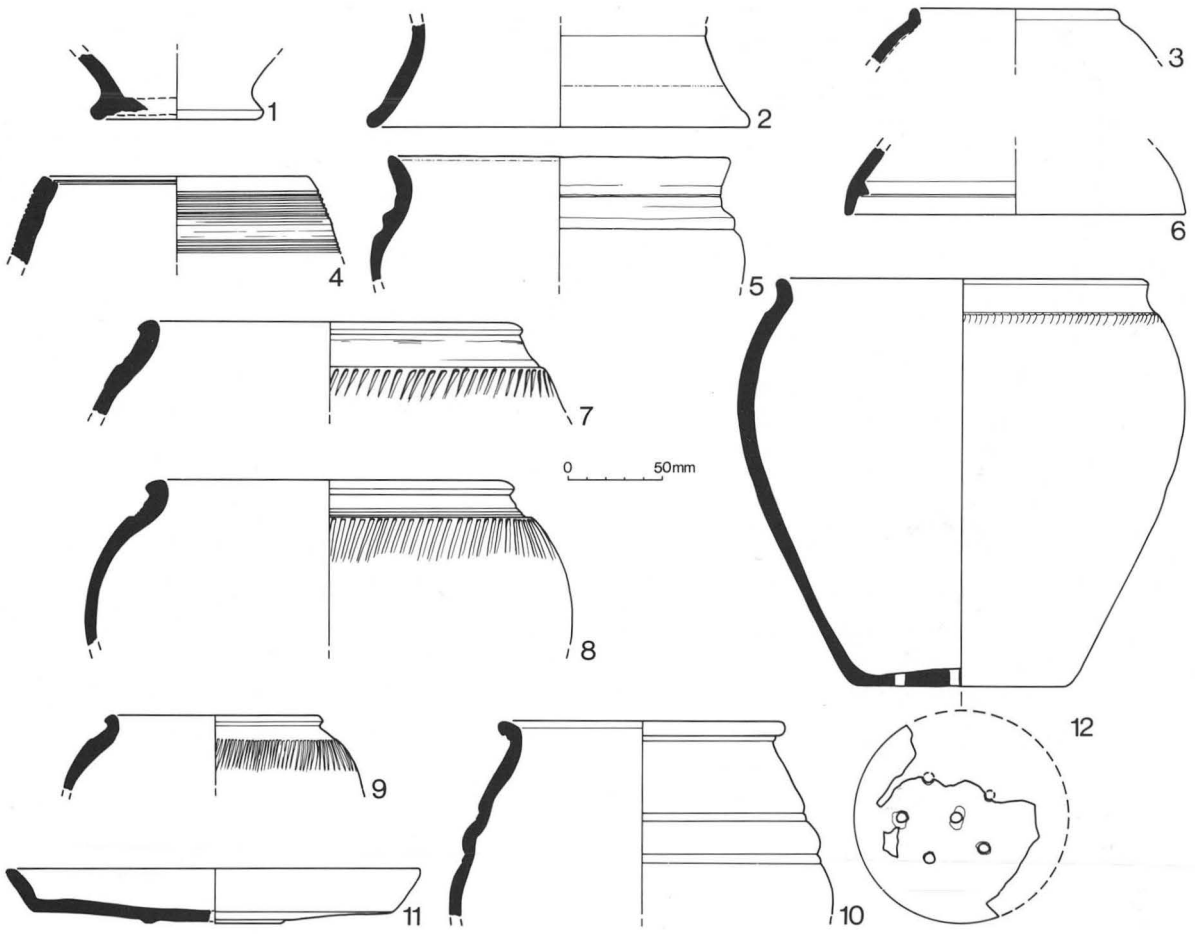

Figure 71 Period II.2 settlement pottery.

late 1st-century BC date; south Essex pottery was poor in comparison with north Essex and, while the presence of traits shared with other local sites implies some local manufacture, some of these burial vessels may have come from north of the Blackwater. The lid for the cordoned bowl No. 10 is a hand-made copy of a north Essex form. In south Essex only burials had good grog-tempered 'Belgic' pots; in everyday living the pottery assemblage is not standardly grog-tempered and is quite different from that of wealthier north Essex.

The three groups were in a line, in the order 1-3-2 from north to south; on balance Groups 1 and 3 appear approximately contemporary but Group 2 is perhaps rather later. There is little to indicate whether Groups 1 and 3 are late 1st-century BC or early 1st-century AD. Each of the vessels in Group 2 has some indication of a date rather nearer AD 43, but none is definitely post-conquest and all are very much in the native tradition.

Pottery from non-burial contexts
(Fig. 71)
This is of a variety of fabrics, typical of south Essex settlements in the first half of the 1st century AD; all the pieces are much broken up. The majority of the pottery is wheel-made unless otherwise specified. There is a large number of sherds from combed storage jars.

Catalogue of illustrated sherds

Grog tempered

Pedestal urns

71.1 A small and stunted A2 base: Hard dark grey fabric. This is the ubiquitous pedestal form that has no significance in date or distribution. *1635 (ditch); 1288B*

71.2 A4 base: A pedestal with dished underside. Grey; sandy feeling; patchy dark grey surfaces. The dishing is not marked, and is not very different from some A1 bases. *1641B (ditch 1469); 1464B*

Coarse ware jars

71.3 C1-2: Small coarse jar with rounded shoulder and bead rim; grey core, orange and grey surfaces. A very common form but not previously noted in grog in south Essex (usually shell). No dating bias. *1558A (gully 1466); 1055B 1020S*

71.4 C7-1: Coarse small everted-rim jar with fine horizontal combing or rilling on the body: Hard dark grey, ?no grog, patchy dark grey-brown outside. In Hertfordshire this was extremely common in the century before the conquest, but is almost unknown in Essex before AD 43, and even afterwards appears usually in non-grog fabrics. *Machining 1411 (ditch); 879B*

71.5 D2-4: Round bowl with everted rim and rippled shoulder: Hand-made, neat dark grey-brown grog, burnished dark grey outside. One of the very few hand-made pieces, and in better condition and more complete than most of the vessels from settlement contexts on the site. The form is usually pre-conquest, and was consistently period I and in native un-Romanised fabric at Sheepen; but in south Essex parallels are not so clearly early (one in a Roman fabric at Canewdon; a Romanised grog version from Hastings Road, Southend). This one is undoubtedly earlier; and is strikingly different from much of the site's pottery. *1635A (ditch) 1253B*

71.6 L2; a small lid: The form is of a rounded high bell shape without out-turned rim, a basic native type; this one, with its small extra internal flange, has no parallel. Grey with grog and some flint grits. Burnished at and under the rim. Lids are never common; others of this form are from Canewdon (Scotts Hall) and Gun Hill. *1525A (ditch 1469); 958B*

Shell tempered

There are several examples of round-shouldered jars with an inset below the rim and some kind of combed decoration on the shoulder. In grog this is type C4, found most commonly in east Kent, and more usually in shell in Essex (Sheepen, Cam. 258, mostly post-conquest). It is often post-conquest and is certainly 1st century AD, and seems confined to Essex coastal or estuarine areas.

71.7 Probably quite large, with brown rim. Shell temper. Diagonal combing on shoulder. *1641A (ditch 1469); 1415S*

71.8 Another large jar. Dark red-brown. Neat vertical combing. *Machining, LW2667; 1155S*

71.9 Similar to No. 42 but with neat diagonal combing made with a wide-pronged instrument. *Surface, LW260660; 1503S*

Pottery from the 1971–72 site

This assemblage does not have a wide range of forms, but the pieces are substantial, and comparable with the pottery from the recent North Shoebury excavations.

Grog tempered

71.10 B5-3 barrel jar with cordon on upper body: Very well made in dark grey grog; smooth dark grey-black surfaces. Sharp cordon. Pink below surfaces. Smoothed outside. These barrel jars are not necessarily related to butt-beakers, and this is a good native vessel of a type that does not last beyond the conquest. *M731 (ditch); B520*

71.11 G1.1 platter copying Cam. 1: Complete profile. Not large. Good grey-brown grog: rather darker grey-brown smooth surfaces. The only reliably pre-conquest platter copy form; this is a good specimen. *M736/M737 (ditch); B622*

Shell tempered

71.12 At least five different examples of C4. One complete profile; very small bead rim, not much inset; summary vertical incised decoration on shoulder; several holes bored in the base after firing (Fig. 71.12). The others are reddish-brown, with larger inset, and diagonal combing. Another example is black, with a deep well-combed shoulder, smooth and well made with much shell. *M736/M737 (ditch); B622; M731 (ditch); B620*

This assemblage does not have a wide range of forms, but the pieces are substantial, and comparable with the pottery from the 1981 North Shoebury excavations.

Roman pottery

by R.S. Leary,
with identifications by B. Dickinson and K. Hartley

This report was completed in 1982 before the appearance of Jason Monaghan's ceramic typology for Roman northern Kent (1987), which would now be referred to for several of the North Shoebury fabrics (*e.g.* LN, FLA, GRT). The work is also relevant to the discussion of pottery supply and trade. Pollard's 1982 paper has now been superseded by his recent book (1988).

Method

Some 2300 sherds of Roman pottery, representing a minimum of 434 vessels, were recovered from the excavation. The pottery from each context was quantified by fabric and form using sherd count and minimum vessel count. A vessel was only included in the minimum vessel count if it had a unique rim form and/or diameter or a unique body form. The fabric sherd count for each group is summarised in Figs 120–122 fiche. Each fabric and form type present is described or illustrated below.

The pottery is catalogued by context (in archive) in ceramic groups defined by the relative quantities of diagnostic forms and fabrics present. The validity of these groups is supported by the author's work on the Mucking pottery, but their chronological significance is limited by the nature of the contexts, principally field ditches removed from the focus of domestic occupation. Thus the proportions or the absence of certain types may be related to the function of the feature rather than its chronology, and its real date may be considerably later than the *terminus post quem* suggested by the pottery. The Mucking pottery provides an adequate sample for assessing the extent of this distortion and it may be possible to define the characteristics of several functional groups for a single chronological phase. At present, only a tentative chronology for the groups is given with reference to the dated sequences in London, Colchester, Verulamium and the author's work on the Mucking pottery.

The pottery from each context is discussed below and a date range suggested. An example of each type present is illustrated and the full catalogue with details of quantification, unillustrated sherds and unstratified pottery is lodged with the archive. The samian ware was identified by B. Dickinson and the mortaria by K. Hartley.

Fabrics

The fabric codes and groups used here are the same as those used in processing the Mucking Roman pottery. This will allow comparisons to be made more readily at a later date. The sherds were grouped by eye and a selection from each group examined with a binocular microscope x20. The classification is hierarchical in character, the subdivisions defined by more detailed examination. Thus it is possible to assign a residual or problem sherd to the major group and avoid a spurious attribution, *e.g.* Group FLC consists of cream-buff flagon sherds which can be divided into some five subgroups at Mucking at x20 magnification. The terminology recommended by Peacock (1977) and Young (1980) is adopted.

Inclusion size is defined as:

Fine	: <0.1mm
Medium	: 0.1–0.25mm
Coarse	: 0.25–2mm
Very Coarse	: 2–5mm

Fabric groups

BLB: Group of 'belgic' grog-tempered fabrics. Since these are residual, no further subdivisions are given.

BLA: The shell-tempered series of the Late Iron Age and early Roman period. Characteristically brown-orange with medium sand and shell in varying proportions. Occasionally grey.

BLA1: Hard and often friable; irregular fracture. Moderate-abundant medium-coarse shell inclusions; varying medium sand content; sparse coarse flint; fine-medium iron ores.

BLA2: As above with moderate medium red grog. This is grouped with BLA1 in the fabric incidence Tables since there does not seem to be any chronological or cultural difference between them.

BLA3: Brown to orange to grey. Hard. Rough, irregular fracture. Moderate medium sand; sparse medium-coarse shell; sparse coarse flint; sparse fine-medium iron ores. Fabric transitional between BLA and GRY fabric groups in character and date.

BLA4: As BLA3 with moderate medium grog. BLA4 and some BLA3 vessels occur in the Mucking 1st century, Late La Tène type kilns, but only BLA3 appeared in the 2nd-century orthodox Romano-British kiln 1.

TRA: Red-orange, often grey core. Smooth, slightly soapy feel. Fairly soft. Finely irregular fracture. Moderate medium-fine sand; moderate medium-fine iron ores; moderate medium-fine grog; moderate-sparse fine mica. One of a group of three fabrics known at Mucking, used to make local Terra Rubra copies, predominantly butt-beakers and platters.

LN: Late 1st-early 2nd century fine ware group. This is equivalent to Marsh's London Ware (Marsh 1978, 124) dated to AD 90–130. As the Mucking destruction deposit, dated by associated samian to AD 160–175, includes a substantial proportion of LN vessels, Marsh's date range should probably be extended to the mid-2nd century at least for the Lower Thames Estuary. The ware is scarce in later deposits. LNA compares well with fine wares from the Upchurch Marshes (Monoghan 1986); LNB is so similar in all characteristics except colour; it is best taken as an oxidised version. At Mucking, LNB is used in the same forms as LNA and seems to owe something to the earlier local terra rubra industry.

LNA: Black-grey. Fairly soft. Smooth, always burnished where surface extant. Finely irregular fracture, often laminar. Moderate fine sand; sparse fine mica; sparse fine oxides.

LNB: As LNA but orange to pinkish-orange. Occasionally ?lime-rich clay.

FL: Oxidised sandy fabric series.

FLA: Orange with cream slip. Fairly hard; smooth feel and often laminar fracture; moderate fine medium sand; sparse fine mica; sparse fine iron ores; occasionally lime-rich clay. A group orange sandy fabrics with cream slip commonly used for flagons. There are eight variants of this at Mucking which compare with local flagon wares (Palmer's Girls School kilns: Rodwell 1971b), Brockley Hill slipped ware flagons, and Kentish products, *e.g.* Hoe (Blumstein 1956). The variants present at North Shoebury occur at Mucking in flagon forms and also in Ware fine ware forms. As the fabric is comparable to the LNA and LNB range in all but colour, it may originate in the Upchurch Marsh area.

FLC3: Cream buff. Soft, often powdery. Smooth and very clean break. Sparse medium ?chalk; sparse fine sand; sparse fine iron ores. This is likely to be a Colchester product.

FLC5: Cream buff. Fairly hard. Sandy feel. Irregular fracture. Sparse medium sand; moderate fine sand; sparse fine chalk; moderate fine iron ores; moderate fine mica. This may also be a Colchester product.

GVC: Grey-orange. Hard, irregular fracture; moderate very coarse grog; abundant medium sand; moderate medium iron ores; moderate long black inclusions — ?burnt organics; moderate coarse flint. A coarse Local fabric used for storage jars. This fabric is not standardised.

GRY: The common grey ware series. The subdivisions of this group are rarely significant.

GRY1: Grey-black. Fairly hard. Irregular fracture. Moderate medium sand; sparse iron ores; moderate fine mica.

GRY2: As above but with coarse sand.

GRYS1: As GRY1 with slip. Slip is often difficult to detect unless it has fired silvery-white or brown. This group includes BB2 type wares and these are noted in the catalogue.

GRYS2: As GRY2 with slip.

GRYS3: As GRYS1 but fabric is light grey with dark grey slip. This fabric is very distinctive and, as it is used for late plain rim dishes and a jar in a late context, it may be chronologically significant.

GRYS1(A): As GRYS1 in lead grey. A distinctive fabric usually in late assemblages and forms.

GRYS2(A): As GRYS2 in lead grey as GRYS1(A) above.

NSP: A dustbin group for sandy coarse wares.

BB1: Black-dark grey. Hard granular fracture. Abundant coarse sand; sparse fine iron ores. Fabric and form (see Fig. 65.39,40) compare with that described by Farrar (1973) and Gillam (1974) as Black Burnished Ware category 1.

BH: Pink-cream. Hard. Granular feel and fracture. Abundant medium sand; sparse fine iron ores. This fabric can be confused with POD, but the latter tends to be yellowish and duller in colour and the BH matrix is cleaner. The fabric is similar to that of flagons identified as Verulamium region products at Mucking.

LST: Brown-buff, usually with grey core. Soft. Slightly soapy feel. Irregular fracture. Moderate-abundant medium-coarse shell; sparse medium iron oxides; sparse fine mica. In fabric and form compares with the Late Shell-Tempered Ware series (Saunders 1973) dated to the second half of the 4th century.

RET: Grey. Very hard. Rough feel. Irregular fracture. Moderate-abundant coarse sand; moderate coarse flint; sparse fine iron ores; sparse fine mica. Comparable with samples of 'Rettendon' Ware (Tildesley 1975; Drury 1976b). The flint-tempered fabric occurs in levels dated to *c.* 260–300 at Braintree, but is most common in the 4th century (Drury 1976b, 257).

POD: Yellowish-cream to off white-grey. Hard. Granular in feel and fracture. Abundant coarse sand; sparse fine iron ores. Similar in

fabric and forms to jars from Mucking attributed to the Porchester D group (Cunliffe 1975, 299) and dated to post-325 AD at Portchester. The most likely source is the Overwey kilns (Orton 1977, 35).

MH: A group of medium sandy orange fine wares which are likely to come from the Much Hadham kilns.

MHA: Bright orange. Hard. Slightly rough feel. Usually burnished externally. Finely irregular fracture. Moderate medium sand; moderate fine iron ores; sparse coarse sand; sparse fine mica. Identical to Much Hadham samples.

MHB: Cherry red. Hard. Slightly rough. Usually burnished. Finely irregular fracture. Moderate medium-fine sand; moderate fine iron ores; moderate fine mica. This fabric occurs at Mucking in flagons, bowls and beakers. It may be a Much Hadham variant or the product of some unlocated production centre. The forms suggest a late date.

ROX: Oxford red colour-coated ware. Red to red-brown with red-brown colour-coat. Fairly soft. Slightly rough feel. Finely irregular fracture. Moderate fine sand; moderate fine mica; moderate fine iron ores. Dated to AD 240–400+.

PMT: Parchment ware, probably Oxford. White to off-white, sometimes with pink core. Hard. Rough feel. Irregular fracture. Moderate medium sand; moderate fine iron ores. Dated to mid-3rd century.

OXOB: Oxford orange with white slip wares. Red-orange with white-cream slip. Soft. Slightly rough feel. Finely irregular fracture. Moderate fine sand; sparse fine iron ores; moderate fine mica. Some forms begin as early as AD 200 but the mortaria are likely to be AD 240+.

OXCM: Oxford white mortaria fabric. White to off-white. Hard. Slightly rough. Abundant coarse sand; moderate medium iron ores; sparse fine mica. Oxford white mortaria were produced from AD 100 onwards.

NV: Group of colour-coated wares comparable to the Nene Valley products. Subdivided on basis of colour and thickness.

NVA: White to off-white with black, brown or orange colour-coat. Hard. Smooth. Irregular fracture. Thick. Moderate medium-fine sand. Sparse fine mica.

NVB: As above but pink with brown colour-coat.

NVC: White to off-white with black-brown colour-coat. Soft. Smooth. Finely irregular fracture. Thin. Moderate fine sand; moderate fine iron ores; sparse fine mica.

NVD: As above with pink, sometimes grey core and reddish-brown colour-coat. The thicker sherds tend to belong to the later forms (*e.g.* Howe *et al.* 1981, nos 63–80 and nos 83–87 — predominantly late 3rd–4th century).

LNV: Buff with pale orange surface. Hard. Smooth; finely irregular fracture. Sparse-moderate fine sand; sparse-moderate fine iron ores. Comparable with mortaria from Mucking identified by K. Hartley as Lower Nene Valley products.

Any other fabrics are described separately in the catalogue.

Chronology

Group 1: c. mid–1st to early 2nd century

This group has a high proportion of BLA and BLB coarse wares and LN fine wares. Grey wares were rare (Fig. 120 fiche).

Ditch *1560*

Sherds of at least five vessels were recovered from this ditch, principally from layer A. Two sherds from layer B, an undiagnostic sandy sherd and a BLB combed storage jar sherd (Archive 9) provide a *terminus post quem* in the early to mid-1st century AD. The pottery from layer A comprises a late 1st-century BLA2 rebated rim jar with potter's graffito (Fig. 72.1); a BLB1 everted rim jar and lid; a TRA butt-beaker (Hawkes and Hull 1947, no. 115); and a Flavian-Trajanic f. 27g cup. The forms are consistent with a date in the mid-late 1st century AD for the silting up of the ditch and comparable to those from some of the late La Tène type pottery kilns at Mucking. Two grey ware sherds of a 2nd/3rd-century hooked rim jar (Jones and Rodwell 1973, type J) clearly derived from later activity in the vicinity.

Ditch *1193*

Some 41 sherds of fabrics BLA, BLB, LNA and GRY were contained in this ditch, but only four vessel forms could be identified: an early 2nd-century rebated rim jar (Fig. 72.2); a simple everted rim jar flask and a carinated beaker both of LNA ware (Marsh 1978, nos 17 and 51, dated late 1st–early 2nd century); and a grey ware bead rim jar (Fig. 72.3). The presence of LN wares and the later form of the rebated rim jar indicate this ditch silted up rather later than ditch *1560* and should be dated to the late 1st–early 2nd century AD.

Ditch *1330*

The lower filling contained a BLA1 bead rim jar with vertical combing on the shoulder (Archive No. 12), with sherds of BLB and LNA ware, suggesting a date in the later 1st century AD.

Pit *1404*

This pit yielded only five sherds, of fabrics BLA, LNB and GVC. Only one is diagnostic: a grooved LNB body sherd from a globular beaker or a butt-beaker (see also Marsh 1978, nos 22 or 51, both dating to the late 1st–early 2nd century). None of the sherds need be dated later than the late 1st century.

Group 2: c. early to mid-2nd century

This group is very similar to Group 1 and, in real terms, overlapped chronologically. The GRY content increased from 14% to 44%, and the LN fine wares doubled (Fig. 120 fiche), suggesting a date in the 2nd century. The traded wares including Colchester and Verulamium region flagons and samian, support an early/mid 2nd-century date with a little late 2nd-century activity.

Ditch *1197*

In total, this ditch yielded 128 sherds representing at least fourteen different vessels. The primary filling was dated to the beginning of the 2nd century at the earliest by the presence of two early to mid 2nd-century wide-mouthed jars (Fig. 72.8). Two 2nd-century poppy-head beakers, an LNA dish, a BLA4 cordoned jar and a BLA4 butt-beaker (Fig. 72.7) are consistent with such a date. The later filling contained more 2nd-century poppy-head beakers; LNA wares (Figs 72.4 and 5), grey wares (Figs 72.6 and 8), and a Central Gaulish samian f. 27 cup of Antonine type. A grey ware rebated rim jar, an early to mid-Antonine samian bowl, f.31, and a 3rd-century painted beaker in Nene Valley type colour-coated ware from the intersection of features *1197* and *1115* indicate these ditches continued to receive some ceramic debris until the 3rd century.

Ditch *1405/1406*

The lower layers of ditches *1405* and *1406* could not be differentiated in excavation. Their combined primary fillings contained some 84 sherds

of at least eight vessels including an LNA butt-beaker (Fig. 72.10) similar to one from a deposit of burnt pottery, which included much late 2nd-century samian, from well 4 at Mucking. Most of the other vessels are 2nd-century grey ware jars with everted or rebated rims. The latest diagnostic sherd is a late 2nd-century everted rim jar of Black Burnished Ware category 2 type fabric and form (*cf.* Marsh and Tyers 1978, type III, F5). A few earlier sherds of BLA and LNA ware were also present.

The wide mouthed jar (Fig. 72.11) from pit *1642G* provides an early/mid 2nd-century *terminus post quem* for ditch *1405*. The upper filling of that ditch yielded more wide-mouthed jars, a late 2nd-century narrow-necked jar (Fig. 72.10), everted and hooked rim jars, and an Antonine samian cup f. 33. These, and a jar base of fabric GRYS1(A) from the latest filling suggest these ditches were filling up during the mid-late 2nd century and received very little 3rd-century material.

Ditch *1431*
This ditch yielded a fairly large assemblage of 222 sherds representing at least 23 vessels. The western cutting contained several diagnostic sherds of 2nd-century date (Fig. 72.16, 17 and 18). In addition to the illustrated material a ring-necked flagon (FLA2), some LNA beakers, and an everted rim jar were also found, all consistent with a 2nd-century date.

The eastern cutting contained less and later pottery: a rilled grey ware sherd and a 3rd/4th-century late shell-tempered ware dish (Fig. 72.15).

The range of 2nd-century grey ware rebated rim jars, flasks (Fig. 72.13), wide-mouthed jars (as Fig. 64.8) and a late 2nd/3rd-century dish, a mid 2nd-century BB2 dish and a BB1 bead rim jar (Fig. 72.17), and a mid-late Antonine Ludowici Tx from the upper layers is best attributed to the silting up of the western cutting, while the small number of 3rd/4th-century sherds (Fig. 72.14 and a sherd of POD) may belong to the eastern cutting or casual losses when the ditches had silted up. Some late 1st/ early 2nd-century material (Fig. 72.12) may derive from the initial use of the ditch or from earlier occupation.

Ditch *1354*
Only grey ware sherds were found in this ditch, including sherds of a GVC storage jar, a 2nd-century grey ware rebated rim jar and a late 2nd/3rd-century bead rim dish of BB2 type form and fabric (*cf.* Gillam 1968, no. 313: Marsh and Tyers 1978, IV H5–7).

Ditch *1369*
Ditch *1369* contained some BLA and BLB sherds, and a jar of BB2 type form and fabric only. The jar compares well with the products of Mucking kiln 1 (early 2nd century), and also Gillam (1968) no. 116, dated AD 125–150.

Pit *1066*
A backfilled post medieval brickearth extraction pit which contained a small group of late 1st to mid 2nd-century pottery including an LNB carinated beaker and a Dressel 20 amphora handle.

Group 3: c. late 2nd–early 3rd century

The assemblages in Group 3 were rather small, totalling only 70 sherds and 13 vessels. The BLA, BLB and LNA fabrics of the 1st and early 2nd century had all but disappeared (Fig. 121 fiche), and such sherds as did occur are best seen as residual. The undecorated bead rim jars present and the mortaria are consistent with dates in the late 2nd–early 3rd century at the earliest.

Ditch *1461*
One complete vessel was found in this ditch: a warped bead rim dish (Archive 110) of late 2nd/early 3rd-century date.

Ditch *1462*
Ditch *1462* contained rather more pottery, some twenty-eight sherds of six vessels, all grey ware. Sherds of four wide-mouthed jars, as Fig. 72.8, were identified, three of which are typologically late, perhaps 3rd century. The presence of a rebated rim jar and a bead rim jar (see Fig. 72.1 and Jones and Rodwell 1973, type J) points to a late 2nd/3rd-century date.

Similar late 2nd/early 3rd-century BB2 type bead rim dishes, wide-mouthed jars, and everted rim jar sherds were recovered from ditches *1576, 1578* and *1594*. Pit fill *1643A* contained a mortarium base of Essex type dated by K. Hartley to the 2nd or 3rd century. Another mortarium (Fig. 72.22), from Lower Germany, dated to AD 150–250 by K. Hartley, came from pit fill 1393A together with a late 2nd/early 3rd-century bead rim dish of BB2 type (*cf.* No. 110) and a jar body sherd.

Group 4: 3rd–early 4th century

Diagnostically 3rd and 4th-century fine and coarse wares such as GRYS2(A), ROX and NV appeared, while fabrics BLB and BLA continued in a residual capacity only as one would anticipate on such a multi-period site. The small quantity or absence of Group 5 types such as MHA, LST, RET and POD sherds suggested these features received little ceramic debris in the later 4th century.

Ditch *1417*
130 sherds of at least thirteen vessels were recovered from this ditch. The majority is grey ware with a little residual BLA and LNA and some late fine wares. The primary filling contained the base of a GRYS1(A) dish and a grey ware hooked rim jar, giving a *terminus post quem* in the 3rd century. The pottery from the re-cutting includes: wide-mouthed and ovoid jars, as Fig. 64.8 and 19; 3rd–4th century plain rim dishes (see Fig. 72.6): two rebated rim bowls (*cf.* Jones and Rodwell 1973, type G, 3rd century); two Nene Valley type painted globular beakers of 3rd-century type (Howe *et al.* 1981, no. 50); and an Oxfordshire red colour-coated mortarium dated AD 240–400+ (Young 1977, C97). This assemblage points to a date range in the mid-late 3rd century for the main filling of that cutting. The flanged-neck ovoid jar (Fig. 64.23) and the sherds of LST and RET wares suggest the ditch went out of use in the later 4th century.

Pit *1390*
Several grey ware wide-mouthed and hooked rim jars, a folded beaker sherd and a plain rim dish (as Fig. 72.6) were found in this pit, along with a 2nd-century samian bowl, f. 30 or 37. The assemblage was assigned to Group 4 because of the dish and the hooked rim jars which superceded rebated rim jars in the 3rd century. It could, however, belong to Group 3.

Pit *1610*
This pit contained rather more pottery than pit *1390*. A flanged dish of fabric GRYS2(A) dated to the mid 3rd century and a 3rd/ 4th-century globular beaker (Fig. 72.24) suggest a date in the mid-late 3rd century for this assemblage. The wide-mouthed jar (*cf.* Fig. 72.8), bead rim dish, a late 2nd/3rd-century mortarium (Fig. 73.36), and a late 2nd/early 3rd-century samian dish, f. 31R, agree with such a date.

Cremation pot *1586*
The upper part of this vessel did not survive. The plain based body in GRY2 fabric probably belonged to a medium necked jar (*cf.* Jones and Rodwell 1973, type J), the predominant jar form of the 3rd-early 4th century. The body is decorated with a single groove outside the upper body and a post-firing incised cross outside the base.

Ditch *1227*
A large amount of pottery was recovered from this ditch, some 245 sherds of at least twenty-nine vessels. Traded wares include a Nene Valley type late 2nd/3rd-century folded beaker and an Oxfordshire red colour-coated painted flanged bowl dated to AD 270–400+ (Young 1977, C48). A few sherds of fabrics BLA, BLB and LNA indicate earlier activity in the area. The GRY and GRYS(A) vessels suggest a late 3rd/early 4th-century date (see Fig. 72.29–32, 73.33–35, and unillustrated plain rim dishes, rebated rim bowls and an indented beaker with oval and slit folds). Several of the near complete vessels are substandard or misfired (see Fig. 72.30; 73.33, 34 and an unillustrated storage jar sherd which was burnt and cracked) and may be interpreted as kiln waster debris. Other sherds are quite clearly domestic rubbish and have carbonised remains adhering to the inner face.

Two sherds of possible late shell-tempered ware were identified but, otherwise, no Group 5 material was present.

Group 5: mid–late 4th century

This group is characterised by the presence of fabrics GRYS1(A) and GRYS2(A) along with late 4th-century coarse wares: LST, RET and POD, and 4th-century fine wares from the Oxfordshire, Much Hadham and the Nene Valley industries (Fig. 122 fiche).

Ditch *1437*
An LST plain rim dish (cf. Corder 1951, fig. 10, no. 42) together with a grey ware narrow-necked jar and an MHA jar came from the primary filling of the first re-cutting, demonstrating its use in the second half of the 4th century.

Ditch *1402*
Some 323 sherds of at least fifty-four vessels were found in this much re-cut ditch (73.38–49). Diagnostically 4th-century pottery included: grey ware ovoid jars (as No. 72.9); LST jars (Fig 73.44, 45); an MHA bowl and beaker (Fig 73.46, 47); a Nene Valley type jar (Fig 72.49), flanged bowl, and mortarium (Howe *et al.* 1981, no. 102, dated AD 350–400); and three Oxfordshire red colour-coated ware bowls (Young 1977, C52, C69 and 75–9). In addition, grey ware plain and flanged rim dishes, hooked rim jars, ovoid and wide-mouthed jars and rebated rim bowls, all common in the 3rd–4th century, were present, suggesting the filling dated principally to that period. Some earlier material such as 2nd-century London fine wares, BB2 ware (Fig. 73.39, 40), grey wares (Fig. 73.42), and samian, may derive from the earliest phases of the ditch or from an earlier use of the area. The majority of the vessels are consistent with a later 4th-century date.

Ditch *1470* and spread *1644*
Some 148 sherds of seventeen vessels were found in this feature. Most are of 4th-century date with a small percentage of earlier fabrics and forms (Fig. 73.51). The grey ware vessels comprise grooved rim dishes (Fig. 73.50), pedestal jars (see No. 64.9), flanged and plain rim dishes (Fig. 73.52–54), everted rim and flanged rim jars. Late 4th-century LST jars and dishes (Fig. 72.53, 55) and sherds of Rettendon Ware were present, and a reeded rim bowl of Alice Holt type (Fig. 73.57). The many ROX, MHA and NV vessels confirm a late 4th-century date, and include: forms C52, 55, 82, 94, 97 and 68 or 81 (Young 1977); a Much Hadham dimpled sherd and flagon; and a Nene Valley type rouletted vessel. A parchment ware painted bowl (Young 1977, 24) was found in the spread from *1470*.

Ditch *1015*
This ditch yielded a similar range of pottery to *1402* and *1470*, and should be dated to the later 4th century. The coarse wares comprise grey ware late ovoid and wide-mouthed jars (Fig. 72.8 and 9); flanged and plain rim bowls; a bifid rim dish (Fig. 73.54); LST jars; and Rettendon ware. The majority of the fine wares are Oxfordshire red colour-coated vessels of late 4th- century type (Young 1977, C68, 77 and 81) and a small number of Nene Valley types including a 4th-century plain rim dish and a flagon.

Ditches *1230, 1368* and pits *1371, 1603*, contained a similar range of pottery, and the presence of 4th-century grey wares, fabrics LST, POD and RET, and 4th-century fine wares from the Oxfordshire and Nene Valley kilns give a date in the later 4th century. Ditches *1328, 1366* and *1566* yielded similar 4th-century material, and Saxon sherds from *1015, 1177, 1470, 1562* and *1644*, supported their late dating.

Contexts *1334, 1385* and *1580* yielded insufficient pottery to be grouped. A Hadrianic-Antonine samian sherd from *1334* provides a *terminus post quem*.

Great Wakering
284 sherds of pottery representing at least forty-four vessels were recovered from excavations at Great Wakering, and these compared typologically with North Shoebury Groups 4 and 5. None of the early fabrics BLA, BLB and LNA were present, suggesting there was no occupation on the site during the 1st and 2nd centuries. The coarse wares consist principally of: wide-mouthed jars (Fig. 72.8); everted and hooked rim jars (Jones and Rodwell 1973, type J); rebated rim jars (Fig. 73.65); ovoid jars (Fig. 73.66): bead rim bowl; and a Rettendon ware jar. These along with 4th-century Oxfordshire, Much Hadham and Nene Valley fine wares (Howe *et al.* 1981, no. 73; Young 1977, C45 and M22) point to a 4th-century date for the site assemblage.

Pottery supply and trade
Throughout the Romano-British occupation, the North Shoebury pottery displays close stylistic affinities with the Thames Estuary ceramic zone of Essex and Kent. The late 1st and early 2nd-century shell-tempered bucket and rebated rim jars, especially the graffito jar (Jones 1972), are common on Thames-side sites such as Gun Hill, Mucking, Cooling and Canvey Island, and are known to have been produced at the Mucking and Gun Hill kilns. The traded fine wares of Groups 1 and 2 were probably supplied by the Upchurch kilns in Kent, with flagons coming from there and also the Verulamium region kiln. These Upchurch-type fine wares supplied most of the non-samian fine wares from Mucking in the late 1st-2nd century and Pollard (1982) notes a similar popularity in Kent.

In the 2nd century, true grey wares and BB2 type wares appear at Shoebury as at Mucking where technological improvements can be traced in the kilns. The exchange of goods and ideas in the Thames zone continues and this stylistic homegeneity was probably both responsible for and, at the same time, encouraged by the success of the BB2 wares. It is notable that the rebated rim jar and hooked rim jars are, in fact, more common on settlement sites than the BB2 everted rim jars. This adds weight to the suggestion that the BB2 jars were being produced for consumption outside the area of origin.

The nature of the organisation of the pottery industry is far from certain. A pattern is emerging of small groups of kilns situated on estates and presumably supplying those estates with vessels for local use and for export whether as tax in kind or as traded commodities. Two pottery kilns are known at Shoeburyness (Laver 1896b: Marsh and Tyers 1978) and one at Wakering (Marsh and Tyers 1978), and the assemblage from feature *1364* includes several vessels which may be wasters or, at least, seconds. Taken with a warped dish from feature *1461*, the grey wares are all likely to be locally produced. Barford (p.126) notes two pieces of fired clay that may have been firebars (from *1219* and *M537*). The distribution of kilns all along the estuary and the stylistic homogeneity of the BB2 wares and grey ware jars (*e.g.* Nos 24–48: see also Pollard 1982) may be indicative of itinerant potters (but see Birss 1982) or, alternatively, a 'workshop' type industry (Peacock 1981). In this case, the potter depends on pottery for part of his income but is not a full time potter. Improved communications, ascertained by the increase in traded goods, would be sufficient to explain the parallel development of pottery types in this zone during the 2nd–early 4th century.

Fine wares of the late 2nd–early 4th century came from the Nene Valley and Oxford potteries, with mortaria from Essex kilns, the Lower Nene Valley, the Mancetter-Hartshill kilns, and one from Lower Germany. A similar range of traded wares is found at Mucking. In the later 4th century, coarse ware jars from kilns in the Rettendon area, Northamptonshire or Hertfordshire, and Surrey appear with Much Hadham fine wares. Grey wares continue to account for *c.* 50% of the assemblage, so presumably some local production continued despite the popularity of non-local coarse wares. North Shoebury contrasts with Mucking in its use of late shell-tempered wares, and the restriction of Much Hadham wares to the late 4th-century phases. This may be the result of a change in marketing zones or a hiatus in the occupation of Mucking at this time. The Great Wakering pottery has the same characteristics as the 4th-century North Shoebury group with the addition of a tantalising hint at the nature of the Romano-Saxon interface. A single chamfered basal sherd from Great Wakering, in a fabric identical to an Anglo-Saxon sherd from North Shoebury, is suggestive but inconclusive.

Catalogue of illustrated sherds

Group 1 (Fig. 72)

72.1 **Rebated rim jar** with potter's graffito. **BLA 2**
This is the principal jar form on Thames-side sites in the 1st and 2nd century AD. The earlier examples are shell-tempered and hand-made, possibly with a wheel-turned rim. The later examples are sand-tempered and grey often with a more everted rim (see Fig. 72.2) and are wheel-thrown. They are produced in BLAI in the Mucking Late La Tène type kilns, (late 1st century), in BLA3 in kiln I (early 2nd century) and GRYI or 2 in kilns VI (late 2nd century) and II (late 2nd–early 3rd century). They are also known from North Kent kiln sites such as Cooling. The graffito jars are restricted to the early kilns (Jones 1972) and they have a South Essex distribution bias (Birss 1982). *1560A (ditch 1470); 1470S.*

72.2 **Rebated rim jar. BLA 3**
More everted type, Jones and Rodwell 1973, no 25. 2nd century. *1216B (ditch 1193); 528B.*

72.3 **Elongated bead rim jar. GRY 2**
cf. Marsh and Tyers 1978, type II J, 1st–2nd century. A very uncommon form on Thames-side sites. *1216A (ditch 1193) 422B.*

Group 2 (Fig. 72)

72.4 **Short everted rim beaker. LNA**
Marsh 1978, no. 22. Late 1st to mid-2nd century. *1341B (ditch 1197) 724B.*

72.5 **Flask or butt beaker. LNA**
Multiple cordons above a band of dash rouletting (*cf.* Marsh 1978, no. 51); Hawkes and Hull 1947, no. 119. Both types are common in late 1st–mid 2nd century contexts at Mucking. *1341B (ditch 1197); 725S.*

72.6 **Plain rim dish. GRYS1**
Chamfered. Undecorated plain rim dishes are most common in the 3rd and 4th century, but occur in the mid 2nd century at Verulamium (Frere 1972, no. 993). *1341B (ditch 1197).*

72.7 **Butt beaker. BLA 4**
Cordoned and burnished on body. The fabric suggests a post conquest date around the middle of 1st century AD, Hawkes and Hull 1947, no. 115D. *1327C (ditch 1197); 654B.*

72.8 **Everted rim wide mouthed jar** with oblique burnished line decoration on shoulder. **GRYS 1**
Jones and Rodwell 1973, type K. A wide mouthed jar with everted hooked or bead rim and burnished shoulder decoration. These jars replace the 'Belgic' cordoned bowl series in form, capacity and, perhaps, function. The 1st and 2nd century types use a similar decorative range of cordon, grooves and geometric line burnishing superceded by wavy line burnishing in the 3rd and 4th century. The form is extremely common and diplays some regional characteristics (Detsicas 1966, 164). The Highgate, Chelmsford and North Essex early types (see Braintree: Drury 1976b, fig. 43, no. 11; Highgate: Brown and Sheldon 1974, fig. 4, nos 47–59: fig. 5 nos 85–6) are angular contrasting with the smoother profiles of the Mucking, Greenhithe (Jones and Rodwell 1973, fig. 7, no. 62; and Detsicas 1966, fig. 6, nos 73–4) and Upchurch vessels, although the decorative motifs are shared. The North Shoebury examples compare better with the angular group and these are dated to AD 100–160 at Highgate, AD 90–125 at Richborough (Bushe-Fox 1949, pl. 90, no. 425). At Mucking their equivalent is produced in the 2nd-century kilns I and VI with lattice, oblique, vertical and chevron line burnishing. The later jars with wavy line decoration are standard throughout these areas and, at Mucking, are dated to the 3rd and 4th century, produced in kilns II, III, IV and V. As a group these jars complement the ovoid jar series (see Fig. 72.19) and share the same decorative motifs (Birss 1982). *1327 (ditch 1197); 644B.*

72.9 **Hooked rim narrow necked jar. GRYS 1**
The form and fabric compares well with ovoid jars from Mucking kiln VI late 2nd century. In form and chronology these occupy an intermediate position between the 'Belgic' pedestal jars and the later Roman ovoid jar series (see Jones and Rodwell 1973, type N). The Mucking Late La Tène kilns produced everted rim ovoid jars with shoulder cordons and the 2nd-century kiln VI ovoid jars with everted or bead rims in GRY1 or 2 suggests some continuity. BLA3, BLA4 and GRY pedestals from settlement context strengthens the typological chain. Further work on the Mucking material supports a 3rd–4th century dating of type N jars. (Jones and Rodwell 1973, 31). Some bodysherds with geometric line burnish hint at a similar decorative sequence to the wide mouthed jars (see Fig. 72.18). A 1st-century ovoid jar with oblique line burnishing from Richborough supports this suggestion. (Bushe-Fox 1949, pl. 87, no. 385). Since bodysherds can be often attributed to either ovoid or wide mouthed jars, their typological changes are difficult to distinguish. *1642C (ditch 1405).*

72.10 **Butt beaker. LNA**
A developed butt beaker type of the Cam 119 type. LN butt beakers of this form are fairly common in late 1st century and 2nd century contexts at Mucking including the Well 4 destruction deposit. *1642E (ditch 1646).*

72.11 **Wide mouthed jar. GRYS 1**
Angular type with double shoulder groove see No. 18 2nd century. *1642C (ditch 1405) 1459B.*

72.12 **Everted rim bowl. LNA**
cf. Marsh 1978, type 44, AD 90–130. Colchester (Hull 1958, fig. 23, no. 43) mid 2nd century and in Mucking Well 4 deposit. AD 160–75. *1563A (ditch 1431) 1076B.*

72.13 **Everted rim flask. GRY 1**
cf. Jones and Rodwell 1973 type O with sparse dating evidence. *1563A (ditch 1431).*

72.14 **Ovoid jar. GRY 2**
Seven rows of rectangular notch rouletting decoration, of Jones and Rodwell 1973, no. 68. 4th century. See archive catalogue no. 19. *1563C (ditch 1431); 1102S.*

72.15 **Grooved rim dish. LST?**
An unparalleled form in LST but compares with 3rd–4th century GRY dishes of Gillam 1968, nos 316–321. *1563D (ditch 1431) 1127B.*

72.16 **Everted rim wide mouthed ?? GRYS 2**
With vertical line burnish. 2nd century see no. 64.8, *cf.* Brown and Sheldon 1974, fig. 6, no. 85, mid 2nd century and also jar paralleled at Palmers Girls' School kilns dated AD 150–250. *1563G (ditch 1431); 1174B.*

72.17 **Bead rim jar. BB 1**
Gillam 1976, no. 30, dated to Hadrianic–Antonine period but surviving into 3rd century AD. This pot has burnished lattice decoration. *1563H (ditch 1431); 1180S.*

72.18 **Everted rim wide mouthed jar. GRYS 1**
With lattice burnish. See no. 18. *1563G (ditch 1431); 1200S.*

72.19 **Bead rim storage jar. GVC**
Jones and Rodwell 1973, type S. These develop from the 'Belgic' storage jar series and are chronologically insensitive. *1240A (ditch 1197) 576B.*

72.20 **Everted rim jar. GRYS 2**
BB2 type fabric and form, *cf.* Higham Kiln products (Pollard 1983 dated AD 160–80; and Marsh and Tyers 1978, II, F12. AD 120–late 2nd century. *1563G (ditch 1431); 1174B.*

Group 3 (Fig. 72)

72.21 **Bead rim. GRYS 1**
Complete undecorated bead rim dish with warped profile. *cf.* Gillam 1968, no. 313; and Marsh and Tyers 1978, type IV H S–7. Late 2nd–early 3rd century AD. *1461 (ditch); 945S.*

72.22 **Mortarium** from Lower Germany.
Buff, hard, white and pink, sand and red oxide inclusions, pink and white trituration grits. AD 150–250. *1393A (pit) 1319S.*

Group 4 (Figs 72–73)

72.23 **Flange necked ovoid jar. GRYS 1**
cf. Jones and Rodwell 1973, no. 73. This example compares with Mucking kiln IV products dated tentatively to the late 3rd–early 4th century. *1417 (ditch); 891B.*

72.24 **Bead rim globular beaker. GRYS 1**
A fairly wide mouthed beaker similar to Hull 1963b, no. 408, dated late 3rd–4th century. *1610 (pit) 1192B.*

72.25 **Pendent beam rim jar. GRY 2**
With double shoulder groove, *cf.* Jones and Rodwell 1973, no. 47. *1364A (ditch 1227); 813S.*

72.26 **Flanged dish. GRY 2**
Upturned flange burnished underneath, ?Slipped Archive catalogue no. 360. *1364A (ditch 1227); 744B.*

72.27 **Incipient flanged dish. GRYS 1**
Typologically, this form is a precursor of the flanged dish but chronologically they co-exist (see Jones and Rodwell 1973, type C). *1364A (ditch 1227); 817B.*

72.28 **Flanged dish. GRYS 1**
Common dish form from the mid-3rd century. See archive catalogue no. 156. *1364A (ditch 1227); 744B.*

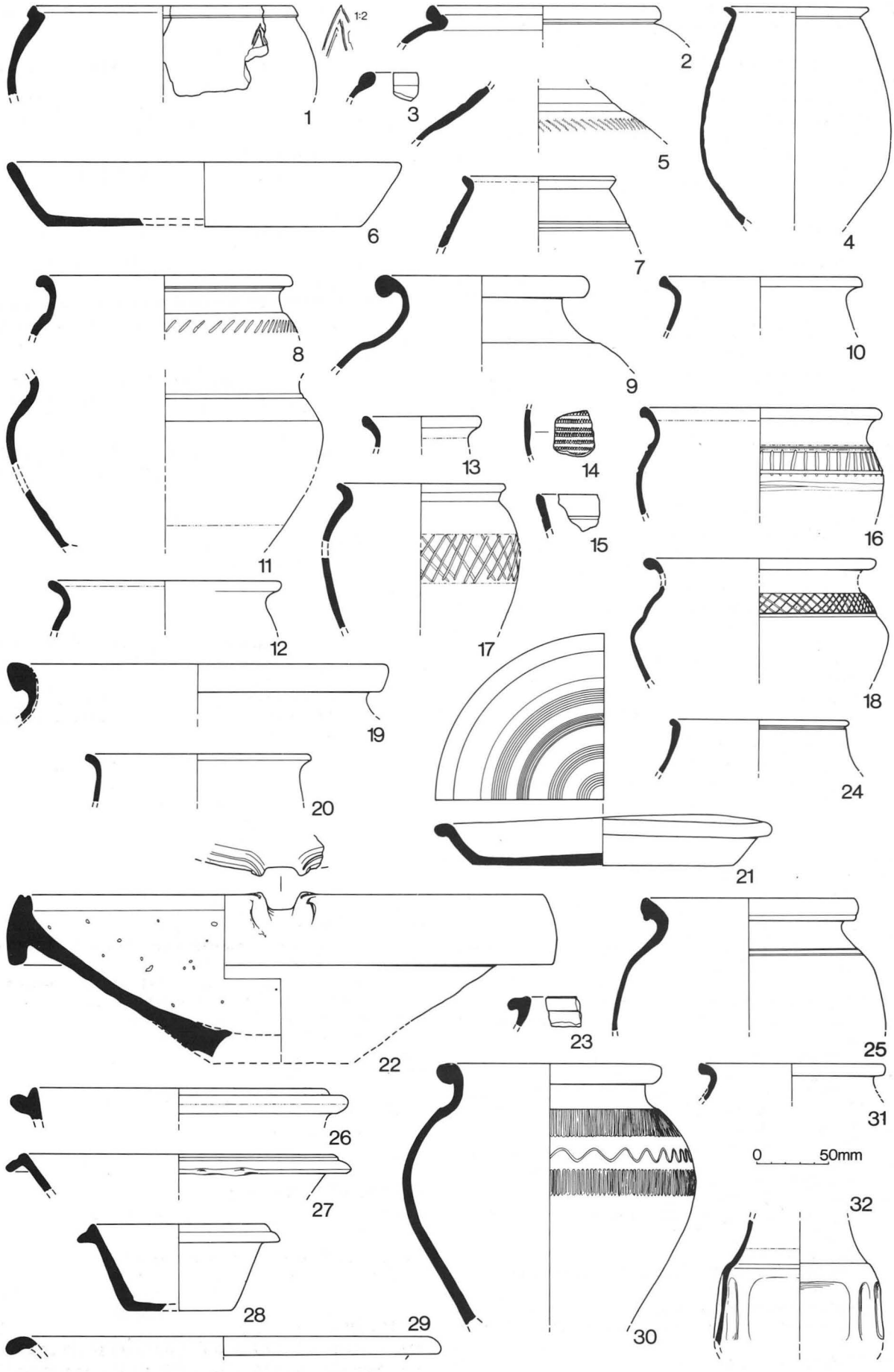

Figure 72 Period III Roman pottery.

72.29 **Flange rim bowl. GRYS 1 (A)**
Burnished, *cf.* Jones and Rodwell 1973, type L, a wide mouthed jar variant found in 3rd and 4th century contexts. *1364A (ditch 1227); 828B.*

72.30 **Bead rim jar. GRY 2**
Decorated with two rows of rouletted vertical lines and wavy line burnish between. The roulette wheel has pulled clay slightly possibly due to applying wheel before the pot was sufficiently dried out. Such a decorative jar of this form is unusual, *cf.* Hull 1958, fig. 56, from pit dated to *c.*AD 100. At Mucking more elaborate decoration on GRY 2 vessels is restricted to 3rd–4th century assemblages at present. *1364B (ditch 1227); 832S.*

72.31 **Everted rim jar. GRY 2**
1364B (ditch 1227); 858.

72.32 **Beaker. GRYS 1**
Long necked folded beaker burnished. 3rd–4th century. *1364B (ditch 1227); 818S.*

73.33 **Wide mouthed jar. GRYS 1 (A)**
With wavy line burnish on shoulder. The decoration is discontinuous and carelessly executed. Another sherd from the same deposit probably belonged this vessel. A hole made in the wall during throwing had been patched from within, and carelessly smoothed on. See No. 72.8. 3rd–4th century. *1364B (ditch 1227); 923B.*

73.34 **Globular beaker. GRYS 1 (A)**
Narrow mouthed burnished beaker, *cf.* Hull 1963b, no. 409. 4th century. The base has blown internally. ?Waster. *1364B (ditch 1227); 857S.*

73.35 **Ovoid jar**. GRYS 1
Decorated with two zones of vertical line rouletting divided by a burnished zone. The wheel has drawn clay as with archive catalogue no. 194. The difference in the breadth of the rouletted zones may be due to a partial register of the wheel. Probably one of the narrow necked ovoid jar series. See No. 72.9. *1364B (ditch 1227); 924S.*

73.36 **Mortaria**. ?Essex
Rim buff, Hard Sparse-moderate sand and flint inclusions with one surviving black trituration grit. Late 2nd–3rd century. *1610 (pit) 1182B.*

73.37 **Short everted rim necked bowl. GRYS 1**
Late and rare variant of the wide mouthed jar series (see Fig. 72.8). It is paralleled by a late 3rd- or early 4th-century grave in Mucking cemetery IV and a bowl in a 4th-century layer at Angel Court, London Blurton 1977, no. 235) and at Braintree in phase III, dated AD 300–360/70 (Drury 1976b, fig. 26 no. 112). *1364A (ditch 1227) 812S.*

Group 5 (Fig. 73)

73.38 **Jar. GRYS 1**
Unusual sherd decorated with oblique grooves and burnished all over outside. *Machining ditch 1596; 899B.*

73.39 **Heavy triangular rim dish.**
With acute lattice burnish. BB2 type form and fabric. *cf.* Marsh and Tyers 1978, IVH2, AD 130/140+. *Machining ditch 1596; 1284B.*

73.40 **Slightly triangular rim dish. GRYS 2**
With acute lattice. BB2 type fabric and form. *cf.* Marsh and Tyers 1978, IVG3, AD 120–150+. *Machining ditch 1596; 900B.*

73.41 **Elongated beam rim jar. GRYS 1**
A variant of the ovoid jar series. See No. 72.9, *cf.* Jones and Rodwell 1973, no. 111; Blurton 1977 no. 213 in a 4th-century layer. *1596A (layer); 1367B.*

73.42 **Hooked rim dish. GRYS 1**
cf. Gillam 1968, no. 312, AD 190–210. *1596A (layer); 1367.*

73.43 **Short everted rim jar. GRYS 2**
Burnished. *1596A (layer) 1367B.*

73.44 **Hooked rim jar. LST**
2nd half of 4th century, *cf.* Clark 1972, fig. 88. *1596A (layer) 1362B.*

73.45 **Everted rim jar. LST**
2nd half of 4th century, *cf.* Clark 1972, fig. 88. *1596A (layer) 1296B.*

73.46 **Bifid flanged bowl. MHA**
cf. Tyres *et al.* 1977, fig. 24, no. 23, AD 360–70. *1596A (ditch) 1296B.*

73.47 **Pedestal base. MHA**
1596B (ditch); 1368S.

73.48 **Bifid everted rim jar. NVC**
?Howe *et al.* 1981, no. 70. 4th century. *1596A (ditch); 1296B.*

73.49 **Hooked rim. GRYS 1 (A)**
?Part of wide mouthed jar. See No. 72.18. *1596A (ditch); 1285B.*

73.50 **Double grooved rim dish. GRYS 1 (A)**
cf. Gillam 1968, no. 321. AD 350–400. *1470 (ditch); 1151B.*

73.51 **Flange rim ovoid jar. GRYS 1**
Variant *cf.* No. 72.9 group 1, *cf.* Jones and Rodwell 1973, type M. 3rd–4th century. With shoulder cordon. *1548A (ditch 1470); 1029B.*

73.52 **Plain rim dish. GRYS 3**
cf. Gillam 1968, no. 330 (AD 330–70), and no. 333 (AD 350–400). *1548A (ditch 1470); 1030B.*

73.53 **Plain rim dish. LST**
2nd half of 4th century AD. *1548A (ditch 1470); 1030B.*

73.54 **Bifid rim dish. GRYS 1**
cf. Jones and Rodwell 1973, fig. 4, no. 7. *1036 (ditch 1015) 313B.*

73.55 **Hooked rim jar. LST**
Rilled. *cf.* Clark 1972, fig. 88. 2nd half of 4th century. *1371 (pit); 1028B.*

73.56 **Mortarium rim. Essex**
Pinkish buff. Hard. Moderate medium sand. No trituration grits. Probably 3rd century but a late 2nd century date not impossible. *1637A (ditch 1470) 1490B.*

73.57 **Reeded rim bowl. GRYS 1**
This form is not known at Mucking and compares with Alice Holt products, *cf.* Lyne and Jeffries 1979, Class 3E, 3rd–4th century. *1644A (layer) 1465B.*

73.58 **Flanged dish. GRYS 1 (A).**
4th century. *1227 (ditch); 781B.*

73.59 **Wallsided mortarium. MANC**
Painted *c.* AD 260–360. *1366 (ditch 1353) 836S.*

Non-Grouped (Fig. 73)

73.60 **Bowl. GRY 1**
With shoulder grooves, *cf.* Lyne and Jefferies 1979, type 5c, strainer. AD 270–420. *Unstratified; 794B.*

73.61 **Bead rim bag beaker. GRYS 1**
With a zone of notch rouletting outside middle body, *cf.* Hull 1963b, fig. 94, no. 41, from kiln 28, dated to *c.*mid 3rd century. *Unstratified; 847S.*

73.62 **Everted rim jar. RET**
Tildesley 1975, type A, fig. no. 21. *Unstratified 898B.*

73.63 Everted rim neck jar. MHA
Mid 3rd century. *Unstratified; 764B.*

73.64 **Bead rim jar. MHA**
Unstratified; 898B.

Great Wakering (Fig. 73)
Abbreviations N.S. = North Shoebury

73.65 **Slightly rebated rim jar. GRY 2**
Late variant *cf.* Jones and Rodwell 1973 type J. *Trowelling.*

73.66 **Everted rim ovoid jar. GRYS 1**
With vertical incision on rim and wavy line combing and burnishing outside body. See N.S. no. 72.19.

73.67 **Bead rim bowl. GRY 2**
Single groove outside upper body.

73.68 **Short everted rim jar.**

73.69 **Dish base. GRYS 1**
At least two circles of burnishing.

73.70 **Everted rim jar.**
With single girth groove.

The Early Saxon pottery
by Susan Tyler

The pottery from the 1981 excavations
(Fig. 74)

Introduction

Excavations in 1981 at North Shoebury produced a total of twenty-eight sherds (707g) of Early Saxon pottery. The sherds represent at least twenty-four vessels, most of the pottery being derived from the machined surface or upper fills of Roman features.

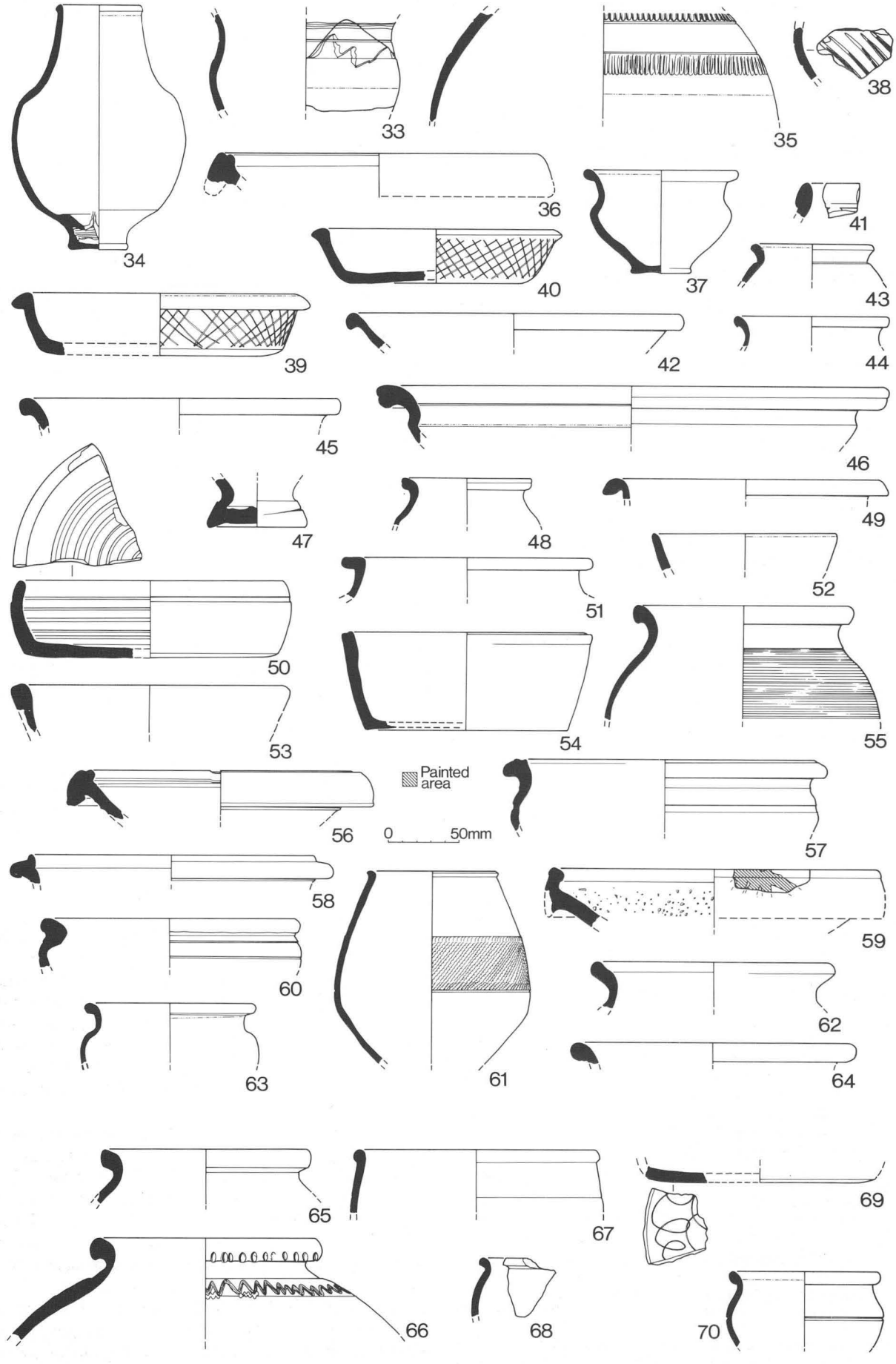

Figure 73 Period III Roman pottery.

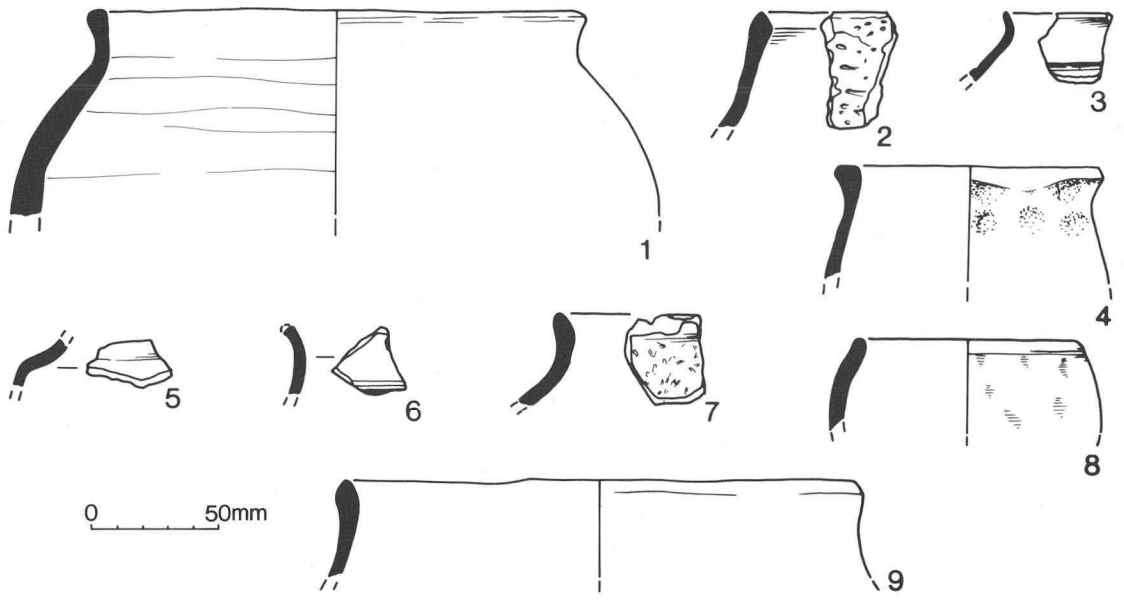

Figure 74 Period IV Early Saxon pottery.

The sherds were examined with the aid of a binocular microscope giving a x20 magnification. All fabrics were found to be hard (*i.e.* could not be scratched with a finger-nail).

The following terms have been used:

Size of temper

Small:		
particles <1mm diam.	Sparse:	<5 per cm^2
Medium:		
particles 1–2mm in diam.	Common:	6–10 per cm^2
Large:		
particles >2mm in diam.	Abundant:	>10 per cm^2

Catalogue of illustrated sherds

Ditch *1562*

74.1 Everted rim: Slightly angular profile (top flattened). Quartz-sand temper; abundant small particles, also common voids giving slightly vesicular appearance (possible caused by leached-out chalk or limestone). Outer surface patchy, reddish-brown to dark brown; inner surface dark brown; core light grey. Wt 88g. *1562A: 1081B.*

Ditch *1470*

74.2 Rim: Upright, angular profile. Vegetable temper; abundant large voids. Dark brown throughout. Carbon residue on interior. Wt 11g. *Machining 1470: 1151B.*

74.3 Everted rim: rounded. Quartz-sand and ?chalk temper; small to medium quartz-sand particles and common voids (possibly leached-out chalk or limestone), giving a vesicular appearance. Dark grey throughout. Decorated with a single horizontal groove. Wt 6g. *1602A: 1342B.*

Layer *1644A*

74.4 Slightly everted rim: Angular profile (top flattened). Quartz-sand temper: abundant small particles. Dark grey throughout. Burnished interior and exterior. Finger-impressions beneath rim. Wt 22g. *1644A: 1419B.*

74.5 Carinated shoulder body sherd from a biconical bowl: Quartz-sand temper, including a high proportion of mica; abundant small particles. Surfaces dark grey; core light grey. Wt 5g. *1644A: 1419B.*

74.6 Rim: Hollow neck. Decorated with two horizontal grooves (probably the beginning of series of necklines). Quartz-sand temper; abundant medium to large particles. Surfaces dark brown; core laminated reddish-brown and light grey. Wt 4g. *1644A: 1419B.*

Unstratified

74.7 Everted rim: Rounded; probably from a globular vessel. Vegetable temper; abundant large voids and particles. Dark brown throughout. Wt 11g. *Field surface, Grid DE: 43B.*

74.8 Upright rounded rim, probably from a globular pot: Quartz-sand temper; abundant small particles. Surfaces orange-brown; core dark brown. Wt 18g. *Machining, DE500210: 1145B.*

74.9 Slightly everted, rounded rim: Quartz-sand temper; abundant small particles, common large particles. Dark brown throughout. Carbonised residue on exterior surface. Wt 28g. *Machining, DE500210: 1145B.*

Discussion

Temper: The predominant fabric is tempered with abundant quartz-sand, mostly small well-sorted particles, and accounts for almost two-thirds of the total sherd weight. Fabrics tempered with a mixture of quartz-sand and vegetable matter (180g), vegetable matter only (29g), and shell (6g), make up the other third.

It has been noted at the Mucking Early Saxon settlement site that the pottery belonging to the earliest phase of settlement exhibits a wide variety of fabrics, tempered with quartz-sand, chalk and vegetable matter; later in the settlement sequence grass-tempered wares predominate (M.U. Jones, pers. comm.: Wilkinson 1988). The wide variety of fabrics at North Shoebury, in what is a comparatively small assemblage, indicates a date range for the pottery near the beginning of the Early Saxon period.

Surface treatment: The intentional roughening of the surface of a pot by the application of a slip containing large grits (*'schlickung'*) has been identified at several Early Saxon settlement sites in southern and mid-Essex including: Mucking (Jones, M.U. 1980, 85); Barling (Couchman 1977a, 66–7); and Heybridge (Drury and Wickenden 1982, 16). *Schlickung* is also present at North Shoebury; in residual and unstratified contexts.

Forms: The pottery is highly fragmented and abraded, and little can be said regarding its form. The predominant shape appears to be a globular or sub-globular jar with upright or slightly everted rim and slightly sagging base. The occurrence of upright rims suggests a 5th-century date for the assemblage (Myres 1977, 6–7). This early date

range is reinforced by the presence of a sharply carinated shoulder sherd from a biconical bowl (Fig. 74.5) of a type dated by Myres (1977, 2) to the 5th century.

Conclusions
The characteristics of the pottery assemblage from the 1981 excavations at North Shoebury are consistent with those from other Early Saxon settlement sites in southern Essex; of particular note is the presence of '*schlickung*' and the wide variety of fabric tempers. The postulated date range for the assemblage is the earlier part of the period AD 400–700, indicated by both the forms and fabrics represented.

The pottery from the cemetery (excavated 1971 to 1972 by D.G. Macleod)
The cemetery pottery is described in the grave inventories in Part 2. It comprises: six cremation vessels (features *M636, M638, M647, M648, M651* and *M653*); two Frankish wheel-turned vessels associated with cremation *M651*; and one inhumation accessory vessel (feature *M685*).

Discussion
Fabrics: The pots show a variety of fabrics. Of the hand-made pottery, two are tempered with abundant quartz-sand, one with vegetable matter, and two with a mixture of chalk and vegetable matter. The wheel-turned Frankish vessels are quartz-sand tempered, as are those from the nearby Saxon cemetery at Prittlewell, near Southend (Southend Central Museum Accn Nos 403/1 and 404/1). An interesting feature of these wheel-turned pots is the apparent roughening of the bottom half of each pot presumably to assist handling. This may have been achieved by the application of a slip containing large quartz-sand particles.
Form: The inhumation vessel (from feature *M685*) and one of the six cremation vessels (that from feature *M638*) are plain globular-shaped pots and are not closely datable, although the almost upright rim on that from feature *M685* may indicate a 5th-century date.

The two pedestal-footed sub-biconical pots (from features *M651* and *M636*) have both round and long bosses forming the main structural elements in their decoration and can, therefore, be classed as '*Buckelurne*' as defined by Myres (1977, 31–4). They fit into his group I: those with feet, decorated with linear or line-and-groove designs, with or without finger-tipping and/or dots, but without stamps (Myres 1977, figs 178–180). Group I are the earliest '*Buckelurne*' and associated metalwork has indicated a predominantly 5th-century date, although the type may have lingered on into the 6th-century (Myres 1977, 32). It has been suggested that these highly decorated cremation vessels may be the products of a travelling potter, and parallels for the North Shoebury pots occur in other parts of East Anglia: similar rectangular infill designs occur on two pots from Caistor-by-Norwich, Norfolk (Myres 1977, corpus nos 1665 and 1668, fig. 179) and Lackford, Suffolk (Myres 1977, corpus no. 845, fig. 179). Alternatively they could be the products of an East Anglian production centre.

The two Frankish wheel-thrown bowls are of a type generally thought to belong to the period AD 550–700 in England (Evison 1979, group 3e). Thus, their association with a '*Buckelurne*' in cremation *M651* seems paradoxical; however, MacLeod's excavation record states that the wheel-thrown sherds were in the ploughsoil above the cremation and cannot, therefore, be regarded as a true association. It is not, however, inconceivable that two are associated; this type of vessel was used in the cremation rite in North Belgium and Holland during the 5th, 6th and 7th centuries (Evison 1979, 45). At nearby Mucking a wheel-thrown bossed jar served as a container for cremated remains (Evison 1979, 45).

Conclusions
The cemetery pottery, with the exception of the two '*Buckelurne*' and the wheel-turned pots, is not closely datable. A 5th to 6th-century date range is suggested by the more diagnostic pots, and this is supported by their associated metalwork (above pp 46–51). It is feasible that the whole assemblage does not post-date the 5th century.

The Medieval and Post-Medieval Pottery
by Helen Walker

Summary
A total of 30.7kg of medieval and post-medieval pottery was excavated. The medieval pottery is dominated by locally made shell-tempered wares. Fine wares comprise Hedingham ware, London-type ware and Mill Green ware. Three medieval pottery phases were identified with the extreme date range of 11th to late 13th century. Post-medieval pottery dating from the late 15th century onwards was excavated from contexts near to the remains of North Shoebury Hall, types found include German stonewares, tin-glazed earthenwares and Metropolitan slipware.

Method
The pottery has been classified using Cunningham's typology for Essex post-Roman pottery (Cunningham 1985a, 1–2). Her fabric numbers are quoted in this report. Methods of quantification are sherd count and weight (in grams/kilos). Most of the quantification is shown in the form of tables, where the fabrics present are shown in approximate chronological order. One bar chart is shown (Fig. 83). All percentages quoted in the text are calculated by weight.

The Fabrics (shown in Fabric number order)

Fabric 9 Thetford-type ware, a wheel-thrown Saxo-Norman ware, dating to *c.* 850–1150 and flourishing in the 10th and 11th centuries (Hurst 1976, 314–318). It was found below the hall wall and to the south of the hall. One rilled jar rim is present (Fig. 75.4). Only three sherds were found, approximately 0.1% of the total.

Fabric 12A[1] Finely-crushed-shell-tempered ware. A hand-made fabric tempered with with moderate ?oyster shell, some of the shell is so fine it is ground almost to a powder, while other shell fragments are larger averaging 1mm across. Also present is sparse grog, shiny carbonised material and very occasional sand. The sherds are thick-walled with uneven surfaces, typically they have thick grey cores, often with an oxidised internal surface which is orange-brown and a reduced dark grey external surface. Forms: no complete profiles could be reconstructed but one bowl rim and twelve cooking pot rim fragments were found, the bowl has a thickened,

flat-topped everted rim (Fig. 75.11). The cooking pots possess undeveloped everted rims either with rounded tops (Fig. 75.6, 9, 12) or flat tops (Fig. 75.2, 3, 8, Fig. 78.69). One cooking pot has a thickened rim (Fig. 75.10) and three have slightly beaded rims (Fig.75.5, 7).

This fabric makes up nearly 3% of the total pottery. It occurred in features below the hall wall; in the linear features parallel to enclosure ditch/moat *0300*; in ditch *0300* segments *0307* and *0332* and in various unphased features that occur mostly to the south of the hall. In view of the undeveloped rims and its occurrence with Thetford-type ware (in contexts *0200* and *0504*) the fabric must be early: Drury suggests that at Rivenhall Fabric 12A may have appeared early in the 11th century (Drury 1993, 80). As Thetford-type ware went out of use *c.*1150 this gives a date range of 11th century to not later than *c.*1150 for Fabric 12A[1].

Fabric 12A[n] Another Early Medieval shell-tempered ware but this time resembling St Neots ware, a Saxo-Norman ware made from a clay naturally containing fossil shell. Fabric 12A[n] contains much coarser added shell but is similar to St Neots ware because both fabrics have the same purplish surfaces. There are no forms and only two sherds are present (0.15% of the total pottery). These were found in gully *0550* below the hall wall and in Early Medieval ditch *0038*. It is probably contemporary with Fabric 12A[1].

Fabric 12A[2] Coarsely-crushed-shell-tempered ware. Tempered with abundant coarsely crushed ?oyster shell, it lacks the finely ground shell particles found in Fabric 12A[1]; average grain size is 0.4–2.0mm across. Sparse red oxides, shiny carbonised material and occasional sand are also present. Vessels usually have grey cores (but the cores are not so well defined as those of Fabric 12A[1]) and buff-brown surfaces. Alternatively they are dark grey thoughout.

Forms: one bowl with a down-turned flanged rim (Fig. 77.48), all the rest are cooking pots. Several almost complete cooking pot profiles were found, these correspond to Cunningham's type C3; squat cooking pots, wider than they are high with a sagging base and squared appearance. The shoulder is usually fairly pronounced. The shape of these vessels is very uniform and the surfaces are smooth and even, however, it is unlikely that these pots were wheel-thrown as the shell would drag against the potters hands (Brown, D. 1988, 18). They may have been coil-built on a turntable. Rims are more developed than those of Fabric 12A[1]; there are three illustrated examples of flat-topped slightly everted rims (Fig. 75.15, 17, Fig. 77.58) and one example of a beaded rim with internal thickening (Fig. 77.57). These are comparable to rim-forms found on cooking pots from Pleshey Castle dating to *c.*1200 (Williams 1977, fig. 31, 6, 9, 10, fig. 32, 22, 25). By far the most frequent are flat-topped or turned-down rims above a vertical or near vertical neck (forty two examples) (Fig. 75.13, 18, 19, 20, 22, 24, Fig. 76.25–26, 28–36, 38, 39, 43–45, Fig. 77.46–47, 50, 59–62, Fig. 78.68, 74). These correspond to rim types found on cooking pots from Naylinghurst, Braintree (Drury 1976a, 270) dating from the early to mid 13th century. However at Naylinghurst and elsewhere in Essex, by the 13th century cooking pots tend to be wheel-thrown in a sand-tempered fabric (Fabric 20) so it would appear that North Shoebury is something of an anomaly. Also shown is one rim fragment (Fig. 77.56). Decoration: consists of thumbing on cooking pot rims, two examples (Fig. 77.50, 59) and thumb applied strips, three examples (Fig. 75.21, Fig. 78.68).

Fabric 12A[2] is by far the commonest medieval ware on site comprising just over 30% of the total. It is found in small quantities below the hall wall and in one of the linear features parallel to enclosure ditch/moat *0300*. It is the dominant fabric in ditch *0300* and in the features which cut *0300*. It is also present in various isolated features to the south of the hall.

Fabric 12B[2] coarsely-crushed-shell-and-sand-tempered ware. This is identical to Fabric 12A[2] but with the addition of sand tempering, giving a harsher texture. Forms: cooking pots only; one beaded rim with internal thickening (Fig. 76.40) and five rims with sloping tops or flat tops above a vertical or near vertical neck (Fig. 75.14, 16, Fig. 77.51, Fig. 78.70, Fig. 79.91). It can be seen from the illustrations that the forms so closely resemble those of Fabric 12A[2] that they must have been produced at the same place at the same time. This ware accounts for 1.6% of the total pottery. It occurred mainly in ditch *0300* and was also found beneath the hall wall and in isolated features to the south of the hall.

Fabric 12A[3] Sparse-shell-tempered ware. Tempered with sparse crushed ?oyster shell, 1–2mm across with occasional rust coloured oxides, shiny carbonised material and sand. Colour is buff-grey with distinct dark grey surfaces. There are no forms except for one sagging base. Only seventeen sherds are present, less than 0.5% of the total. It occurred in enclosure ditch/moat *0300* and in ditch *0343* which cut ditch *0300*.

Fabric 12C Sand-and-shell-tempered ware. Any fabric which is sand tempered with small quantities of crushed shell, usually superficial. Forms: three cooking pots with beaded or thickened rims (Fig. 76.27, Fig. 77.63, 64). Fabric 12C makes up less than 1% of the total pottery. It was found in enclosure ditch/moat *0300*, ditch *0343* cutting ditch *0300* and in two isolated features to the south of the hall.

Fabric 13 Early Medieval ware, described by Cunningham (1982, 358) see also Drury (1993). It is hand-made with a coarse sand tempering, typically it has a grey core with red-brown surfaces. The suggested date range for this fabric in central Essex is 11th to *c.*1200 (Drury 1993, 80). Forms: one bowl (Fig. 77.65), a cooking pot with a thickened, flat-topped slightly everted rim (Fig. 75.23) and a cooking pot with a pointed thickened rim (Fig. 78.71). Nearly 2% of the pottery is Fabric 13. It is sparsely but widely distributed throughout most medieval features.

Fabric 13[1] A specific type of Early Medieval ware, micaceous with thick grey cores and red-brown surfaces. It is tempered with distinctive brown, grey, clear, black and amber sands. Forms: only one form is present; a possible cooking pot (Fig. 75.1). Thirteen sherds were found, 0.2% of the total pottery. It occurs in ditch *0007* and associated features beneath the hall wall and in one of the linear features parallel to ditch *0300*. It often occurs with Fabric 12A[1] and may be contemporary with it, although it is present in later features such as ditch *0300* and a beam-slot to the south of the hall.

Fabric 20 Medieval grey ware. A hard, coarse sand-tempered fabric (not as coarse as Fabric 13) it usually fires to a grey colour and derives from a variety of sources. It spans the 12th to 14th centuries. This fabric is described in more detail in Cunningham (1982, 359, 363) and Drury (1993, 81–6). The cooking pot rims have been dated using Drury's typology. Forms: one curfew (Fig. 76.41), various cooking pots with rims dated to *c.* 1200 (Fig. 77.66, Fig. 78.75) and the early to mid 13th century (Fig. 77.54, 67, Fig. 78.76) (described in more detail in the text/catalogue). Fabric 20 accounts for nearly 3% of the total pottery, it is found in most medieval features except the earliest.

Fabric 20C Mill Green coarse ware. Described in detail by Pearce *et al.* (1982). It is micaceous and tends to fire to a reddish brown rather than grey like other Fabric 20s. It is thought to date from the late 13th to mid 14th century but see Fabric 35 (Mill Green fine ware) for a discussion of dating. Forms: two cooking pot rims (see archive). Only fourteen sherds, less than 0.3% of the total were found. Mill Green coarse ware was present in ditch *0200* below the south wall of North Shoebury Hall and in *0339*, one of the butt ends of ditch *0300*. Otherwise it is unstratified or residual.

Fabric 20D Hedingham coarse ware. This fabric is micaceous, with moderate, angular, white, colourless and grey sands with sparse rust-coloured iron oxides. Colour is usually grey but buff examples also occur. Date ?mid 12th to end of 13th century. Forms: none, apart from one sagging base. Only eight sherds less than 0.3% of the total pottery were found. It occurred in ditch *0300* with one sherd from a post-hole to the south of the hall.

Fabric 21 Sandy orange ware. Any hard, sand tempered oxidised fabric, its origins are usually local. It can be medieval or early post-medieval with a date range of 13th to 16th century. This fabric is discussed in Cunningham 1982 (359) and Cunningham 1985a (1) Forms: two jugs (Fig. 77.55, Fig. 79.89). Decoration: one medieval sherd has a thumbed applied strip (Fig. 78.72) and jug Fig. 79.89 is slip-painted. Fabric 21 accounts for just over 1% of pottery. It was found in medieval and post-medieval contexts but did not occur in the earliest features.

Fabric 21[1] A specific type of sandy orange ware; it is thick-walled with orange-buff surfaces and a distinctive blue-grey core. It has a tempering of moderate, medium to coarse sub-rounded sands which are mainly clear or grey, although amber and dark red sands are also present. Sherds have a green splash glaze. On the inside surfaces, sands protrude from the clay giving a pimply texture. Forms and Decoration: one lower handle attachment from a jug, the body is decorated with a horizontal applied strip overlying a coating of cream slip (from ditch *0200*, not illustrated). Only five sherds of this fabric are present, just over 0.1% of the total. It was found in ditch *0200* below the hall wall, in enclosure ditch *0300* and in medieval features *0403* and *0448* to the south of the hall. It is earlier than the other sandy orange wares and may be contemporary with Fabric 12A[2].

Fabric 22 Hedingham fine ware. A fine, soft very micaceous fabric, generally orange-brown or pinky-buff. It contains abundant sub-angular pale coloured quartz and usually has a deep green mottled glaze. It is often highly decorated. Drury gives a suggested date range of the late 12th to the end of the 13th century (Drury 1993, 86–9) but at Colchester this fabric first appears *c.* 1140/50 (John Cotter pers. comm.). Hedingham ware was manufactured at Sible Hedingham in North Essex about 50km from Shoeburyness and is usually found in the northern half of the county (Drury 1993, 86), so its appearance here means that it is occurring well to the south of its normal limits of distribution.

Forms: jug handle (Fig. 76.42) and jug base (Fig. 77.49). Decoration: three sherds are decorated with vertical applied strips (Fig. 76.37). Hedingham fine ware accounts for nearly 1% of the total pottery. It was found in features below the hall wall, in enclosure ditch *0300*, in ditch *0343* which cut *0300* and in an isolated pit to the south of the hall.

Fabric 23 Medieval white ware. Only one sherd was found, a base in 16th-century layer *0450*, it could not be attributed to any of the Surrey industries.

Fabric 35 Mill Green fine ware. A fine micaceous fabric usually brick-red with a grey core, described by Pearce *et al.* (1982). It was manufactured at Mill Green near Ingatestone which is about 33km north west of Shoebury, and was imported into London from the later 13th to mid 14th century, as evidenced from Thames waterfront deposits (Pearce *et al.* 1982, 272–5). It is thought that coarse ware production for local consumption carried on to *c.* 1400 (Pearce *et al.*1982, 270). Whether production of Mill Green ware started during the later 13th century or whether the industry was already in existence before trade with London began is not known. Forms: one jug rim (Fig. 80.113). Decoration: seven sherds are slip-painted. Twenty one sherds of Mill Green fine ware were found, 0.6% of the total. It was found in features below the hall wall; from a hearth inside the hall; from *0339* a butt end of ditch *0300* and in medieval layer *0403*. It also occurred unstratified and residual in post-medieval features.

Fabric 35B Mill Green-type ware. The fabric is visually indistinguishable from that of Mill Green but the forms, methods of decoration *etc.* are untypical. At least one example of this pottery appears to be from a ?kiln at Rayleigh which produced 14th to 15th-century decorated jugs (Walker 1990). Forms: one jug base (Fig. 82.150). Decoration: one sherd is slip-painted. Only fifteen sherds of this fabric were identified, less than 0.8% of the total. It was found in ditch *0200* below the hall wall and in various post-medieval features.

Fabric 36 London-type ware. This fabric is fully discussed in Pearce *et al.* (1985). It started production in the early to mid 12th century and was in decline by the early 14th century. The pottery may have reached Shoebury via the River Thames; it is known that London-type ware was traded along the North Sea coast from the late 12th to the late 13th century (Vince 1985, 78, 84). Forms and Decoration: one jug rim is illustrated (Fig. 78.77) and four decorated sherds. (Fig. 77.52, 53, Fig. 78. 73, Fig. 79.92). Several different decorative types are present which can be quite closely dated, these are discussed in the text/catalogue. One late 12th-century sherd was found, whilst others are early to mid 13th-century. Fifteen sherds of London-type ware were identified altogether, nearly 0.9% of the total by weight. It was found in post-hole *0075* below the hall wall; in *0339* a butt end of ditch *0300*; in medieval feature *0403* and in contexts associated with post-medieval ditch *0444*.

Fabric 40 Post-medieval red earthenware. This is described in detail by Cunningham (1985a, 1–2). It first appeared in the late 15th century and was current throughout the post-medieval period. It was noted that, at North Shoebury some examples are smooth without any obvious sand temper, under the microscope the fabric resembles Mill Green ware (a medieval fabric), while other examples are sand tempered. It was therefore decided to sub-divide Fabric 40 into two groups; smooth, coded Fabric 40^{MG} and sandy, coded Fabric 40^{s}. This is to test the hypothesis that as the smooth earthenware resembles Mill Green fabric then it might be evolved from that industry and be earlier than the sandy fabric. Alternative explanations are that tempering of fabric is related to form *i.e.* sand may have been added to larger vessels to give them strength, or it may mean that they are simply the products of different work shops. Both fabrics are ubiquitous in post-medieval contexts.

Smooth Fabric 40 is the more frequent ware (251 sherds) accounting for nearly 26% of the total pottery. Fabric 40^{MG} forms: bowls, including pancheons (Fig. 78.80, Fig. 79.94, 95, 108–110, Fig. 80.120–122, Fig. 82.139, 140), jars (Fig. 78.86, Fig. 79.96, 97, 100, 101, 111, Fig. 81.123, Fig. 82.141), cisterns (Fig. 78.81, Fig. 82.147), jugs (Fig. 78.82, 83, Fig. 79.98, Fig. 80.124, Fig. 82.142), cups (Fig. 78.84, 85, Fig. 79.102, Fig. 82.143), plus one costrel (Fig. 79.99) and one unattributed rim (Fig.82.144). These are described in the text/catalogue. Fabric 40^{MG} forms and decoration: all three main decorative types occur in this fabric but not in the sandy version, these are slip-painting, Metropolitan slipware and black-glazed ware as discussed in Cunningham (1985b, 64, 71). Slip-painting occurs on jugs and cisterns of the late 15th to 16th century (see archive). Metropolitan slipware dates from the 17th and 18th century and probably came from Harlow which supplied the bulk of London's slipware. Bowls are the only Metropolitan slipware forms found at North Shoebury, three have flanged rims, beaded below, and are decorated with an ?oak leaf pattern (Fig. 78.109, Fig. 80.120, 121). Black-glazed ware is also thought to belong to the 17th and 18th centuries, it may come from Harlow or Stock (Cunningham 1985b, 71). Forms at North Shoebury comprise jug (Fig. 79.98) and cups/tygs (Fig. 78.84, 85, Fig. 79.102, Fig. 82.143). Some of these vessels have a dark green or dark brown rather than a black glaze and may be 16th not 17th century. Fabric 40^{MG} Merchant's mark: one sherd, perhaps from a cistern (Fig. 82.151) is inscribed with a merchant's or owner's mark. Such marks are discussed in (Cunningham 1985b, 70).

Sandy Fabric 40 makes up nearly 21% of the total pottery (seventy three sherds). Fabric 40^{s} forms: dripping dishes (Fig. 79.90, Fig. 82.145), bowls, including pancheons (Fig. 79.112, Fig. 80.125, Fig. 82.146), and jars including a one-handle jar and an almost complete large storage jar or bread crock (Fig. 78.87, 88, Fig. 80.114, 115). Fabric 40^{s} decoration: apart from thumbing on rims and handles, decoration is absent.

Fabric 42 Southern white ware (also known as Surrey-Hampshire border ware) described by Cunningham (1985a, 2) and dating from the 16th to 17th century. Forms: one jar (Fig. 80.127). Only seven sherds are present about 0.4% of the total. It was found in features associated with north-south ditch *0444*, in north-south ditch *0033* and from a pit to the south of the hall.

Fabric 43 Martincamp flasks from northern France described by Hurst *et al.* (1986, 102–104). One fragment only is present probably from a type I flask in layer *0450*, described in text and dated from the ?late 15th to mid 16th century.

Fabric 45 Unattributed stoneware, three sherds probably German.

Fabric 45C Raeren stoneware, dark grey German stoneware described by Hurst *et al.* (1986, 194–208) and imported into London from the second half of the 15th century (Gaimster 1987, 343–4). Forms: squat, globular drinking jugs (Fig. 78.78). Nine sherds were found, just over 1% of the total pottery. It was found in dumps of levelling material to the south of the hall.

Fabric 45D Frechen stoneware, decribed by Hurst *et al.* (1986, 214–221) and imported from Germany from the mid 16th century to the end of the 17th, when it was replaced by English stoneware. Forms: Jugs; one rim and two bases (Fig. 78.79, Fig. 79.93, Fig. 80.126). Altogether five sherds were excavated, about 0.6% of the total. It was found in features associated with ditch *0444* and in ditch *0033*.

Fabric 45F Westerwald stoneware, described by Hurst *et al.* (1986, 221–225) and imported from Germany from the early 17th century onwards (Jennings 1981, 123). Forms: a tankard rim (Fig. 82.149) and one rim fragment (Fig. 82.138). Decoration: one decorated sherd is illustrated (Fig. 81.137). Altogether five sherds were found, 0.1% of the total pottery; excavated from ditch *0033* and associated pit *0061*.

Fabric 45G Nottingham/Derby-type stoneware, produced throughout the 18th century. Only one sherd is present, found in layer *0450*.

Fabric 45M English stoneware, first manufactured in the late 17th century (Draper 1984, 33). Forms: none. Four sherds only were found, 0.2% of the total pottery. It was found in contexts associated with ditch *0444* and from post-holes to the south of the hall.

Fabric 46A English tin-glazed earthenware. This can be confused with Dutch tin glazed earthenware but from about 1630 distinctively English shapes began to be made. The industry lasted until the end of the 18th century (Draper 1984, 28, 32). Forms: ?plates (Fig. 80.117), tea-bowls (Fig. 78.103, Fig. 80.118, Fig. 81.129, 130, 136), ?saucers (Fig. 81.131, 132), one chamber pot (Fig. 81.133) and two albarelli (Fig. 79.104, Fig. 82.148) Decoration: three decorated body sherds are also shown (Fig. 80.116, Fig. 81.134, 135). Several of these pieces have been identified by Michael Archer of the Victoria and Albert Museum, most belong to the first half of the 18th century. A total of 66 sherds comprising 1.2% of the pottery was excavated in this fabric. It was mainly found in features associated with ditch *0444*, ditch *0033* and associated pit *0061*, with odd sherds in isolated features.

Fabric 46C Netherlands tin-glazed earthenware. Only two examples are present; a base dating to the mid 17th century (Fig. 81.128) and part of a ?plate which is 18th-century (Fig. 79.105).

Fabric 47 Staffordshire salt-glazed white stoneware, described by Draper (1984, 36–39) and produced from the 1720s to 1770s. One body sherd was found from pit *0438A* associated with ditch *0444*.

Fabric 48D Staffordshire ironstone types, early 19th to 20th century. Ten sherds are present, 0.6% of the total. It was found in two isolated pits and was intrusive in medieval features.

Fabric 48W Agate ware, made from intermixed, coloured clays, simulating veined stone (Draper 1984, 41). It was produced from the mid 18th century. Only one sherd is present, the base of a dish/saucer (Fig. 79.107).

Fabric 50 Staffordshire-type slipwares, manufactured in the second half of the 17th century and throughout the 18th (Celoria and Kelly 1973, 6). One body sherd is illustrated (Fig. 80.ll9). Three sherds altogether were recovered; from ditch *0444*, associated pit *0438A* and as a surface find.

Fabric 50A Staffordshire-type buff coloured earthenware. This has a manganese glaze which fires to a mottled brown colour on the buff-coloured body. It was made in Yorkshire as well as Staffordshire and dates to the late 17th and 18th centuries (Dolan 1985). One sherd only was found, a ?dish rim (Fig. 79.106).

Pottery from the Medieval Features

Pottery from contexts below the hall
A total of forty one sherds weighing 401g was excavated from various contexts which were either cut by, or beneath the hall wall or foundations. The fabrics present are summarised in Table 3. Table 3 shows that the finely-crushed-shell-tempered fabrics predominate (*i.e.* Fabrics 12A^1 and 12A^n) indicating an early date of ?11th to not earlier than *c.* 1150 for most features, although later pottery is also present.

Perhaps the earliest feature is beam-slot *0504*. Surface cleaning produced Thetford-type ware (Fabric 9) and Fabric 12A^1. Ditch *0007* and associated contexts may be contemporary with the beam-slot; two simple everted ?cooking pot rims were found in Fabrics 13^1 and 12A^1 (Fig. 75.1,2) However, the picture is complicated by the presence of a sherd of Hedingham fine ware (Fabric 22) in context *0483*, a continuation of ditch *0007*. This is a fabric which, apart from this instance always occurs with later material. Its presence indicates that the feature could not have been infilled before *c.* 1140, although it is possible that the Hedingham ware is intrusive as *0483* is cut by later features.

Ditch *0052*, apparently a recut of ditch *0007*, contains later pottery (one sherd of medieval coarse ware, Fabric 20 and one sherd of sandy orange ware, Fabric 21). It was probably infilled in the 13th century.

Post-hole *0075* yielded a single sherd of London-type ware, it may be from the neck of a jug and is decorated with two, vertical self-coloured strips, the sherd is abraded but traces of cream-slip and mottled greenish glaze remain. It may be of the North French style, belonging to the early to mid 13th century (Pearce *et al.* 1985, 19, 29).

The latest pottery to be found comes from ditch *0200* where sherds of Mill Green and Mill Green type ware (Fabrics 20C, 35, 35B) are present, dating from the late 13th to mid 14th century. This provides a *terminus post quem* of the late 13/14th century or later for the building of North Shoebury Hall. Ditch *0200* also contained earlier pottery including a Thetford-type ware jar rim (Fig. 75.4) and a Fabric 12A^1 cooking pot rim (Fig. 75.5). Layer *0505*, stratified above *0200* also produced a Fabric 12A^1 cooking pot rim (Fig. 75.3).

Medieval Contexts Cutting Ditch *0007* and *0483*
These comprise flat-bottomed trench *0014* and flat-bottomed ditch *0038*. Total weight of pottery is 124g. Three sherds of finely-crushed-shell-tempered ware (Fabric 12A^1) were found in trench *0014* including two cooking pot fragments, one with a simple everted round-topped rim (Fig. 75.6) and one with a slightly beaded rim (Fig. 75.7). Ditch *0038* also produced three sherds; a Fabric 12A^1 cooking pot fragment with a flat-topped everted rim (Fig. 75.8) together with body sherds of St Neots-like shelly fabric (Fabric 12A^n) and Early Medieval ware (Fabric 13^1). This assemblage is therefore similar to that found in ditch *0007* and was probably deposited at the same time *i.e.* ?11th century to not later than *c.*1150.

Features running parallel to enclosure ditch/moat *0300*
These consist of two linear features, interpreted as possible palisade slots or revetments. The first runs north-south along the western side of ditch *0300* (the side nearest North Shoebury Hall). The second runs north-south along the eastern side of ditch *0300* but carries on to the north. Very little pottery was recovered from either feature, it is quantified in Table 4.

Western side: a total of four sherds weighing 61g was excavated from three contexts, all thought to be part of the same feature. Fills *0340* and *0338* contain sherds of finely-crushed-shell-tempered ware (Fabric 12A^1). One Fabric 12A^1 cooking pot is illustrated (Fig. 75.9). This is comparable with pottery from the earliest features found beneath the hall wall (for example ditch *0007* and beam-slot *0504*). Fill *0341* however, contains the more developed coarsely-crushed-shell-with-sand-tempered ware (Fabric 12B^2) as found in enclosure ditch *0300*, and may have been infilled at a later date.

Eastern side: a total of twelve sherds weighing 119g was excavated. The assemblage is similar to that found on the western side. Contexts *0318, 0319, 0321* again yielding sherds of Fabric 12A^1 (one cooking pot rim, Fig. 75.10 is illustrated), plus one sherd of Fabric 13^1. The butt end of the slot, context *0314* contained sherds of the more developed coarsely-crushed-shell-tempered ware (Fabric 12A^2) and must have been infilled later than the rest of the slot — or may not actually be part of the same feature. The view is complicated by the presence of 19th/20th century-Staffordshire-type ironstone (Fabric 48D) in contexts *0322* and *0324*; either these sherds are intrusive or contexts *0322* and *0324* are different features.

To conclude: the two features are probably related and at least some of the infill is contemporary with the first phase of medieval activity on the site, dating from the ?11th century to not later than *c.*1150.

Enclosure ditch/moat *0300*
Most medieval pottery came from this feature, a total of 585 sherds weighing 7.8kg was excavated. The fabrics from each segment are quantified by means of a bar chart (Fig. 83). The segments are shown in an anticlockwise direction starting at the butt end of the ditch on the south side of the entrance (context *0345*) and finishing at the butt end of the ditch on the north side of the entrance (context *0339*). Some segments have several fills, these are also shown on Fig. 83 (each fill is denoted by a letter). From the bar chart it can be seen that most pottery comes from the southern arm of the ditch (segments *0304, 0300, 0303,*

Context and type	Relationship	Fabrics															Comments
		9	12A[1]	12A[n]	13[1]	13	22	12A[2]	12B[2]	21[1]	36	20	21	35	20C	35B	
0001 layer outside Hall	cut by foundation of Hall	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	?11th C not later than *c.* 1150
0003 tile spread	?part of *0007*	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	as above
0007A upper fill of ditch *0007*	cut by foundation of Hall	-	-	-	1	-	-	-	-	-	-	-	-	-	-		as above No. 1
0007B lower fill of ditch *0007*	as above	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	as above
0483 ditch ?continuation of *0007*	below Hall wall, layer *0012*, ?hearth *0479*	-	5	-	1	-	1	-	-	-	-	-	-	-	-	-	not before *c.* 1140 No. 2
0052 ditch, ?recut cf ditch *0007*	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	13th C
0504 beam slot	below Hall wall	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	?11th C. not later than *c.* 1150
0511 post hole	associated with *0504*	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	as above
0505 layer	below Hall wall, ?upper fill of *0200*	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	same date range as *0200.* No. 3
0200 ditch	below Hall wall	1	4	-	-	1	1	1	-	1	-	-	-	1	1	1	11th to 14th/15th C Nos 4, 5
0075 post-hole	below Hall wall	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	early to mid 13th C
0460 pit/post-hole	below Hall wall	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	later 13th to mid 14th C
0550 curving gully	below Hall wall	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	?11th, not later than *c.*1150
Surface cleaning in vicinity of *0550, 0557*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	as above

Table 3 Quantification of pottery from features beneath North Shoebury Hall by fabric and sherd count (Fabrics are shown in approximate chronological order, associated features are grouped together otherwise features are listed in context number order).

0302). It is also present in quantity from butt end *0345*. The dominant fabric is coarsely-crushed-shell-tempered ware (Fabric 12A^2).

The eastern and western arms: the earliest pottery occurs in the eastern and western arms of the ditch (excluding butt ends *0345* and *0339*). It is here that ditch *0300* ran parallel to the earlier features described in the previous section. In segments *0309, 0307, 0112*, the lower fills contained Early Medieval ware (Fabric 13) and finely-crushed-shell-tempered ware (Fabric 12A^1). Fabric 12A^1 is also present in *0332*. Two Fabric 12A^1 forms are illustrated, bowl (Fig. 75.11) and cooking pot rim (Fig. 75.12). It would therefore appear that these lower fills were deposited at the same time as the fills of the parallel features.

The upper fills of these segments contained coarsely-crushed-shell-tempered ware (Fabric 12A^2), shell-and-sand-tempered ware (Fabric 12B^2) and Hedingham fine ware (Fabric 22). These fabrics were also found in segments *0308* and *0330*, together with an example of sparse-shell-tempered ware (Fabric 12A^3) in segment *0330*. Two cooking pots are illustrated (Fig. 75.13, 14). These fills were probably deposited at the same time as the southern arm of the ditch.

Southern arm of ditch 0300 and butt end *0345*: this part of the ditch tells a different story; finely-crushed-shell-tempered fabric (Fabric 12A^1) is entirely absent (although there are tiny amounts of Fabric 13^1, a fabric usually associated with 12A^1 in segments *0304A* and *0307A*). Coarsely-crushed-shell-tempered ware (Fabric 12A^2) is by far the most frequent fabric, occurring with smaller amounts of other shelly wares (Fabric 12A^3); shell-and-sand-tempered ware (Fabrics 12B^2, 12C); Early Medieval ware (Fabrics 13, 13^1); medieval grey ware (Fabric 20); and Hedingham fine and coarse ware (Fabrics 22, 20D), with one example of early sandy orange ware (Fabric 21^1). Each fill has more or less the same assemblage but it was noted that the lower fills contain exclusively Fabric 12A^2 (with some Fabric 12B^2 but this is essentially the same fabric with added sand). This could mean that Fabric 12A^2 is earlier. It can also be seen from Fig. 83 that Hedingham ware only appears in the upper fills and may have been deposited later. However, cross-fits between different fills and different segments indicate that the fills were deposited at the same time. A possible explanation is that all the pottery was deposited in one episode and that the coarse wares were thrown in first with the fine ware last.

Hedingham ware is the only fine ware present in this part of the ditch. No rim forms were recovered but part of a strap handle and a jug base were found (Fig. 76.42, Fig. 77.49). In addition there is one decorated sherd (Fig. 76.37), showing applied strips. At Colchester, Hedingham strip jugs are thought to date from the late 12th to earlier 13th century (John Cotter pers. comm.).

All other wares are coarse wares. Nearly all forms and decorated sherds have been illustrated, they are shown in the following order. Pottery from the lower fill is shown first, starting from butt end *0345* and moving in an anticlockwise direction around the ditch (left to right on the bar chart, Fig. 83). Within each fill the drawings are shown in fabric order.

As can be seen from the illustrations, except for one bowl (Fig. 77.48), all the coarsely-crushed-shell-tempered ware (Fabric 12A^2) forms are cooking pots. The rim forms in this ware have already been discussed (above p.103). There are two examples of the less developed flat-topped slightly everted rims (Fig. 75.15 and 17) from lower fills *0304E* and *0345C*, so there is some evidence that the lower fills are in fact earlier. All the remaining rims are of the vertical necked type of the early to mid 13th century (Fig. 75.18–20, 22, 24, Fig. 76.25–26, 28–36, 38, 39, 43–45, Fig. 77.46–47). Some of the rims are so similar that they could be the work of the same potter, which in turn indicates that the pottery was deposited at the same time. One decorated sherd is illustrated (Fig. 75.21). Two shell-and-sand-tempered (Fabric 12B^2) cooking pot rims are present (Fig. 75.16, Fig. 76.40).

Cooking pots in other coarse wares are also found; one in Fabric 12C with an angular beaded rim (Fig. 76.27), and one in Fabric 13 with a thickened flat-topped rim (Fig. 75.23), which is similar to rims found at Pleshey Castle period I dating to *c.* 1200 (Williams 1977, fig. 31.7). Also found was the remains of a curfew, or fire cover used to damp down domestic fires overnight (Fabric 20, Fig. 76.41). The larger vessel fragments were examined for traces of use. Many cooking pot rims display blackening up the sides and beneath the rim, indicating they were stood in or beside a wood fire. Others are quite thickly covered with soot or some other burnt deposit, sometimes accompanied by a thick green deposit, possibly cess. The insides of bases often have sooty deposits at the centre.

To conclude: most, if not all the pottery was deposited in one episode. The shelly cooking pots possess early to mid 13th-century rim types. However, the presence of other coarse wares with less developed rims and Hedingham fine ware belonging to the late 12th to early 13th century, indicate that an early 13th-century date is more likely for the infilling of this part of the ditch.

Butt end 0339 of ditch *0300*: this is the butt end of the ditch on the northern side of the entrance, it revealed a different and later assemblage from the rest of ditch *0300*. There are two fills; the lower fill (B) produced examples of 12A^2, 12B^2 and 13, similar to that found in the rest of the ditch, two cooking pot rims are illustrated (Fig. 77.50, 51). Also present however, are sherds of Mill Green ware and a single sherd of London-type ware. The sherd of London-type ware (Fig. 77.52) has a pale fabric which indicates a late 12th-century date (Pearce *et al.* 1985, 3). It is decorated with an incised zig-zag pattern which is comparable to the decoration found on an early style baluster jug of the late 12th century (Pearce *et al.* 1985, fig. 24.48). No diagnostic sherds of Mill Green ware were found.

London-type ware and Mill Green ware are also present in the upper fill. This time the sherd of London-type ware (Fig. 77.53) appears to be of the highly decorated or north French style of the early to mid 13th century (Pearce *et al.* 1985, 19). Jugs with similar decoration are illustrated in Pearce *et al.* (1985, fig. 41.139, fig. 51.181). Also illustrated is a 13th-century type medieval grey ware cooking pot rim (Fabric 20, Fig. 77.54) and a sandy orange ware jug (Fabric 21, Fig. 77.55). Fabric 21 does not occur elsewhere in the ditch. Again there are no diagnostic sherds of Mill Green ware.

To conclude; the examples of Fabrics 12A^2, 12B^2 and 13 in the lower fill of *0339* are probably contemporary with the southern arm of ditch *0300*. This is most likely the case for the 12th-century London-type ware sherd although this fabric does not occur elsewhere in ditch *0300*. Most of the pottery in the upper fill can be given a

13th-century date but the presence of Mill Green ware in both fills precludes a date before the middle of the 13th century for the deposition of the group.

Features cutting ditch *0300*

Segment *0345*, the butt end of ditch *0300* on the south side of the entrance was cut by several features, namely ditch *0350*, pits *0352, 0353, 0355* and ditch *0343*, a possible recut of *0350*. East-west ditch *0448*, thought to be an extension of *0343/0350* is also included in this section. A total of 142 sherds weighing 2.6kg was excavated from these contexts, the fabrics are summarised in (Table 5). From Table 5, it can be seen that the group is similar to that from the southern arm of ditch *0300*; coarsely-crushed-shell-tempered ware predominates (Fabric $12A^2$) with smaller amounts of other shelly wares (Fabrics $12A^3$, 12C), Early Medieval ware (Fabric 13), medieval grey ware (Fabric 20), early sandy orange ware (Fabric 21^1) and Hedingham fine ware (Fabric 22). There is one sherd of post-medieval red earthenware in ditch *0448* but this is probably intrusive as *0448* is cut by post-medieval features.

There are no fine ware forms or decorated sherds. All coarse ware forms are illustrated (Fig. 77.56–67, Fig. 78.68). They are shown in stratigraphic, then fabric order. As with ditch *0300*, all are from cooking pots except one Early Medieval ware bowl rim (Fig. 77.65, Fabric 13). The coarsely-crushed-shell-tempered cooking pots have the same rim forms as those in ditch *0300*, many are so similar that they could be from the same vessels or made by the same potter, although only two cross-fits were found (shown on Table 5). There are however, two rim forms in Fabric $12A^2$ not found in ditch *0300*; Fig. 77.57 has a beaded rim with internal thickening, a type usually dated to the 12th century, and Fig. 77.58 has a thickened, everted flat-topped rim, a type perhaps datable to *c.*1200.

Two cooking pot rims are present in Fabric 12C (Fig. 77.63, 64), these are less developed types dating from perhaps the 12th century to *c.* 1200. There are also two medieval grey ware cooking pots (Fig. 77.66, 67). No. 66 has a pointed, thickened rim, perhaps datable to the late 12th/early 13th century (Drury 1993, 81) while No. 67 has a sloping top above a near vertical neck, similar to the majority of Fabric $12A^2$ rims. There is one undiagnostic sherd of Hedingham fine ware, again in the upper-most feature *0343*. The pottery from the lowest features cannot be demonstrated to be earlier than those from the top. There is very little pottery at all from ditch *0350* or from pits *0352, 0353* and *0355*. Most comes from ?recut *0343*. These features cannot be demonstrated to be later than ditch *0300* even though they cut it, in fact they both appear to have been infilled at the same time *i.e.* the ?early 13th century. It seems likely that ditch *0448* is a continuation of *0343* because of the similar ceramic horizon and because there is a cross-fit with ditch *0300* segment *0304A*, a distance of some 800 metres.

Remaining medieval contexts

Several stratigraphically isolated features clustered just to the south of, or within the hall produced very small quantities of medieval pottery, these contexts are discussed in the archive report. Four vessels are illustrated (Fig. 78.69–72). Six other isolated medieval contexts are also described in the archive. Worth mentioning here, however, is pit/layer *0403* situated to the south east of the hall. It produced an assortment of pottery including London-type ware, early sandy orange ware and Mill Green ware. The only context with a similar ceramic horizon is ditch *0200* beneath the hall wall. Indeed sherds of early sandy orange ware from these contexts are from the same vessel. Pit/layer *0403* may also be related to ditch segment *0339*. This feature is only about 17 metres away and also contains London-type ware and Mill Green ware. One sherd of London-type ware is illustrated (Fig. 78.73), but it could not be attributed to a particular decorative type. However, the presence of Mill Green ware precludes a date before the mid 13th century. Three coarse ware forms from this context are illustrated (Fig. 78.74–76).

Medieval pottery from Macleod's site and surface finds of medieval pottery are described in the archive. One surface find is published (Fig. 82.150).

Pottery from Post-Medieval Features

Contexts within hall

These included a floor, a levelling layer for a floor and the remains of a hearth. A total of sixteen sherds weighing 209g was excavated, the fabrics are shown on Table 6. The latest pottery consists of post-medieval red earthenware (Fabrics 40^{MG}, 40^{S}) from layers *0011, 0012* and ?hearth *0479*. No diagnostic forms are present but an internal glaze on some of these sherds gives a date of later 16th century or beyond (Cunningham 1985a, 2). There are several examples of medieval fabrics (see Table) no doubt derived from features below the hall wall.

Contexts associated with ditch *0444*

A total of 181 sherds weighing 10.6kg was excavated from north-south ditch *0444* and associated features situated about 20 metres to the south of the hall. The fabrics and contexts are summarised in Table 7. Post-medieval red earthenware predominates.

Layer 0450: The stratigraphically earliest deposit is layer *0450*, the assemblage includes residual sherds of coarsely-crushed-shell-tempered ware and London-type ware. Fig. 78.77 shows the rim of a London-type jug probably of baluster form with a flared rim (Pearce *et al.* 1985, 24). It is undecorated except for a covering of white slip, glaze is absent although it may have worn off as the vessel is abraded. Such jugs have been found in Thames waterfront deposits dating to *c.* 1250 (Pearce *et al.* 1985, 19). This would make it contemporary with the London-type ware found in ditch *0300* segment *0339*. Also ?residual, is a base classified as medieval white ware (Fabric 23). It is not a Surrey white ware and is difficult to identify as the inside is blackened, this may have been due to firing conditions rather than use, as spots of glaze appear to overlie the blackening.

German stonewares were found in this layer and comprise Fig.78.78, the base of a Raeren squat, globular drinking jug imported between 1485 and 1550 (Hurst *et al.* 1986, 196). Fig. 78.79 shows a Frechen base, it may be from a plain, wide globular jug and is similar to an example published in Hurst *et al.* (1986, fig. 106.332) dated 1550 to 1575. It was found on the surface of layer *0450*. One other imported ware is present; the neck of a Martincamp flask. It has a hard off-white fabric with orange-buff surfaces and a narrow blue-grey core, and is probably from a Type I flask datable to ?1475–1550. (Hurst *et al.* 1986, 104). The sherds of Fabric 21 shown in

	Feature	Context	Relationships	Fabrics 12A[1]	13[1]	13	12A[2]	12B[2]	48D	Comments
North	On western side of ditch *0300*	*0340*	Parallel or part of ditch *0300*, segment *0330*	1	-	1	-	-	-	
		0338	Parallel to or part of ditch *0300*, segment *0332*	1	-	-	-	-	-	Same vessel in *0332* No.9
South		*0341*	Parallel to or part of ditch *0300*, segment *0339*	-	-	-	-	1	-	
North	On eastern side of ditch *0300*	*0314*	Butt end of ditch, not parallel to *0300* at this point	-	-	-	6	-	-	
		0318	Parallel to ditch *0300*, segment *0307*	2	-	-	-	-	-	No. 10
		0319	Parallel to ditch *0300*, segment *0306*	-	1	-	-	-	-	
		0321	?Parallel to ditch *0300*, segment *0306*	1	-	-	-	-	-	
		0322	Parallel to ditch *0300*, segment *0309*	-	-	-	-	-	1	
South		*0324*	Parallel to ditch *0300*, segment *0311*	-	-	-	-	-	1	

Table 4 Quantification of pottery from features running parallel to enclosure ditch/moat *0300* by fabric and sherd count. (Fabrics are arranged in approximate chronological order).

Context and type	Relationship	Fabrics 13	22	12A[2]	12A[3]	12C	21[1]	20	40	Comments
0343 E-W ditch	?recut of *0350*	1	1	71	6	2	-	9	-	Cross-fits with *0350A*, *0345*. Nos 57–67
0352 pit	cut by *0343*									
	cuts *0350*	-	-	1	-	-	-	-	-	
0353 pit	as above	-	-	7	-	-	-	-	-	
0355 pit	as above	-	-	3	-	-	-	-	-	
0350 ditch	cuts *0345*	1	-	1	-	-	-	-	-	
0350A ditch fill	upper fill of *0350*	-	-	1	-	-	-	2	-	No. 56
0350B ditch fill	lower fill of *0350*	-	-	1	-	-	-	-	-	
0448 E-W ditch	?continuation of *0343*, *0345*	1	-	31	-	-	1	1	1	Cross-fit with *0304A*. No. 68

Table 5 Quantification of pottery from features cutting ditch *0300* by fabric and sherd count. (Fabrics are shown in approximate chronological order).

Context type	Relationships	Fabrics 12A[1]	13[1]	12A[2]	12A[3]	20	21	35	40[MG]	40[S]
0010 Floor layer	above *0011*	-	-	-	1	-	-	-	-	-
0011 levelling for floor *0010*	above *0012*	-	-	-	-	-	-	-	3	-
0012 layer	above *0479*	-	-	-	-	1	1	-	1	-
0479 ?remnants of hearth		1	1	1	-	-	2	1	2	1

Table 6 Quantification of pottery from contexts within the hall by fabric and sherd count.

Context and type	Relationship	Fabrics 13[1]	20	35B	45	40[MG]	40[S]	45D	42	46A	46C	45F	Comments
0061 pit	cuts *0034*	-	-	-	-	3	2	-	-	1	-	1	Nos 148, 149
0033 N-S boundary ditch	cuts *0007* and *0034*	1	2	-	1	42	8	2	2	54	1	4	Nos 126–146
0033/0034	surface cleaning of these features	-	-	-	-	2	-	-	-	-	-	-	No. 147
0042 large post-hole	?cuts *0034*	-	-	-	-	4	-	-	-	-	-	-	
0034 ditch	-	-	-	1	-	-	-	-	-	-	-	-	

Table 8 Quantification of pottery from features cutting ditch *0034* by fabric and sherd count.

	Context and type	Relationships	Fabrics																					Comments
			12A[2]	12B[2]	36	21	35	35B	23	45C	45	40[MG]	40[S]	43	45D	42	46A	46C	50	50A	47	45G	45M	48W	
Latest features	*0443* post-hole	cuts *0444*	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-	from mid 18th century
	0439 post-hole	cuts *0438*	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	from mid 18th century
	0438A pit fill	cuts *0440, 0450, 0477*	-	-	-	-	-	-	-	-	1	9	4	-	-	1	5	-	1	-	1	-	-	-	includes Metropolitan slipware, not earlier than 1720s. Nos 116–125
	0477 ditch	cuts *0450*	-	-	-	-	1	-	-	-	-	12	25	-	-	-	1	-	-	-	-	-	1	-	18th C and earlier Nos 113–115
	0444 N-S ditch	cuts *0446, 0447, 0450* and medieval ditch *0448*	-	-	-	1	-	-	-	-	-	9	11	-	-	-	3	1	1	1	-	-	-	1	ncludes Metropolitan slip-ware. Mid 18th C. Cross-fit with 0447, same vessels in *0033, 0438.* Nos 103–112
	0446 E-W ditch	partial recut of *0447*	-	-	-	-	-	-	-	-	-	7	-	-	1	-	-	-	-	-	-	-	-	-	includes black glazed ware. Same vessel in *0447,* from early 17th C. Nos 100–102
	0447 E-W ditch	cuts layer *0450* and medieval ditch *0448*	-	1	3	1	-	2	-	-	-	21	-	-	1	-	-	-	-	-	-	-	-	-	includes black glazed ware. From early 17th C. Nos 91–99
	0449 Pit	cuts medieval ditch *0448*	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	black-glazed ware, 17th–18th C
	0440 Pit	cut by *0438*	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	Same vessel in *0450.* ?16th–17th C, plus earlier. Nos 89, 90
Earliest features	*0450* Layer		1	-	3	5	-	-	1	1	-	27	4	2	1	-	-	-	-	-	-	1	-	-	Most pottery dates to the 1st half of the 16th C. Nos 77–88

Table 7 Quantification of pottery from contexts associated with ditch *0444* by fabric and sherd count.

Table 7 are 15th/16th century types rather than medieval in date.

With the exception of one sherd of pottery (see below) the remaining pottery is post-medieval red earthenware.

Forms in smooth earthenware (Fabric 40^{MG}) are as follows:

Bowls: small shallow bowl with a plain rim (Fig. 78.80)
Jar forms: top half of one-handled cistern (Fig. 78.81)
Jugs: two jug rims (Fig. 78.82, 83)
Cups: cup with flat pedestal base (Fig. 78.84)
fragment of jug or cup with frilled base (Fig. 78.85)

Forms in sandy earthenware (Fabric 40^{S}) are as follows:

Jar forms: Dutch-type cauldron (Fig. 78.86); rim of possible Dutch-type cauldron (Fig. 78.87); storage jar rim (Fig. 78.88)

Post-medieval red earthenware forms are difficult to date, however cisterns are thought to be 15th/16th century-types (Cunningham 1985b, 70). The Dutch-type cauldron (Fig. 78.86) is comparable to one found at Southampton (Platt and Coleman-Smith 1975, fig. 196.1170) probably dating to 1500–1550. Cup base (Fig. 78.84) may be from a standing cup; at Moulsham Street Chelmsford this type is commonest in the 15th century (Cunningham 1985b, 71). The dating of the earthenwares, then, fits in with the date of the imported Martincamp flask and Raeren drinking jug; *i.e.* the late 15th to first half of the 16th century. In addition most earthenware sherds are unglazed and two are decorated with slip-painting, another 15th/16th-century tradition (Cunningham 1985b, 64). The Frechen stoneware example is later but was found on the surface of *0450*.

The latest material found in layer *0450* is a sherd of grog-coated Nottingham/Derby stoneware (Fabric 45G). There is an example of a grog-coated vessel in Hildyard (1985, no. 242) which is dated to the third quarter of the 18th century. It is therefore much later than the rest of the pottery in the group and is probably intrusive although no Nottingham/Derby stoneware occurs in any other associated context.

Pit 0440: contained three sherds; a Mill Green-type ware sagging base, a sandy orange ware jug rim (Fig. 79.89); and a sandy Fabric 40 dripping dish (Fig. 79.90). Jug (Fig. 79.89) is slip-painted and dates perhaps to the 15th or 16th century. The fabric is not unlike that of Colchester ware (John Cotter pers.comm.) although the rim is untypical. Sherds from the same vessel as Fig. 79.89 occur in layer *0450*. The dripping dish (Fig. 79.90) was probably the latest vessel to be deposited in pit *0440*. Dripping dishes first appear at Moulsham Street during the period 1550–1590 but are more frequent in the later 16th and earlier 17th centuries (Cunningham 1985b, table 5). A sherd from the same vessel occurs in ditch *0033*.

Pit 0449: only one sherd is present; a fragment of black-glazed ware dating to the 17th or 18th century.

East-west ditch 0447: as in layer *0450* residual medieval wares are present comprising a coarsely-crushed-shell-and-sand-tempered ware cooking pot (Fabric $12B^{2}$, Fig. 79.91) and sherds of London-type ware (Fabric 36) including a decorated sherd (Fig. 79.92). As *0447* cuts medieval ditch *0448* this material may be expected to derive from that feature but neither fabric occurs in *0448*. The London-type ware sherd exhibits Rouen style decoration; a baluster jug with the same decoration is published in Pearce (*et al.* 1985, fig. 31.85). Jugs with Rouen style decoration have been found in Thames waterfront deposits dating from the early to mid 13th century (Pearce *et al.* 1985, 19). The sherd of sandy orange ware present is of 15th/16th-century date rather than medieval. The only other sherd that could date to the medieval period is a Mill Green-type ware sagging base (Fabric 35B) which dates from the later 13th to mid 14th century or beyond.

One Frechen stoneware jug rim was found (Fabric 45D), with a tiger ware salt-glaze (Fig. 79.93) dating from the late 16th century to the end of the 17th (Hurst *et al.* 1986, 214). The remaining pottery in this context is smooth post-medieval red earthenware (Fabric 40^{MG}). Sandy Fabric 40 is absent.

Forms in smooth earthenware are as follows:

Bowls: two unglazed bowl fragments with hollowed everted rims (Fig. 79.94, 95)
Jar forms: two unglazed jars (Fig. 79.96, 97)
Jugs: the body of a black-glazed jug (Fig. 79.98)
Costrels: costrel fragment with pierced lugs (Fig. 79.99)

The jugs and jars with lid-seated rims are similar to those from a pit group at Moulsham Street, Chelmsford (Cunningham 1985b, fig. 44) dated to the late 16th century. Jar Fig. 79.96 probably corresponds to Cunningham's form C4EA which is thought to date from the late 16th to late 17th century (Cunningham 1985b, 69). The latest form is the black-glazed jug. Black-glazing was current throughout the 17th century and beyond (Cunningham 1985b, 71). This group therefore, cannot be earlier than the 17th century but in view of the fact that many earthenwares belong to the late 16th century, a date early in the 17th seems most likely.

East-west ditch 0446: this feature produced pottery similar to that found in ditch *0447* but without any residual medieval material. One undiagnostic sherd of Frechen stoneware was found, all the remaining pottery is smooth earthenware (Fabric 40^{MG}).

Forms in smooth earthenware are as follows:

Jars: two jar rims with a beaded rim (Fig. 79.100) and one with a hollowed everted rim (Fig. 79.101)
Cups: one possible tyg rim with a dark green glaze (Fig. 79.102)

Also in this group is a sherd of black-glazed ware probably from the same vessel as jug No. 98 (Fig. 79) in ditch *0447*. Again, the earthenware forms are similar to those found in the late 16th century pits in Moulsham Street, (Cunningham 1985b, figs 44–46). However the presence of the black-glazed sherds gives a 17th century date confirmed by the stratgraphic relationship with *0447*.

North-south ditch 0444: except for one sherd of sandy orange ware (Fabric 21) which may belong to the early post- medieval period, none of the pottery is residual. New wares appear here, not present in lower contexts. These comprise an English tin-glazed tea-bowl and albarello; a Dutch tin-glazed plate; a sherd of Staffordshire-type slipware; a Staffordshire-type buff-coloured earthenware dish rim and an agate ware dish or saucer. All forms are illustrated (Fig. 79.103–107), they are described and dated in the catalogue.

The latest ware to be deposited is the Agate ware which was produced from the mid 18th century. The tin-glazed wares fit in with this date as do the examples of Staffordshire-type slipwares and buff-coloured earthenwares. As the English tin-glazed earthenwares date to the first half of the 18th century, a mid 18th-century date seems most likely for the deposition of this group.

The remaining pottery is post-medieval red earthenware. Smooth earthenware forms (Fabric 40^{MG}) are as follows:

Bowls: bowl with beaded rim (Fig. 79.108);
Metropolitan slipware bowl (Fig. 79.109),
plus the bottom half of a bowl (Fig. 79.110)
Jars: one jar with a beaded rim (Fig. 79.111)

Sandy earthenware forms are as follows:
Bowls: one bowl (Fig. 79.112)

Metropolitan slipwares appear for the first time here. In contrast to earthenwares from earlier contexts, vessels now have an all over internal glaze with external splashes. Again, none of the forms are closely datable but fit in with the mid 18th century date given to the fine wares. There are several cross-fits.

Ditch 0477: the earliest pot to be deposited is the rim of a Mill Green ware jug (Fig. 80.113). This rim type is typical of Mill Green ware and is found on jugs imported into London from the late 13th to mid 14th century, for an example see Pearce (*et al.*1982, fig. 5.7).

The only post-medieval fine ware present is a sherd of tin-glazed earthenware. It has a white, undecorated tin glaze of eggshell thickness and is probably English, dating to the 18th century. Also present is a sherd of English stoneware which appears to be modern and may be intrusive. The remaining pottery in this ditch comprises post-medieval red earthenware. Smooth (Fabric 40^{MG}) and sandy (Fabric 40^{S}) earthenwares are present but there are no smooth forms. Of the Fabric 40^{MG} body sherds, most are unglazed or have only splashes of glaze, indicating a 15th/16th-century date. As *0477* cuts layer *0450* these sherds may derive from there. Also present in Fabric 40^{MG} is a sherd of later black-glazed ware.

Forms in Sandy earthenware are as follows:
Jars: almost complete large storage jar
(Fig. 80.114);
?storage jar rim (Fig. 80.115)

An example of a similar storage jar with a looped handle was found at Moulsham Street from a late 17th-century context (Cunningham 1985b, 70). Such storage jars may have been used as bread crocks. The second storage jar rim (Fig. 80.115) appears to be a smaller version of one found in layer *0450* (No. 88). An 18th-century date can be assigned to this feature.

Pit 0438: this pit had a similar content to that found in north-south ditch *0444* with examples of English tin-glazed earthenware, Staffordshire-type slipware and Metropolitan slipware. Three tin-glazed sherds are illustrated; one decorated sherd (Fig. 80.116), the base of a ?plate (Fig. 80.117) and the base of a tea-bowl (Fig. 80.118) which dates to the first quarter of the 18th century and originated from London or Bristol (M. Archer pers. comm.). The presence of a sherd of Staffordshire salt-glazed white stoneware (Fabric 47) however, precludes a date before the 1720s. One sherd of Staffordshire-type slipware is illustrated (Fig. 80.119) this could also belong to the 18th century but sherds of unprovenanced German stoneware (Fabric 45) and Southern white ware (Fabric 42) could be earlier, perhaps 16th to 17th-century.

The remaining pottery in the pit is post-medieval red earthenware. Smooth Fabric 40 forms comprise:

Bowls: two Metropolitan slipware bowls
(Fig. 80.120, 121);
one plain bowl (Fig. 80.122)
Jars: one small jar (Fig. 80.123)
Jugs: one jug (Fig. 80.124), unglazed and of the
jug/cistern tradition of the 15th/16th century

Sandy Fabric 40 forms comprise:
Bowls: one small ?bowl (Fig. 80.125)

The infilling of this pit appears to be contemporary with the infilling of ditch *0444 i.e.* sometime in the middle of the 18th century, although it also contains 16th/17th-century pottery.

Post-hole 0439: this contains only one sherd, a fragment of Southern white ware (Fabric 42). It is unusual because it has a brown glaze on the outside and green glaze on the inside. As this feature cuts pit *0438* it must date to the mid 18th century or later although this piece of pottery would normally date to the 16th/17th-century.

Post-hole 0443: this feature cuts ditch *0444*, so it must belong to the mid 18th century or later. The most datable sherd is a fragment of salt-glazed English stoneware which was manufactured from the late 17th century onwards.

Contexts cutting N–S ditch *0034*

A total of 131 sherds weighing 1.7kg was excavated from these features, the fabrics are summarised in Table 8. The stratigraphically earliest feature, ditch *0034* yielded one undiagnostic sherd of Mill Green-type ware; it is decorated with splashes of plain lead glaze and could date anywhere from the later 13th to 15th centuries.

Large post-hole *0042* contained sherds of smooth Fabric 40. The sherds are unglazed except for occasional splashes and one exhibits slip-painting characteristic of the 15th/16th century.

Most pottery comes from north-south ditch *0033*. It contains pottery similar to that found in ditch *0444* and pit *0438* to the south of the hall (see previous section). The earliest pottery comprises Early Medieval ware (Fabric 13^{1}) and medieval grey ware, these may derive from medieval ditch *0007* which it cuts. Otherwise the pottery dates to the post-medieval period. The sherds of Frechen stoneware (including jug base Fig. 80.126) and Southern white ware (including lid-seated jar rim Fig. 80.127) date from the mid 16th to 17th century. The tin-glazed earthenwares provide the best dating; again they have been identified by M. Archer. Base No. 128, Fig. 81, is Dutch and belongs to the mid 17th century; tea-bowl No.129, Fig.81 is from London or Bristol and belongs to the first quarter of the 18th century; tea-bowl Fig. 81.130 is also English and dates to the first quarter of the 18th century; saucers (Fig. 81.131, 132) are slightly later, dating to the second quarter of the 18th century, Fig. 81.131 was probably made in London. An English tin-glazed chamber pot was also excavated (Fig. 81.133) and two decorated fragments are shown (Fig. 81.134, 135). In addition a rim fragment probably from a tea bowl is illustrated (Fig. 81.136). Present in this feature but not in ditch *0444* are fragments of Westerwald stoneware (Fabric 45F). This was imported

from the earlier 17th century, two examples are illustrated, a decorated sherd (Fig. 81.137) and a rim (Fig. 82.138).

The remaining pottery from ditch *0033* is post-medieval red earthenware, both smooth and sandy varieties are present. Smooth Fabric 40 forms are as follows:

Bowls: one flanged bowl rim, beaded below (Fig. 82.139); one hollowed everted bowl rim (Fig. 82.140)
Jars: one small storage jar (Fig. 82.141)
Jugs: one large jug rim (Fig. 82.142)
Cups: one black-glazed tyg rim (Fig. 82.143)
Unidentified: one rim (Fig. 82.144)

Sandy Fabric 40 forms are as follows:
Dishes: one dripping dish (same vessel in pit *0440*) (Fig. 82.145)
Bowls: one flanged bowl rim (same vessel in ditch *0444*) (Fig. 82.146)

This feature was probably infilled around the mid 18th century and was contemporary with ditch *0444*/pit *0438*. Additional evidence for this comes from the fact that there is a cross-fit between ditch *0033* and ditch *0444* and between ditch *0033* and pit *0440*.

Context *0033/0034*, the surface cleaning of these two features produced a cistern (Fig. 82.147) and the base of a black-glazed tyg.

Pit *0061* yielded an English tin-glazed albarello (Fig. 82.148) datable to the first half of the 18th century (M. Archer pers. comm.) and the rim of a Westerwald ?straight sided tankard (Fig. 82.149) which dates from the early 18th century (Jennings 1981, 123).

The remaining pottery in this context is post-medieval red earthenware (Fabrics 40^{MG}, 40^{s}), no forms are present. The pottery in pit *0061* is so similar to that in ditch *0033* that it must have been deposited at the same time.

Remaining post-medieval contexts

A further 3.4kg of post-medieval pottery was extracted from various stratigraphically isolated contexts, the pottery has been tabulated and illustrated in the archive report. It is worth mentioning here that several features to the west of the hall contained slip-painted jugs and cisterns characteristic of the 15th/16th century. Post-medieval features to the south of the hall yielded Raeren stoneware drinking jugs of the late 15th to mid 16th century. While other contexts produced more tin-glazed earthenwares dating to the 18th century. Post-medieval wares found as surface finds are also illustrated in the archive.

Conclusions

Three different medieval phases can be identified from the ceramic evidence; phase 1, dating from the ?11th century to not later than *c.* 1150, characterised by Thetford-type ware (Fabric 9), finely-crushed-shell-tempered wares (Fabrics $12A^{1}$ and $12A^{n}$) and Early Medieval ware (Fabric 13^{1}). Features belonging to this phase are, some of the contexts beneath the hall wall, including ditch *0007* and beam-slot *0504*; the features that run parallel to enclosure ditch *0300*; the lower fills of the eastern and western arms of ditch *0300* and some of the isolated features near to or within the hall.

The second phase is the major ceramic phase. The main fills of enclosure ditch *0300* belong to it as do the features cutting ditch *0300*. Some isolated features near to, or within the hall also belong to the second phase. It is characterised by Hedingham ware (Fabrics 22, 20D); early sandy orange ware (Fabric 21^{1}); coarsely-crushed-shell-tempered ware (Fabrics $12A^{2}$, $12A^{3}$); shell-and-sand-tempered ware (Fabrics $12B^{2}$ and 12C); and medieval grey ware (Fabric 20). This phase may date to the early 13th century. If Fig. 77.52, the example of early London-type ware from ditch *0300* also belongs to this ceramic phase, then it pushes the date back to the late 12th century.

Ditch *0200* beneath the hall; segment *0339*, the butt end of enclosure ditch *0300*; and isolated pit/layer *0403*, may belong to a third and final medieval phase. These contexts are characterised by London-type ware, Mill Green ware and Mill Green-type ware although earlier pottery is also present. The London-type ware sherds give an early to mid 13th-century date but the presence of Mill Green ware precludes a date before the late 13th century. This may, however be evidence that Mill Green ware was in existence before trade with London began, so that this third phase may date to the mid 13th century.

There is little ceramic evidence for activity on the site for the rest of the medieval period, except for one Rayleigh-type base recovered as a surface find (Fig. 82.150) and perhaps dating to the 14th or 15th century. The dearth of pottery at this time does not necessarily indicate lack of activity in the late medieval period; it may reflect a decline in the pottery industry or a different method of rubbish disposal.

There are several features dating to the late 15th/16th century, such as layer *0450* and various isolated features to the west and south of the hall. These assemblages are typified by post-medieval earthenwares which are sometimes slip-painted. In some cases these are accompanied by imported Raeren stoneware drinking jugs and in one case a Martincamp flask. These imports do not necessarily indicate that North Shoebury was a site of high status but probably reflect its proximity to the coast. Some features may date to the 17th century but large north-south ditches *0033* and *0444* can be quite closely dated to the mid 18th century, where tin-glazed earthenwares are common. The use of tin-glazed earthenwares show that North Shoebury was not a wealthy household at that time as tin-glazed earthenwares were cheap copies of the more luxurious Chinese porcelain.

When the smooth and sandy types of post-medieval red earthenwares were examined the results were inconclusive. As expected the fabrics of the very earliest forms, the 15th/16th-century large jugs/cisterns, are smooth and resemble Mill Green ware. However 18th-century types like Metropolitan slipware are also smooth. In addition the sandy fabrics are often used for the large, heavy forms such as large storage jars and dripping dishes. This supports Cunningham's contention that variation in the amount of sand tempering is not chronological (Cunningham 1985a, 1).

Catalogue of illustrated sherds

(Figs 75–82)

(Fabric colour is only commented on where it differs from that in the fabric description).

75.1 Cooking pot rim: Early Medieval ware (Fabric 13^{1}). *Ditch fill 0007A*

75.2–3 Cooking pot rims: finely-crushed-shell-tempered ware (Fabric $12A^{1}$); No.2 has buff surfaces and darker core; some of shell leached out. *Ditch 0483 and layer 0505 respectively*

75.4 Jar: Thetford-type ware (Fabric 9). *Ditch 0200*

75.5 Cooking pot rim: finely-crushed-shell-tempered ware (Fabric 12A[1]); thick grey-brown core, orange-brown margins and darker surfaces. *Ditch 0200*

75.6–10 Cooking pot rims: finely-crushed-shell-tempered ware (Fabric 12A[1]); No.6 shows external sooting below rim, *trench 0014*; No.7 is from *trench 0014*; No.8, *ditch 0038*; No.9, *ditch 0338*; No.10, creamy-buff surfaces, grey core, *ditch 0318*

75.11 Bowl rim: finely-crushed-shell-tempered ware (Fabric 12A[1]); blackening on sides and under rim. *Segment 0307A (Ditch 0300)*

75.12 Cooking pot rim: finely-crushed-shell-tempered ware (Fabric 12A[1]). *Segment 0332 (Ditch 300)*

75.13 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]). *Segment 0308 (Ditch 0300)*

75.14 Cooking pot rim: coarsely-crushed-shell-and-sand-tempered ware (Fabric 12B[2]); bright orange surfaces, grey core. *Segment 0112B (Ditch 0300)*

75.15 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); sooting on rim. *Segment 0304E (Ditch 0300)*

75.16 Cooking pot rim: coarsely-crushed-shell-and-sand-tempered ware (Fabric 12B[2]). *Segment 0359E (Ditch 0300)*

75.17–20 Cooking pot rims: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); No.17 is fire blackened on rim and sides; No.19 has a grey core with black surfaces, outside encrusted with thick black and green deposit, possibly cess. *Segments 0345C, 0359B, 0303D, 0302C respectively (ditch 0300)*

75.21 Sherd with applied, pinched decoration: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); fire blackened externally, also has patches of a thick greenish deposit, possibly cess. *Segment 0302C (Ditch 0300)*

75.22 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); totally grey; patches of fire blackening externally. *Segment 0345B (Ditch 0300)*

75.23 Cooking pot rim: Early Medieval ware (Fabric 13); grey core, red-brown margins and brown-buff surfaces; fire blackened under rim. *Segment 0345B (Ditch 0300)*

75.24 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); grey core, purplish surfaces; fire blackening on shoulder and edge of rim. *Segment 0345B (Ditch 0300)*

76.25 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]), grey core, purplish surfaces, sooting on shoulder, neck and rim. *Segments 0360A and B (Ditch 0300)*

76.26 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]). *Segment 0361B (Ditch 0300)*

76.27 Cooking pot rim: sand-and-sparse-shell-tempered ware (Fabric 12C); medium sand tempering, sparse ill-sorted shell; buff core, pinkish-brown surfaces. *Segment 0361B (Ditch 0300)*

76.28–36 Cooking pot rims: coarsely-crushed-shell-tempered ware. (Fabric 12A[2]); Nos 28, 30 are totally grey throughout, No. 28 also shows patches of fire blackening externally; No. 36 is ?grass wiped, fire blackened externally up to shoulders and on edge of rim, also patch of external blackening. No. 28 is from *segment 0345A*; Nos 29–36 are from *Segment 0304A (Ditch 0300)*

76.37 Jug sherd: Hedingham fine ware (Fabric 22); decorated with applied slip stripes in a clay darker than that used for the pot body, a clear glaze has produced brown strips and an orange background, a patch of pale green glaze is also present. *Segment 0359A (Ditch 0300)*

76.38–39 Cooking pot rims: coarsely-crushed-shell-tempered ware. (Fabric 12A[2]). *Segments 0303A and 0360A respectively (Ditch 0300)*

76.40 Cooking pot rim: coarsely-crushed-shell-and-sand-tempered ware (Fabric 12B[2]); sooting on rim. *Segment 0360A (Ditch 0300)*

76.41 Part of curfew: medieval grey ware (Fabric 20); grey core, red-brown margins, brown-buff surfaces, fabric resembles Hedingham coarse ware but contains sparse shell; applied, thumbed strip around edge; vertical, applied strip down the side. *Segment 0300 (Ditch 0300)*

76.42 Lower handle attachment of jug: Hedingham fine ware; (Fabric 22) mottled pale green glaze. *Segment 0300 (Ditch 0300)*

76.43 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); fire blackened on neck and edge of rim. *Segment 0361A (Ditch 0300)*

76.44–5 Cooking pot rims: coarsely-crushed-shell-tempered ware

77.46–7 (Fabric 12A[2]). *Segment 0300 (Ditch 0300)*

77.48 Bowl rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]). *Segment 0300 (Ditch 0300)*

77.49 Jug base: Hedingham fine ware (Fabric 22); splashes of mottled green glaze on sides and underside of base. *Segment 0300 (Ditch 0300)*

77.50 Thumbed rim ?from cooking pot: coarsely-crushed-shell-tempered ware (Fabric 12A[2]). *Segment 0339B (Ditch 0300)*

77.51 Cooking pot rim: coarsely-crushed-shell-and-sand-tempered ware (Fabric 12B[2]). *Segment 0339B (Ditch 0300)*

77.52 Body sherd: London-type ware (Fabric 36); pale buff-grey fabric; incised zig-zag decoration almost obscured by a thick dark green glaze which has bubbled. *Segment 0339B (Ditch 0300).*

77.53 Body sherd: London-type ware (Fabric 36); orange-red fabric; applied white slip scales; apple-green glaze. *Segment 0339A (Ditch 0300)*

77.54 Cooking pot rim: medieval grey ware (Fabric 20); grey with buff surfaces. *Segment 0339A (Ditch 0300)*

77.55 Jug rim: sandy orange ware (Fabric 21); grey core, dark orange surfaces, splashes of clear glaze externally. *Segment 0330A (Ditch 0300)*

77.56 Rim, probably from cooking pot: coarsely-crushed-shell-tempered ware (Fabric 12A[2]). *Ditch fill 0350A*

77.57–62 Cooking pot rims: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); No.57 has thick grey core and darker grey surfaces; No. 59 shows thumbing on rim; oxidised throughout except for thin grey core. *Ditch 0343*

77.63–64 Cooking pot rims: sand-with-sparse-shell-tempered ware (Fabric 12C); No. 63 is pale grey with darker grey surfaces; No. 64 has a grey core, red-brown margins and darker surfaces. *Ditch 0343*

77.65 Bowl rim: Early medieval ware (Fabric 13); grey-buff core, buff surfaces, tempered with sparse, coarse sands, sparse organic material and very sparse crushed shell; fire blackened on sides and under rim. *Ditch 0343*

77.66–67 Cooking pot rims: medieval grey ware (Fabric 20); grey cores; No. 66 has pink-brown margins and grey surfaces; No. 67 has buff margins, buff-grey surfaces. *Ditch 0343*

78.68 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]); faint vertical thumbed applied strip, sooting up to shoulders and on edge of rim; patches of thick greenish encrustation over both surfaces, ?cess. *Ditch 0448*

78.69 Cooking pot rim: finely-crushed-shell-tempered ware (Fabric 12A[1]). *Pit fill 0086B*

78.70 Cooking pot rim: coarsely-crushed-shell-and-sand-tempered ware (Fabric 12B[2]); orange surfaces with darker patches. Pit *fill 0088A*

78.71 Cooking pot rim: Early Medieval ware (Fabric 13); fire blackened up to shoulders and beneath rim. *Slot 0416B*

78.72 Decorated sherd: sandy orange ware (Fabric 21); coarse sand tempering, thin grey core, otherwise orange; applied thumbed strip; splashes of glaze internally; fire blackened on the outside. *Post-hole 0457*

78.73 Body sherd: London-type ware (Fabric 36); grey fabric with red-brown internal surface; applied white slip stripes; a clear glaze gives yellow stripes on a dull green background. *Pit/layer 0403*

78.74 Cooking pot rim: coarsely-crushed-shell-tempered ware (Fabric 12A[2]). *Pit/layer 0403*

78.75–76 Cooking pot rims: medieval grey ware (Fabric 20), thick grey. core but red-brown surfaces; borderline Fabric 13; external sooting. *Pit/layer 0403*

78.77 Jug: London-type ware (Fabric 36); red-brown with paler core; uneven coating of off-white slip both inside and out; unglazed; abraded. *Layer 0450*

78.78 Bottom half of squat, globular drinking jug: Raeren stoneware (Fabric 45C); brown wash. *Layer 0450*

78.79 Base of jug: Frechen stoneware (Fabric 45D); brown wash; speckled salt-glaze. *Layer 0450*

78.80 Bowl: post-medieval red earthenware (Fabric 40[MG]); grey core and dark internal surface; all over internal plain lead glaze. *Layer 0450*

78.81 Cistern: post-medieval red earthenware (Fabric 40[MG]), red fabric but with darker core and surfaces; single patch of plain lead glaze on rim. *Layer 0450*

78.82 Jug rim: post-medieval red earthenware (Fabric 40[MG]); red-brown fabric with dark 'skin'; unglazed. *Layer 0450*

78.83 Jug rim: post-medieval red earthenware (Fabric 40[MG]); dark external 'skin', patch of glaze on rim. *Layer 0450*

78.84 Bottom half of flat pedestal base cup: post-medieval red earthenware (Fabric 40[MG]); reduced dark grey fabric with dark,

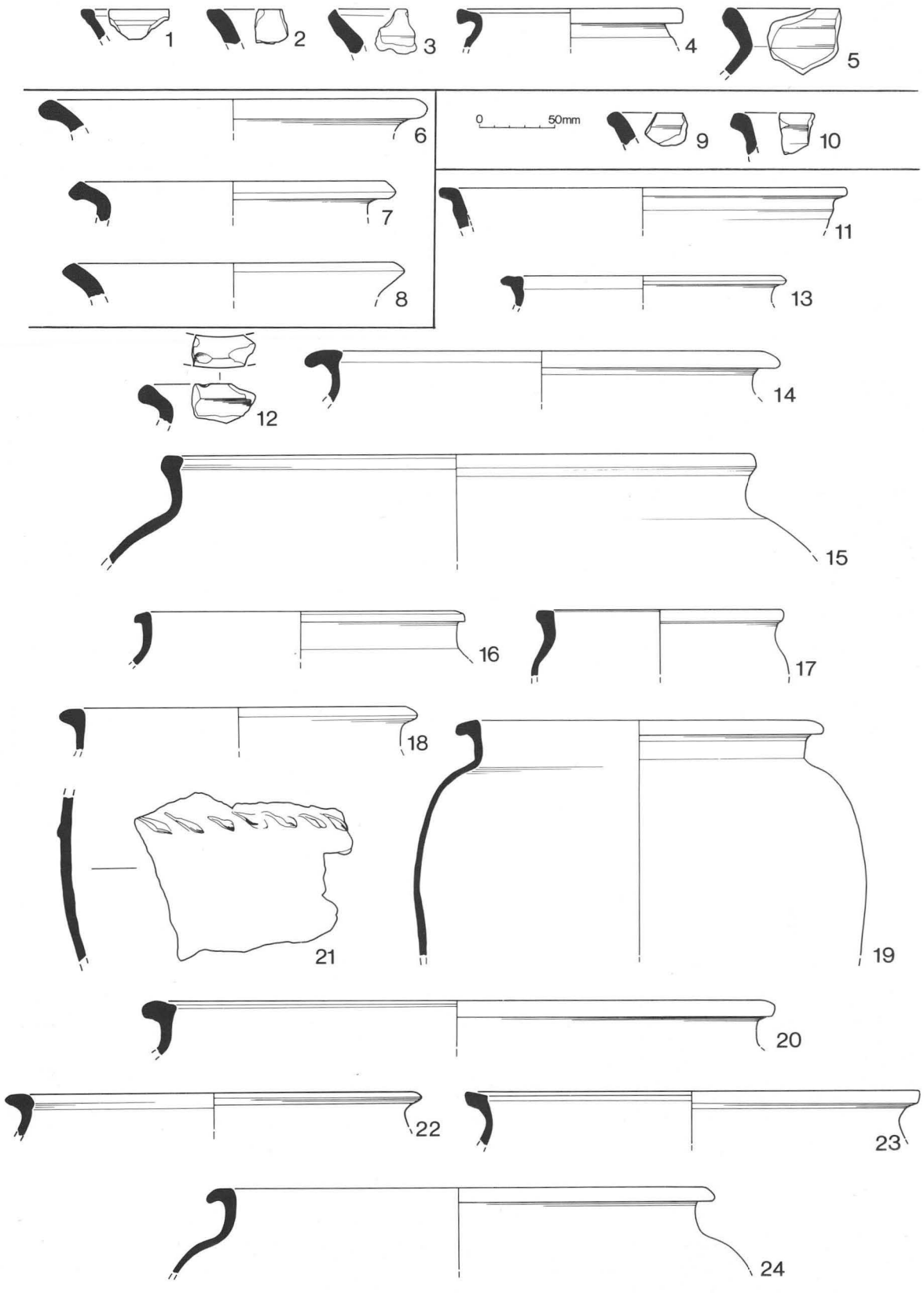

Figure 75 Period V Early Medieval pottery.

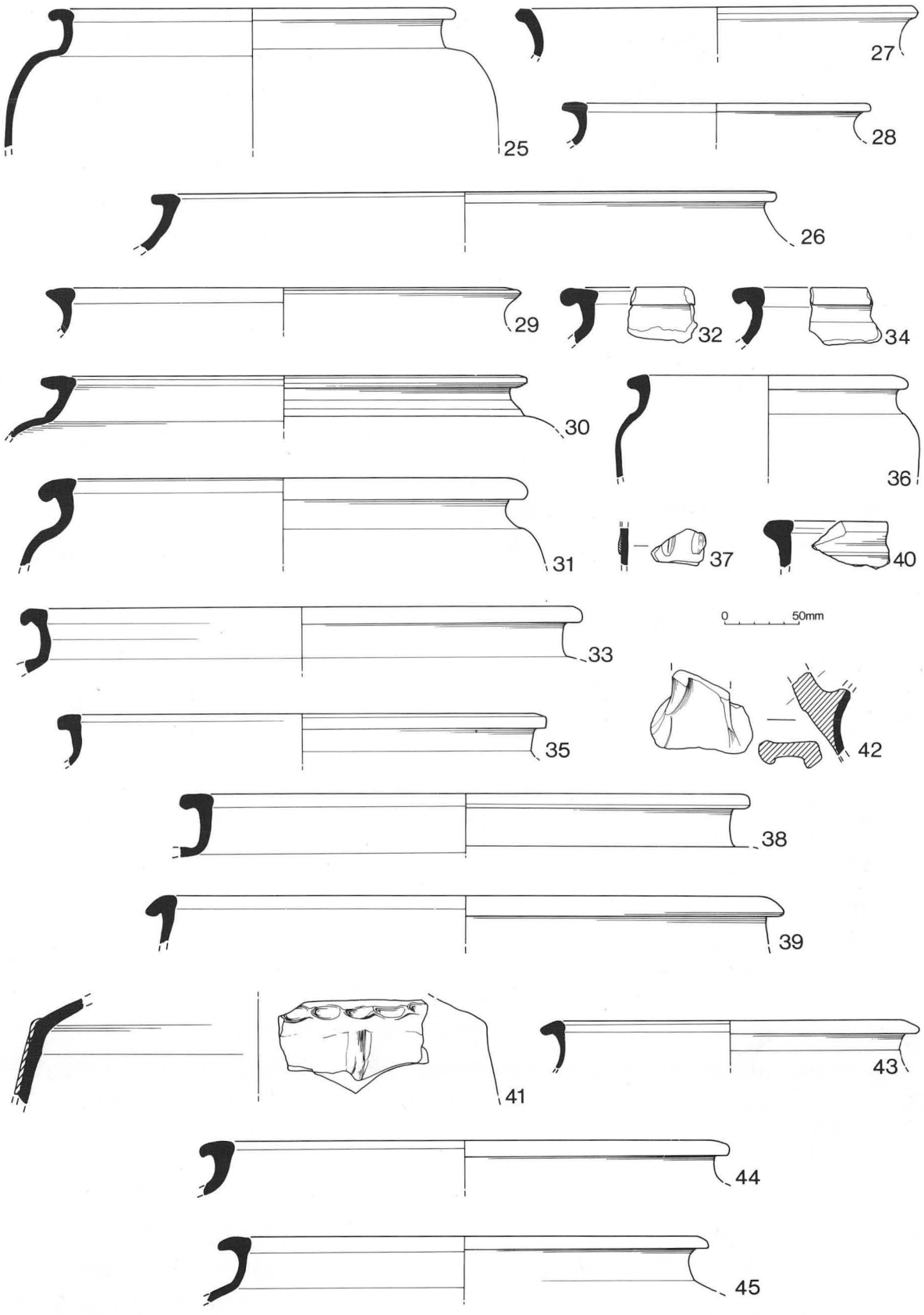

Figure 76 Period V Early Medieval and Medieval pottery.

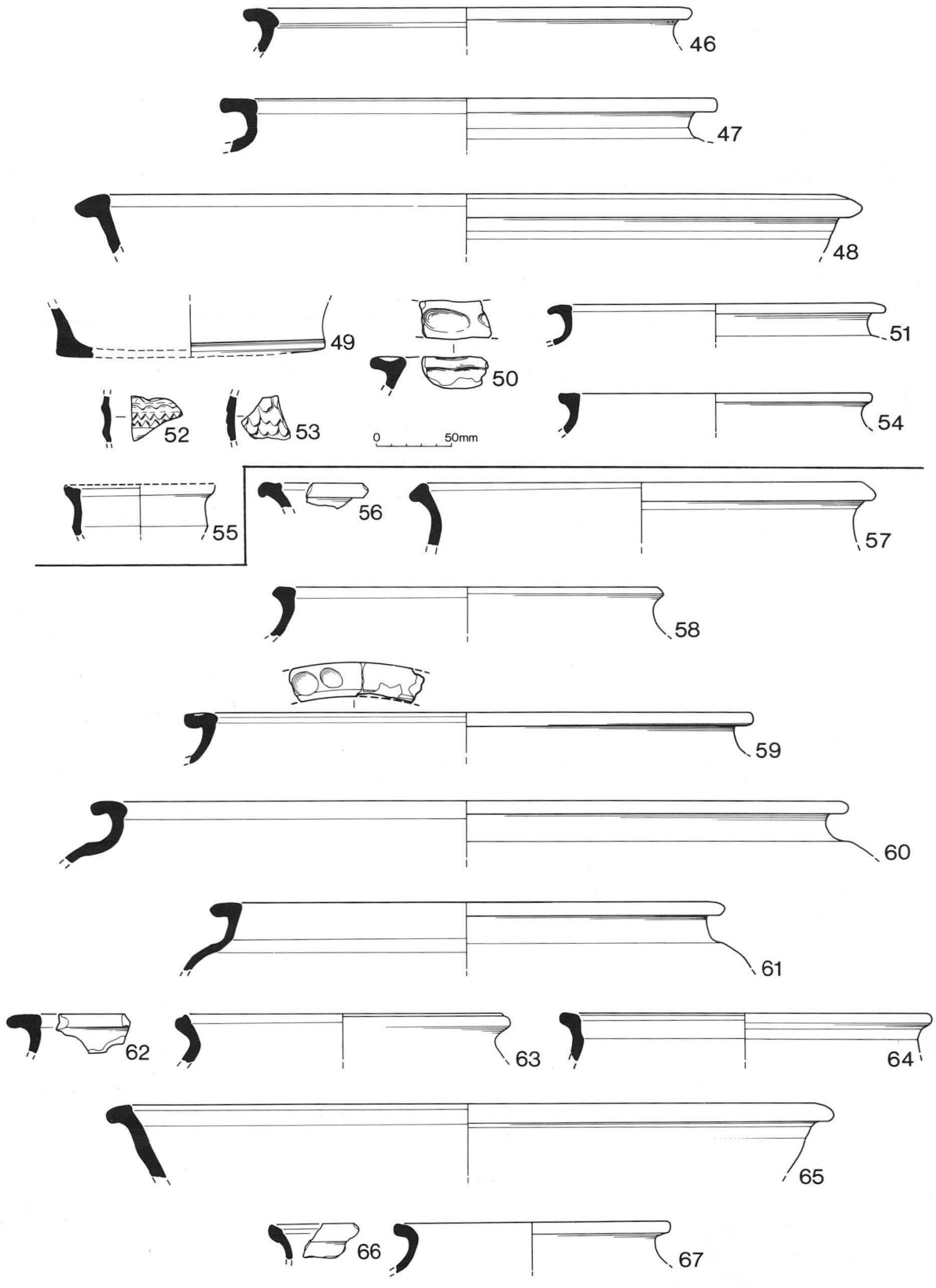

Figure 77 Period V Early Medieval and Medieval pottery.

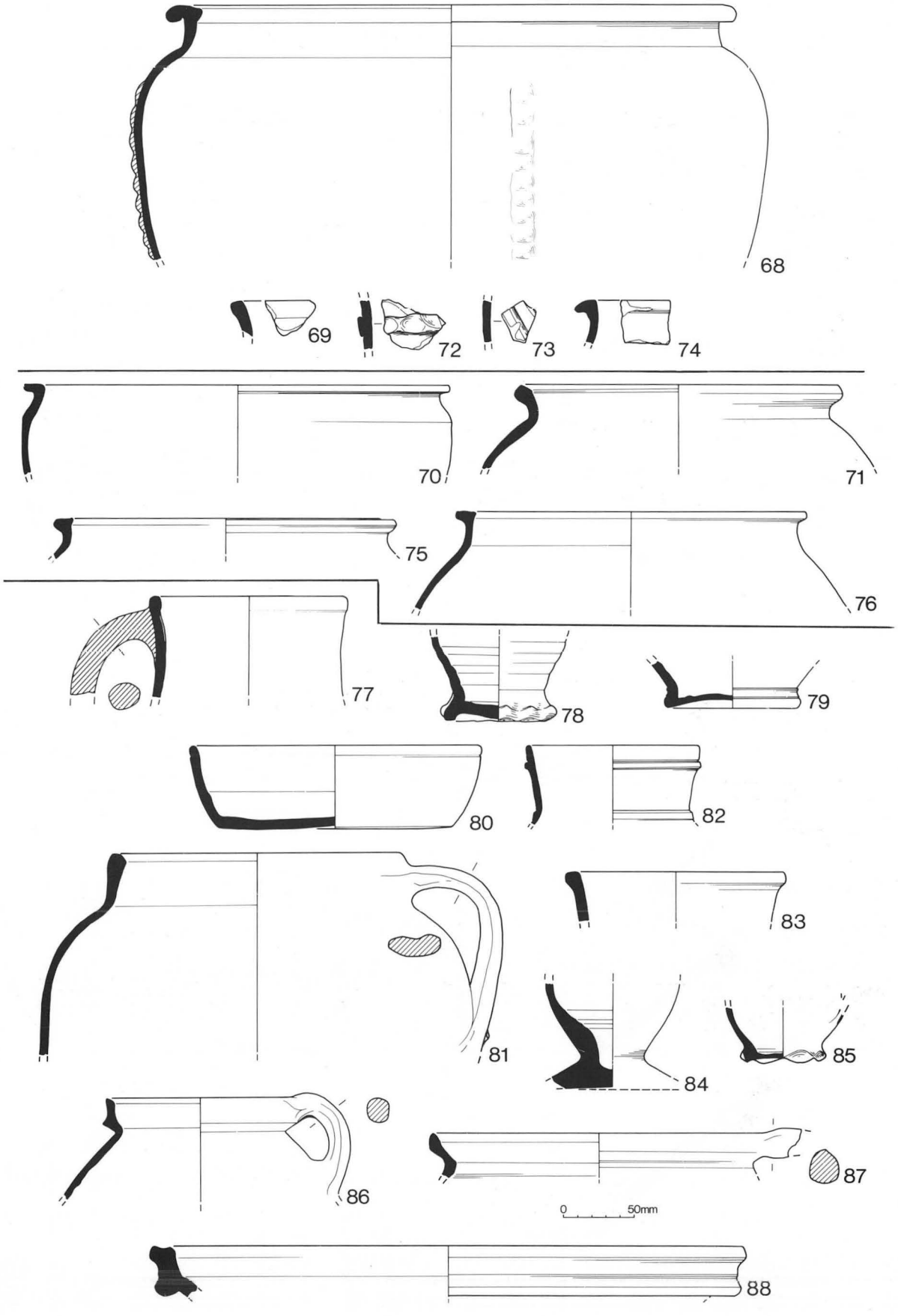

Figure 78 Period V and VI Early Medieval, Medieval and Post-Medieval pottery.

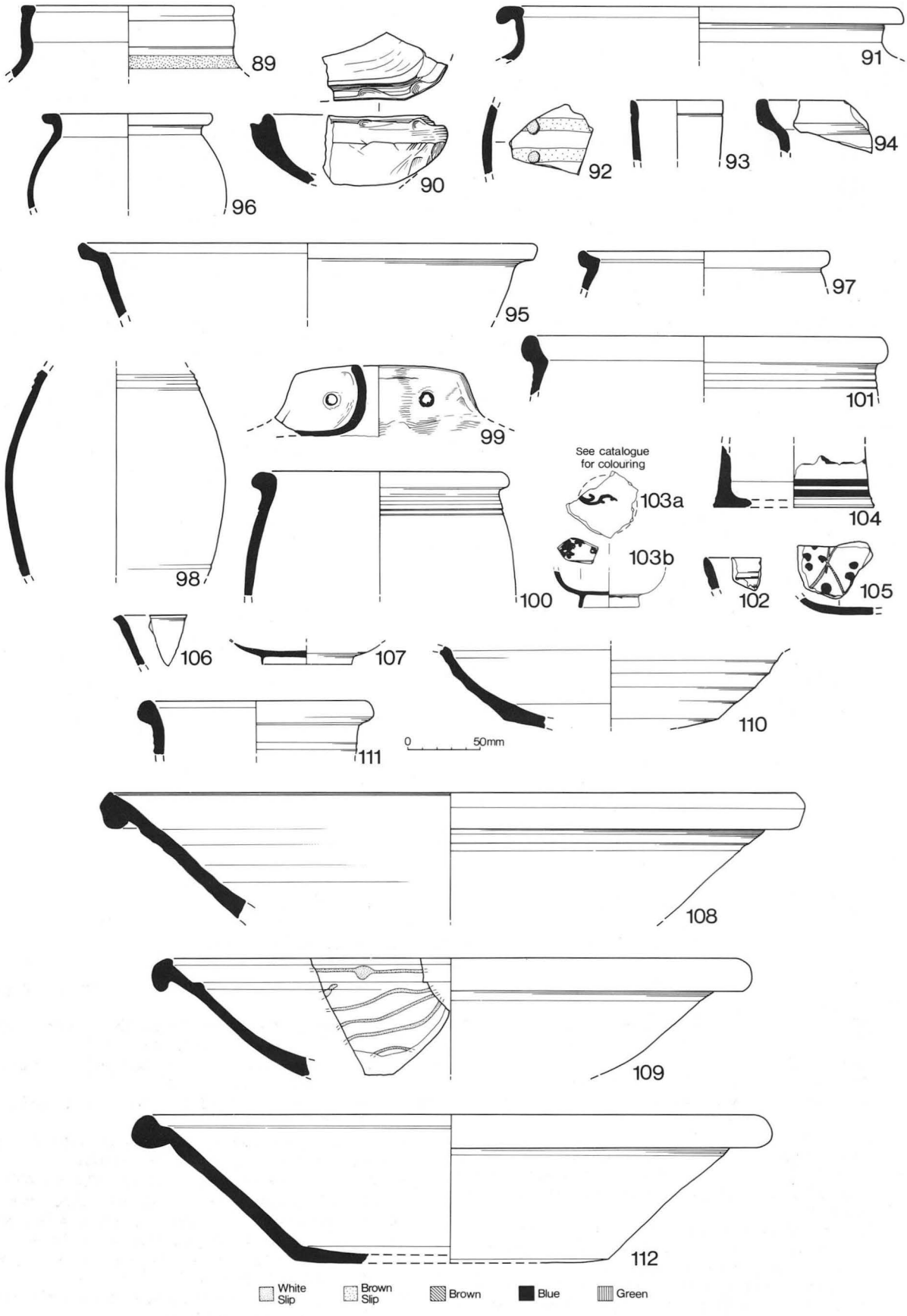

Figure 79 Period V and VI Medieval and Post-Medieval pottery.

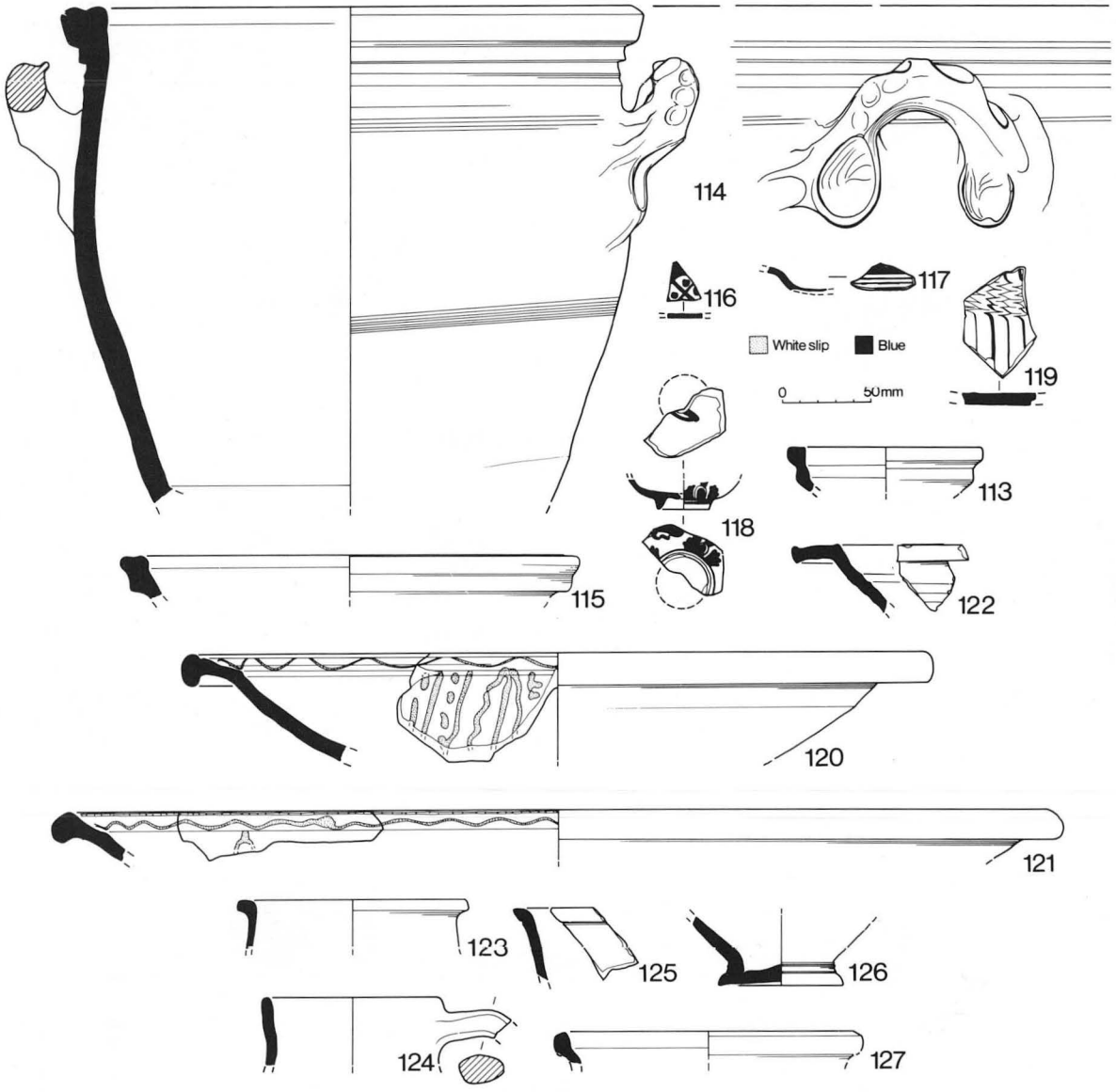

Figure 80 Period V and VI Medieval and Post-Medieval pottery.

greenish glaze on the outside; base is chipped all round, probably deliberately. *Layer 0450*

78.85 Cup or jug with frilled base: post-medieval red earthenware (Fabric 40^{MG}); handle attachment scar; all over internal brown glaze; partial external glaze. *Layer 0450*

78.86 Dutch-type cauldron: post-medieval red earthenware (Fabric 40^{s}); grey core and grey surfaces; greenish glaze on inside of rim with splashes of glaze externally. *Layer 0450*

78.87 ?Dutch-type cauldron: post-medieval red earthenware (Fabric 40^{s}); honey coloured glaze over both surfaces. *Layer 0450*

78.88 Storage jar rim: post-medieval red earthenware (Fabric 40^{s}); red fabric with grey core and darker surfaces; glaze on inside of rim. *Layer 0450*

79.89 Jug rim: sandy orange ware (Fabric 21); thick grey core and grey external surface; cream slip-painting, glaze on rim, fabric similar to Colchester ware. *Pit 0440*

79.90 Dripping dish: post-medieval red earthenware (Fabric 40^{s}), red fabric with grey core; all over internal greenish glaze; splashes of glaze externally; knife trimmed; thumbing around edge of rim. *Pit 0440*

79.91 Cooking pot: coarsely-crushed-shell-and-sand-tempered ware (Fabric 12B^{2}). *Ditch 0447*

79.92 Decorated sherd: London-type ware (Fabric 36); grey core, red-brown surfaces; painted red slip stripes overlain by applied white slip pellets, a plain lead glaze gives yellow pellets, red stripes and a light brown background; Rouen style. *Ditch 0447*

79.93 Jug rim: Frechen stoneware (Fabric 45D); tiger ware salt-glaze. *Ditch 0447*

79.94–95 Bowl rims: post-medieval red earthenware (Fabric 40^{MG}); creamy-orange fabric; unglazed. *Ditch 0447*

79.96 Jar rim: post-medieval red earthenware (Fabric 40^{MG}); creamy-orange fabric; unglazed. *Ditch 0447*

79.97 Jar rim: post-medieval red earthenware (Fabric 40^{MG}); dark external surface. *Ditch 0447*

79.98 Body of jug: post-medieval red earthenware (Fabric 40^{MG}); all over thick black glaze. *Ditches 0447 and 0444*

79.99 Costrel: post-medieval red earthenware (Fabric 40^{MG}); red fabric with darker external 'skin'; patches of glaze. *Ditch 0447*

79.100 Jar: post-medieval red earthenware (Fabric 40^{MG}); partial internal glaze; splashes of glaze externally. *Ditch 0446*

79.101 Jar rim: post-medieval red earthenware (Fabric 40^{MG}); splashes of glaze internally. *Ditch 0446*

79.102 Tyg rim: post medieval red earthenware (Fabric 40^{MG}); all over very dark green glaze. *Ditch 0446*

79.103a Part of tea-bowl: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over sky blue tin glaze; rust and green painted floral decoration; dating to *c.*1725 (M. Archer pers. comm.). *Ditch 0444*

79.103b Footring base of tea-bowl: same vessel as 103a, rust-coloured lines painted around base, blue-painted decoration internally. *Ditch 0444*

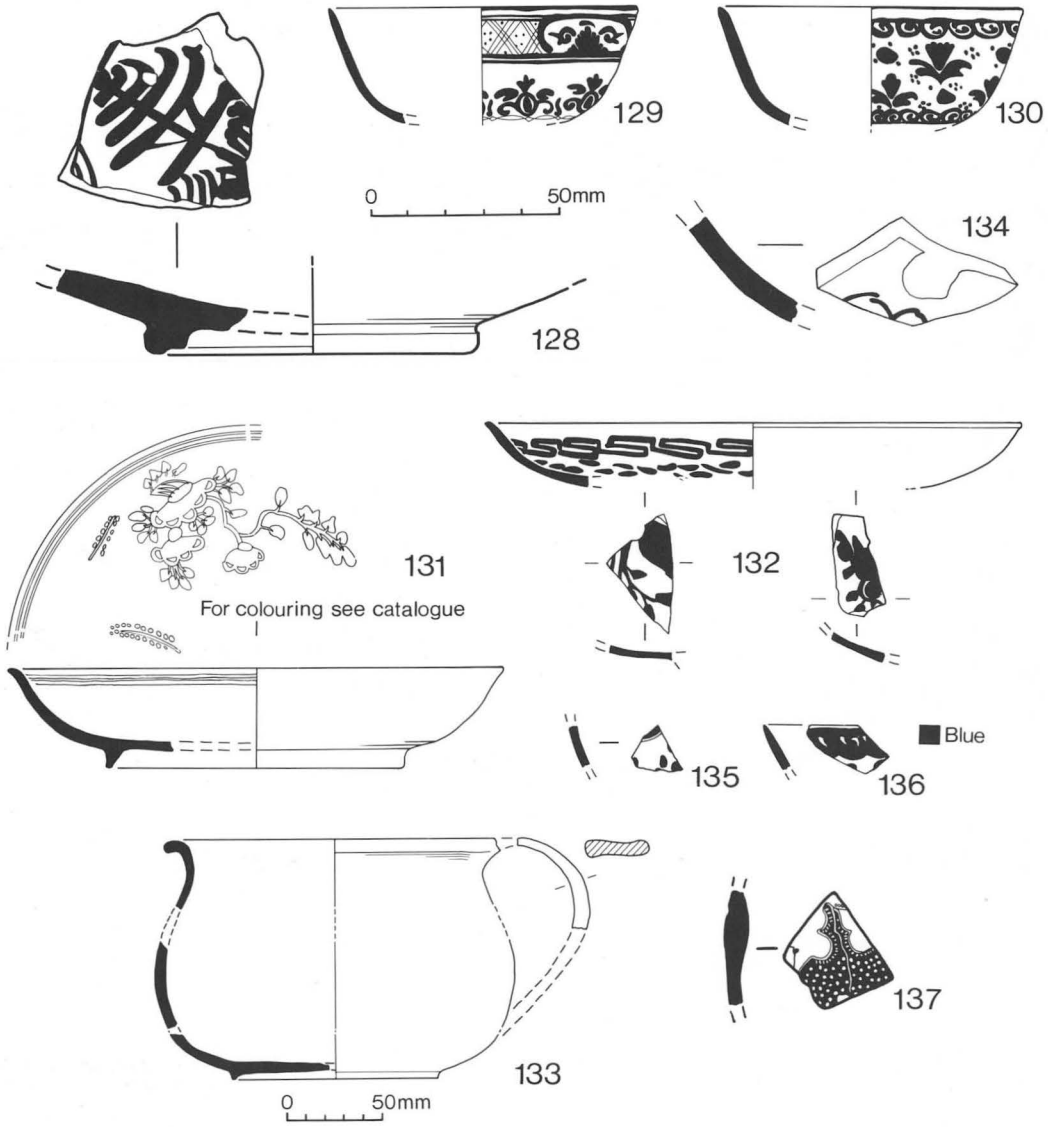

Figure 81 Period VI Post-Medieval pottery.

79.104 Base of albarello: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over very pale blue-grey tin-glaze, blue painted decoration; dating to the first half of the 18th century (M. Archer pers. comm.). *Ditch 0444*

79.105 ?Base of plate: ?Dutch tin-glazed earthenware (Fabric 46C); off-white fabric; all over white tin-glaze; dark blue and rust painted pattern; 18th century (M. Archer pers. comm.). *Ditch 0444*

79.106 ?Dish rim: Staffordshire type buff-coloured earthenware (Fabric 50A); all over mottled brown glaze. *Ditch 0444*

79.107 Footring base from dish or saucer. Agate ware (Fabric 48W); shades of brown, yellow and blue-green have been produced; all over clear lead glaze, crazed in places. *Ditch 0444*

79.108 Bowl: post-medieval red earthenware (Fabric 40^{MG}); all over internal plain lead glaze, external splashes. *Ditch 0444*

79.109 Bowl rim: post-medieval red earthenware (Fabric 40^{MG}); Metropolitan slipware decorated in ?oak leaf pattern; all over internal plain lead glaze; fire-blackened externally beneath rim. *Ditch 0444*

79.110 Bottom half of shallow bowl or dish: post-medieval red earthenware (Fabric 40^{MG}); all over internal plain lead glaze, splashes of glaze externally; wear mark at basal angle. *Ditch 0444*

79.111 Jar rim: post-medieval red earthenware (Fabric 40^{MG}); all over internal glossy lead glaze. *Ditch 0444*

79.112 Bowl or pancheon: post-medieval red earthenware (Fabric 40^{S}); all over internal plain lead glaze, external splashes. *Ditch 0444*

80.113 Jug rim: Mill Green fine ware (Fabric 35); thick-grey core, brick-red surfaces; all over cream slip-coating, partial pale green glaze cover. *Ditch 0477*

80.114 Large storage jar or bread crock: post-medieval red earthenware (Fabric 40^{S}); all over plain lead glaze, thumbing on handle; wear on rim. *Ditch 0477*

80.115 Storage jar: post-medieval red earthenware (Fabric 40^{S}); all over glossy brown glaze. *Ditch 0477*

80.116 Body sherd: ?English tin-glazed earthenware (Fabric 46A); off-white fabric; all over pale grey tin-glaze; blue-painted decoration. *Pit fill 0438A*

80.117 ?Base of plate: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over pale blue tin-glaze of egg shell thickness; blue painted bands. *Pit fill 0438A*

80.118 Base of tea-bowl: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over pale grey tin glaze; blue painted decoration. *Pit fill 0438A*

80.119 Dish fragment: Staffordshire type slipware (Fabric 50). *Pit fill 0438A*

80.120 Bowl: post-medieval red earthenware (Fabric 40^{MG}); Metropolitan slipware decoration; ?oak leaf pattern; all over glossy internal glaze, splashes of glaze externally. *Pit 0438A*

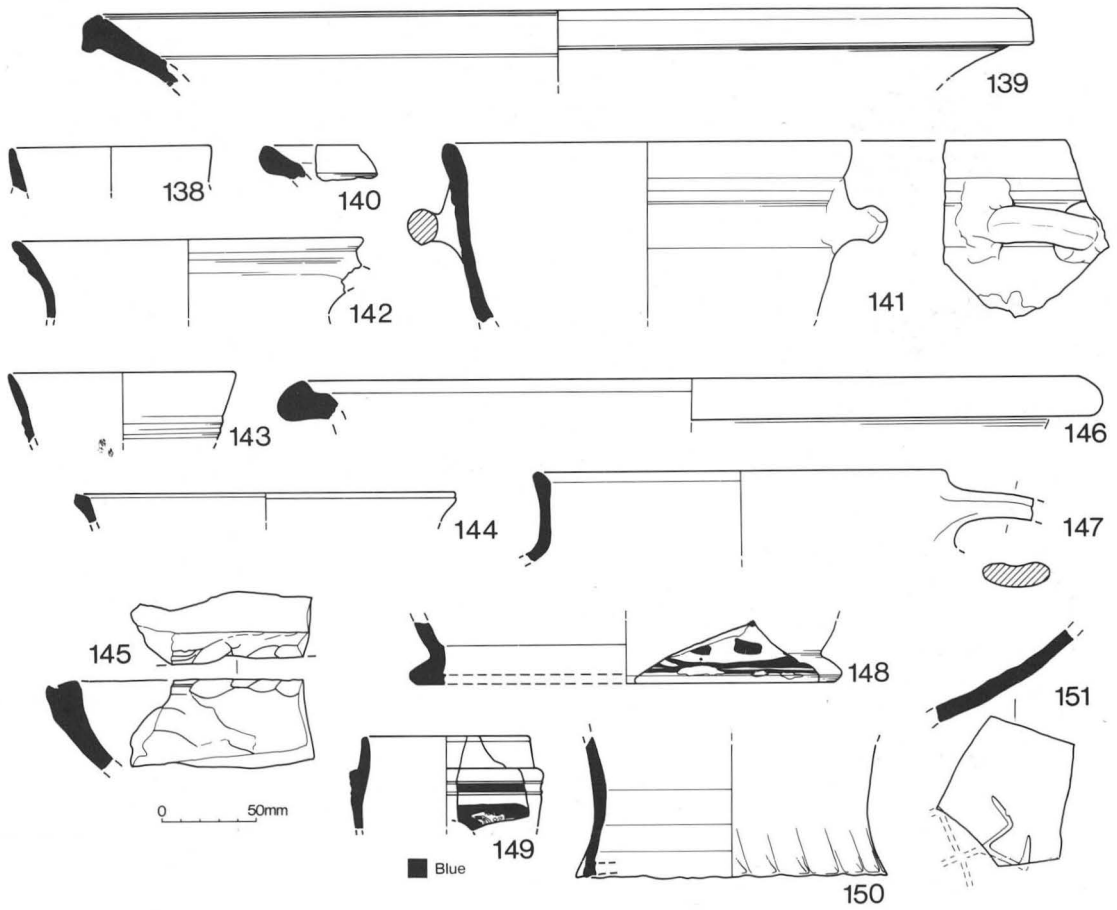

Figure 82 Period VI Post-Medieval pottery.

80.121 Bowl: post-medieval red earthenware (Fabric 40^{MG}); Metropolitan slipware decoration, all over glossy internal glaze. *Pit fill 0438A*

80.122 Bowl: post-medieval red earthenware (Fabric 40^{MG}); all over internal glaze. *Pit fill 0438A*

80.123 Jar: post-medieval red earthenware (Fabric 40^{MG}): all over greenish glaze. *Pit fill 0438A*

80.124 Jug rim: post-medieval red earthenware (Fabric 40^{MG}); unglazed; red fabric with darker surfaces. *Pit fill 0438A*

80.125 ?Bowl rim: post-medieval red earthenware (Fabric 40^{S}); all over internal glaze. *Pit fill 0438A*

80.126 Base of jug: Frechen stoneware (Fabric 45D); brown wash; speckled salt-glaze. *Ditch 0033*

80.127 Lid-seated rim from jar: southern white ware (Fabric 42), all over plain lead glaze giving yellow colour. *Ditch 0033*

81.128 Footring base: Dutch tin-glazed earthenware (Fabric 46C); pink fabric; all over off-white tin glaze which appears slightly iridescent on the external surface; blue-green painted decoration. *Ditch 0033*

81.129 Tea-bowl: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over, very pale grey tin-glaze; blue painted decoration. *Ditch 0033*

81.130 Tea-bowl: English tin-glazed earthenware (Fabric 46A), similar to No. 129. *Ditch 0033*

81.131 Saucer/bowl: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over sky blue tin-glaze; green, blue and rust coloured floral painted decoration on inside surface; similar to No. 103. *Ditch 0033*

81.132 Saucer/bowl: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over white tin-glaze; blue painted decoration. *Ditch 0033*

81.133 Chamber pot: English tin-glazed earthenware (Fabric 46A); off-white fabric; thick, all over off-white tin-glaze; undecorated. *Ditch 0033*

81.134 Decorated sherd: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over, off-white tin glaze; blue painted decoration on outside surface. *Ditch 0033*

81.135 Decorated sherd: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over sky blue tin glaze; blue painted decoration on outside surface. *Ditch 0033*

81.136 Rim ?from tea-bowl: English tin-glazed earthenware (Fabric 46A); off-white fabric: all over off-white tin glaze: blue painted decoration. *Ditch 0033*

81.137 Body sherd: Westerwald stoneware: (Fabric 45F); moulded decoration; cobalt-blue glaze. *Ditch 0033*

82.138 Rim: Westerwald stoneware (Fabric 45F). *Ditch 0033*

82.139 Bowl rim: post-medieval red earthenware (Fabric 40^{MG}); partial, internal plain lead glaze, external splashes. *Ditch 0033*

82.140 Bowl rim: post-medieval red earthenware (Fabric 40^{MG}); partial, internal plain lead glaze. *Ditch 0033*

82.141 Small storage jar: post-medieval red earthenware (Fabric 40^{MG}): all over plain lead glaze. *Ditch 0033*

82.142 Rim of ?large jug: post-medieval red earthenware (Fabric 40^{MG}); all over plain lead glaze; handle attachment scar. *Ditch 0033*

82.143 Tyg rim: post-medieval red earthenware (Fabric 40^{MG}); all over black glaze. *Ditch 0033*

82.144 Rim: post-medieval red earthenware (Fabric 40^{MG}); grey core, dark external surface; patch of glaze on rim. *Ditch 0033*

82.145 Dripping dish: post-medieval red earthenware (Fabric 40^{S}); same as No. 90. *Ditch 0033*

82.146 Bowl rim: post-medieval red earthenware (Fabric 40^{S}); internal plain lead glaze. *Ditch 0033*

82.147 Cistern rim: post-medieval red earthenware (Fabric 40^{MG}); grey core and dark external surface; patch of glaze on rim. *Surface cleaning of ditches 0033/0034*

82.148 Base of albarello: English tin-glazed earthenware (Fabric 46A); off-white fabric; all over white tin glaze; blue painted decoration. *Pit 0061*

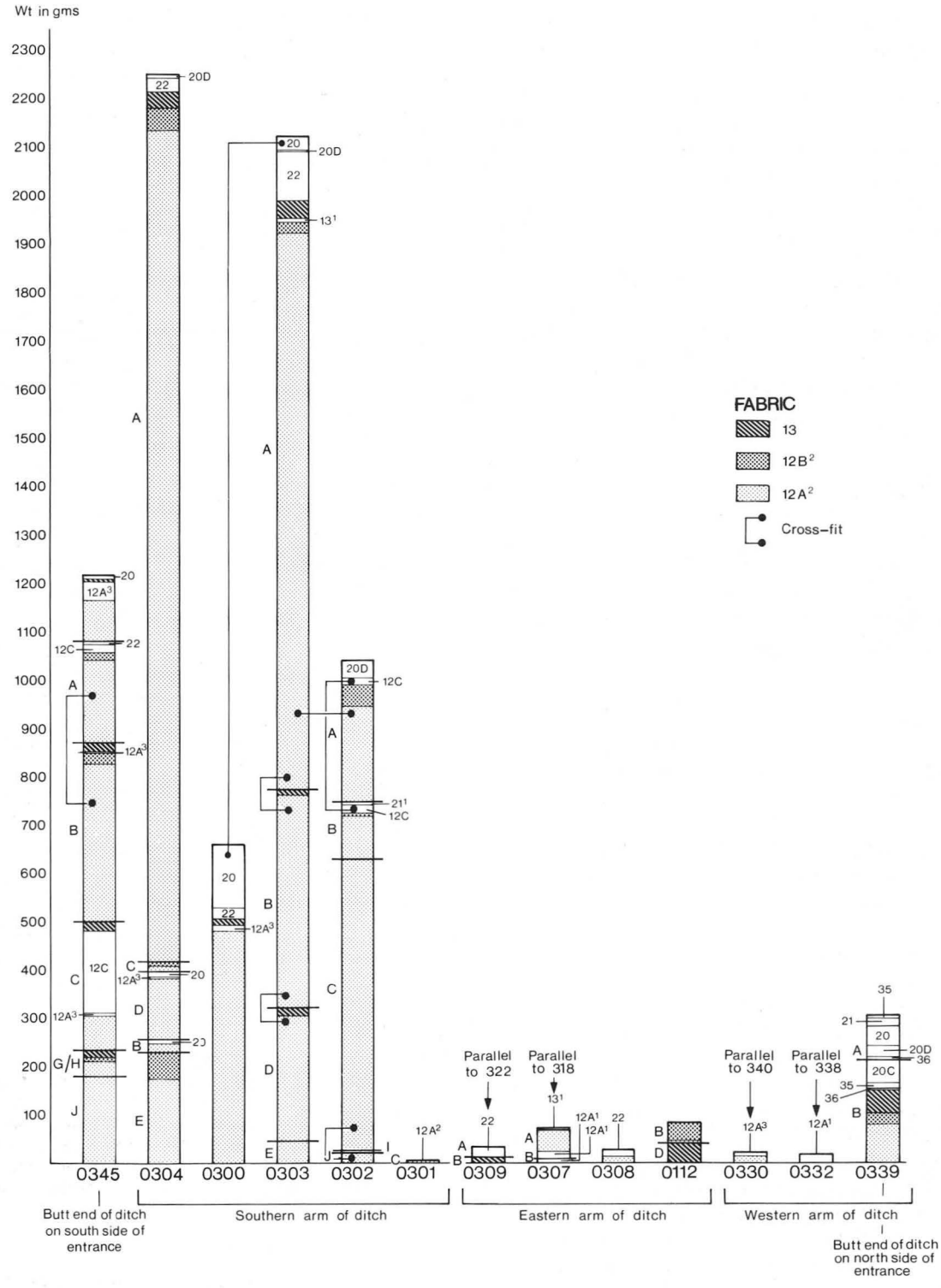

Figure 83 Quantification of pottery fabrics by weight in each segment of enclosure ditch *0300*. For segments with more than one fill, the fill letter is shown on the left of each column. The earliest fill is at the bottom of the graph, the latest at the top. The interconnecting lines denote cross fits.

82.149 Rim of ?straight sided tankard: Westerwald stoneware (Fabric 45F); incised line border to motif; cobalt-blue and manganese purple glaze. *Pit 0061*

82.150 Jug base: Mill Green-type ware (Fabric 35B); grey internal half, orange external half, darker external skin; thumbed base; traces of cream slip on sides; glaze splashes; ?from Rayleigh. *Surface find*

82.151 Body sherd: post-medieval red earthenware (Fabric 40^{MG}); reduced grey; owner or merchants mark incised after firing; perhaps from a cistern. *Surface find*

IX. Brick and tile

by J. Wymer

Fragments of brick and tile occurred in numerous contexts, mainly in those of Periods V–VI, *i.e.* medieval and later. They also occurred in some of the Period III (Roman) features, rather more frequently in features of phase III 2, but not anywhere in sufficient quantity to suggest the existence of any substantial building nearby.

X. Fired clay

by P.R. Barford

Introduction

In south-east England, particularly in the later prehistoric period, objects were frequently made of clay, in many cases deliberately fired. In addition many structures (*e.g.* walls and ovens) were built of daub, which was incidentally or accidentally fired. Fired clay fragments are relatively common finds in excavations in the area but often, as at Shoebury, relatively few recognisable objects are found. This report is based on an examination of the fired clay objects from the 1981 excavations, all of the Macleod material in Southend Museum has also been studied, and the more important objects discussed here. Fuller notes on material not mentioned here will be found in the Archive. The fabric of the majority of fragments seen was visually identical to samples of fired brickearth from the North Thames Terraces, at Mucking, and has been accordingly termed 'brickearth' here. The 'brickearth' fabric contains much very fine sand and has a slightly 'abrasive' feel; it sometimes includes small (less than 1mm) ironstone and quartz (flint) inclusions, and sparse small flecks of mica. All objects are in this fabric unless the fabric is individually described below.

'Burnt daub' and 'oven debris'

Most of the fragments of fired clay from the site can be placed in this category. It seems unlikely that all of this material derives from burnt wattle and daub walls, and it is suggested that much of it represents the destroyed superstructure of domestic (or perhaps industrial) ovens. In fact, the number of British sites which have produced identifiable ovens is about a dozen. It is possible that these once (presumably) ubiquitous structures were nearly always surface-built, and when demolished little of their fabric would survive archaeologically, except as scattered or dumped fired clay fragments.

The Shoebury material consists mainly of small abraded fragments of fired clay. Little of this shows signs of deliberate fabric modification; neither were surfaces generally well finished. Few pieces showed wattle impressions. Most fragments are so small that they could not be assigned to any particular place in the oven structure. Most commonly recognised were fragments of the junction of the oven chamber floor and wall. There were fifteen fragments of perforated oven floor (closely spaced), 25–30mm diameter perforations. On the underside are impressions of 40mm diameter wattle supports for the floor.

Textile production

Spinning

(Fig. 84)

Ten spindle whorls came from the site. Those from prehistoric contexts tend to be heavier and taller than those from Roman contexts; globular, cylindrical and biconical shapes being represented. The Roman preference for smaller, lighter weights (a tendency noted by the writer on other Essex sites) is reflected in the use of sherds for whorls. That this is not an invariable practice is suggested by the globular decorated shale spindle whorl from a Roman context (Fig. 49).

84.1 Biconical spindle whorl: tempered with finely crushed shell *M126 (pit); B79*

84.2 Spindle whorl: made from Samian sherd. *Unstratified; 468S*

84.3 Spindle whorl: made from potsherd. *Unstratified 467S*

Weaving

(Fig. 84)

Six fragments of cylindrical loomweights probably Middle Bronze Age were recovered from different features, mostly from the 1971/72 site. The illustrated examples are listed below:

84.4 Height 81–90mm; diameter 116mm; weight 1425g. The ?lower part of the weight is blackened. *M225 (pit); B343*

84.5 Height 85–90mm; diameter 114mm; weight 1500g. The lower part of the weight is blackened. *M225 (pit); B239*

84.6 Approximately half of weight split longitudinally. *1239A (pit 1167); 441S*

84.7 Fragment of weight. *M637 (pit); B539*

No loomweights were recovered from Late Bronze Age contexts. Eight fragments of triangular Iron Age loomweight were found, five from the 1981 excavations. The triangular loomweight fragments were mainly found in the area of MIA–LIA settlement in Grid DE. The fabric differs from the cylindrical weights in that it is usually more heavily vegetable tempered.

84.8 Complete small loomweight: Only two complete perforations *1458A (pit); 050S*

84.9 Fragment of triangular weight: Trails of two perforations surviving. *1525E (ditch 1469); 1000S*

84.10 Small fragment of triangular weight: Hard fabric with dense sand temper. *1499A (ditch); 999S*

(n.ill) Fragments of a very large triangular weight probably in excess of 3kg. These may form a separate class of object (and may not be loomweights). *M383*

Metalworking debris

(Not illustrated)

No metalworking debris was recovered, except a possible, but dubious, fragment of metal mould in hard-fired sandy brickearth fabric from the Macleod excavations. *M205*

Potter's waste

84.11 A large piece of fired clay from a Bronze Age context is most interesting. It was interpreted by the excavator as a tuyére fragment, but it is quite clearly a complete object. Firing is variable and the fabric is heavily tempered with crushed calcined flint. The layered structure, shape and flint temper suggest that this is a piece of potter's clay that has been accidentally fired during the process of 'wedging'. *M225 (pit); B241*

Tournettes

This artefact class was discussed by Jones (1975). They date from the Iron Age and have a markedly south Essex-north Kent distribution at present. Jones suggests that they were items of potter's equipment, and the Shoebury finds tend to support this suggestion, although it might be possible that they served some function in the 'kiln'.

84.12–13 Two almost complete examples. Decidedly pink in colour; slurried surfaces discoloured to a whitish-buff. Found in the fill of a feature interpreted by MacLeod as an oven or kiln. *M671 (?oven); B547*

84.14 A complete example. Pink, discoloured whitish-buff, with base blackened. This object has a slightly more pronounced hour-glass profile than Nos 12 and 13. *M386 (pit); B372*

n.ill Fragment of large rectangular block *M645* no. 523 possibly kiln or oven furniture.

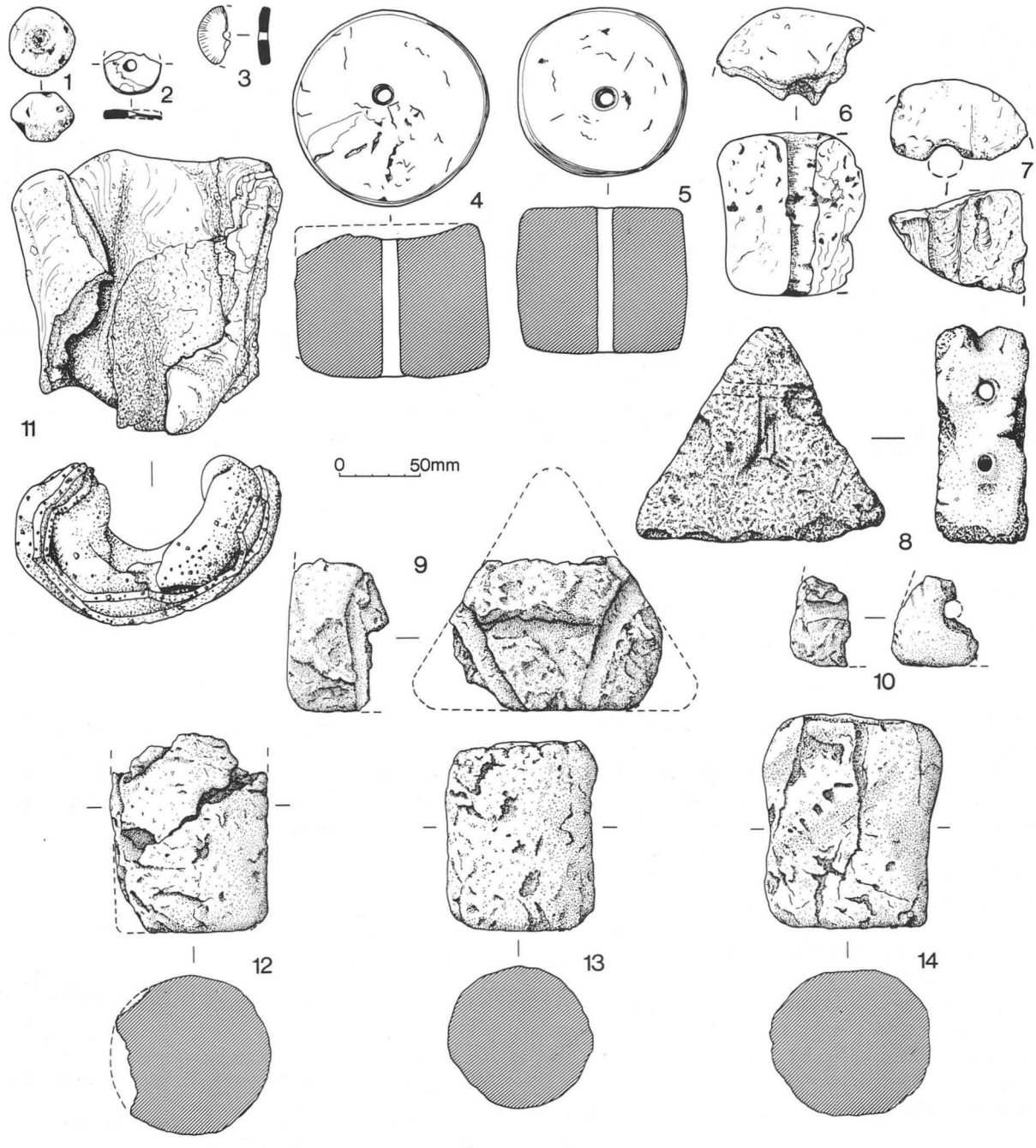

Figure 84 Objects of fired clay.

Firebar fragments

n.ill Fragment of circular-sectioned firebar *F1584 ditch No. 1219*

n.ill Fragment of rectangular sectioned firebar. *M537*

Late Bronze Age perforated clay slabs

(Fig. 85)

The group of 135 fragments from the Shoebury sites is a significant addition to this class of artefact, exceeded only in number by those from Mucking. Most of the pieces came from the 1971–72 site (53 contexts); only two fragments came from the 1981 excavations.

85.15 Corner fragment: two edges and part of one perforation survive. Flint temper. *M330 (pit); B326*

85.16 Corner fragment: two edges and part of one perforation survive. Flint temper. *M351 (pit); B344*

85.17 Corner fragment: two edges and part of one perforation survive. Vegetable temper. *M351 (pit); B347*

85.18 Fragment: two perforations survive. Flint temper. *M351 (pit); B347*

85.19 Fragment: one curved edge and two perforations survive. Coarse vegetable temper. *M351 (pit); B347*

85.20 Corner fragment: one curved edge and part of one perforation survive. *M351 (pit); B345*

85.21 Corner fragment: two bifurcated edges and part of five perforations survive. Flint temper. *M644 (pit) B522*

85.22 Corner fragment: one bifurcated edge, one flattened edge and parts of four perforations survive. Flint temper. *M644 (pit); B522*

85.23 Fragment: one curved edge and one perforation survive. Coarse vegetable temper. *M644 (pit); B522*

85.24 Near complete slab: one edge bifurcated; five perforations survive. Flint temper. *M600 (pit); B647*

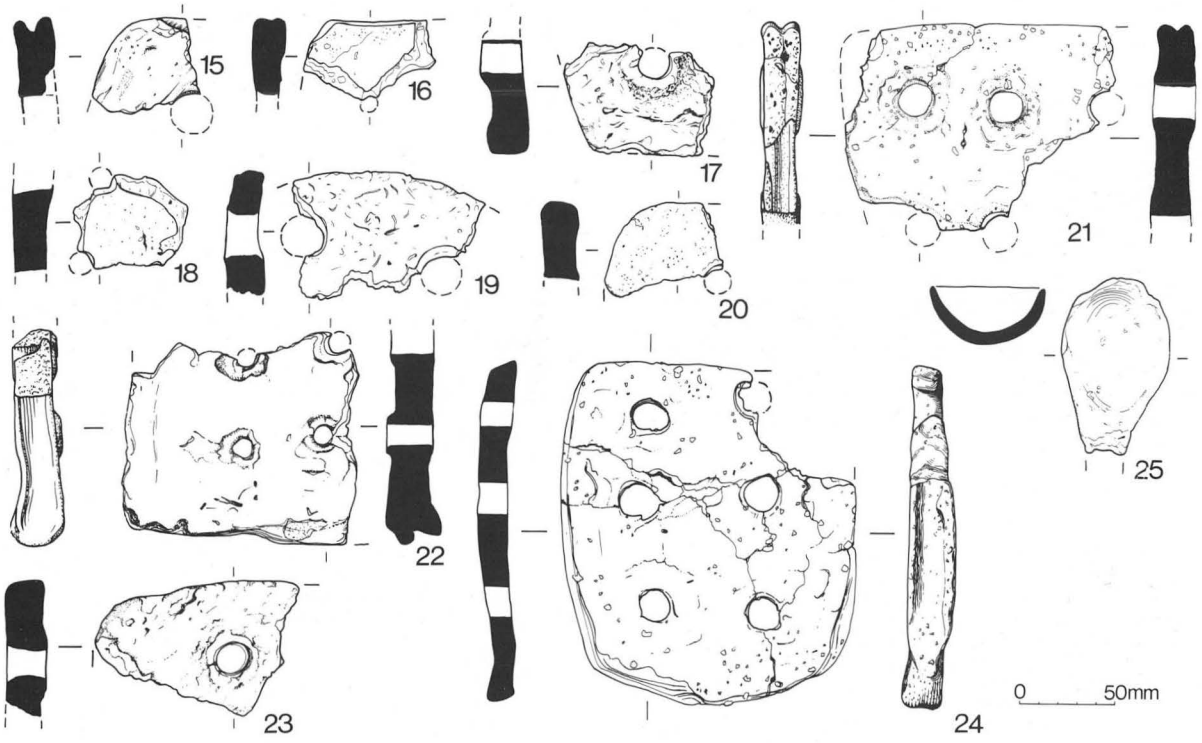

Figure 85 Perforated clay slabs.

In form the Shoebury slabs are rectangular, or sub-rectangular, possibly of variable size but 15–20mm thick. Few fragments can be reconstructed, but No. 24 is an exceptional piece as it is virtually complete. The upper surfaces of the objects are usually slurried, and the edges frequently show a 'bifurcated' section, with a groove running along them. This is probably an incidental feature of manufacture; some edges or lengths are rounded, none are knife-cut. There are ridges around many of the perforations, again due to the method of formation. The pattern of holes seems to be in rows. Some of the lower surfaces of the slabs have copious temper (*e.g.* grass or flint) to prevent adhesion to the surfaces on which they were made. Fragment B381 (not illustrated) is interesting in that crushed limestone (chalk) was used as temper, which has now dissolved out to leave vesicles in the lower surface.

Pottery spoon

85.25 Fragment of pottery spoon or scoop from an Early Iron Age context. Fabric hard-fired 'brickearth'; fine, oxidised. Fine vegetable temper and some coarse sand. Well made with well-finished surfaces. *M126 (pit); B99*

Fired clay 'spoons' are known from Neolithic contexts but only one later prehistoric British example is known to the writer, from Staple Howe (Brewster 1963, 107, fig. 60). Spoons and ladles were probably more commonly made of wood (Coles *et al.* 1978, 16) or some other perishable material.

Briquetage

Briquetage (defined as ceramic equipment believed to be associated with the production of salt) is now being quite frequently recognised on prehistoric and Roman sites in Essex (Rodwell 1979), and a number of fragments from Shoebury were not unexpected.

Two shapeless fragments of possible briquetage fabric came from Macleod's investigations (*M540* and *M549*). Two fairly definite examples of 'chaff-tempered ware' (Macpherson-Grant 1980: Barford 1982) vessel sherds came from Roman features of the site. Both these sherds differ in fabric from the Kentish examples seen by the writer (details in archive).

XI. Objects of bone

by N.R. Brown

(Fig. 86)

86.1 Spatula-like object: single perforation in handle, drilled from one side. Surface and edges are smooth and polished. *I.2 M644 (pit); B521*

86.2 Spatula-like object: damage at the end opposite point indicates it may originally have had a handle, as No. 1. Single perforation drilled from one side. Surfaces and edges smoothed, but lack the polish of No. 1. *I.2 M644 (pit); B521*

86.3 Sharply pointed bone awl. *II. 1499A (ditch); 998S*

86.4 Bone awl *I.2 M715 (pit); B597*

86.5 Abraded broken weaving comb: seven horizontal incised lines separating incised crosses or triangles. Rounded terminal. Most of teeth missing. *I.3 M122 (pit); B94*

86.6 Multi-faceted handle: broken at one end. Decorated with roughly incised chevron patterns. Surfaces smoothed and polished. *I.3 M399 (pit); B400*

86.7 Gouge: Smooth polished surface. *I.2 M644 (pit); B521*

86.8–10 Fragments of bone comb with rivet holes: Possibly Saxon (S. Tyler pers. comm.). *1230A (ditch); 697S*

Bone objects, particularly prehistoric examples, are rare from Essex owing to the common acid soil conditions. The two Late Bronze Age spatula-like objects have clear parallels with a group of twenty bone implements from All Cannings Cross (Cunnington 1923, 74, plate 6). Their function is unclear, but Cunliffe (1974 fig. 14.1) suggests a use in weaving or skin dressing. The gouge is one of a class of objects which occurs widely on prehistoric sites but whose function is uncertain (Sellwood 1984, 382–7). The middle part of a large long bone with the articular ends evenly sawn off, found during machining in Grid DE 3030, may suggest on-site boneworking.

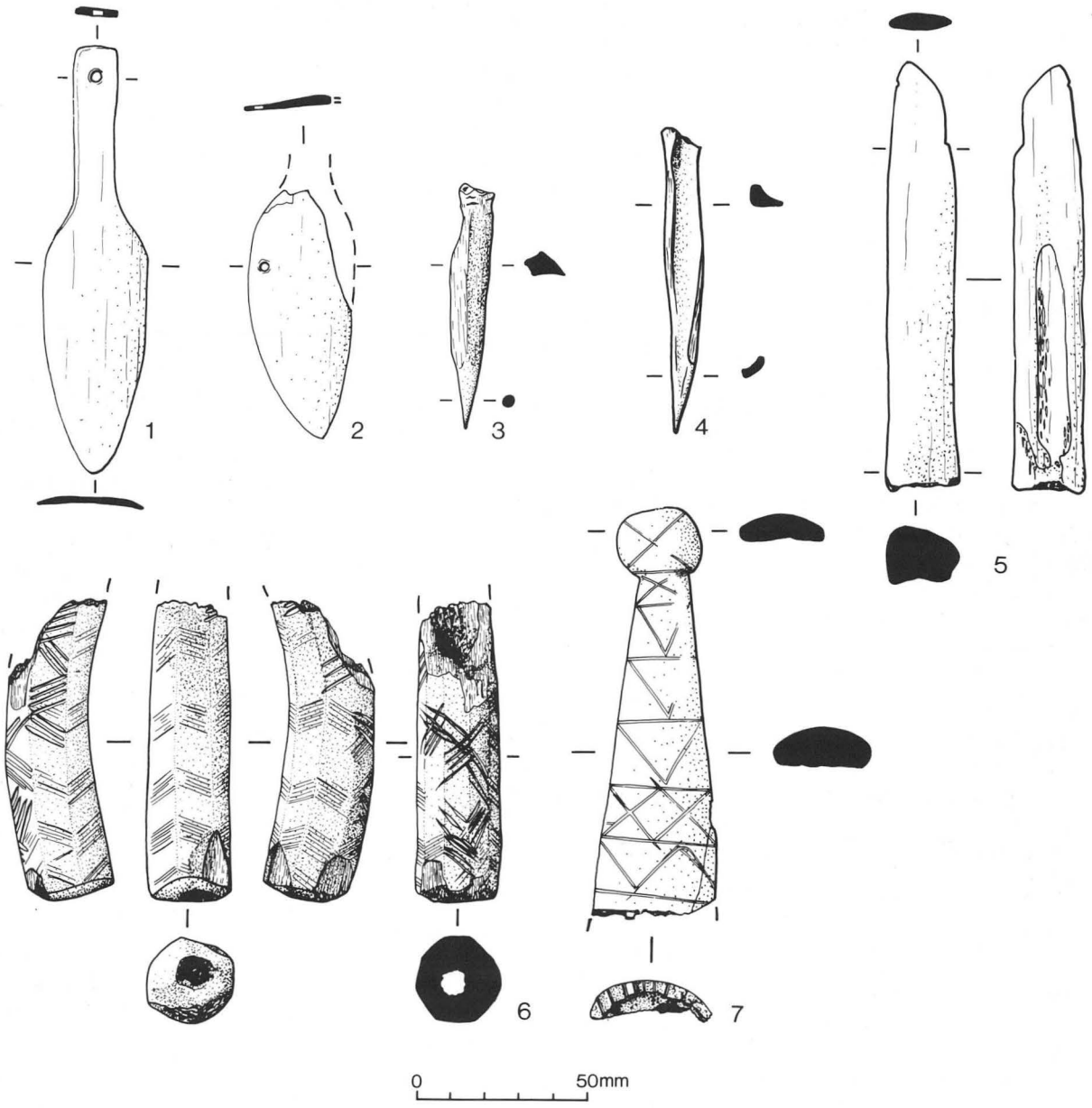

Figure 86 Bone objects.

Part 4. Zoological Evidence

I. Human bones

by J. Wymer and Janet D. Henderson

Previous finds

by J. Wymer

Human remains have frequently been found in the area during the process of quarrying for brickearth. Burrows (1930) records that so many were found at Great Wakering that the workmen referred to it as a battleground. Nothing is known of the date of such burials. Those found since controlled recording and excavation commenced, but prior to 1981, include the small Saxon cemetery (p.46), a group of five inhumation burials at the Tithe Barn site found in 1958 and referred to by Macleod as Cemetery III (report in Archive), and a contracted burial probably of Iron Age date at Elm Road in 1972 (site report in Archive).

The Tithe Barn burials are described by Macleod:

> ...no evidence that they were contemporary burials or that they were Saxon. One male inhumation grave contained the remains of an iron arrowhead "Wheeler type II" lodged between the left clavicle and vertebra, and had been orientated in the non-Christian direction of north-south with the head to the north.... The type of arrowhead is known from Frankish graves but was in use till the thirteenth century. From the four remaining graves, all probably and two certainly robust men aged approximately 40, came two lower jaws. Both showed signs of advanced caries and also disease on the inside of the jaw. Similar deformity has been noted on other inhumations at Great Wakering, but here again the date is doubtful. Much Roman material was found but Saxon finds were also present.

The Elm Road burial was placed in a disused storage pit, and is described by Macleod:

> The dental evidence shows that adult teeth from both the upper and lower jaw were deposited, but the skull and jaw were not present when the bones were finally sealed. The lower leg bones lay at a higher level than the rest of the bones and were in correct association. From the position of the other bones it is clear that the body had been in a contracted position although the disassociated position of the bones indicates prolonged exposure before final filling in. The skull and jaw were possibly removed after the teeth found with the bones had become detached. Environmental evidence provided by four species of snail found with the bones indicated an open vegetation.

In 1981, burials of prehistoric and Roman date were excavated. The main details have been recorded above in the appropriate sections but are listed here for convenience, with some further comments and a report on the human remains by J.D. Henderson.

Finds from the 1981 excavation

by J. Wymer

Summary by period

Period I–Prehistoric, probably MBA

Pit *0021*: a small, shallow sub-circular pit in Grid DZ at 182872. A dark, organic fill containing small fragments of cremated bones of a child, six small sherds, four burnt flints and three seeds (Find No. 27). Laboratory examination of the pit contents by P. Murphy identified seeds of crop plants and wild species from different habitats.

Pit *0600*: oval, flat-bottomed pit in Grid NM 8955, 40 by 70cm with 40cm of fill intact beneath ploughsoil. Heat had baked the sides and base of the pit into hard, red, burnt clay. The large sample of cremated bone was mainly at the base of the pit and is considered by J.D. Henderson (see below) probably to represent a female, aged 25–40 years.

Phase II.1–MIA

Pit *1505*: (Pl. XIV) 46 by 36cm and 13cm deep, with human cranium (967) lying on the base of MIA vessel (968) on its side. Skull damaged by machining/ploughing. Considered by Henderson to be an adult of at least 30 years.

Phase II.2– LIA 'Belgic'

Cemetery: small cremation cemetery partly within a shallow, rectangular enclosure, (p.34; Figs 27–28, Pls VI–VIII). Details of the cremated bones are described below.

Phase III.2–Late Roman

Cremation *1586:* remains of a cremation placed with a plain-based jar in the upper fill of a large feature and much disturbed by machining. For description of pot see above (p.95). It cannot be certain whether the cremated bones were placed in or around the pot. The individual is assessed to be adult (p.130).

Report on the human remains

by Janet D. Henderson

Summary

Several samples of cremated human bone and one of inhumed bone were examined in the Ancient Monuments Laboratory (AML).The cremated bone derived from two Bronze Age burials (*0021* and *0600*), three Late Iron Age burials (*1167, 1232* and *1367*) and one Roman burial (*1586*). The inhumed bone, part of a skull, was recovered from a small Middle Iron Age pit (*1505*).

Observations were confined to identification of fragments present, and where possible age and sex. There was little evidence for number of individuals or cremation practice. The majority of cremated bone from the Late Iron Age burials was found outside the accompanying pots.

Plate XIV Human bone: cranium *967* from Middle Iron Age pit *1505*.

Soil from the interiors of the vessels was wet-sieved (5.6, 4.0, 2.0, and 1.0mm sieves) and oven-dried.

Feature 0600 Bronze Age
(above p.21), Find Nos 1508, 1509.
A large amount of cremated human bone from which fragments of skull, teeth, mandible, vertebrae, long-bones, pelvis, hands and feet were all recognised. The bones and teeth could be aged as adult. Examination of a fragment of pubic symphysis suggested a female.

Feature 0021 ?Bronze Age
(above p.21), Find Nos 27, 464.
A small amount of cremated human bone including fragments of skull, long-bones and phalanges. The bones were assessed as adult and, on the basis of their size and gracility, female.

Feature 1505 Middle Iron Age
(above p.34), Find No. 967
Part of the parietals and frontal bones of an inhumed cranium. The skull had been buried upside down, and the lower part of the skull had apparently been removed during ploughing. On the basis of endocranially fused and obliterated coronal and sagittal sutures, it was suggested that the individual probably had a minimum age of 30 years.

Feature 1232 Late Iron Age
(above p.34), Find Nos 679, 680, 681, 682, 684, 685, 1507
Find No. 679 Interior of pot. Very little bone, a mixture of human and animal. Identifiable fragments of animal bone were, a premolar tooth of a dog and three vertebrae of a small mammal ?mouse.
Find No. 680 Interior of pot, contained four small fragments of unidentifiable human bone.
Find No. 681 Interior of pot, no bone.
Find No. 682 Interior of pot, very little bone, human, unidentifiable.
Find No. 684 Interior of pot, no bone.
Find Nos 685, 1507 Burial pit, a large amount of human bone together with some animal bone, a small fragment of unidentifiable copper alloy. Identifiable human bone fragments comprised, skull, mandible, teeth (including a second molar), vertebrae, ribs, scapula, pevis, long-bones, hands and feet. Adult, size and robustness of bone suggested at least one male present.

Feature 1367 Late Iron Age
(above p.34) Finds Nos 910, 910, 911, 912, 913, 1506.
Find No. 910 Interior of pot. Four small fragments of human bone, unidentifiable. Small quantity of bones of domestic fowl ?chicken.
Find No. 911 Interior of pot. Three fragments of human bone, unidentifiable. Near-complete skeleton of mole.
Find No. 912 Interior of pot. Very little human bone unidentifiable, part of a rib of a small mammal.
Find No. 913 Interior of pot. Three fragments of human bone, small quantity of bones of domestic fowl ?chicken.
Find No. 1506 Mixture of cremated human bone and unburnt animal bone. Human bone included fragments of skull, vertebrae, ribs, and long-bones. Age assessed as adult. Animal bone included vertebral fragments, several vertebral epiphyses, and a tooth from an animal of small ungulate ?sheep.

Feature 1161 Late Iron Age (above p.34) Find Nos 443, 444, 445, 485, 1510, 1511.
Find No. 443 Interior of pot. Very small quantity of burnt bone uncertain wnether animal or human.
Find No. 444 Interior of pot. Very small quantity of burnt bone probably human.
Find No. 445 Interior of pot. Very small quantity of burnt human bone, unidentifiable.
Finds Nos 485, 1510, 1511 Burial pit, small amount of burnt bone including identifiable fragments of skull, long-bone, teeth (including molar), and an odontoid process (axis vertebra). All of the bones were assessed as adult.

Feature 1586 Roman (above p.40) Find No. 1293
Find No. 1293 Small amount of burnt human bone including fragments of skull, vertebrae and long-bones. Age was assessed as adult.

II. Animal Bone
by Marsha Levine

Introduction
A small sample of the deposits from North Shoebury was excavated, yielding a small but generally well-preserved

assemblage of bones and teeth. However, by studying the population structure, taphonomy, butchery marks and pathology of the fauna, it should be possible to learn something about the changes in animal husbandry, meat processing and bone waste disposal that took place on the site throughout its occupation. The Statistical Package for Social Scientists (Nie *et al.* 1975) was used for the computer-aided data analysis. Tables 9–20 together with all appendices are on fiche.

This report was completed and submitted to the excavators in October 1983.

Sampling

Usually the first objective of a bone report is the determination of the relative proportions of the various taxa from period to period and by comparison with other sites. But there is good reason to believe that, in the case of a site like North Shoebury, comparisons of the usual sort would be extremely misleading.

The most important stratigraphic unit at Shoebury is the feature. It could be a boundary or enclosure ditch, a pit or a gully (Table 10). Features were not normally associated with the remains of structures, such as buildings. In most cases only a small portion of any one feature has been excavated, and its relationship to others of the same period is often unclear.

Halstead *et al.* (1978) and Maltby (1982) have demonstrated that variability in the disposal patterns of the various taxa and anatomical elements within a stratigraphic unit can critically bias the representation of those taxa in an assemblage. This is most important at a site like North Shoebury where a variety of activities have been distributed over a relatively large area. Consequently, before comparing one level to another and then one site to another, it is essential to understand what is happening in the various features of which the site is composed. Moreover, because there is no reason to believe that each species would have been killed, butchered, cooked and disposed of in the same way, it is necessary to obtain a sample that will be representative of all the activities relevant to each taxon. This means, of course, that samples must be very large. Because movements of livestock from one site to another can bias the pattern of representation at any one site, it is important to understand each site in its larger, regional context.

This having been said, it is necessary to admit that these requirements are practically never entirely satisfied and it becomes the role of the archaeozoologist to make the most out of what is available. Shoebury is a case in point. The samples are very small; the features are ambiguous. Because of the short period of time allowed for the excavation, only the very small samples needed for an environmental analysis were sieved. The rest of the material was collected by hand. Despite the excavators' intentions, some small elements will always be missed when this method is used. Without large, sieved control samples the degree to which small species and anatomical elements are under-represented cannot be accurately assessed (Payne 1972). It is notable, for example, that the only elements missing from a well-preserved Shoebury dog burial (Roman Phase III.2) were small ones: most of the carpals and tarsals and 38 out of 52 phalanges. This kind of bias must also be expected in the much less well-preserved caprine and pig bones. It will distort the ratio of small to large animals and bias the representation of the various skeletal elements.

Taphonomy

Taphonomy is 'the study of the transition (in all its details) of animal remains from the biosphere into the lithosphere.' (Efremov 1940, 85). Although the discipline originally concerned itself solely with palaeontological problems, it has been adapted to help explain the differential representation of taxa and anatomical elements in archaeological assemblages (Brain 1967; 1969: Behrensmeyer and Hill 1980; Levine 1979). Some of the variables that influence the preservation of an element in an assemblage are as follows:

Factors mainly affecting the whole carcase

1. cause of death
2. length of time elapsing before burial
3. climate and other weathering conditions
4. use of the carcase for food by man or other animals
5. use of the carcase for hides or pelts
6. size of the animal
7. age at death
8. butchery and cooking techniques
9. transport before and after processing
10. methods of disposal
11. whether the flesh was removed from the carcase before burial
12. whether the carcase was disarticulated before burial
13. soil chemistry

Factors affecting individual elements

1. size
2. shape
3. stage of development (*e.g.* fusion state)
4. bone density
5. value as meat-bearing bone
6. value for bone grease
7. value for tool fabrication
8. affects of butchery and cooking
9. method of disposal
10. exposure to scavengers
11. exposure to trampling
12. length of time exposed
13. weathering agents
14. soil chemistry and disturbances (*e.g.* ploughing)

Some of these factors leave ample evidence in the archaeological record and others leave none.

Quantification

It is probably fair to say that there is no best way of quantifying archaeozoological data. Methods of analysis must be chosen to answer questions relevant to the site under consideration. According to the argument for methodological standardisation, sites are only comparable when established methods of quantification are employed. However, the use of inappropriate techniques of analysis will not make sites more comparable. More important than standard methods is the clear explanation of whatever methods are used, the rationale behind them, and the provision of enough data to allow them to be criticised.

Raw frequencies, frequencies excluding some elements, bone weights and volumes, meat weights and various ways of determining the Minimum Number of Individuals (MNI) are continually under debate (Uerpmann 1973: Klein 1980). In the analysis of the North Shoebury data various methods have been used for various problems. The main methods are described below. Less important ones will be explained when they are used.

The MNI is determined in three different ways: for bones; for teeth; and for bones and teeth (Tables 11 and 12). The aim is to determine the maximum MNI. The most

frequently represented element for each taxon is the main determinant, but size and age are also taken into consideration.

Various kinds of element frequencies are also used in the anlysis of the Shoebury data. For example, cranial bones are compared with post-cranial, foot bones with upper limb bones, and teeth with bones. When the various taxa are compared with one another, only the anatomical elements common to all are considered. For example, canines, incisors, first premolars, fibulae and accessory metapodials and phalanges are excluded when ruminants are compared with pigs. Also, equid phalanges must be weighted when they are compared with those of other taxa.

Taxa

The taxa found at North Shoebury and studied here include:

Equus caballus	horse
Bos taurus	cow
Ovis aries	sheep
Capra hircus	goat
Sus scrofa	pig
Capreolus capreolus	roe deer
Canis familiaris	dog
Vulpes vulpes	fox
Felis cf. catus	cat
Meles meles	badger
Lepus cf. capensis	hare (probably brown hare)
Talpa europaea	mole
Gallus gallus	domestic fowl
Anser sp.	goose
Anatidae	duck
Buteo buteo	buzzard
Passerines	perching birds
Anura	frog or toad

Because sheep and goat are not indigenous to Great Britain, there is little doubt that the individuals from Shoebury were domesticated. Methods devised by Boessneck *et al.* (1964), S. Payne (for the lower D3 and D4; pers. comm.) and P. Halstead (for the distal radius; pers. comm.) were used to distinguish sheep from goats. Because the caprine bones are so badly preserved, this is possible for only a small part of the material. For goat only two left horncores (Middle Bronze Age) could be identified with certainty. Sheep is represented by thirty postcranial elements (scapulae, pelves, humeri, radii, tibiae, metacarpals, phalanges and calcanei), two horncores and fourteen pieces of jawbone with teeth. Because of the small samples involved, the data from these two species will be pooled. It is worth noting however that sheep/goat here means mainly sheep.

The wild relations of cattle, pigs, horses, dogs and cats were all indigenous to Britain. Since *Bos primigenius* was probably extinct before the Middle Bronze Age, the earliest period represented at North Shoebury, it seems likely that the cattle were domesticated. Moreover, the measurable bones fit well within the range of prehistoric domesticated varieties (Appendix 7).

Wild pigs survived in England until about AD 1260 (Rackham 1980). The sample from Shoebury is not big enough to distinguish wild from domesticated varieties. However, it seems likely that the pig bones from North Shoebury did come from domesticated animals, as that is usually judged to be the case at sites where more data is available (Tinsley and Grigson 1981: King 1978: Maltby 1979).

It has been suggested that the rare horse remains from Mesolithic and Early Neolithic British sites probably come from wild animals (Smith *et al.* 1981). However, by the Late Neolithic or Early Bronze Age it is generally assumed that domesticated horses had been introduced into Britain from the continent and that it is these domesticated equids that we find in the later periods. If that is the case, it is likely that, at least from the Late Iron Age, the Shoebury horses were domesticated.

Domesticated dogs were probably contemporary in England with wolves from the Mesolithic to about AD 1500 (Simmons *et al.* 1981: Corbet and Southern 1977). However, the size and shape of the skull and other elements, the tendancy of the teeth to be crowded, and the recovery in a number of cases of more or less complete articulated skeletons suggests that *Canis* at Shoebury was domesticated (Appendix 7, Table 3) (Harcourt 1974).

The possibility of distinguishing wild cat (*Felis silvestris*) from domesticated cat (*Felis catus*), particularly in the light of the small samples available for study here, is negligible. The English *Felis silvestris* probably survived into the 19th century (Mivart 1881: Van den Brink 1973), but wild cats are shy woodland animals and it is unlikely that they would have been encountered often at North Shoebury. They could, however, have been hunted for their pelts. Nevertheless, it seems more likely that most, if not all, the Shoebury cat bones belonged to *Felis catus*.

Gallus gallus, domesticated fowl, is another introduced species. It is represented in the Roman Phase III.2 and Early Medieval Phase V.1 periods by at least thirty-two specimens (Table 12). There is one uncertain identification from the Late Iron Age (other pre-Roman *Gallus* finds have been discussed by Luff (1982) and Carey (1982)). The pheasant, *Phasianus colchicus*, which is sometimes difficult to distinguish from *Gallus*, was apparently introduced into Britain during the second half of the 11th century AD, and started to become naturalised soon thereafter (Cramp and Simmons 1980: Lever 1977). Therefore, it is possible that some of the uncertain Early Medieval fowl bones actually belonged to pheasants.

The few duck and goose bones from Shoebury are not species identifiable, and the environment of the site is such that they could have been either wild or domestic.

The other wild taxa listed above could have been killed as pests or, in some cases, for their pelts. They could, however, be small samples of local natural mortalities that found their way by chance into the pits and ditches of North Shoebury.

The domesticated ungulates

The taxa of greatest interest here are those most closely connected with the subsistence and economy of North Shoebury; that is, cattle, caprines (sheep and goats), pigs and horses. It is these taxa that are the main concern of this report.

Horse

Horse is represented at North Shoebury by a very small quantity of material; fifty-eight pieces of bone, seven loose teeth and one mandible (Table 11 and Appendix 5). It is found in all periods except the Middle Bronze Age and the Late Iron Age. It is mainly represented by the

densest anatomical elements: cheekteeth, radii, tibiae, cannon bones, carpals and tarsals — very much as it would be in a Pleistocene deposit (Levine 1979). The preservation state of the material is very good and a high percentage of the bones are whole or nearly so. This suggests that the morphology of the bone has been a more important factor in determining its preservation state than human behaviour. However, at least one bone, a Roman scapula, does have butchery marks on it (Fig. 87.9 and Table 19) marks which are perhaps associated with dismemberment and filleting (Binford 1981). The meat could have been consumed by people or fed to dogs. The preservation state of horse ribs and vertebrae could not be assessed, since *Bos* has not been distinguished from *Equus* for those elements (Appendix 5).

Table 13 shows the ages at which horses died at Shoebury (for the ageing methods see Levine 1982). The samples are extremely small. However it is interesting to note that throughout the occupation of the site a relatively high proportion of the animals (four out of seven individuals) died between the ages of two and four years. Since horses are more productive as work animals than as food, it seems likely that they died of disease or in accidents. The rest of the ageable horses were between seven and eleven years old at death.

Artiodactyls

The domesticated artiodactyls — cow, sheep/goat and pig — are the most important taxa from North Shoebury. They vary in relative abundance throughout the occupation of the site and also in the representation and preservation state of their skeletal elements. It is likely that at least some of the differences between them are related to the small size of the assemblage. Hopefully, however, it will be possible to attribute some variability to human behaviour: husbandry and butchery techniques, and patterns of waste disposal. To that end the samples studied here will be dealt with more or less as if they were representative of the features from which they are derived.

Bos and *Ovis/Capra* are present in every period at North Shoebury, though in varying proportions (Tables 11 and 14). Although sheep/goat is represented overall by a greater MNI, the frequency of cow elements is higher. If the samples studied are representative of the whole site, cow would probably have been the more important source of meat. Pig was important at Shoebury from the Late Iron Age: there is no sample in which it dominates by frequency, although it has the highest MNI in the Early Medieval period.

There are three very important considerations that must be taken into account when trying to compare changes in the importance of the various taxa through time:

1. the sample size;
2. the functional comparability of the samples;
3. the differential representation of the anatomical elements of each taxon.

Some of the problems associated with inadequate sample sizes have already been discussed, but a glance at Table 11 reveals how serious the problem is here. Although the data for this table has been aggregated from features into periods, particularly as regards the pre-Roman data, the samples are still too small for meaningful analysis. Therefore, wherever it seems worthwhile, the data have been pooled into yet larger units: pre-Roman, Roman and Early Medieval — a solution which has a tendency to average out and perhaps to distort the variability within the assemblage.

The second problem, that of the functional comparability of the samples, is not often taken into account by archaeologists. This problem operates on at least two levels: intra- and inter-site; that is, the spacial separation of various taxa and anatomical elements at a site. Moreover, different kinds of activities will take place on different kinds of sites (military, urban, agricultural, *etc.*). The determination of the type of site under investigation is usually a prime interest of the excavator and, therefore, not generally an insurmountable problem. However, interpreting intra-site variability is more difficult because it necessitates the collection of representative and, consequently, large samples of bone from all parts of the site (Ragir 1972). The resources for this kind of sampling strategy have not been available at Shoebury.

The third problem, that of the taphonomic differences between the taxa, is very complex, very poorly understood and vital to the interpretation of an assemblage. Despite the inadequate size of the Shoebury sample, it is quite clear that various taphonomic agents have significantly biased the representation of the various taxa at the site. The samples are, of course, too small for statistical analysis, but certain relevant observations will be made.

Bos

The most salient feature of the bovid assemblage is the very low proportion of small bones — carpals, tarsals, sesamoids and especially phalanges — by comparison with the other limb bones (see Appendix 2). It is most unlikely that this pattern could be attributable to the collection technique of the excavation, since the calcaneus, astragalus and phalanges of a cow are all relatively large elements. They are also very dense, non meat-bearing bones, which could, however, have been used for making soup, glue or tools. In any case, it seems likely that they were separated from the rest of the carcase when it was butchered.

If we exclude sesamoids, carpals and small tarsals from the calculations as elements liable to be missed by the excavators, a cow has approximately five times more footbones (including metapodials) than upper limb bones. Table 15 shows that throughout the whole sequence and particularly during the Early Medieval period foot bones are under-represented.

If ribs, vertebrae, skull bones, incisors and canines are excluded from the calculations (because they are difficult to identify or likely to be under-represented archaeologically) the proportion of teeth in a cow skeleton is about 23%. The proportion of cow teeth for the pre-Roman Period is 42.9%. Thus teeth are over-represented in comparison with bones by a factor of almost two (Table 11). A high tooth:bone ratio in an archaeological deposit can be explained by two very different phenomena. One is differential preservation: because teeth are composed of harder materials than bone, in some situations, the preservation of the former will be favoured over that of the latter (Levine 1979). The second explanation is differential rubbish disposal: the brains, tongue and cheek meat might be consumed, but a cow's skull is primarily waste material and could be disposed of early on in the butchery process with other non

meat-bearing bone. The excavation of a butchery deposit should, then, yield a high proportion of teeth.

At North Shoebury the bovid tooth:bone ratio seems to decrease throughout the occupation of the site. By Early Medieval times it is lower than it would be in a living animal. In order to choose between the two explanations for the varying proportions of teeth at Shoebury, the data must be approached from another angle; that is, the preservation state of the bones. If the bone preservation state is good, the high tooth:bone ratio of pre-Roman times is probably not attributable to differential preservation. The method used here to describe preservation state is a comparison of the relative proportions of anatomical elements categorised as whole, proximal, distal, shaft or fragment (Table 16). The category 'fragment' is of less value than the others, because it is not usually taxon identifiable (Table 15 and Appendices 5 and 6).

Table 16 shows that the preservation state of cow hardly changes throughout the whole sequence. Therefore it seems unlikely that differential preservation could be responsible either for the high tooth:bone ratio in the pre-Roman period or for the successively lower ratios in the later periods. Consequently, it seems that changes in butchery or rubbish disposal practices were likely to have been responsible for the observed changes in the tooth:bone ratios, and that the deposits contained proportionally less and less waste bone as time progressed. This hypothesis is generally confirmed by other patterns of element representation — the cranial:postcranial, foot bone:upper limb bone, and cranial and foot bone:upper limb bone ratios (Tables 14, 15 and 17). These analyses also suggest that the difference in the ratio of waste bone to meat-bearing bone between the pre-Roman and Roman periods was not great and that a more important change occurred in Early Medieval times.

Sheep/goat

The preservation state of caprines at North Shoebury is very different from that of cattle (Table 16 and Appendix 3). The proportion of whole bones is much lower, while the proportion of shaft bones is much higher throughout the whole sequence. Apart from the somewhat higher proportion of whole bones in the Early Medieval period than earlier, the preservation state of sheep/goat remains fairly constant. The caprine tooth:bone ratios (at 71.8%, 71.3% and 16.3% for the pre-Roman, Roman and Early Medieval periods respectively) are much higher than those for cattle, particularly in the earlier periods (Table 11). It appears, then, that the bone preservation state of sheep/goat is much worse than that of cow.

The caprine tooth:bone and cranial:post-cranial ratios drop steeply in the Early Medieval period to a level below that found in the living animal. Since the bone preservation state does not improve at the same time, it seems likely that the low proportion of cranial bones in this period was caused by differential waste disposal — that the skulls were not deposited in the ditches with the postcranial material.

It is notable that the frequency of sheep/goat bones in the Early Medieval period is not very different from that in the earlier periods. Therefore, since the bone preservation state scarcely changes throughout the whole sequence, it is not unlikely that approximately the same number of individuals are represented in the Early Medieval assemblage as in earlier ones. If that were the case, the true MNI would be closer to fourteen or fifteen than to four (Table 14). In archaeology, chronological and taxonomic comparisons of faunal frequencies must be handled cautiously.

The sheep/goat ratio of foot bones to upper limb bones is even lower than that of cattle (Table 15). However, in an unsieved sample small bones are always under-represented (Payne 1972). It is interesting that the foot bone:upper limb bone ratio remains fairly constant throughout the whole sequence. However, it is not possible to say whether this is a sampling anomaly or an archaeological pattern.

Pig

Taking into account the two intact pig vertebral columns from the Late Iron Age cremation burials, pig is, overall, the third most important artiodactyl from North Shoebury (Table 11 and Appendix 4). It is represented by a greater MNI than cow in the Late Iron Age and a greater MNI than either cow or sheep/goat in the Early Medieval period.

The overall pig tooth:bone ratio is much higher than that for cattle and slightly lower than that for sheep/goat. In contrast to the ruminants, instead of decreasing, the pig tooth:bone ratio increases in the Early Medieval period. A high tooth:bone ratio is, apparently, the norm for pig remains in archaeological deposits (King 1978: Halstead *et al.* 1978). Although the bone frequencies for pig are very low at Shoebury, the bone preservation state seems to be better than that of sheep/goat throughout the whole sequence (Table 16).

It is very difficult to assess the pig foot bone:upper limb bone ratios because the samples available for study are so small, but the data suggest that pig foot bones are even more under-represented than those of sheep/goat (Table 15). No pig phalanges were recovered from North Shoebury. Since the pig has four times as many metapodials as a ruminant, the six Early Medieval foot bones are equivalent to one or two from a bovid. A number of very different explanations could be called upon to explain this pattern. Pig metapodials like phalanges are rather small. Because the deposits were not sieved, they could have been overlooked. Alternatively, they could have been entirely consumed by dogs (many bones from Shoebury show evidence of gnawing). Also, particularly in the case if immature bones, cooking would have caused considerable damage.

It is noteworthy that the pig cranial: post-cranial ratio is slightly higher in the Early Medieval period than earlier, while the ruminant ratios are decidedly lower. This is probably attributable to variations in the butchery techniques employed for the different taxa. Apparently, pig skulls were not disposed of separately from the rest of the skeleton.

Artiodactyl age structure

The sample of ageable teeth and jaws from North Shoebury is too small to do more than give an impression of the age structure of the data over variable and not necessarily comparable spans of time. There are two reasons why epiphyseal fusion is not used for ageing here:

1. differential preservation can grossly distort the age structure of an assemblage;
2. because epiphyseal fusion is a single event, it can only be used to divide the data into three age classes — fused, unfused and fusing.

Cow

Apparently no precise method of ageing cow teeth has yet been designed. Higham (1968) was the main source used here, but other methods were taken into account (Grigson 1982). Table 13 shows the approximate ages of the cattle teeth and jaws which were used for the calculation of the MNI. Clearly, the sample of ageable material is too small to be analysed.

Sheep/goat

Payne's method of ageing sheep/goat teeth was used here to obtain the ages recorded in Table 13 (Payne 1973). The sample is very small, but somewhat more useful than that for cow.

Dahl and Hjort (1976) suggest that the optimum slaughter age for sheep is one to two years, while Payne (1973) suggests that it is one to three years. Table 18 organises the data from Table 13 according to both of these criteria. The most significant point about this sample is its inadequacy. Therefore, the pattern of the data will only briefly be described by comparing it with Dahl and Hjort's growth model.

The model is based on data from western Sudan for a mixed flock of sheep and goats, kept both for milk and meat. Table 18 presents a much simplified breakdown of its age structure. In the model most of the animals slaughtered are 18 month old males, which comprise only about 8% of the living herd. A few female lambs and old does or rams, animals surplus to the productivity of the herd, might also be killed.

During the pre-Roman and Roman periods at Shoebury, as predicted, a much higher proportion of individuals (23.1% and 29.4% respectively) were apparently being killed at one to two years of age than would have been present in the living herd (8%), assuming (as is necessary if a herd is not to be doomed to extinction) that mainly males were chosen for slaughter. The relatively high proportion of individuals less than one year old in the pre-Roman period could be accounted for in a number of ways: the inadequacy of the sample; a high infant mortality rate (the model rate is 30% for the first six months of life); or slaughter patterns somewhat different from those in the model herd. Since the Roman preservation state is, if anything, better than that of the pre-Roman period, the low proportion of Roman caprines less than one year old is not likely to be the result of differential preservation. It is more likely that the absence of animals from this age class is the result of a sampling anomaly; this is, the deposits containing caprines that died of natural causes were not excavated.

The proportions of pre-Roman and Roman individuals over two years old appear to be quite different (at 46.2% and 64.7% respectively). However, this difference results from the low incidence of caprines in their first year during the Roman period. If the figures are recalculated, excluding animals less than one year old, the proportions of animals over two years of age are similar for the pre-Roman and Roman periods (at 66.7% and 68.8% respectively). These figures are not very much lower than that calculated in the same way for the model herd (72.4%). If the material excavated accurately reflects the patterns of slaughter, it would appear that a relatively high proportion of older animals was being killed, although the main emphasis was on lambs (probably male) in their second year. The fact that a relatively high percentage of animals from the Roman period died at quite an advanced age (older than four or five years) suggests that other produce besides meat — perhaps milk and wool — were important at that time.

Pig

Because they are only used for meat and hides and because of their high reproductive potential, many different strategies can be employed in pig husbandry.

Five out of the six pre-Roman North Shoebury pigs were killed between the ages of one and three years (Bull and Payne 1982). The Roman sample is decidedly inadequate; however, the two closely ageable individuals were less than three years old at death. This could be similar to a strategy employed in south-western Spain where, to maximise their productivity, hogs, fattened on acorns, are killed in their first or second year, depending upon their nutritional state (Parsons 1962). Four out of the seven Early Medieval pigs represented in the sample were six months of age or less, and only one was more than three years old. The Early Medieval deposits have already been shown to contain a relatively small proportion of waste bone. Therefore, it seems more likely that the preponderance of very young pigs in the assemblage would be attributable to dietary preference than to natural mortality.

Butchery

(Figs 87–88)

Although the bone surfaces, particularly of the large taxa, are in very good condition at North Shoebury, only a very small proportion (5.5% — 88 bones) of the material (excluding unidentifiable fragments) shows clear evidence of butchery; that is, knife cuts, chop marks, *etc.* (Table 19). This is the usual archaeological pattern. The primary goal of the butcher is to skin, disarticulate and fillet the carcase. Cutting through bone blunts the tools unnecessarily and is, therefore, avoided. Bones will be chopped or sawn through when suitable tools are available and when such techniques are more efficient (for example, for the disarticulation of vertebrae or foot bones), or when desirable in order to obtain certain cuts of meat.

To date there has been relatively little research concerned with the archaeological evidence for butchery. Binford (1981) has reviewed the literature concerned with butchery techniques research on the Navaho Indians. He has also carried out ethno-archaeological research on the Navaho Indians and the Nunamiut Eskimos (Binford and Bertram 1977; Binford 1978, 1981). This data is, of course, not strictly comparable with that from North Shoebury. However the taxa involved are primarily ungulates, and, since the morphology of an animal is critical to its butchery, a comparison of the British with the American data should not be irrelevant.

Figures 87–88 illustrate the kinds of butchery marks found at Shoebury, and Table 19 describes and attempts to interpret them. The interpretations marked '(B)' are derived from Binford (1981, table 4.04). The others are based, for the most part, on the writer's own observations and are hypothetical. Most of the butchery marks from Shoebury can be ascribed to the dismemberment or filleting of the carcases. A knife cut (or cuts) on the ventral face of a rib and perpendicular to its long axis could have been caused by gutting (personal observation). Rib fragments are commonly found in short sections —

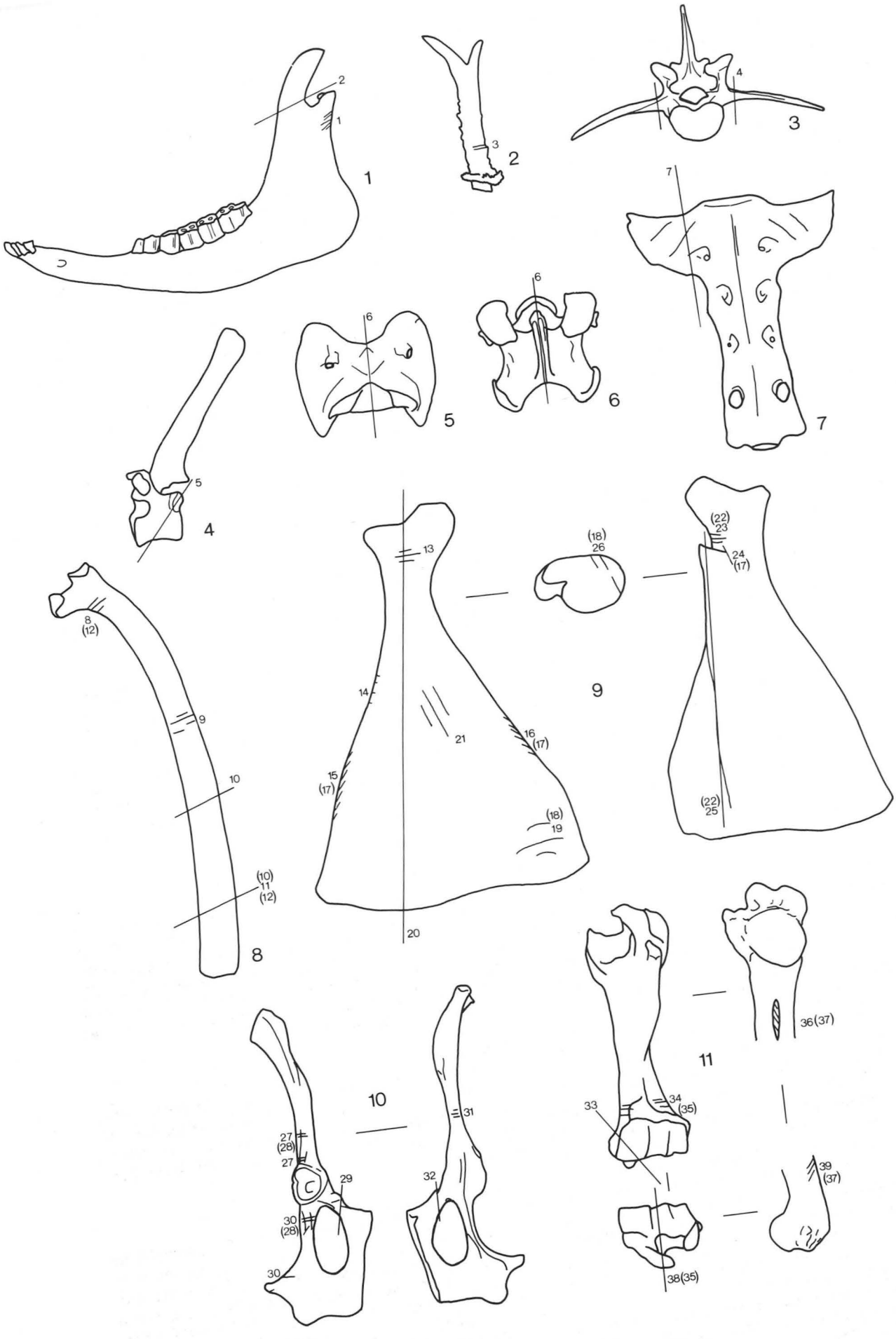

Figure 87 Bones showing butchery marks.

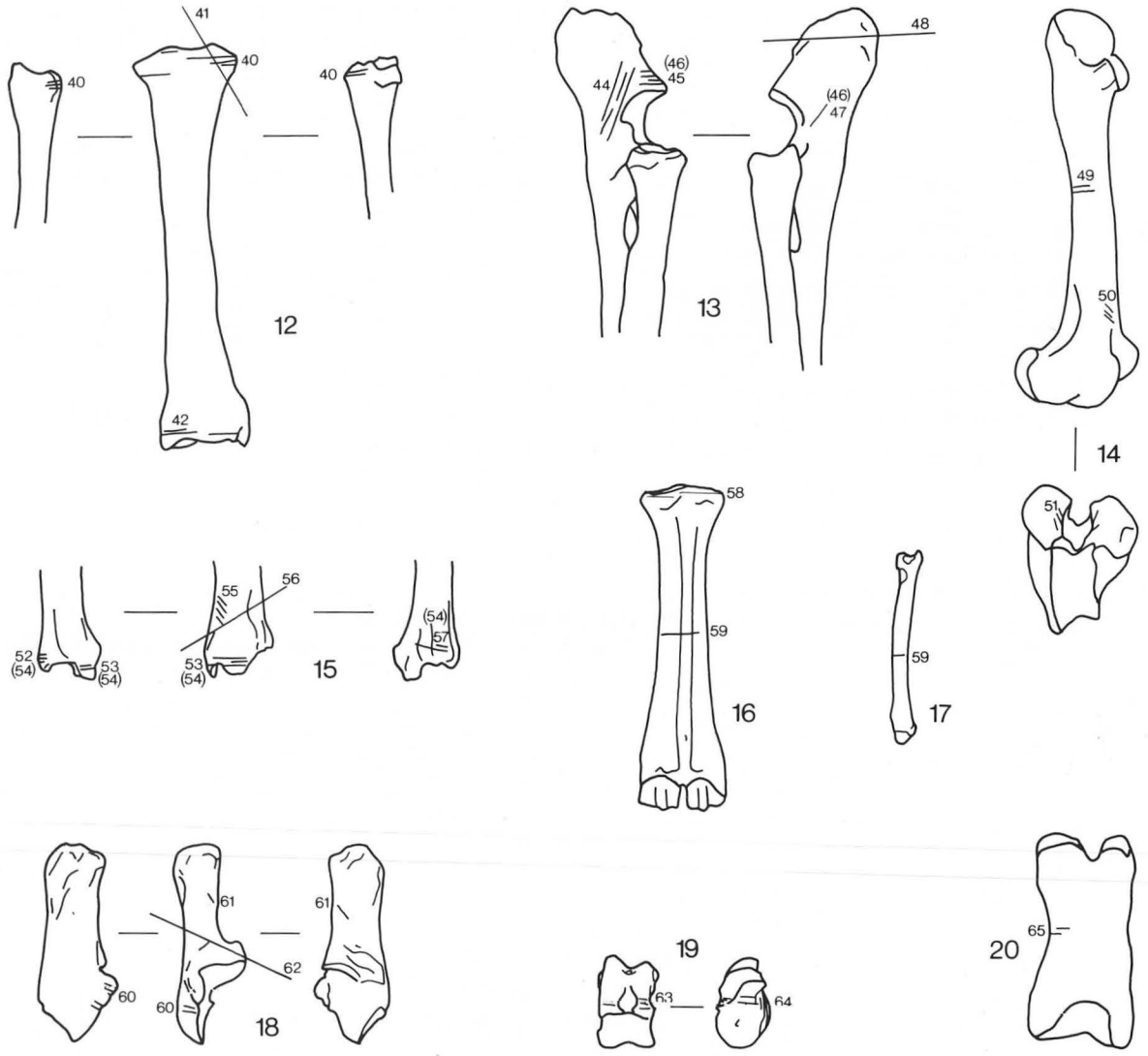

Figure 88 Bones showing butchery marks.

approximately 50–70 mm in length. The ends of a section are often too weathered to show whether or not they had both been chopped, or if one or both had been broken. But in some cases it is quite clear that the ribs had been chopped into short sections, very much as they are today, for example, in Chinese cookery. Cow and fox metapodials show mid-shaft cut marks, which might have been caused by skinning.

The most interesting butchery evidence is that of the vertebrae, which perhaps show temporal change in the way they were disarticulated. The transverse processes of the thoracic vertebrae from the Roman period were chopped off, probably when the ribs were detached from the vertebral column. The thoracic vertebrae from the two Late Iron Age pigs, found with the cremation burials, are rather damaged, but they also seem to have been treated this way. The transverse processes of the lumbar vertebrae from these pigs and those from two Early Medieval large ungulates were also chopped off. Cutting across the transverse processes of the lumbar vertebrae is one method of detaching the meat from the loin.

Two Early Medieval sheep/goat cervical vertebrae (one an atlas) were chopped antero-posteriorly, through the median plane. The vertebrae look like this when a carcase is cut into sides. Maltby (1979) observed that carcases were not regularly cut into sides until the post-medieval period. It is unlikely that an animal cut into sides would have had its transverse processes chopped off. As both of these patterns occur during the Early Medieval period, it is possible that this was a time of transition and both methods were in use.

Pathological bone

A few of the bones from North Shoebury have pathological abnormalities. Some were congenital and some were traumatic. Some were caused by accidents, diseases or infections, and some could have been occupational.

Probably congenital pathology

1. Pig cranium (Find No. 220, Pl. XV). The parietal bone failed to close over the frontal sinus, leaving deep depressions in the cranium. Sutures of cranium fused, except for those between the frontal and lacrimal bones. No teeth present. Apparently the pig was able to survive to a fairly advanced age despite this abnormality. Period V.

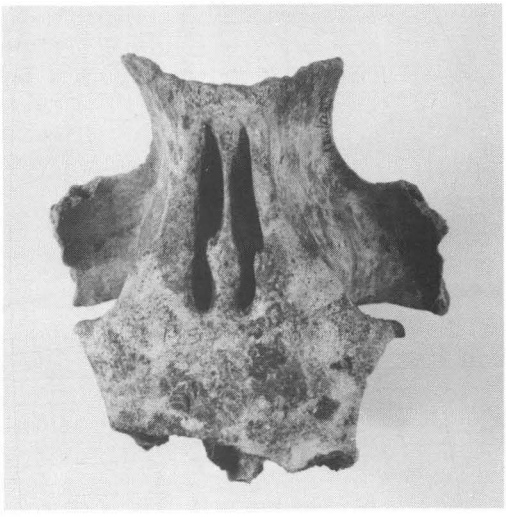

Plate XV Pig cranium. Scale 1:2

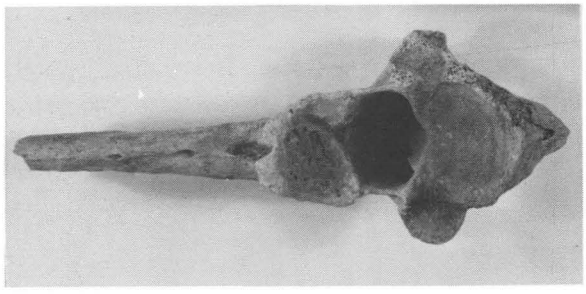

Plate XVI Cow/horse thoracic vertebra. Scale 1:2

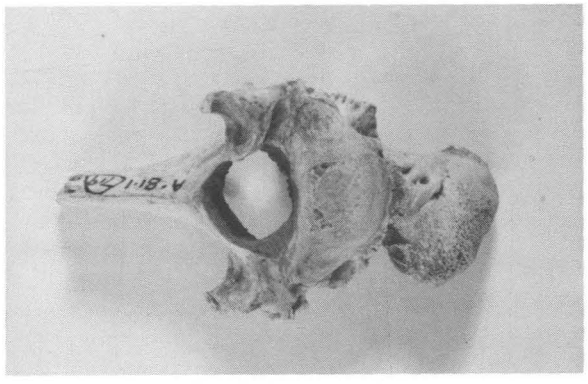

Plate XVII Dog thoracic vertebra. Scale 1:1

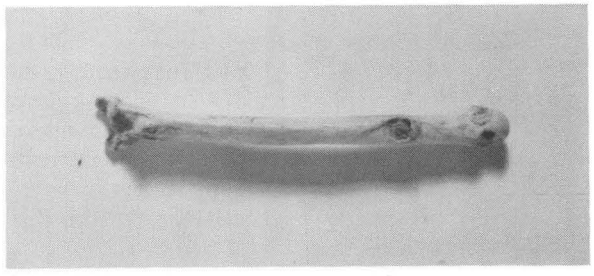

Plate XVIII Fox metatarsal. Scale 1:1

Abnormalities caused by infection or disease

2. Cow/horse thoracic vertebra (Find No. 1015, Pl. XVI). There is a development of periosteal new bone around the articular process of the spinous process. Probably caused by an infection or an abscess. The vertebra posterior to this one would also have been affected. The build-up of new bone might have put pressure on the spinal cord. Phase III.2.
3. Dog thoracic vertebra (Find No. 719, Pl. XVII). This individual had ankylosing spondylitis, associated with the prolapse of the inter-vertebral disk. In this disorder the fibrous material in the disk is squeezed out and under the periosteum, generating a build-up of new bone. In life this vertebra was fused to the one posterior to it. This condition does not usually occur on thoracic vertebra, but sometimes the whole vertebral column is affected. Phase III.1.
4. Fox metatarsal V (Find No. 448, Pl. XVIII). The cortex of this bone is eroded, possibly by osteomyolitis or by a bone tumour. Phase III.2.

Trauma — accidental

5. Cow/horse thoracic vertebra (Find No. 63, Pl. XIX). An injury to the articular process of the spinous process is the probable cause of the growth of periosteal new bone on this specimen. Period V
6. Dog metacarpals II, III, IV and V (Find No. 1136, Pl. XX). The growth of periosteal new bone on this foot is probably of traumatic origin, perhaps resulting from the healing of a fracture of the two central bones. Phase III.2.
7. Dog sacrum (Find No. 1136, Pl. XXI, the same individual as No. 6 above). The first coccygeal vertebra sometimes fuses with the sacrum. In this case it seems to have been partly dislocated by some trauma. Phase III.2.
8. Dog scapula (Find No. 1013, Pl. XXII). The gaps in the blade of the scapula and the growth of periosteal new bone were probably caused by the healing of a rather unusual fracture. Phase III.2.

Trauma — perhaps occupational

The suggestion that the abnormalities described below were occupational, that is, in these cases, caused by the animals' use for traction, is highly speculative. However they are the kind of injuries that one could expect to find if the animals were being used in this way. Further research is needed before such hypotheses can be proved.

9. Cow scapula (Find No. 1082, Pl. XXIII). There is a development of periosteal new bone on the costal surface where the tendon of insertion (one of the main strengthening tendons of the shoulder joint) leaves the sub-scapularis. This growth is probably traumatic in origin, perhaps the result of strain over a relatively long period of time from an abnormal movement or stance. Phase III.2.
10. Cow pelvis (Find No. 1277, Pl. XXIV). The transverse ligament that covers the acetabulum, including the notch of the acetabular fossa, has become ossified. According to Sisson and Grossman (1953) this is not uncommon, but their sources are not identified. The development of periosteal new bone over the acetabular notch of the North Shoebury example suggest that, at least in this case, this growth is neither normal nor congenital. The effect of the ossification

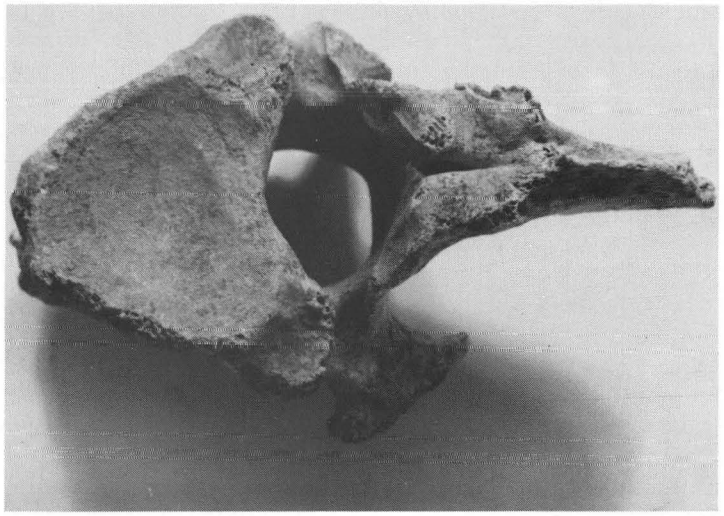

Plate XIX Cow/horse thoracic vertebra. Scale 1:1

Plate XXII Dog scapula. Scale 1:2

Plate XXIII Cow scapula. Scale 1:1

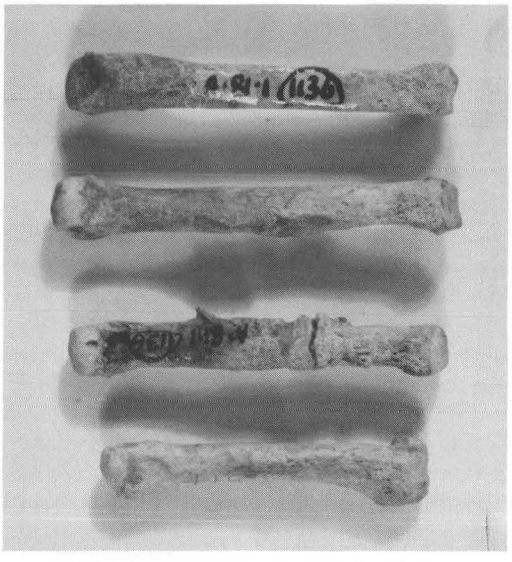

Plate XX Dog metacarpals. Scale 1:1

Plate XXIV Cow pelvis. Scale 1:2

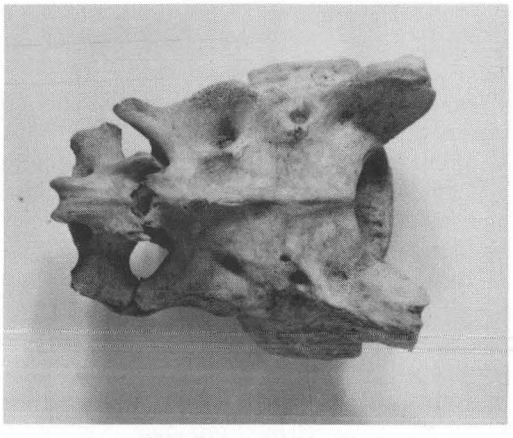

Plate XXI Dog sacrum. Scale 1:1

of the ligament is to extend the area of articulation with the femur and, thus, to strengthen the joint. Therefore, one might speculate that the growth of new bone was stimulated by strain to that joint. Period II.

Summary and conclusions

Despite the sampling problems discussed earlier, some tentative interpretations of the data from North Shoebury will be made here.

Pre-Roman fauna — summary

This data aggregate extends from the Middle Bronze Age to the Late pre-Roman Iron Age: from the latter half of the second millennium BC to the middle of the first century AD. It is analysed in this way because of the inadequacy of the samples available for study. Trends in the data will be compared with those from other periods, but no detailed analyses can be carried out.

The material from this 'super-period' comes from the pits, enclosure ditches and boundary ditches associated with field systems and, at least sometimes, with habitations.

In the pre-Roman period as a whole, sheep/goat is represented by a slightly greater MNI and a slightly smaller total frequency of anatomical elements than cattle, while pig is the least important by both accounts. However, it is significant that a cow has a much greater meat weight than either a caprine or a pig.

The pre-Roman bone preservation state of cattle is considerably better than that of sheep/goat or pig and, although the *Bos* tooth:bone ratio is higher than that of a living cow, it is lower than that of pre-Roman Shoebury pig or sheep/goat. The pig preservation state is rather ambiguous: the tooth:bone ratio is high, but so is the proportion of whole bones. The sheep/goat preservation state is poor: the bone surfaces are abraded and the proportion of fragments and pieces of shaft is high by comparison with the other taxa.

Cranial bones are over-represented by comparison with post-cranial bones. Cattle have the lowest cranial: post-cranial ratio and pigs the highest. Foot bones are under-represented by comparison with upper limb bones for all taxa.

The sample of ageable cattle jaws is too small to comment upon. Sheep/goat is somewhat better represented. A relatively high proportion of animals appear to have died in their first year (35.7%). At least 85.7% of the sample (fourteen individuals) were four years old or less. Five out of six ageable pig jaws were between one and three years old. The sixth was older.

The precentage of inorganic artefacts (pot sherds, flints, fragments of daub, *etc.*), compared with bone (reckoned either by frequency or by weight) was relatively high during the pre-Roman period.

Pre-Roman fauna — conclusion

This evidence and that of the butchery marks indicate that a variety of activities are represented in the pre-Roman deposits at Shoebury. The high proportion of waste bones, by comparison with that of later periods, suggests that animals were butchered here. The relatively high proportion of limb bones suggests that meat was also prepared and consumed at the site.

The preservation state of cow is very much better than that of sheep/goat or pig. At least part of the explanation lies in the size difference. For example, dogs cause more damage to the bones of small animals than to those of large ones, and there is considerable evidence both of dogs and of gnawing at Shoebury. There might, however, be another explanation: the abraded surfaces of the sheep/goat bones suggest that these were exposed longer to weathering than were the cow bones. This could have been the case if the bones, particularly those of small animals, were added with other kitchen rubbish to the compost heap to be used in manuring the fields. Eventually some would have been washed into ditches, where other domestic rubbish had been dumped.

The remains of caprines less than one year old could have belonged to animals that died of natural causes and were then disposed of in the ditches. Alternatively, they might have been slaughtered at this early age because of culinary preferences. However, a very high proportion of the caprines and pigs were slaughtered as they approached maturity, at approximately one to three years of age. If these samples are representative, then the sheep, as well as the pigs, were probably raised primarily for meat.

The bones from the pre-Roman deposits at North Shoebury, appear, then, to have been associated with the various kinds of activities that one expect to take place on a farm, where subsistence was the primary motivation.

Roman fauna — summary

The Roman period at North Shoebury is divided into two phases by a reorganisation of the settlement. However, because the samples available for study, and particularly those for Phase III.1 are very small, and because a considerable proportion of the Roman material could not be assigned a phase, the data has been aggregated.

Apparently, the features associated with the Roman data belonged primarily to field systems: a rectangular enclosure, trackways, ditches and gullies. The fauna came from the ditches and gullies (Table 10).

The patterns of bone preservation and element representation for the Roman period are in many ways intermediate between those of the earlier and later periods, but they are more similar to pre-Roman than to Early Medieval patterns. For example, although cow is the taxon with the greatest frequency, sheep/goat is represented by the greatest MNI, followed by cow and then pig.

The preservation state of the Roman material seems to be, in general, a little better than that of the earlier periods. The cow tooth:bone ratio, at 25.2%, is close to that in the living animal. However, sheep/goat and pig teeth are still over-represented by comparison with bones. This supports the preservation state data, which suggests that cow is much better preserved than caprines or pigs.

The Roman ratios of foot bones to upper limb bones are also rather similar to those of the earlier periods. Foot bones are under-represented for all taxa, but the sheep/goat ratio is considerably higher than it was in the pre-Roman period. The cranial:post-cranial ratio is lower for cow and pig, but higher for sheep/goat than it was earlier. This and the increased proportion of sheep/goat foot bones suggest that pig (for which the sample of data is very small) and cow are represented by less waste bone, and sheep/goat by more. This pattern is even more pronounced when the data from the Roman Phase III.2 occupation is examined on its own.

The sample of ageable cow jaws is thoroughly inadequate for any kind of analysis. Two out of eighteen

sheep/goat jaws (11.1%) are from individuals that might have died in their first year — a very low rate for natural infant mortality. Of the caprines, 38.9% died between the ages of one and three years — the usual age to slaughter meat animals. However a relatively high proportion of the animals died at a rather advanced age. Half of the ageable jaws were from caprines over three years old and one third were more than four years old. At least three out of four pigs were more than one year old at death.

The ratio of skeletal material to inorganic artefacts is higher in the Roman period (both by frequency and by weight) than in the earlier periods, and especially when the frequency of marine molluscs is taken into account.

Roman fauna — conclusion

The activities of the Roman farmers at North Shoebury do not appear, from the available data, to have changed very much from those of their predecessors. Evidence of butchery, food preparation and consumption all seem to be present. It appears, then, that subsistence activities still predominate in the fauna. The most important changes seem to have occurred in the representation of caprines. A much higher proportion of older animals are present, suggesting, perhaps, that they were kept for milk or wool, as well as for meat.

There is also a change in the proportions of the various anatomical elements. That is, cow and pig are represented by less waste bone and sheep/goat by more. That could, of course, be a sampling anomaly: that, by chance, the places where pre-Roman cattle waste and Roman sheep/goat waste had been dumped, were excavated.

Early Medieval fauna — summary

The Early Medieval fauna mainly comes from a corner of the large enclosure ditch that may have surrounded the earliest manor house at North Shoebury. The structure and composition of the fauna from this period differs significantly from both that of the pre-Roman and the Roman periods.

By frequency cow is the most important species in this sample. However, the cow MNI is the same as that for sheep/goat (four) and less than that for pig (seven).

Although the bone preservation state of cow remains fairly constant throughout the whole Shoebury sequence, that of sheep/goat and pig apparently improves in the Early Medieval period. Not only are the caprine and cow tooth:bone ratios much lower than previously, but also ruminant teeth are actually under-represented by comparison with bones in these deposits. In contrast to this, the pig tooth:bone ratio is very high and teeth are considerably over-represented.

Foot bones are still under-represented for all taxa. The only important change in the foot bone:upper limb bone ratio is that, that of cow has dropped sharply. Moreover, the cranial:post-cranial, and foot bone plus cranial:upper limb bone ratios have decreased sharply for cattle and sheep/goat, while they have increased for pig.

The quantity of ruminant jaws is too small to be interpreted. Although the sample of seven ageable pig jaws is very small, in this case it is quite interesting. In contrast to earlier periods, a high percentage of very young pigs were present. Four were six months of age or less, and two more were one to two years old.

The Early Medieval deposits contained the lowest proportion of unidentifiable bones and the lowest ratio of inorganic artefacts to bones either by bone frequency or weight (Table 20; columns 12, 14, 16 and 25).

Early Medieval fauna — conclusion

All of this suggests that the Early Medieval deposits were rather different from those of earlier periods. The relatively small quantity of waste bone in the deposit suggests that table, and possibly kitchen, waste was dumped here, but also that butchery refuse probably was not.

The high proportion of pig cranial bones is probably due to the different food preparation techniques employed for the different taxa. Unlike ruminants, pigs (especially the very young ones) were probably cooked whole. That such young pigs were consumed might suggest that subsistence needs were not as urgent as they were in the earlier periods.

The Early Medieval fauna is relatively well preserved, highly concentrated and mixed with a smaller proportion of non-organic cultural material than in the earlier periods. This could mean that the rubbish was taken more or less directly from the table to the ditch, where it was disposed of without such a long exposure to the elements as in earlier periods.

III. Fish bones and amphibian remains

by Andrew Jones

Although approximately sixty samples of different archaeological contexts were wet-sieved on 1mm mesh, fish bones were recovered from only six layers. Of the fifty-four identified bones, twenty-three were from Early Medieval ditches, twenty-nine from Roman ditches, and one each from an Early Iron Age pit and a Late Iron Age pit. Table 21 shows the date and type of features which produced fish bones and the species present, and a full list of identified bones is in the archive. Bones were identified by comparing ancient specimens with modern reference skeletons in the Environmental Archaeology Unit at the University of York.

The Early Iron Age pit (*1412*) produced a single branchial bone. This was from a flat fish of the family Pleuronectidae and compared closely with a branchial from a flounder, *Platichthys flesus* (L.), of approximately 20cm total length.

The Late Iron Age pit (*1525*) yielded a single shark tooth which has been examined by both Alwyne Wheeler and Alison Longbottom of the British Museum (Natural History). They agree that the tooth is not identifiable to species and that it is probably a Tertiary fossil. Several fossil shark teeth have been recovered from the London Clay (Lower Eocene) at Shoebury. Thus the tooth recovered from the Iron Age pit is unlikely to be of archaeological significance.

The Roman ditches both contained remains of eel, *Anguilla anguilla* (L.). A total of twenty-seven identifiable bones, mainly vertebral centra, from a minimum of two fish of 30–40cm total length, were recognised. In addition, frog, *Rana* sp., bones were recovered.

The two Early Medieval ditch samples contained the following: three burnt vertebral centra of herring, *Clupea harengus* L.; a fragment of dentary, a hypobranchial and four vertebral centra from medium sized (*c.* 70cm total length) cod, *Gadus morhua* L.; and ten vertebral centra and one urohyal from a pleuronectid flatfish of 15–35 cm total length. Frog bones were present in both samples.

Context	*1412*	*1525*	*1364C*	*1364B*	*0304*	*0345B*
Sample	55	74	44	45	3	7
Date	Early Iron Age	Late Iron Age	Roman	Roman	Early Medieval	Early Medieval
Type of feature	Pit	Pit	Ditch	Ditch	Ditch	Ditch
Number of identified bones	1	1	4	25	10	13
Selachii (shark)	-	X	-	-	-	-
Clupea harengus L. (herring)	-	-	-	-	X	X
Anguilla anguilla (L.) (eel)	-	-	X	X	-	-
Gadus morhua L. (cod)	-	-	-	-	X	X
Pleuronectidae (flatfish)	X	-	-	-	X	X
Rana sp. (frog)	-	-	X	-	X	X

Note: X = present

Table 21 The distribution of fish and amphibian bones in sieved samples and the date and type of feature.

Whilst most animal bones found on archaeological sites owe their presence to human domestic, industrial or ritual activities, some may be the remains of creatures which died on or very near the site. The interpretation of small groups of bones such as these must therefore be guarded.

The (cf.) flounder bone from the Early Iron Age pit and the eel and frog remains from the Roman ditch are from animals which can live in freshwater and are found in the North Shoebury area today. Unfortunately there is insufficient evidence to determine whether or not these bones were human food debris.

By contrast, there can be little doubt that the Early Medieval fish bones are human food refuse, for herring and cod are marine fish and must have been deliberately imported. Although only a few fragments of identifiable fish bone were recovered, cod was represented by head bones and vertebral centra suggesting that whole fresh fish were brought onto the site in the Early Medieval period.

IV. Mollusca

by P. Murphy
(Tables 24–30 microfiche)

Marine molluscs

(Tables 26–30 microfiche)
Shells of marine molluscs were collected by hand during excavation and further shells and fragments were extracted by wet-sieving soil samples. The main species identified were *Ostrea edulis* L. (oyster), *Mytilus edulis* L. (mussel), *Cerastoderma edule* (L.) (cockle), *Buccinum undatum* L. (whelk) and *Littorina littorea* L. (winkle). Rare valves of *Scrobicularia plana* (da Costa), *Macoma balthica* L., and *Venerupis* cf. *rhomboides* (Pennant) were also collected, and samples of some shell-rich layers produced shells of *Hydrobia ulvae* (Pennant) and *Rissoa* sp. with immature bivalves (*Mytilus*, *Cerastoderma*, *Macoma*, cf. *Mya* sp.) as well as Foraminifera, Bryozoa and barnacles.

Changes in species frequency and shell abundance
Figure 89 summarises counts of minimum numbers of individual molluscs and percentage frequencies of the main edible species, sub-divided by site periods.

Prehistoric contexts (Periods I and II) produced only very small quantities of shell, predominantly of mussels with some cockle and oyster. This seems to indicate relatively small-scale shellfish collection, mainly in the intertidal zone. Much greater quantities of shell were collected from Roman features (Period III) and this could indicate an increased exploitation of shellfish beds at this time. Oysters account for 54.8% of the shell collection from contexts of Roman and probable Roman date. Winkles are also common (25.9%), though most shells of this species came from a single pit (*0715*). Cockles and mussels occur at lower frequencies (13.3% and 3.8% respectively). Whelks, though rare (2.2%), are of interest in showing that offshore shellfish beds were exploited during the Roman period: the whelk is a sublittoral species occurring from LWM to 1200 fathoms and is nowadays collected using baited wicker pots shot from vessels (McMillan 1968, 10). Early Medieval contexts (Period V) produced a smaller shell collection than the Roman contexts, but the range of species is the same, and oysters are again the main species (57.7%). Species frequencies in the later site periods are dominated and biased by a large deposit of over 2000 cockle valves from context *0645*.

Possible management of oyster beds
Large collections of oyster valves were obtained from shell dumps in Roman and Early Medieval contexts. Two aspects of six large oyster assemblages have been examined in detail: shell size and lower valve attachment (Pl. XXV).

Hinge-gape dimensions have been obtained where possible from 100 upper (right) valves and 100 lower (left) valves from each deposit, although poor preservation has necessitated a smaller sample size for several deposits. Almost all valves had sustained some marginal damage which inevitably has reduced the possible accuracy of measurement. Mean shell dimensions were calculated for right and left valves.

The oyster lives cemented to firm substrates by the lower valve (Tebble 1966, 53). The area of attachment often shows a 'mould' of the substrate. In the majority of lower valves the nature of the substrate cannot be determined or else consisted of dead oyster valves, but a number of lower valves clearly show attachments to *Cerastoderma*, *Mytilus*, or *Littorina* shells (either moulds or the shells themselves), and a few are attached to other bivalves, probably *Venerupis* sp. and *Scrobicularia plana*. Frequencies of attachment to these species were determined for each assemblage.

Figure 90 shows mean shell dimensions and frequencies of attachment to shells of species other than oyster for the six assemblages studied. The data on which Figure 90 is based are given on microfiche. There are clearly two quite distinct groups. Shells from *1036, 1150, 1150B* and *1364B* have a large mean size (more than 80mm for left valves) and very few or none are attached to shells

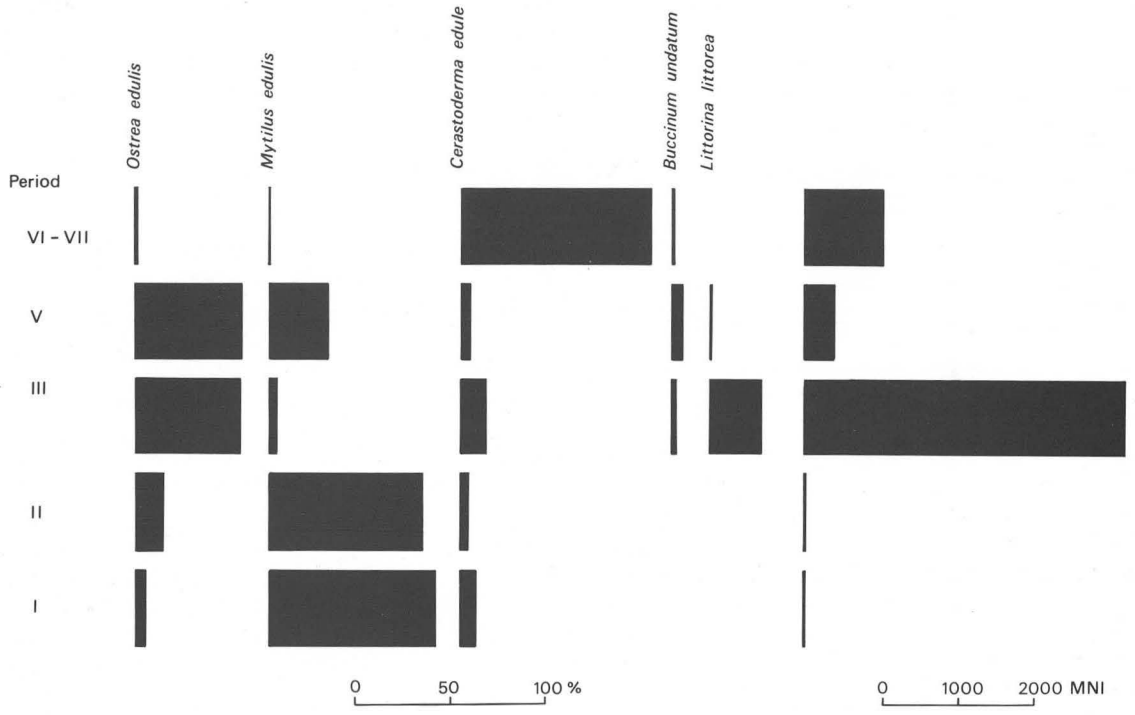

Figure 89 Occurrence of edible molluscs, by period.

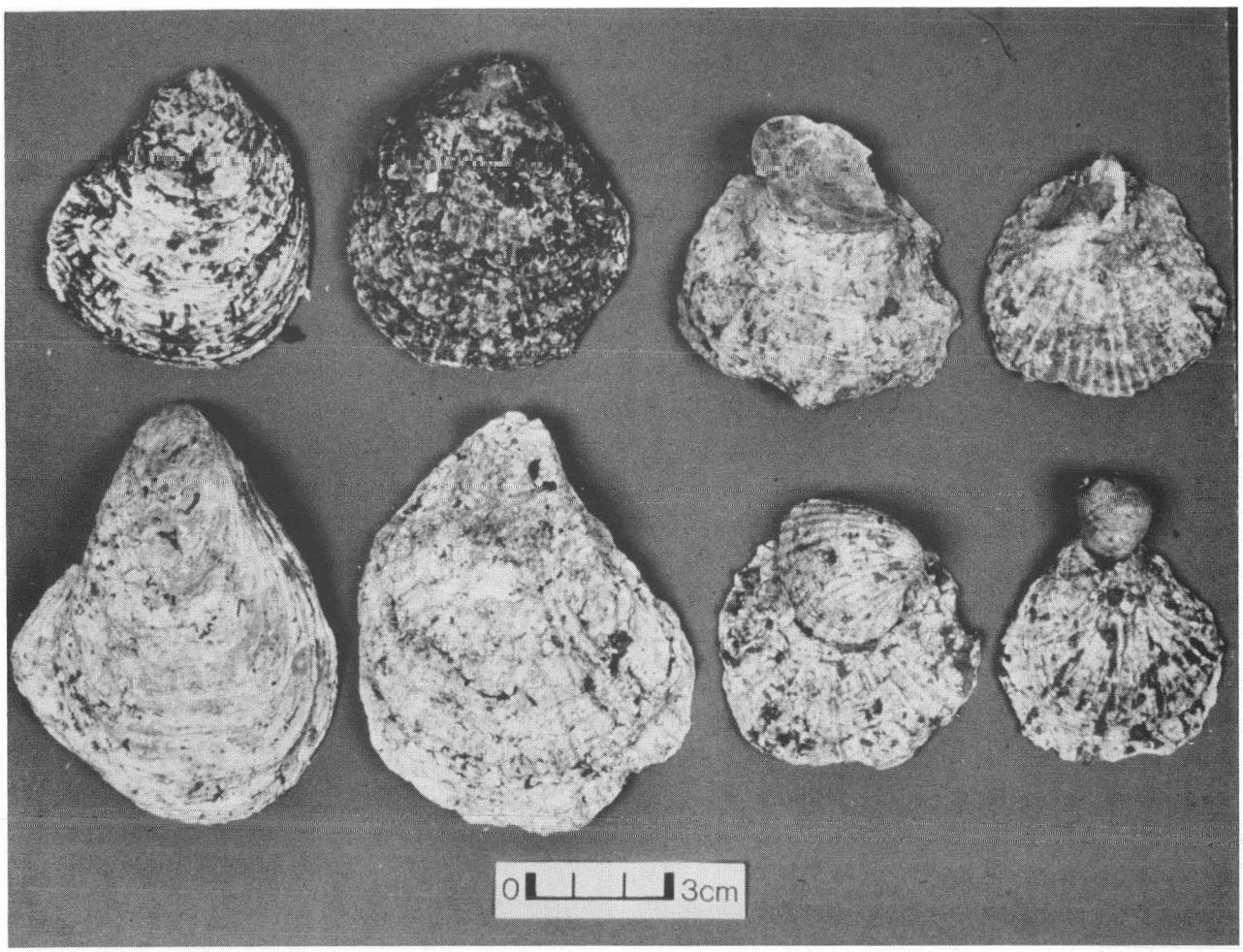

Plate XXV Oyster valves illustrating the range of size and form. Valves on the right (from *0304A*) are attached to shells of *Ostrea, Mytilus, Cerastoderma* and *Littorina.*

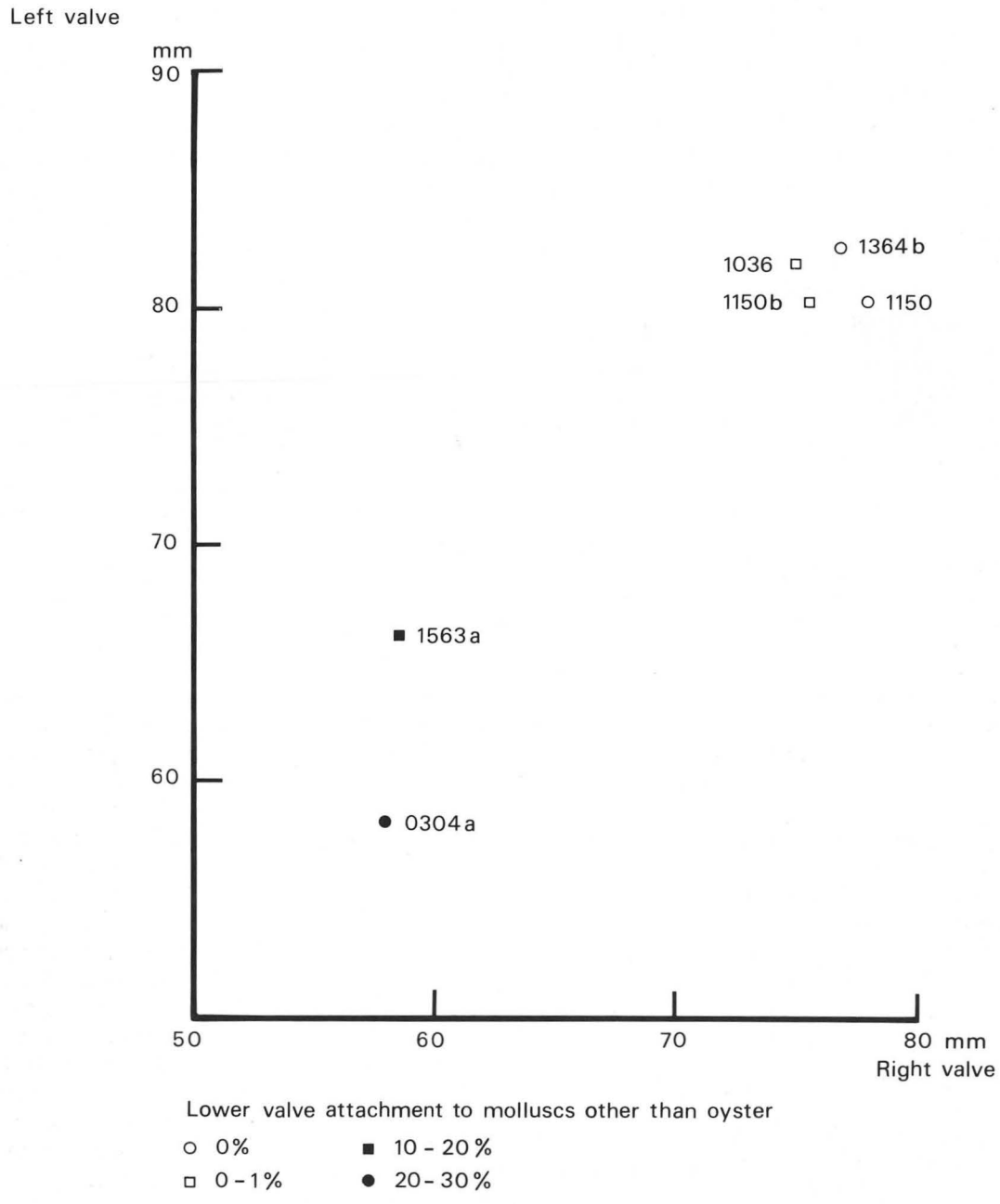

Figure 90 Oyster shell dimensions and attachment.

other than oyster (maximum 0.8%). Valves from *0304A* and *1563A* are smaller (mean size left valves 59–66 mm) and show higher frequencies of attachment to shells of other molluscan species (24 and 12% respectively). Moreover, though this is difficult to illustrate quantitatively, valves from *0304A* and *1563A* tend to be more rounded with fewer grossly distorted specimens.

These two groups are thought to represent two distinct types of oyster population. The first group shows characteristics which might be expected to occur in a natural population, not significantly modified by human exploitation: it appears to represent beds in which a high proportion of individuals attained maturity. Since no unmodified natural populations survive today there is, unfortunately, no way of testing this by comparison with modern shells. The second group has a smaller mean shell size and this suggests a greater intensity of exploitation with fewer individuals surviving to maturity. There are two alternative explanations for the high proportion of attachment to shells other than oyster in this second group. It is possible that empty shells of cockle and other intertidal species were transported and concentrated by currents and that these shells then formed a natural substrate for oyster attachment. An alternative possibility is that these shells were food refuse deliberately deposited along with oyster shells as 'cultch' (Yonge 1949, 282) to form an artificial substrate for oysters. The second of these two alternatives gains some support from the fact that oyster attachments to non-edible species such as *Scrobicularia* or *Venerupis* are very rare: most attachments are to edible species. Of the 113 *Ostrea* lower valves from *0304A*, twenty-one are attached to cockle, three to mussel, one to *Littorina* and only one to an indeterminate bivalve, possible *Venerupis*.

It is therefore possible that the oyster shells from *0304A* and *1563A* (of Early Medieval and Roman date respectively) are from beds which were managed by cultch deposition and which were heavily 'cropped', whereas the remaining Roman oyster deposits are from natural populations which were only lightly exploited.

Land and freshwater molluscs

(Tables 24–25 microfiche)

The fills of archaeological features at the site were generally decalcified and land snails were therefore normally absent apart from shells of *Cecilioides acicula* and very rare shells of other species which are perhaps modern contaminants. However, in deposits from a medieval pit (*0329*), the lowest fill of a recent ditch (*0157D*) and from several Roman ditch fills (*1240G, 1328J, 1346B, 1364A–D, 1598B* and *1642C*), base-rich conditions had been maintained. In most cases this resulted from the presence of dumped layers of marine mollusc shells. Layers of this type were not present in the prehistoric features, and consequently land mollusc shells did not usually survive. Mollusca were extracted from samples of *0157D, 0329, 1364* and *1236B* using the method of Evans (1972, 44). Shells were identified with reference to Evans (1972) and Kerney and Cameron (1979), and all identifications were confirmed by comparison with modern reference specimens. Full lists of identifications are given in Tables 24–25.

Discussion

The only land mollusc shell recovered from a prehistoric feature (apart from *Cecilioides acicula*) is a fragmentary shell of *Clausilia* sp. from context *1236B* of Middle Bronze Age pit *1167*. It is greyish in colour and appears to have been partly burnt: this seems to have made the shell resistant to leaching. The Clausiliidae are rupestral snails frequently found in crevices in bark. This specimen may therefore have been collected with firewood.

Interpretation of the snail assemblages from the Roman ditch *1364* is complicated by two main factors:

1. The layers of dumped marine shells in this ditch would have represented a base rich microhabitat with numerous shaded cavities of relatively high humidity including decaying remnants of uneaten shellfish. These conditions must have influenced the species composition of the mollusc fauna, and this is most apparent with respect to the shade-requiring component of the fauna. The assemblages recovered are clearly unusual in species composition: some common 'shade' snails (*e.g. Discus rotundatus* and the Clausiliidae) are absent, other common shade species (*e.g. Carychium tridentatum*) are rare and yet the Zonitidae are relatively abundant. However, unlike other 'shade' snails the Zonitidae, together with *Vitrina pellucida*, are facultative carnivores and it therefore seems possible that the high frequencies of these taxa are related primarily to the food resource provided by the shell dumps. If this is so then the value of these faunas as indicators of vegetational structure in the vicinity is slight.

2. The assemblages include a high proportion of catholic mollusca (*Cochlicopa, Cepaea, Trichia hispida*, Limacidae) which, because of their wide habitat ranges, are of little value in environmental interpretation. *Punctum pygmaeum* and *Vitrina pellucida*, which are able to tolerate more open habitats than the majority of shade snails, are also fairly common.

These factors, together with the fact that the assemblages from *1364A* and *D* are small, mean that the snail evidence is of limited use in palaeoecological reconstruction. However, there is a predominance of open-country and 'catholic' snails in the lowest fill (*1364D*), a peak in the frequency of shade-requiring taxa in the middle fills (*1364B* and *C*), and an assemblage dominated by open-country snails in the top fill (*1364A*). These variations might be related both to vegetational changes in the ditch and to shell dumping, but do not give useful information on land use in the adjacent field.

The sparse assemblages from the medieval and later features (*0329, 0157D*) are not fully interpretable. The terrestrial species include synanthropic snails (*Helix aspersa, Trichia striolata*) as well as snails characteristic of grassland and shaded habitats. Shells of *Vallonia pulchella, Lymnaea truncatula* and *Pisidium* sp. indicate locally damp and 'freshwater slum' habitats.

Part 5. Botanical Evidence

by P. Murphy

Plant remains

(Tables 22–23; Tables 31–35 microfiche)

Carbonised remains of crops and wild plants were recovered from fifty-five soil samples taken from ditches, pits, ovens/kilns and cremations. The samples varied considerably in size: some were very small, comprising isolated discrete patches of carbonised plant material within more extensive contexts or contents of pots associated with cremations, but others were bulk samples up to almost 20kg in weight from the fills of pits and other features. Full details of the samples and of methods used to extract plant remains are given on microfiche, together with complete lists of identifications and descriptions of the crop plant remains. Selected specimens from Period I (Middle Bronze Age and Early Iron Age contexts) are illustrated on Figure 91.

Crops

(Table 22)

Remains of crops were present in samples from Middle Bronze Age, Early and Late Iron Age, Roman, Early Medieval and post-medieval features. The results are summarised as a presence analysis (Hubbard 1975) in Table 22. Period I contexts (Middle Bronze Age and Early Iron Age) produced few cereal remains. Most of the grains, spikelet and rachis fragments of wheats from Middle Bronze Age contexts are of emmer (*Triticum dicoccum*). A single glume base of spelt (*Triticum spelta*) was identified in the sample from context *1236A* (pit *1167*), and context *1202A* (pit *1202*) produced a damaged spikelet fork probably of einkorn (*Triticum* cf. *monococcum*). A short grain from a free-threshing hexaploid wheat came from the cremation *0021*. The Early Iron Age samples contained remains of both spelt and emmer, in roughly equal quantities. A fragmentary grain from *1412* is very tentatively identified as einkorn. There are several very badly deformed and incompletely disarticulated spikelet fragments from this context which appear to be from immature ears. It seems probable that the cereals in *1412* were contaminants of a pea crop (see below), and it would appear that some ears were incompletely ripened when harvested along with the peas.

The only wheat species identified in the Late Iron Age samples (Period II) were emmer and spelt. In the Roman samples (Period III) spelt was by far the most numerically important wheat, with lesser quantities of emmer and very rare grains and rachis nodes of a free-threshing wheat. The Early Medieval samples contained only free-threshing wheat. The grains are all short forms of *T.aestivum/compactum* type, but the rachis nodes include both hexaploid and possible tetraploid forms.

The remains of barley (*Hordeum* sp.) are not well-preserved, but appear to be of a hulled variety in all site phases. The rachis internodes are generally fragmentary. Presence analysis tends to inflate the apparent importance of this crop since, although it occurs in a relatively large number of samples, in no site phase is it numerically as abundant as wheats. The significance of the remains of oats (*Avena* spp.) is difficult to assess since floret bases, which are necessary for specific determination, were rare. Some, at least, of these oat remains must be of wild species, and an *Avena fatua*-type floret base was identified in one Late Iron Age cremation. The presence frequencies of *Avena* are, moreover, inflated by the extreme durability of its charred awn fragments, which in some samples were the only remains of this genus. Rye (*Secale cereale*), represented by grains and rachis fragments, was identified only in samples from Early Medieval features.

Remains of pulse crops are in general uncommon at British prehistoric sites. The very large sample of charred peas (*Pisum sativum*), comprising almost 5000 seeds from an Early Iron Age pit (*1412*), is therefore particularly interesting. Legge (1981, 94) reports a single pea seed from a Bronze Age midden at Grimes Graves, Norfolk, but there appear to be no other published identifications of peas from early prehistoric contexts in this country. Later Iron Age and Roman features produced no pulse seeds, but a single pea was identified from Early Medieval pit *0352*.

Seeds of *Camelina sativa* (gold-of-pleasure) occurred in two Early Iron Age samples from *1412*. Remains of this plant have been reported from Iron Age deposits in Scandinavia, Germany and Holland (Körber-Grohne 1967: Renfrew 1973, 168: van Zeist 1970, 87). It has also been identified in association with flax seeds from Boudiccan destruction levels at Colchester (Murphy 1992). *Camelina* is a common weed of flax, but has also been grown as an oil crop in its own right (Renfrew 1973).

Wild plants

The distribution of fruits and seeds of wild plants determined to generic or specific level is summarised in Table 23. The species identified are grouped for ecological interpretation, though inevitably such grouping is artificial due to the wide habitat ranges of many of these plants.

As would be expected, the majority of these charred seeds are from arable weeds, either species growing directly in the crop or in grassy areas at field margins (Groups 1 and 2). Most of these plants are of widespread distribution on many soil-types and under a variety of cultivation methods, but a few are more informative.

M.K. Jones (1978, 106) has drawn attention to *Galium aparine* as a characteristic weed of autumn-sown crops. At North Shoebury it occurs in association with cereals in samples from prehistoric, Early Medieval and post-medieval contexts. This is of particular significance for the Bronze Age material, since direct evidence for pre-Iron Age autumn sowing is at present slight, although Hillman (1981, 145–8) considers that autumn sowing of wheats has probably always been customary in temperate Europe.

Fruits of *Anthemis cotula* have been identified in samples from Roman and later contexts. It is a weed largely confined to arable habitats on heavy alkaline,

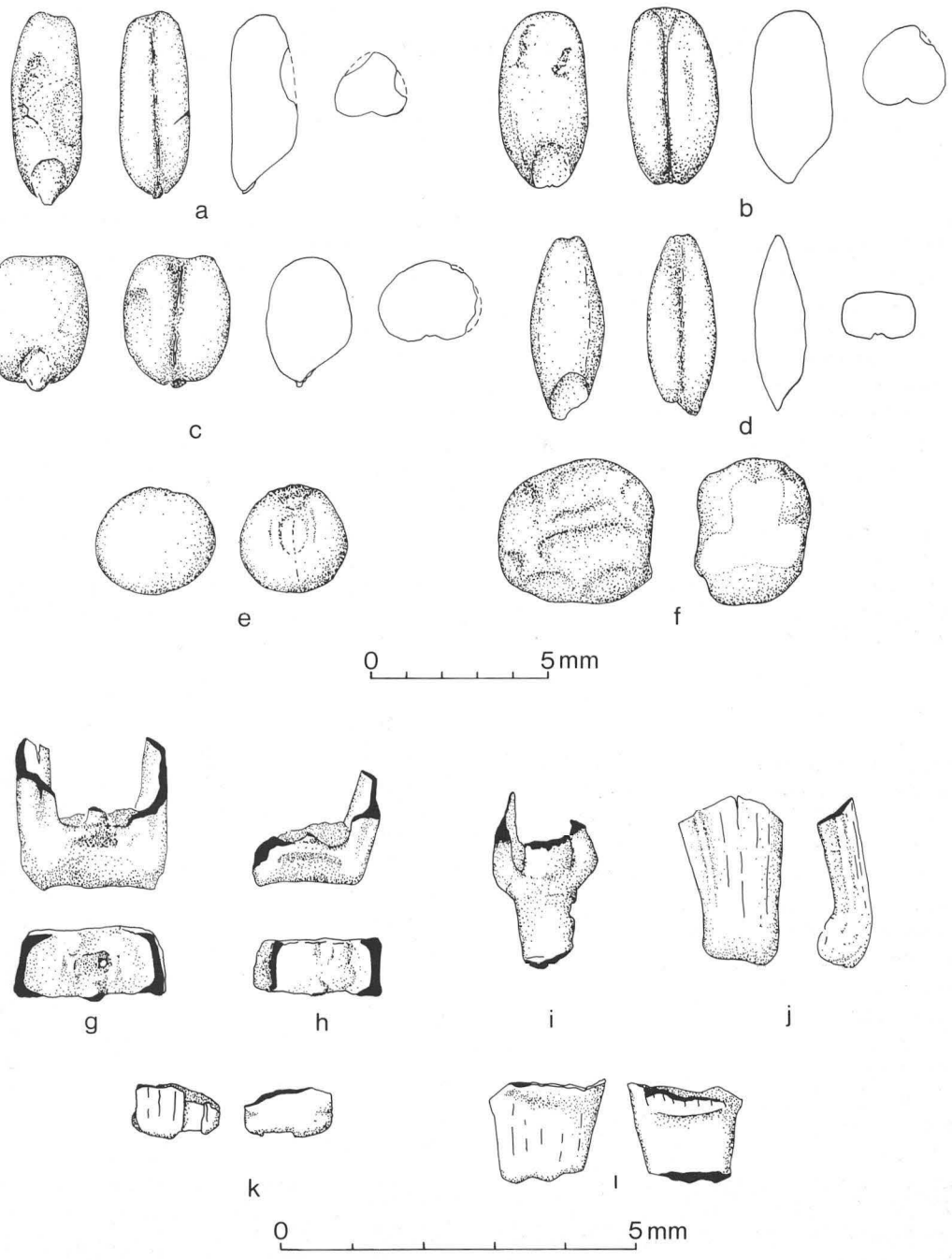

Figure 91 Selected carbonised plant remains from Period I contexts.
a. and b. *Triticum dicoccum* caryopses. *1412* (Early Iron Age);
c. *Triticum aestivum* s.l. caryopsis. *0021* (?Bronze Age);
d. *Hordeum* sp. hulled caryopsis. *1202A* (Middle Bronze Age);
e. and f. *Pisum sativum* seeds. *1412* (Early Iron Age). On f. there is a silty encrustation obscuring the hilum;
g. *Triticum dicoccum* spikelet fork. *1008B* (Early Iron Age);
h. *Triticum* cf *monococcum* spikelet fork *1202A* (Middle Bronze Age);
i. *Triticum* sp. spikelet fork from immature ear. *1412* (Early Iron Age);
j. *Triticum spelta* glume base. *1044A* (?Middle Iron Age);
k. *Hordeum* sp. rachis node. *1202A* (Middle Bronze Age);
l. *Hordeum* sp. rachis internode. *1209B* (Middle Bronze Age). Damaged at base.

Period	I	I	II	III	V	VII	Uncertain
	I.1	I.3	II.2	III.1–III.2			
Phase	MBA*a*	EIA	LIA*b*	Roman	Early Med.	Post Med.	?Roman
Triticum sp. (indeterminate wheat)	6	3	8	8	-	-	5
Triticum cf. monococcum (? einkorn)	1	1	-	-	-	-	-
Triticum dicoccum (emmer)	2	3	2	2	-	-	3
Triticum cf. turgidum/durum type	-	-	-	-	2	-	-
Triticum spelta (spelt)	1	3	4	6	-	-	4
Triticum aestivum/compactum (bread/club wheat)	1	-	-	1	5	1	1
Hordeum spp. (barley)	3	3	3	5	4	-	3
Avena sp. (oats; wild or cultivated)	1	2	4	3	3	-	1
Secale cereale (rye)	-	-	-	-	3	-	-
Pisum sativum (pea)	-	1	-	-	1	-	-
Camelina sativa (gold-of-pleasure)	-	1	-	-	-	-	-
Total number of independent contexts per period or phase	7	3	8	9	5	1	5

Notes: *a)* Cremation *0021* included in this column. *b)* Contexts *1561* and *1592* included in this column.

The analysis is based on the numbers of independent contexts sampled: thus, for example, results from samples 29 and 30 from *1236A* and *1236B*, layers within a single pit, are not considered separately. In view of the small numbers of contexts, percentages have not been calculated.

Table 22 Presence analysis of crop plants.

poorly-drained soils. Its absence in Bronze Age contexts may simply indicate that at this date it had not been introduced to the British Isles (there are no pre-Iron Age records; Jones 1978), or alternatively could suggest some subsequent localised deterioration in drainage conditions as a result of soil compaction. A second species of mayweed, *Tripleurospermum maritimum*, is present in Early Iron Age to Early Medieval contexts.

As was noted above, the status of *Camelina sativa*, present in Early Iron Age features only, is uncertain at this site. It is a common and characteristic weed of flax (Hjelmqvist 1950) and its presence could perhaps indicate the proximity of flax cultivation. Alternatively it may be a crop.

The third ecological group distinguished (Group 3) consists of woodland and scrub plants. A charred seed of elder (*Sambucus nigra*) came from Bronze Age pit *1202* (fill *1202B*), and Early Medieval pit *0352* (fill *0352A*) produced charred hazel-nut shell fragments (*Corylus avellana*). These no doubt reflect the gathering of wild fruits and nuts.

Remains of plants characteristic of grassland and heath on light soils (Group 4) are very rare, and were recovered from only one Roman context (*1592D*).

The final group of wetland and damp grassland plants (Group 5) is represented by small numbers of seeds and nutlets of *Ranunculus* sp. (buttercup), *Montia fontana* (blinks), *Eleocharis* sp. (spike-rush) and sedges (*Carex* sp.) from Bronze Age to Roman features. Jones (1978, 105) reports charred remains of these species in association with cereals and suggests that this may indicate an extension of cultivation onto damp ground. Seeds of damp grassland plants are, however, very rare in samples from North Shoebury, and this seems to indicate that cultivation was largely confined to better-drained soils at all periods. Fill *1642C* of Roman ditch *1642*, produced charred fruits of *Scirpus maritimus*, the sea club-rush. This species occurs in shallow water at muddy margins of tidal rivers and ditches; possibly these fruits reached the site with plants harvested for thatch or litter.

Taphonomy

Most of the samples from the site included only thin scatters of charred plant remains of unknown and probably diverse origin. It is impossible to make any reliable assessment of the processes which resulted in the formation of these assemblages. A few of the larger samples, however, merit detailed consideration. The numerical composition of these samples is summarised in Figure 92.

Context *0021* (Sample 9) was a cremation of Bronze Age date. The associated charred plant remains include numerous tubers of the onion couch (*Arrhenatherum elatius* var. *bulbosum*) with seeds of wetland and damp grassland plants (*Montia fontana*, *Carex* sp.), ruderals and segetals (Leguminosae, *Plantago lanceolata*) and rare grains and spikelet fragments of cereals (*Triticum dicoccum*, *T. aestivum/compactum*, *Hordeum* sp.). This oddly diverse assemblage dominated by onion couch tubers is closely comparable to assemblages from some Bronze Age cremation pits from Oxfordshire (Jones 1978, 107–8) and from Rush Green, Clacton, Essex (Murphy 1983). Tubers of this grass have also been reported from a Bronze Age cremation pit at Easton Down, Hampshire (Fasham 1982, 27). The significance of plant remains from such contexts is difficult to assess. Some specimens may merely represent the remains of kindling for the pyre, but as Jones (1978) has suggested, the tubers and cereals could represent ritual food offerings.

Interpretation of sample 55 from Early Iron Age pit *1412*, is more straightforward. The assemblage consists almost entirely of seeds of pea (*Pisum sativum*) with no pod fragments, and represents an almost fully processed crop. There are a few cereal remains, including spikelet fragments from immature ears. These are thought to have been contaminants of the pea crop. The most abundant weed seeds are of *Vicia/Lathyrus* sp. and *Camelina sativa*. The circumstances in which carbonisation occurred are uncertain, but the very high concentration of seeds in the soil (about 650 peas per kg) could indicate a catastrophic fire in storage.

Samples from the Early Medieval features (*0304, 0343, 0352, 0354* and *0345*) also seem to represent an

Period		I	I	II	III	V.1	VI	Uncertain
Phase		I.1	I.3	II.2	All phases			dating
	EIA	MBA*a*	EIA	LIA*b*	Roman	Early Medieval	Post-Medieval	?Roman
1.	Raphanus raphanistrum	-	-	+	-	-	-	-
	Camelina sativa	-	+	-	-	-	-	-
	Stellaria media-type	-	-	+	-	+	-	-
	Atriplex spp.	+	-	+	+	+	-	-
	Chenopodium album	-	+	+	+	-	-	-
	Polygonum aviculare	-	-	+	+	-	-	+
	Polygonum convolvulus	-	-	+	+	-	-	+
	Rumex acetosella	+	-	+	+	-	-	-
	Rumex (crispus-type)	-	+	+	+	+	-	+
	Lithospermum arvense	-	-	-	+	+	-	-
	Plantago lanceolata	+	+	-	-	-	-	-
	Galium aparine	+	+	+	-	+	+	-
	Anthemis cotula	-	-	-	+	+	-	-
	Tripleurospermum maritimum	-	+	+	+	+	-	-
	Centaurea cf. cyanus	-	-	-	-	+	-	-
	Avena spp.	+	+	+	+	+	-	+
	Avena fatua-type	-	-	+	-	-	-	-
2.	Malva sp.	-	+	+	-	-	-	-
	Medicago lupulina	+	-	+	+	-	-	+
	Vicia tetrasperma	+	-	-	-	-	-	-
	Vicia sativa	-	-	-	+	+	-	-
	Lathyrus nissolia	-	-	-	+	-	-	-
	Bromus sp.	-	+	+	+	+	-	+
	Arrhenatherum elatius	+	-	+	-	-	-	-
3.	Corylus avellana	-	-	-	-	+	-	-
	Sambucus nigra	+	-	-	-	-	-	-
4.	Pteridium aquilinum (pinnule)	-	-	+	-	-	-	-
	Stellaria graminea	-	-	+	-	-	-	-
5.	Ranunculus sp.	+	-	-	+	-	-	+
	Montia fontana subsp. chondrosperma	+	-	+	-	-	-	-
	Eleocharis sp.	-	-	-	-	-	-	+
	Carex sp.	+	-	-	-	-	-	-
	Scirpus maritimus	-	-	-	+	-	-	-

Notes: *a)* Cremation *0021* included in this column; *b)* Contexts *1561* and *1592* included in this column

The species identified are grouped for ecological interpretation as follows:

1. Arable weeds (many also present in other disturbed-ground habitats) *Camelina* and *Avena* are here considered as possible weeds.
2. Species of grassland and field margins.
3. Woodland and scrub plants.
4. Species characteristic of grassland and heath on light sandy soils.
5. Wetland and damp grassland plants.

Table 23 Distribution of remains of wild plants.

almost fully processed crop. Context *0345* is the largest of these samples, but it typifies the remainder. Nearly 90% of this assemblage consists of cereal grains, predominantly of bread/club wheat, and the remainder comprises rachis nodes and weed seeds. It appears to represent a crop which had been cleaned for bulk storage but which had not been finally cleaned for domestic consumption (Hillman 1981, fig. 6). In view of the very similar composition of these Early Medieval assemblages and the proximity of the features which produced them a common source seems possible. The most likely interpretation is that there was a granary fire and that subsequently the charred debris was dispersed and incorporated into various contexts.

Sample 57 from Roman pit *1610*, also contains a fairly high proportion of grains (79%), mainly of wheats, associated with spelt and emmer spikelet fragments and arable weed seeds. Though clearly not fully processed, this assemblage appears to represent a part-cleaned crop. Sample 69 from context *1640B* in a Late Iron Age ditch *1640* is, however, more typical of the Late Iron Age/Roman assemblages. Weed seeds (predominantly *Bromus* caryopses and *Vicia* seeds) account for 51% of the assemblage, and cereal spikelet fragments, mainly spelt (*T. spelta*) glume bases comprise a further 30%. It is unlikely that this, or any of the other ditch assemblages, is derived from a single event or process: mixing is very likely to have occurred. However, assemblages of this type clearly include a component of crop-cleaning waste.

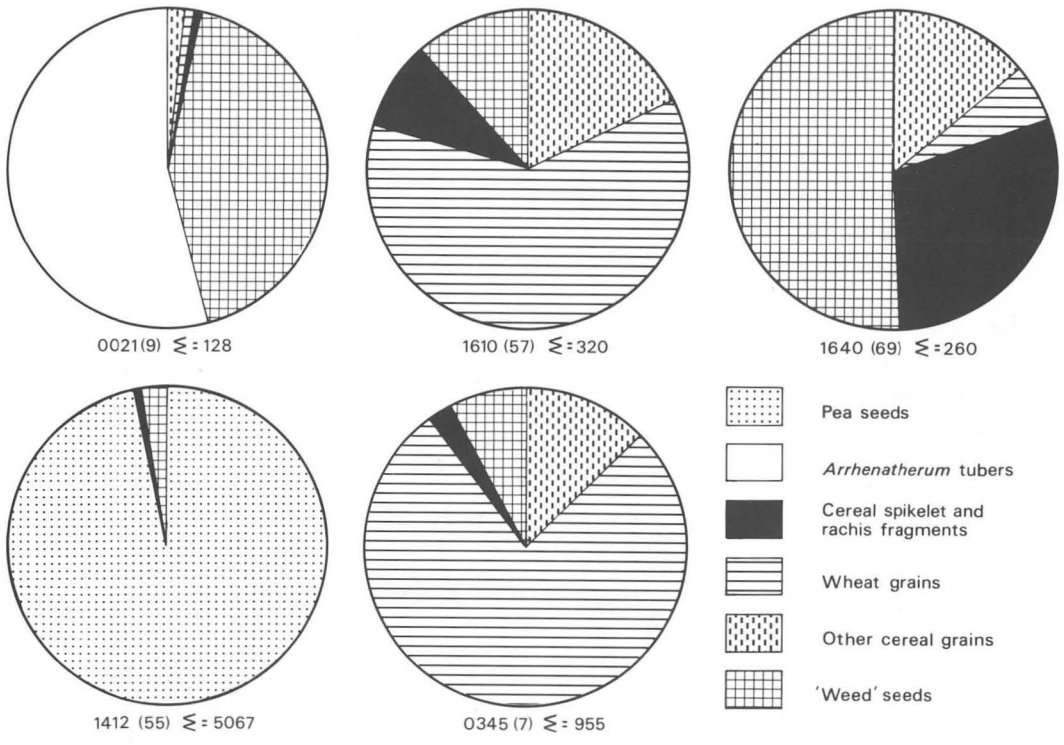

Figure 92 Composition of carbonised plant assemblages from selected features.

Conclusions

Owing to the curtailment of the excavation after only one season's work, the samples represent no more than small scale sampling of a complex multi-period site. Consequently the numbers of samples available from each period are small, and provide no real basis for assessing the economic status of the site at any period. More intensive work is clearly required in this area of high grade loamy soils. However the data from the North Shoebury samples do provide a useful overview of changing crop cultivation in the area between the Bronze Age and post-medieval period, and the early evidence for cultivation of peas is of some significance.

Part 6. Discussion
North Shoebury and the Archaeology of the Southend Peninsula

I. Introduction

It is disappointing that resources allowed only a limited time for elucidating the extent and pattern of the various settlements and field systems that were revealed at North Shoebury. New discoveries are being made and recorded on the brickearth terrace, particularly north of Shoebury at Great Wakering. These finds, together with earlier discoveries (Gazetteer below pp 174–181), viewed in the light of the evidence from the North Shoebury excavations; provide an extensive body of data regarding the development of settlement in south-east Essex over several millennia.

Each phase of settlement at North Shoebury is discussed below, and related to evidence from elsewhere in the Southend peninsula and south-east Britain.

II. Later Upper Palaeolithic

One shouldered point has been recorded from Shoeburyness (Jacobi 1980a, 12, fig. 4), found on the foreshore by H. Laver. Typologically, it could equate with similar points in the Hamburgian Industries of north-west Germany of the 12th millennium BC. At this period the sea level would have been 30–40m below OD and most of what is now the North Sea and English Channel exposed as dry land. This point could represent a stray loss from richer settlement sites now buried beneath Thames alluvium.

III. Mesolithic

This period is well represented in the area, particularly along the valley of the Crouch, on the relatively high and sandier soils at Rayleigh and Thundersley, and on the brickearth-covered or gravel terraces at Southend, fringing the clay lands to the west. The richest site is at Daws Heath, Thundersley, where an unusually large number of tranchet axes (at least twenty-nine) have been collected. The flint assemblages, especially the microliths, suggest an Early Mesolithic date of *c.* 8000–6800 BC (Jacobi 1980b). The axes may relate to initial clearing of the woodland in this area, as may the other tranchet axes found around Southend. At this stage the sea level would have been 30–20m below OD, and any settlement sites along the River Thames would now be buried beneath alluvium. The Rayleigh sites (Wymer 1977) are probably contemporary, at least in part. At least one microlith comes from North Shoebury (Wymer 1977, 92).

The Mesolithic sites along the River Crouch are mainly on its north bank, but occur on the south side at Rawreth, Hullbridge, South Fambridge and Canewdon (Vincent and George 1980). As Jacobi has emphasised, these sites belong to a surface that was not buried by peats and clays until the Bronze Age, and the Mesolithic material recovered may extend over a long period of time. Some of the microlithic forms, however, indicate that there was activity along the Crouch well into the later Mesolithic of the 6th and possibly 5th millennium BC. Recent work in the Crouch Estuary by Wilkinson and Murphy (1984–5, 1986, 1995) has established the Holocene stratigraphy. A radiocarbon date of 2245±70 bc (HAR-5226) has been obtained for the base of the lower Peat above the Mesolithic site at Hullbridge (Reader 1911). The same peat elsewhere in the Crouch Estuary covers both Mesolithic and Neolithic sites.

IV. Neolithic

No certain Neolithic pottery has been identified from the 1981 excavations at North Shoebury, nor was any of the small quantity of flintwork recorded in 1981 considered to be necessarily Neolithic. One partly-ground flint axehead, unifacial 'knife' and a Jadeite axe (Pollitt 1953, 52) from the Milton Hall Brickfields are in Southend Museum.

The flakes and cores recovered by Macleod, mainly in 1971–2, differ little in type and number from those recovered in 1981, *i.e.* they are the products of unsystematic, haphazard knapping of post-Neolithic date. There are also several flakes from methodically prepared cores and these are presumably Neolithic. They come from either undated or post-Neolithic features and are most likely residual.

As described above (p.20) one enigmatic feature recorded by Macleod (*M2.82*) produced a considerable quantity of early Neolithic pottery and flintwork.

In the gazetteer of Essex sites producing Neolithic pottery compiled by Hedges (1980), there is only one entry for a parish within the District: a very small Grooved Ware sherd from Southend Airport (actually just within the parish of Rochford, at TQ 873895) associated with a pit containing a crouched inhumation burial, found in 1955. However, the association of this sherd with the burial is dubious for it was associated with Early Iron Age sherds (K. Crowe, pers. comm.). Yet, there is positive evidence for Neolithic activity in the District in the form of diagnostic flint artefacts such as chipped or ground flint axes, stone axes and leaf-shaped arrowheads. In fact, there is a concentration of flint and stone axeheads comparable to similar riverine or coastal concentrations in the Mucking-Grays area, and around Walton-on-the-Naze. Those in the Southend peninsula, when plotted spatially against the geological map, show a two-fold distribution. One group, like the Mesolithic tranchet axes, follows the brickearth or gravel-covered terraces north and west of Southend, fringing the heavier clay soils. The distribution continues across the similar topography between the Roach and the Crouch unlike that of the tranchet axes. The other group is on the Barling Terrace between Great Wakering and Shoeburyness. In both cases it would seem that, assuming the axes do represent tree-felling, it was the

suitability of the soil for farming needs that prompted clearance.

The only surface Neolithic flints recorded in any quantity come from the highest part of the district where Bagshot sands and podsolised gravels outcrop, at Hamborough Hill, Rayleigh, and at Daws Heath, near Thundersley Lodge. Mesolithic people, as noted above, chose the same areas probably for the same reasons, *i.e.* ease of clearance, good drainage, availability of flint, and nearby freshwater. A flint sickle was also found at Rayleigh. Other sickles come from low-lying land at Stambridge and at Baldwin's Farm, Barling Magna. Another has recently been recovered from Barling (R. Arscot pers. comm.) These may, of course, have been lost in the process of cutting reeds, for by the latter part of the Neolithic period the sea level may have risen high enough to create suitable conditions along the small river channels to promote the growth of reeds.

Beyond the area under consideration, a little further up the Thames Estuary, there is firmer evidence for Neolithic occupation, with a causewayed enclosure at Orsett (Hedges and Buckley 1978) and Mildenhall and Grooved Ware sherds from pits in the Mucking complex. It would be strange if this occupation (radiocarbon dated at Orsett to 2583 ± 112 bc (BM 1214) and 2776 ± 74 bc (BM 1378)) had not spread downstream. However, settlements along the north bank of the Thames would have been below present Ordnance Datum and would now be buried. There is good evidence for the existence of the so-called 'Lyonesse' occupation surface beneath and off Foulness and the Maplin Sands. Reference has been made (p.4) to the borehole evidence given by Greensmith and Tucker (1980); and their conclusion that this surface is, unlike its counterpart between Clacton and Dovercourt, not at an intertidal level but now at a considerable depth below low water mark because of the local subsidence. The boreholes on Foulness have proved organic deposits at depths of greater than 5.20m below OD, radiocarbon dated to around 2000 BC. There is consolidated silty clay at this level which equates with the 'Lyonesse' surface elsewhere. No artefacts are known from this level but the considerable depth of marine and estuarine sediments that now bury it preclude any exposures. It may be that these once low-lying flats and marshes were the most favoured places for Neolithic settlement in the area. This would help explain the general lack of any definite Neolithic settlement sites within the Rochford Hundred.

V. Beaker and Early Bronze Age

There is a fairly general spread of characteristic artefacts: barbed and tanged arrowheads from several parishes, axe hammers from Prittlewell and Thorpe Bay, and a fine flint dagger from Daws Heath, Thundersley (Couchman 1980).

Some barrows may have existed. Benton refers to one at Prittlewell that had been destroyed, and another is said to have been levelled at Great Wakering. Cropmarks of ring-ditches are recorded at Paglesham. An existing mound at Sutton, known as Butler's Hill (TQ 905987), is circular, *c.* 14m in diameter and about 1m high, with a trace of an encircling ditch. It may be a barrow, although it appears to be the site of one of the distinctive circular 'Dutch' cottages which occur in south-east Essex (Francis 1934).

Positive evidence for burials is comparatively rich, with Beaker burials discovered about 1km south-west of North Shoebury Church at Thorpe Hall Brickfield in 1924, 1929 and 1960, one with another flint dagger; presumably these burials formed part of a small cemetery. Beaker vessels or sherds have also been recorded from Great Wakering, Southchurch and Shoebury (Clarke 1970) but their exact provenances or associations are uncertain. There is also a conical amber bead from Great Wakering. A number of barbed and tanged arrowheads are known from the Southchurch/Shoebury area (Couchman 1980, fig. 15). Another has recently been recovered from Wakering (Crowe 1986).

What must have been a burial of the Early Bronze Age was discovered in 1914, by soldiers digging trenches at Rochford. It is recorded that fragments of a cinerary urn were found over some beads, of which 6 amber and 2 gold-covered shale examples survive in Colchester Museum. A clue to the location of this burial may be the more recent find of a jet bead at Three Ashes Farm, Rochford (Crowe pers. comm.). Collared urns have been recovered from Southchurch and Paglesham (Pollitt 1953; Longworth 1985).

The excavations at North Shoebury recovered little Early Bronze Age material, apart from a few probably residual sherds. However a flanged axe was recently found on a spoil heap during building work to the north of the excavated area (Crowe 1990).

VI. Period I 1500–300 BC

Phase: I.1 Middle Bronze Age (*c.* 1500–1000 BC)

The pits, ditches and gullies of the settlement (Figs 14–16) produced a range of domestic debris, including Deverel-Rimbury pottery, and flintwork characteristic of the later Bronze Age. A variety of evidence indicates a mixed farming economy, faunal remains show sheep, cattle and pigs were kept, and carbonised plant remains indicate wheat, and possibly oats were grown. Mussels were brought from the nearby coast, and a single carbonised elder seed probably represents the seasonal gathering of wild plant produce. Fragments of Greensand and ferruginous sandstone querns attest to grain processing. The 1981 and 1971–72 excavations produced seven cylindrical loomweights, indicating the importance of cloth production. Extensive marshland pasture would have been available to the east towards Foulness, and to the south west in the area of the former Southchurch mere (Francis 1931, Crowe forthcoming). Despite the very different geographical setting, the economic evidence and range of resources exploited are very similar to that recovered from the downland sites (Drewett 1982).

A cremation burial of a child *(0021)* was recovered 250m to the south east of the main settlement area, an unurned cremation burial of a middle aged woman yielded a radiocarbon date of 3280 ± 90BP HAR-4634 (above p.66). This burial lay 400m to the south of the settlement and close to two cropmark ring-ditches (Fig. 93). The relationship between these burials and the settlement at North Shoebury, appears to fit the pattern noted by Bradley (1981) for Deverel-Rimbury settlements on the chalk of southern England. A small pit (*M988*) 120m north of the MBA settlement, contained a small bossed pot buried upright. The pit fill contained frequent scraps of charcoal,

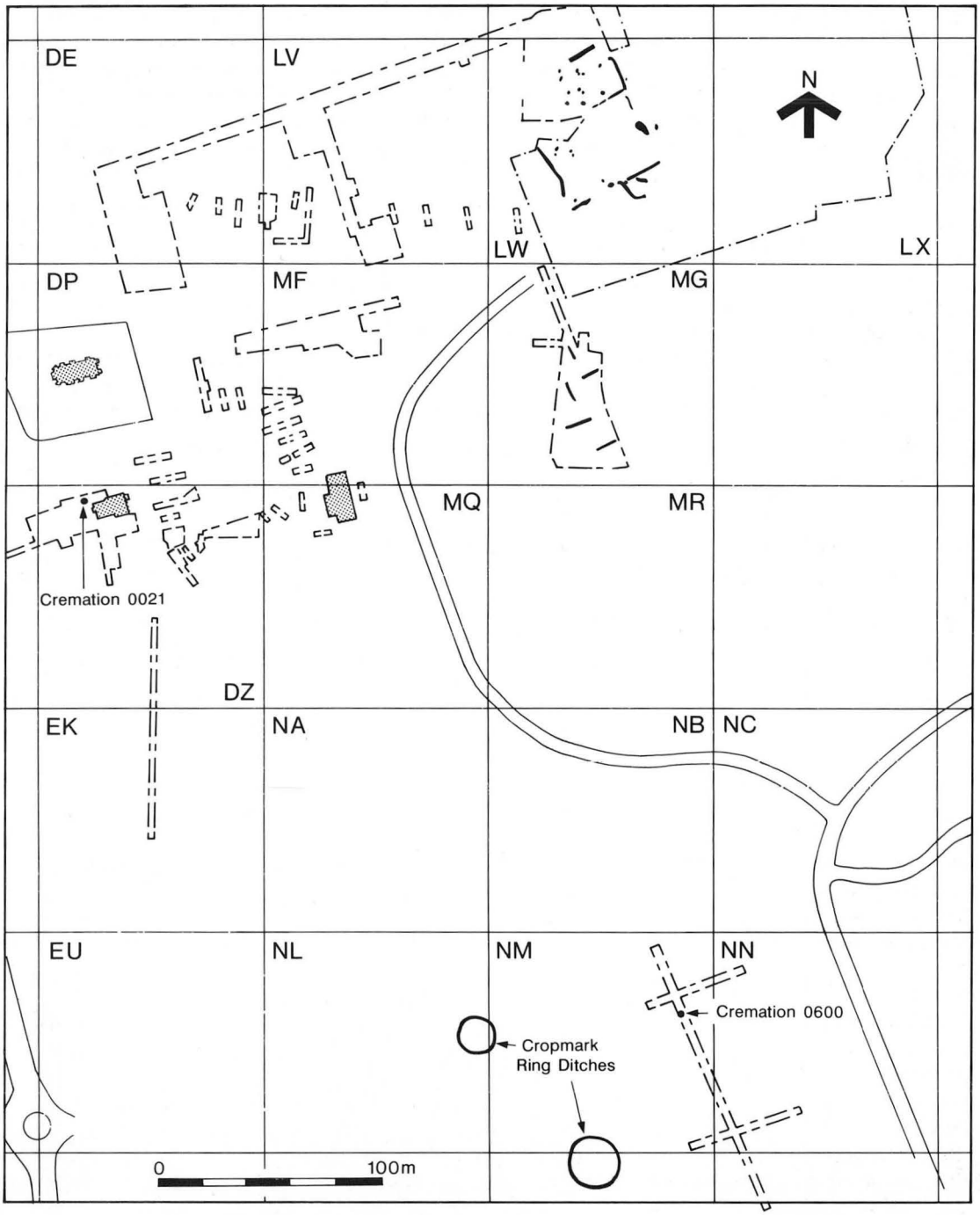

Figure 93 Plan of MBA settlement in grid squares LW and MG in relation to cropmark ringditches and cremation burials.

charred wood and fired clay; it seems likely to represent a ritual deposit.

Deliberate deposits at boundaries also occur within the settlement at North Shoebury. Pit *1000* towards the east end of the irregular gully *1004/1046/1081* (Fig. 16, Pl. IV), had a bucket urn placed in it on its side and orientated north-south (Fig. 62.12). A cow leg bone orientated east-west within *1046* together with a rim of bucket urn (Fig. 62.8) may also be relevant. The settlement yielded few faunal remains, which has made interpretation of animal husbandry difficult (above p.140). It therefore seems quite likely that the bone from *1046* was deliberately deposited. This relative lack of animal bone and other food debris is also apparent from sites on the Chalk (Barrett 1989). Pit *1203* contained a carefully placed deposit of a large part of a bucket urn and part of a small bossed vessel (above p.80 Fig. 62.14, 15), the description of *M718* (fiche) indicates that it may have contained a similar deposit.

It is clear that the MBA settlement at North Shoebury was one of a series occupying the eastern end of the Southend peninsula (Fig. 94). MBA occupation was recorded at Baldwin's Farm Gravel Pit Barling (Couchman 1977a), further settlement has been revealed at Barling and also at Great Wakering (Crowe forthcoming and pers. comm.). To the south and west numerous finds

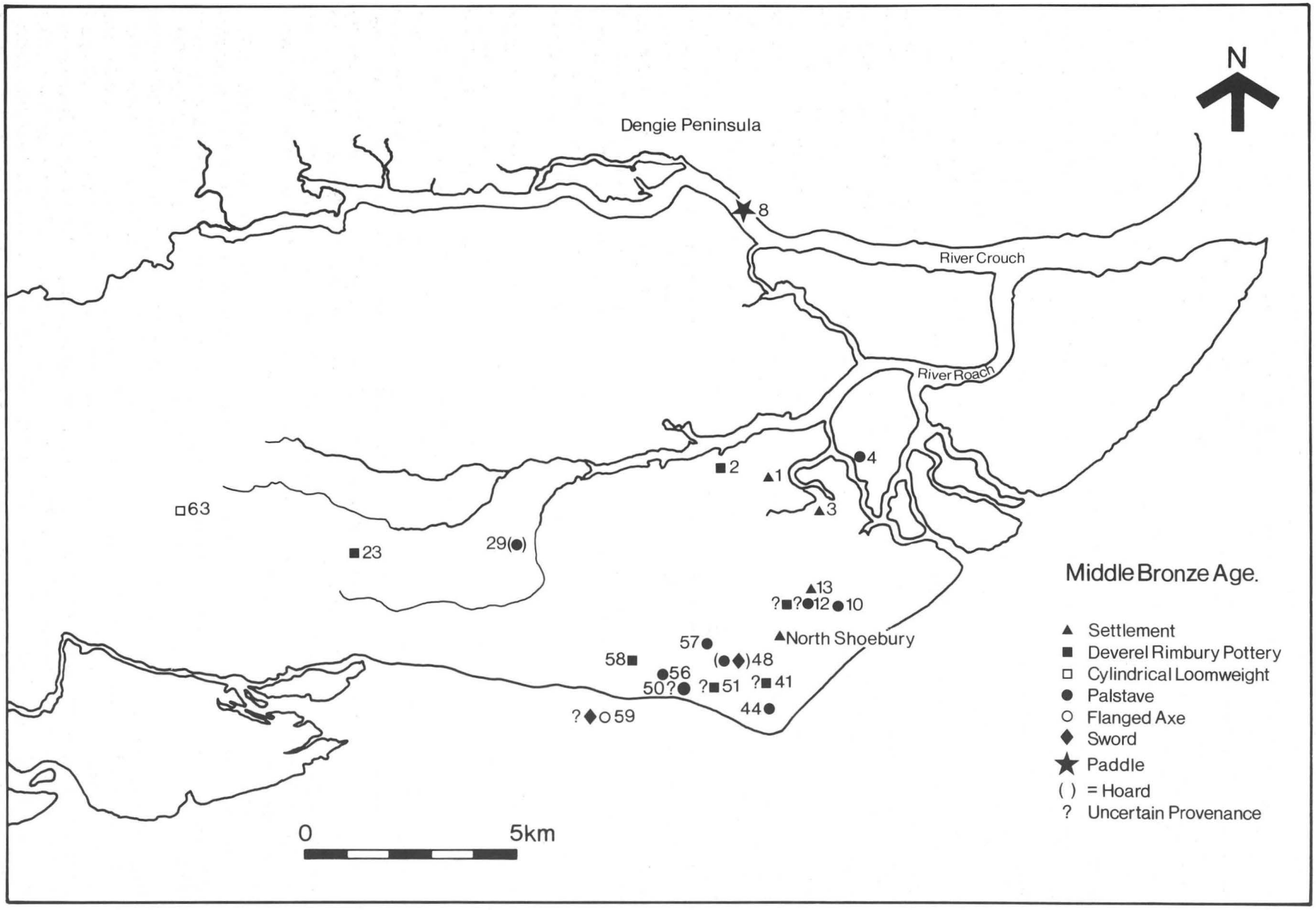

Figure 94 Distribution of Middle Bronze Age sites and finds in south east Essex. Numbers refer to entries in the Bronze–Early Iron Age section of the gazetteer (pp 176–178).

of Deverel-Rimbury pottery in Southchurch and Shoebury, during brickearth extraction in the late 19th and early 20th centuries, demonstrate widespread occupation.

The Deverel-Rimbury pottery from North Shoebury and south Essex generally, is quite unlike the pottery of the Ardleigh Group further north (p.78 above, Brown forthcoming; *contra* Couchman 1980 and Lawson 1984). The pottery from south Essex shows links with pottery from further up the Thames (Barrett 1973) and North Kent (Brown 1984–5). The MBA settlements of the Southend peninsula, can therefore be seen as part of one of the regional ceramic groups, which Ellison (1980) has shown exist within the Deverel-Rimbury pottery of southern England. Within the area of the two ceramic groups represented in Essex, there appears to be significant differences in the nature of cemetery sites. Large cremation cemeteries with tight clusters of ring-ditches, are common in the area of the Ardleigh group (*e.g.* Ardleigh, White Colne, Chitts Hill). In the south smaller groups of burials occur with more widely scattered ring-ditches (*e.g.* Orsett, Mucking, Slough House Farm). Settlements such as North Shoebury were clearly not isolated and are unlikely to have been self sufficient (Barrett and Needham 1988). A wide range of social and economic exchanges with neighbours near and far would have taken place at every level from agricultural activity to the acquisition of marriage partners. Occasionally material evidence of such contacts survives, such as the quern stones probably derived from a source south of the Thames (above p.73). The regional ceramic groups noted above may reflect the areas within which social interactions generally took place. Wider ranging contacts also occurred.

The stamped fine wares provide particularly striking parallels for pottery from North Kent (p.78 above and Brown 1984–5) and may reflect continental contact (Butler 1963, Champion 1982). The most obvious evidence of participation in wide ranging social networks, are the finds of metalwork.

Most of the metal objects are finds of single palstaves. Although more elaborate items and deposits are also known (Rowlands 1976, O'Connor 1980, Crowe forthcoming), a pair of palstaves were found together at Prittlewell, a Tumulous sword and flanged axe from 'off Southend' may date to the beginning of our Phase I:1, whilst a Balintober sword and looped palstave, found together in Thorpe Hall Brickfield, date towards its end. The relationship of the settlement to metalwork finds is of some interest, the metalwork finds lie in an arc to the south, west and east of the known settlements (Couchman 1980, fig. 16; Crowe forthcoming). It is possible they represent deliberate deposits on the periphery of settled areas, a relationship similar to that between settlement and burial noted above.

Phase I.2 Late Bronze Age — *c.*1000–600 BC

The main features of this phase are shown on Figure 19. Some survived and became incorporated into the EIA field system, such as the long, straight ditch *M13* (above p.22). Both this ditch and a possible trackway (*M253, M244, M81, M97, M257*, Figs 19 and 21) just miss the corners of the MBA enclosures. It seems that a largely new settlement had been created, taking in land to the east of the MBA settlement. The evidence mainly comprised pit scatters and lengths of ditches and gullies, mostly recorded during 1971–2 rescue work. It is possible that the earlier MBA settlement was deliberately avoided, as noted above major LBA linear features seem to have avoided the phase I.1 enclosures. Only three LBA pits (*1008, M521* and *M351*), were recorded within the MBA settlement. These pits lie on the line of, or close to, the east west boundaries of the MBA enclosures (Fig. 21). Two of the pits (*1008* and *M351*) contained placed deposits (below).

As virtually no features of this phase occurred within the area excavated in 1981, there is very little evidence derived from faunal remains and no evidence from carbonised plant remains. However, the 1971–72 work shows that the features included occasional dumps of mussel shell, some of the pits recorded were again typical storage pits with constricted necks (fiche Fig. 107, *M327, M330*). No loomweights were recovered although seven spindle whorls were found in features of this phase or the succeeding phase I.3. Some fine bone objects, possibly associated with weaving, were also recovered (above p.127). The pottery from the features of this phase is typical of the LBA and indicates a range of domestic functions (p.85 above). Numerous fragments of perforated clay slabs were recovered. The function of these objects is uncertain, they may be related to cooking or perhaps pottery manufacture (Adkins and Needham 1985). The single socketed axe from the site was recovered from pit *M351*, which also yielded a near complete bowl. The axe is untrimmed, in an as-cast state, and these artefacts are probably a deliberate deposit. This, together with the bottom half of a fine ware bowl placed in pit *1008*, represents the continuation of the practice of deliberate deposition of selected artefacts within the settlement, noted in phase I.1. A fragment of copper ingot (p.68) and a few bronze droplets were also recovered and may indicate on-site metalworking. Recently a loop from a socketed axe and small piece of scrap bronze have been recovered by metal detector north of the church (K. Crowe pers. comm.).

LBA settlement evidence is widespread throughout the area (Fig. 95). To the north of North Shoebury, settlement is known from Tithe Barn, Great Wakering (Helliwell and Macleod 1959), two other sites in Great Wakering and also at Barling (Crowe forthcoming and pers. comm.). LBA pottery and perforated clay slabs have been recovered to the south and west in Shoebury, Southchurch and Southend, during late 19th and early 20th century brickearth and gravel extraction. In addition the Southend area has produced the largest concentration of LBA metalwork deposits in Essex (Couchman 1980, Crowe forthcoming).

The evidence indicates intensive LBA occupation. This accords with evidence for similarly dense occupation along the gravels and brickearth elsewhere in Essex; further up the Thames at Mucking (Jones and Bond 1980), Upminster and Rainham (Greenwood 1982, 1986) in the Stort Valley (Robertson 1976), the Chelmer Valley/ Blackwater Estuary (Buckley *et al.* 1986; Buckley and Hedges 1987; Brown 1988a; Brown and Adkins 1988) and north east Essex (Sealey 1987). Settlement is also known from London Clay areas (Couchman 1980, Brown 1988c) and the fringes of the boulder clay plateau (Brown 1988b). Besides these numerous settlement sites and finds of metalwork, environmental evidence also indicates agricultural intensification, including the adoption of new crops (Murphy 1988). Increased alluviation around the

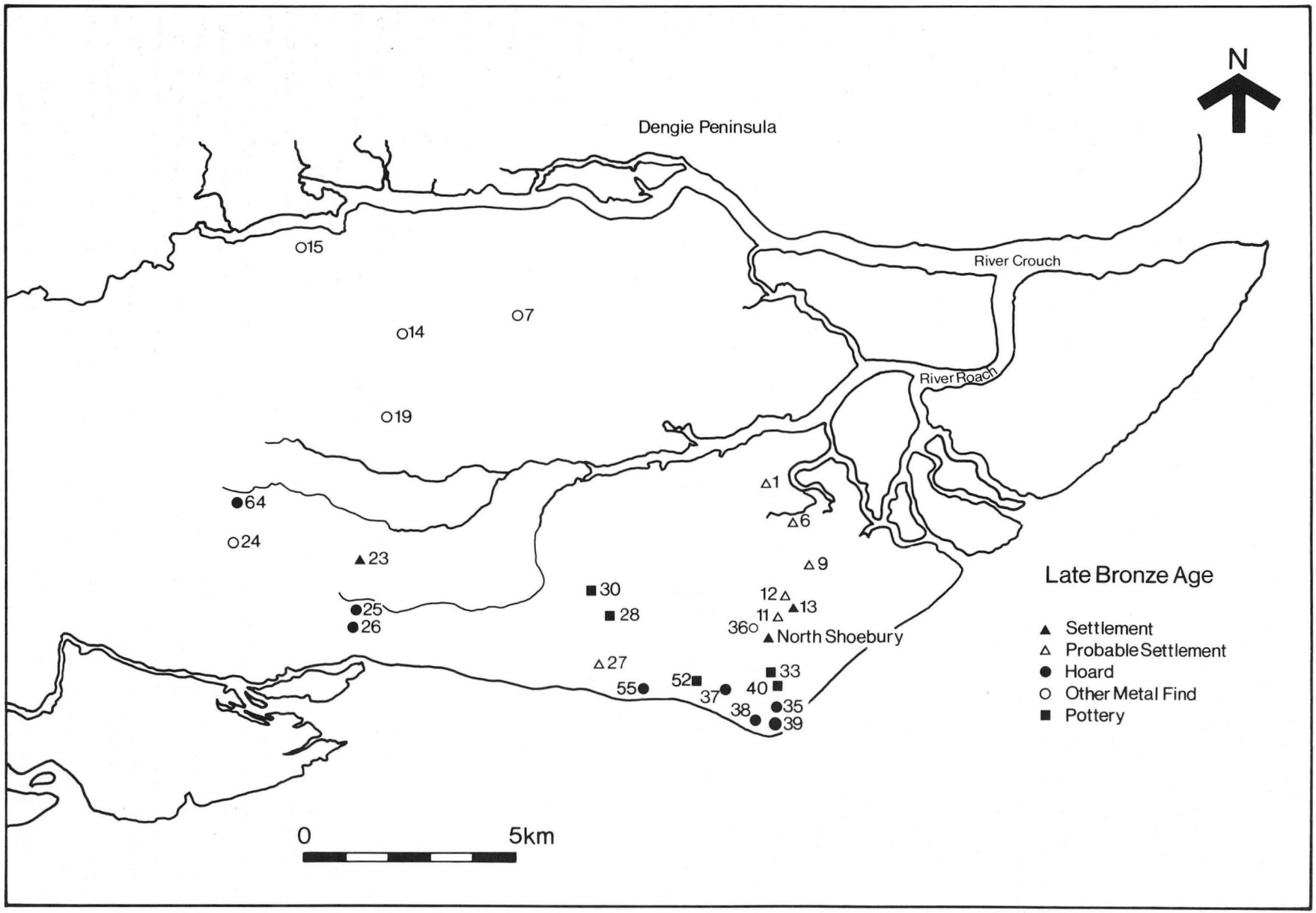

Figure 95 Distribution of Late Bronze Age sites and finds in south east Essex. Numbers refer to the entries in the Bronze–Early Iron Age section of the gazetteer (pp 176–178).

Mar Dyke, coupled with increased frequency of cereal pollen after 1000bc, reveals greater agricultural activity at this time (Wilkinson 1988).

Sites such as the impressive circular enclosures at Mucking (Jones and Bond 1980; Bond 1988) and Springfield Lyons (Buckley and Hedges 1987), are unknown in the Southend peninsula. It is possible that such a site may await discovery or, perhaps more likely given the scale of development in the area, may have been destroyed without record. However circular enclosures are also absent from around the Blackwater Estuary, an area with widespread LBA occupation (Brown 1988a; Brown and Adkins 1988) and extensive cropmark evidence (Priddy and Buckley 1987). Therefore it may be that areas around the outer estuaries were organised in such a way that they did not require such sites; the enclosures being constructed further west, at Springfield in the Chelmer Valley/Blackwater Estuary river system and at Mucking on the Thames.

It is possible other forms of enclosed site existed in the Southend area. At Eastwood a corner of a ditch was recorded by Southend Museum (Eddy 1981) and interpreted as part of a rectangular enclosure. A very small part of the site was examined under difficult conditions, more than one period of occupation is implied by the recovery of sherds of bucket urn and fine carinated bowls. A cropmark of a double ditched rectangular enclosure west of Bournes Green, appears similar to the enclosure excavated at Lofts Farm (Brown 1988a), and may belong to the LBA. However an Iron Age date is equally likely. The site occupies a high knoll commanding wide views north towards the Roach Estuary.

Phase I.3. Early Iron Age (*c.*600–300 BC)

Few features of this phase occurred within the areas excavated during 1981. A cluster of features in Grid Square LW may represent a four post structure (Figs 23 and 24 *1006, 1009, 10026, 1030*), and two post rack (*1072, 1075*), with other features possibly associated. In Grid Square LV a shallow pit (*1412* Figs 22 and 24) produced a quantity of carbonised peas, part of a curving gully (*1435*, Figs 22 and 24) of uncertain purpose was also recorded. A north-south ditch, *1422* (Figs 22 and 24) although very slight may have been a boundary, as no EIA features were recognised to the west of it (above p.22).

As with the LBA, because most of the features of this phase were excavated during the 1971–72 rescue work, few bone and carbonised plant remains were recovered. There is little indication of dumps of shell in the recorded sections of features of this phase. However, the high percentage of shell tempered pottery (above p.83) may indicate that shell-fish were still collected, and the shells were used as temper rather than being discarded. The presence of spindle whorls and a bone weaving comb indicates the continuation of cloth production.

Given the large quantity of Bronze Age metalwork from south-east Essex the local settlements must have been affected by the cessation of exchange networks involving the acquisition and distribution of bronzes. Perhaps the appearance of very large storage pits, (above p.22) and presence of at least one four post structure, are a reflection of the greater self-sufficiency of Early Iron Age sites noted by Bradley (1984, 138). The presence of a number of ?kilns may indicate the development of craft production, although the associated overfired sherds are derived from coarse shell-tempered wares, rather than from fine wares as might be expected. The carbonised peas from pit *1412* may indicate some diversification of crops, although it should be noted that all the principal crops of the later 1st millennium BC are known from LBA sites in Essex (Murphy 1988).

In common with evidence from elsewhere (Bradley 1984), burial now occurred within the settlement (above p.22); a clear contrast with the peripheral location of burial in the MBA (above). One of the EIA burials was placed within the butt end of a small ditch (above p.152), which appears to presage the long association of burial with settlement boundary at North Shoebury from the Late Iron Age to Early Saxon period (below p.158).

There are far fewer known EIA sites in the Southend peninsula than LBA ones. This might be the result of the lack in the EIA of readily identifable artefacts, particularly bronzes, but also the presence of Deverel-Rimbury Urns for the MBA and perforated clay slabs for the LBA. Certainly occupation at North Shoebury seems to have expanded during this period (compare Figs 19 and 22). Just to the north at Great Wakering a settlement very similar to that at North Shoebury has been recorded. This site also included evidence of pottery manufacture and cloth production (Crowe 1986 and pers. comm.). To the west at Chapel Lane, Hadleigh a shallow ditch which seemed to be the corner of a rectangular enclosure was recorded during building work (Brown 1987a). The ditch fill produced a quantity of EIA pottery and a triangular loomweight. The enclosure appears to have been quite isolated (no other features were recorded), and was sited on a high bluff commanding wide views of the Thames Estuary.

Two earthworks might belong to this period or perhaps later in the Iron Age (Morris and Buckley 1978). At Prittlewell Camp, only a length of degraded bank and outer ditch can now still be seen, but Burrows (1909) records that it covered (?enclosed) 8 acres. This site is a kilometre north-east of Prittlewell and known usually as Prittlewell Camp, but it has also been referred to as Grove Field Camp and Fossett's Farm Camp. Although not strictly a 'hillfort' in that it lies on a wide, flat terrace, it is at 23m OD on the Southminster or No. 3 Terrace, and this is one of the highest points east of the Prittle Brook. It lies on the northern lip of this terrace, where it begins to slope down to the Roach Valley, commanding a good view to the north, east and west. As a defensive work, it is strategically placed in relation to the later Period I occupation that was concentrated between the Roach and the Thames and may date from this period. However recording of a pipeline, together with trial trenching of the earthworks, and part of the interior in 1929 (Mepham 1930) revealed no trace of ditch or rampart on the north side and no dating evidence. A detached mound produced quantities of medieval (13th-century) pottery. As the site is known to have been woodland in the early 18th century (Mepham 1930), and the field, of which the earthworks form the south and west sides, is known as Grove Field, it is possible that the 'ramparts' are no more than woodland banks.

The 'Danish Camp' at Shoeburyness (Spurrell 1890a, 1890b; Laver 1896a) may also be considered, for the historical references could be misleading and, instead of being constructed in the 9th century, it might be a prehistoric structure merely modified at that time. As with Prittlewell Camp, there is no statisfactory dating, but a

scatter of finds of different periods from Iron Age onwards may indicate a longer history than is generally assumed.

Drury (1980, 48) does not include Prittlewell Camp or Shoebury Camp in his map of Iron Age sites in Essex but marks the site of Rayleigh Castle as a probable hillfort. Excavations at Rayleigh Castle in 1959–1961 and 1969–1970, more recently published (Helliwell and Macleod 1981), have produced nothing to support this, although the outer ditches to the bailey were not sectioned.

VII. Period II 300 BC–AD 43

Phase II. 1 Middle Iron Age (300–50 BC)

Just as in Period I, the western part of the site produced little evidence of occupation (Fig. 12), in Period II the eastern part of the site was devoid of subsoil features (Fig. 25), perhaps indicating use as woodland and/or pasture.

This phase shows a radical shift in settlement focus. Evidence of occupation in the Middle and Late Iron Age is concentrated in Grid Square DE 300m west of the main Period I occupation (Figs 25 and 26). This might imply some discontinuity, however the presence of a few 'glauconite' tempered sherds, characteristic of the later Iron Age, in the area of the phase I:3 settlement together with the radiocarbon date from pit *1412* (above p.66), may indicate that the phase I:3 settlement actually continued into the early part of phase II.1.

Settlement evidence is relatively slight, comprising part of a single roundhouse gully and fragmentary ditched enclosures, together with occasional pits. These features yielded a rather sparse ceramic assemblage together with loomweight fragments and a bone awl (above p.127). A small pit containing an inverted human skull (above p.34) lay close to the roundhouse gully and might represent a foundation deposit.

Phase II.2 Late Iron Age (50 BC–AD 43)

Oyster shells become a common component of rubbish deposits in the phase II.2 ditches, contrasting with the predominance of mussels in the earlier phases. Part of at least five triangular loomweights were recovered from the late Iron Age features in Grid DE. Given the relatively small area, this seems quite a high frequency. It may be that the part of the settlement examined was specifically associated with cloth production (Fasham 1985, 129). The complete loomweight (Fig. 84.8) found lying flat in pit *1485* may be a deliberate deposit. The remarkable concentration of loomweight fragments in the entrance to the Iron Age house at Ardleigh (Erith and Holbert 1970, 24), may be an example of a similar practice. The plan (Fig. 26) of the later Iron Age settlement excavated at North Shoebury looks like the plan of the larger scale excavations of the site at Dragonby (May 1976, fig. 4), with its small rectilinear ditched enclosures and compounds, pit scatters and occasional house circles.

There is considerable evidence for boundary maintenance, individual ditches show evidence of recutting (*e.g. 1468, 1469,* Figs 24, 29, and fiche 00). The southern boundary ditch *(1469* Fig. 26) of the Period II.2 settlement appears to perpetuate a Period II.1 boundary (above p.34). Period II.2 ditch *1421* (Figs 24, 25), follows the line of Period I.3 ditch *1422* thus apparently continuing the line of an earlier boundary (above p.34). The placing of cremation burials at the western boundary of the period II.2 settlement (above p.34 and Fig. 25), appears to begin a tradition of burial deposits in this part of the site which lasted for several hundred years (below p.161).

Little evidence has been recovered for settlement during phase II.1 in the Rochford Hundred. Part of a bowl with free flowing curvilinear decoration has been identified amongst material from Prittlewell (Brown 1983). Similar decoration occurs on MIA bowls from further west at Ardale (Hamilton 1988, fig. 72.22) and Mucking (S. Trow pers. comm.). It is also represented amongst pottery from Asheldam Camp to the north (Brown 1991). This coastal distribution of decorated bowls forms a marked contrast with the pottery from the inland site at Little Waltham (Drury 1978), where closely similar bowls are without decoration. The decorated bowls also occur in North Kent (Thompson 1986, fig. 7.18). The faint impressed lines on an everted rim from North Shoebury can also be matched on pottery from sites on both sides of the Thames Estuary (Hamilton 1988, fig. 73.47; Thompson 1986, fig. 7.18). The somewhat later Mucking-Crayford style pottery is known from a number of sites in south-east Essex, and further emphasises the ceramic unity of both sides of the Thames Estuary (Cunliffe 1982, fig. 17).

Evidence for settlement in south-east Essex is more widespread in period II.2 (Fig. 96). The evidence mainly consists of a series of cremation burials recorded during the late 19th–early 20th century (Thompson 1982). However non-funerary evidence is also known from Shoebury (Thompson 1982), Great Wakering (Thompson 1982), Barling (Crowe 1983) and Southend (Thompson 1982). Rescue recording at Temple Farm (Brown and Arscot 1986) north of Southend, revealed Late Iron Age settlement. The site is comparable to that at North Shoebury, with ditches containing dumps of domestic debris; the site also produced a hoard of 33 gold staters. As at North Shoebury, there appears to have been clear division of land use, with features cut into the subsoil confined to specific areas. Excavation immediately to the west revealed no trace of Late Iron Age occupation (Brown 1988d).

The pottery of phase II.2 again shows links with north Kent (Thompson 1982, 10). The ceramic unity of areas north and south of the Thames throughout the later Iron Age is also reflected in a recent re-examination of the coin evidence, in which the coinage of Kent and south Essex is viewed as a regional group (Haselgrove 1987). No rich burials are known from south-east Essex, and imported luxury goods are rare in the whole of the south of the county. The distribution of Arretine ware avoids the region (Rodwell 1976a, fig. 44), and finds of amphorae are sparse compared with areas to the north (Rodwell 1976a, figs 18 and 43). This pattern is similar to the situation in Kent (Cunliffe 1982, 46–47) and quite different from north Essex. It seems likely that south Essex formed a territory separate from the north of the county.

South-east Essex clearly belonged to this southern territory and it seems likely that the Dengie peninsula formed part of it as well. Thompson (1982, 11) suggests that the Dengie may belong to her south Essex zone 1. The occurrence of a Middle Iron Age curvilinear decorated bowl at Asheldam Camp has already been noted above. Survey work around the Essex coast (Wilkinson and Murphy 1986) has demonstrated the existence of a creek system running from the mouth of the Crouch Estuary to the foot of Asheldam Camp. This creek would have

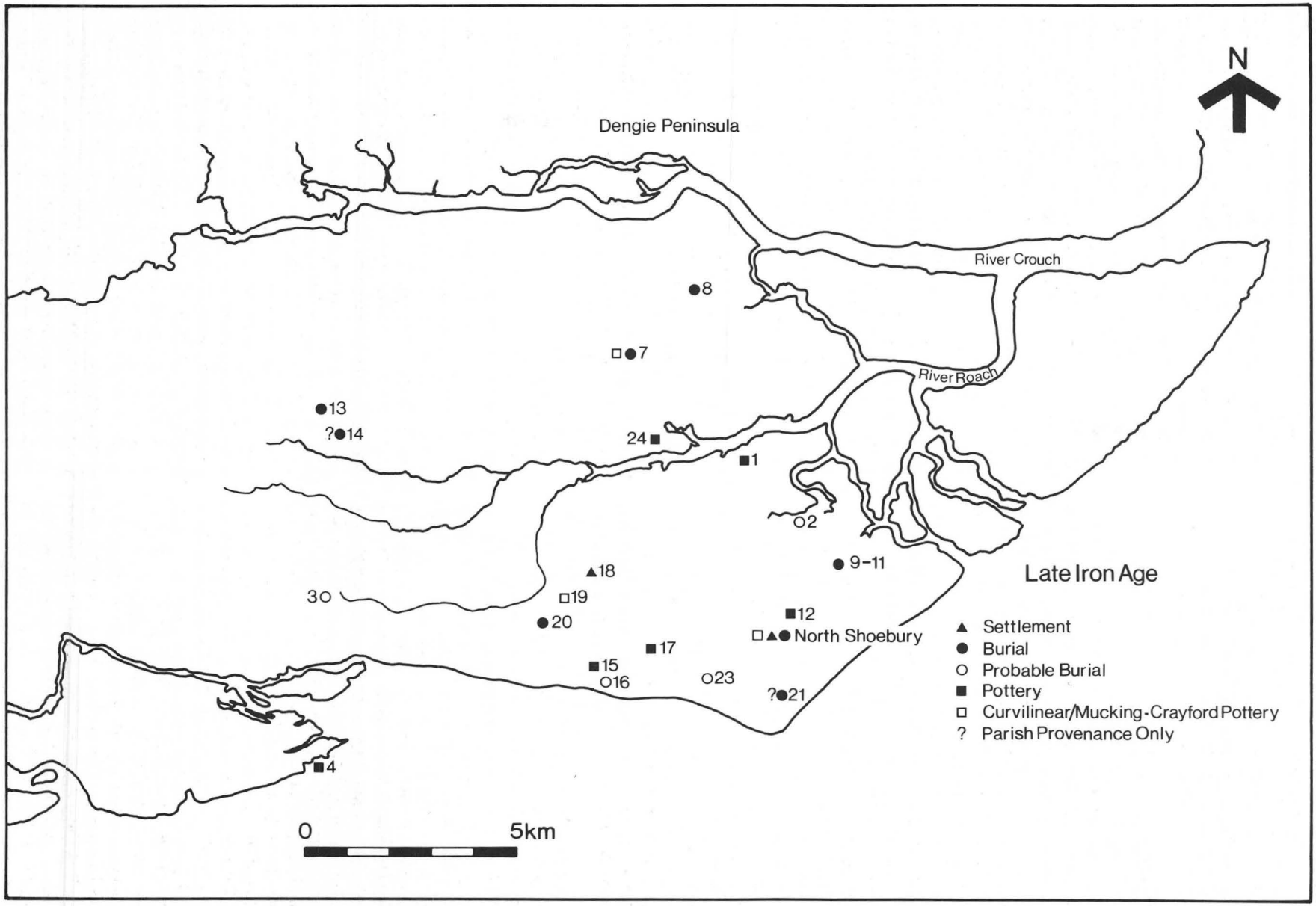

Figure 96 Distribution of Late Iron Age sites and finds in south east Essex. Numbers refer to entries in the Middle and Late Iron Age section of the gazetteer (pp 178–179).

permitted access from the heart of the Dengie via the Roach and the creeks west of Foulness into the centre of the Southend peninsula. If the Dengie and Southend peninsulas are considered part of a south Essex territory, this would mean that the important Iron Age sites in the Maldon/Heybridge area (Wickenden 1987, Bedwin 1992) were not only strategically placed at the head of the Blackwater Estuary, but also close to the border of two territories. The division might be seen to originate in the early Iron Age. Darmsden-Linton style pottery is known from a number of sites in north-east Essex (above p.87 and Brown 1988a), but rarely occurs south of the Blackwater Estuary. How far the south Essex territory may have extended westward is problematic, perhaps the western boundary was formed by one of the south flowing tributaries of the Thames; the Mar Dyke, Roding or Lea.

The social and economic trajectory of south Essex appears to have been quite different from that to the north. It is probably not accidental that no proto-urban centre is known in this southern area (Cunliffe 1981, fig. 15). The differing pattern of development between north and south Essex, can be traced through into the Roman period.

VIII. Period III AD 43–410

The arrangement of the north-south ditches of this phase (Fig. 30) appears to continue and extend the pattern established in the Late Iron Age (Fig 25). The strip-like pattern is similar to a Late Iron Age/Roman ditched field system at Slough House Farm, north of the Blackwater Estuary (S. Wallis pers. comm). There is some evidence of the setting out of narrow strips or strip fields during the Roman Period (Applebaum 1972) and the parallel ditches in Grid Squares DE and LV might have been part of such a system. A system of strips marked by narrow ditches set within a large rectilinear enclosure has recently been recorded at Coggeshall (Clarke 1988).

The eastern boundary of the settled area, marked in the Late Iron Age by a small cremation cemetery (above p.158), seems to have been broadly maintained, though in varying form, throughout the Roman and into the Early Saxon period (below). The continued association of features at this boundary with deposition of human remains (above p.161) is striking. Indeed, the Phase III.2 rectangular enclosure (above p.40) may well have been a focus of ritual activity. There is a remarkable variation in the form of the enclosure ditches (above p.40 and Fig. 29). Besides fragments of human skull the ditches include parts of animal skulls apparently deliberately placed (above p.40) reminiscent of Iron Age practice (Wait 1985). Similar deposits of human skull fragments and animal skulls have been recovered from ditches elsewhere in south-east Essex (below p.161). Given the presence of deliberate deposits within the enclosure ditch, it appears possible that the large dumps of shell, pottery and bone (above p.40), might well represent something more than simple rubbish disposal, rather like the 'rubbish' deposits in Iron Age storage pits (Hill 1989).

Pottery production close to North Shoebury may be indicated by the presence of apparent wasters, and the 19th-century records of kilns from south of the site, in Shoebury (above p.96). The larger number of sheep bones recorded from Roman features at the site (above p.141), provide better evidence of slaughter patterns than is available for the earlier periods. This indicates slaughter of relatively old animals, presumably reflecting flocks kept mainly for wool and/or milk. Three spindle whorls, including a finely made shale example, indicate spinning. The absence of loomweights is common on Roman sites, and may reflect the demise of the upright loom during this period. There is some evidence that cattle were used as traction animals, as in period II (above p.138).

The major cereal crops remain the same as in the earlier periods at North Shoebury (Table 22). Activities connected with grain processing are represented by the flue of a 'corn dryer', and fragments of lava and Millstone Grit querns, the latter relatively numerous (above p.73).

Murphy (above p.148) notes that seeds of damp grassland are very rare (as they are in all periods at North Shoebury). This probably indicates that crops were grown on the fertile brickearth-covered terrace on which the site was developed. The brickearth is naturally free draining, and the numerous ditches, although (as noted above for the Early Iron Age) probably not intended primarily as drainage features, would have assisted drainage. The charred fruit of the sea club rush from ditch *1642* (Murphy above p.148), derived from the edges of tidal creeks, is a reflection of the exploitation of coastal resources. It is likely that the nearby marshes were exploited for pasture by the inhabitants of North Shoebury, as they probably were during the earlier phases of occupation. Oyster shell forms a major component of refuse in the Roman ditches, and there is evidence for the exploitation of both natural and managed beds (above p.145). Whelks appear for the first time, and this also implies an intensification of the exploitation of marine resources. Whelks cannot be collected from the foreshore like mussels and oysters, but require a different technique involving baited pots (above p.142). Numerous red hills associated with salt production are known around the Roach and Crouch estuaries and on Foulness, Potten, Havengore, Rushley and Canvey islands. Survey work in the Thames Estuary has revealed what may well be the waste from a fish processing site on Canvey Island (Wilkinson and Murphy 1987 and 1995). The same site has produced a bone assemblage dominated by sheep/goat bones. This may support the notion that the Essex marshes were used as sheep pasture in the Roman period, as they are known to have been in the medieval period. Similar use of the Essex marsh pastures has been postulated for the prehistoric period (Brown 1988a, Murphy 1991).

The eel bones from North Shoebury may be another indicator of the exploitation of coastal resources (assuming they are not of natural occurrence). However, eels could have been caught on the site in the deeper ditches. Trapping of eels in field ditches was a common practice in south-east Essex until at least the middle of the present century, and is still carried on elsewhere in the county.

In summary, there is evidence from North Shoebury and elsewhere in south-east Essex, of an economy exploiting the free draining brickearth for cereal production, and the coastal marshes for grazing sheep as suggested by Applebaum (1972), and salt production. The estuaries themselves were used for collection and cultivation of shell-fish and fishing. It seems clear that these activities provided not only the subsistence needs of the local communities, but also surplus for export to other areas. This included most obviously salt; but probably also wool, cheese, cereals, fish and shell-fish. The economy

appears much the same as that operating in south-east Essex in the medieval period. Indeed there is definite evidence of fish processing in the medieval period (Wilkinson and Murphy 1987 and 1995), on the same Canvey site where fish processing may have been carried on in the Roman period. In both cases the presence of such sites in the Thames Estuary, probably reflects the large market for fish, and fish products, upstream at London. Indeed, the evidence of oyster cultivation accords well with Milne's (1985, 92) argument that oysters were supplied to London from the coasts of Essex and Kent, although there is no evidence to support the view that the oyster storage pits currently in use at Paglesham were originally Iron Age salt pans (Milne 1985, 92). Remains of such pits are a common feature of the Essex salt marshes and they appear to be of post-medieval date, when they were mostly used for oyster storage, but also in some cases live turbot, plaice and other flat fish (Bride 1930, 17).

The above account can only be a broad generalisation, clearly in the several hundred years of the Roman period the economy must have changed and developed. For instance the creation of Red Hills appears to have stopped by the 3rd century AD if not earlier (Barford 1988).

Numerous finds of Roman material have been recorded in south-east Essex (Fig. 97). The finds are concentrated in the area south of Rochford, although this is likely to be a fortuitous consequence resulting from brickearth/gravel extraction, and building work associated with the development of Southend. Finds are particularly numerous on Canvey and Foulness, probably reflecting the importance of pasture and salt production in these areas. Perhaps the best evidence comes from a series of sites recorded as a result of rescue work and small scale research excavation by Southend Museum and South East Essex Archaeological Society (Pollitt 1953, Crowe 1978, 1979–80, 1981b, 1983).

These sites lie along both banks of the Prittle Brook stretching for 2.5km from Prittlewell, north to where the brook enters the Roach Estuary (Fig. 98). At Prittlewell a dump of Roman tile was recorded near Roman burials, which included one in a lead coffin, and a cremation accompanied by four pots, a bronze vase, bronze strigil, and iron lamp. At Temple Farm, 1km north of Prittlewell, recent rescue work (Brown and Arscot 1986) has revealed ditches and other features reminiscent of those excavated at North Shoebury. Besides dumps of bone, shell and pottery, the Temple Farm site has produced numerous coins, bone needles and counters, and a small group of bronze items. A cremation burial accompanied by a number of pots and an amphora was recovered just south of the Temple Farm site (Crowe 1983). At Marshall's Farm (Crowe 1978, 1979/80 and 1981b) 600m north of Temple Farm, a number of small trenches have revealed, ? midden deposits, a pond or irregular well with waterlogged timbers in its fill, one 'corn dryer', part of another 'dryer', ditches and pits. One of the ditches included a large dump of burnt grain and daub — presumably the result of a granary fire. Another ditch contained fragments of a human skull, which were apparently scattered along the excavated length of the ditch, and may have been accidentally incorporated in its fill. However, some of the skull fragments were actually resting on top of a cow's skull which lay on the natural gravel at the base of the ditch, so it seems likely that the cow's skull and fragments of human skull were deliberately deposited in the ditch. These finds recall those recovered from the enclosure marking the eastern edge of the North Shoebury field system (above p.160). Further north again at Tinkers Lane Rochford a series of Roman ditches were recorded in the section of a new drainage ditch, whilst Roman finds have been recorded from Purdey's Farm gravel pit and other sites in Rochford (Eddy 1984–5). These finds indicate an intensively settled and farmed landscape.

Only one definite villa site is known in south-east Essex at Dawes Heath recorded by fieldwalking and confirmed by aerial photography (Drury *et al.* 1982). On the edge of the Southend peninsula the settlement at Wickford has been described as a small town (Rodwell 1975; Drury and Rodwell 1980, fig. 22), but may be an extensive rural settlement around a villa (Wickenden pers. comm.). It would be appropriate as one of Hingley's (1989) local centres. Further west settlement at Billericay (Rudling 1990) may be of similar status, the settlement here, as at Wickford, developed from Late Iron Age beginings. As noted above at North Shoebury there is evidence of continuity of the field systems from the Late Iron Age, and it may be that Temple Farm displays similar evidence. The marked social and economic differences between north and south Essex discernible in the later Iron Age (above p.160) appear to have continued. In the Roman period south Essex was an intensively occupied landscape, but one largely devoid of villas and towns in contrast to the landscape of central and north Essex. The distribution map of villas and towns published by Drury and Rodwell (1980, fig. 22) clearly demonstrates the difference between the two areas.

IX. Period IV AD 410–1066

Phase IV.1 early Saxon AD 410–AD 700

The evidence for this phase at North Shoebury is confined to a small mixed inhumation cremation cemetery excavated in 1971/72, and a scatter of Saxon sherds in the upper fills of some of the late Roman ditches (Fig. 36). The cemetery appears to represent a family group and may well date from the 5th century. It may be that it is the burial place of a group of *laeti* settled at North Shoebury at the end of the Roman period. The position of the cemetery outside the Late Roman rectilinear enclosure (above p.46) continues the association of burial with the eastern boundary of the field system, an association which had begun in the Late Iron Age. There is little evidence of occupation at North Shoebury between the 5th and 11th centuries AD.

Elsewhere in south-east Essex there is a scatter of placenames which may reflect early settlement (Reaney 1935, Helliwell 1971). Saxon loomweights, metalwork and bone combs have been recovered from the brickfields at Great Wakering (Pollitt 1953, Tyler 1988). Excavation at Barling (Couchman 1977a) has revealed a sunken floored building. A complete Great Square Headed brooch is recorded from Paglesham (Fig. 99).

As in the Roman period perhaps the best evidence for early Saxon settlement comes from the banks of the Prittle Brook (Fig. 100). This close proximity of Saxon and Roman sites, is suggestive of continuity, with perhaps some slight settlement shift, and may be compared with the results of fieldwork in the east midlands (Hall 1988, figs 5.1 and 2). At Prittlewell part of a large cemetery probably of the 7th century was recorded during road and

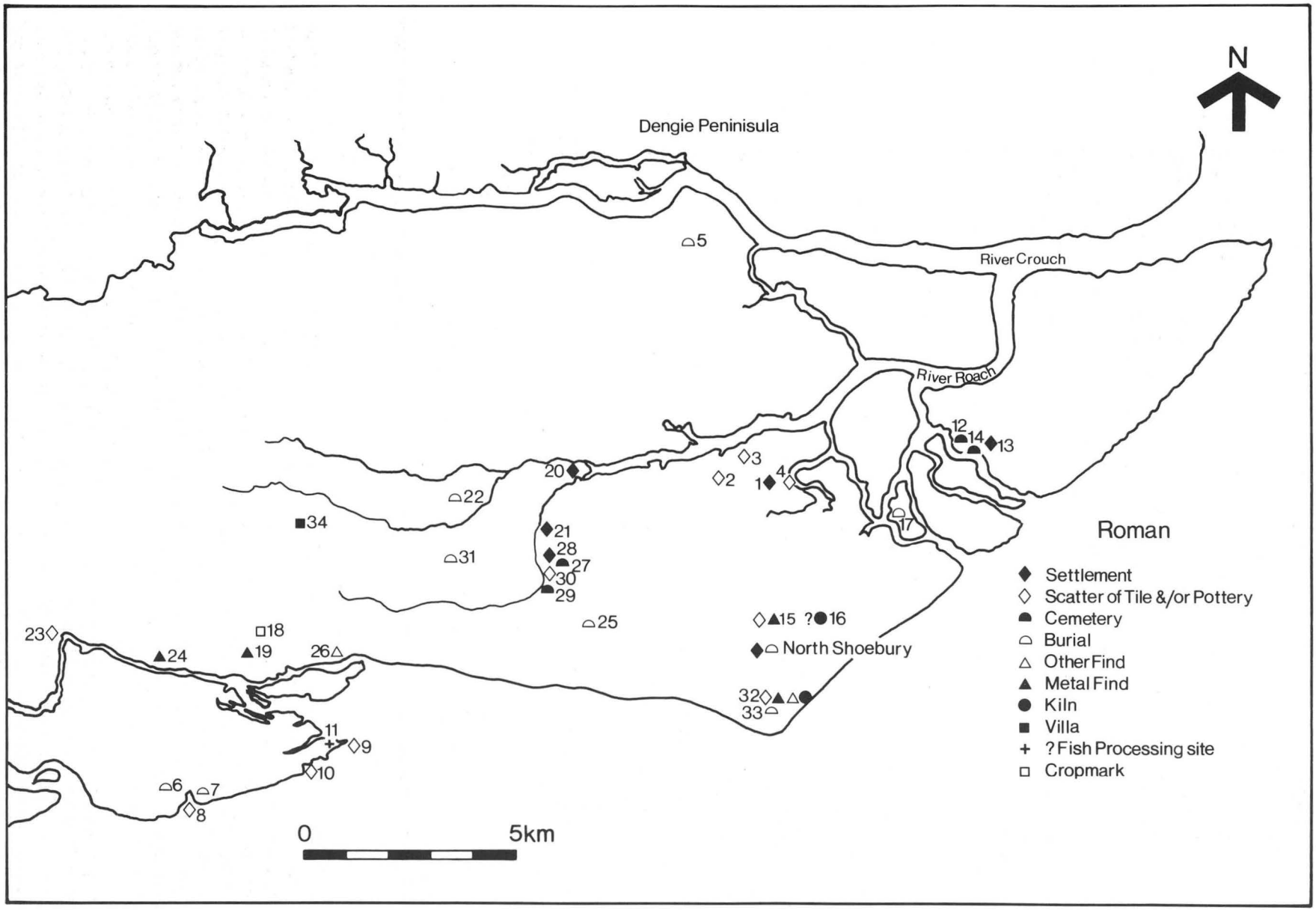

Figure 97 Distribution of Roman sites and finds in south east Essex. Numbers refer to entries in the Roman section of the gazetteer (pp 179–180). For distribution of Red Hills see Fawn *et al* 1990.

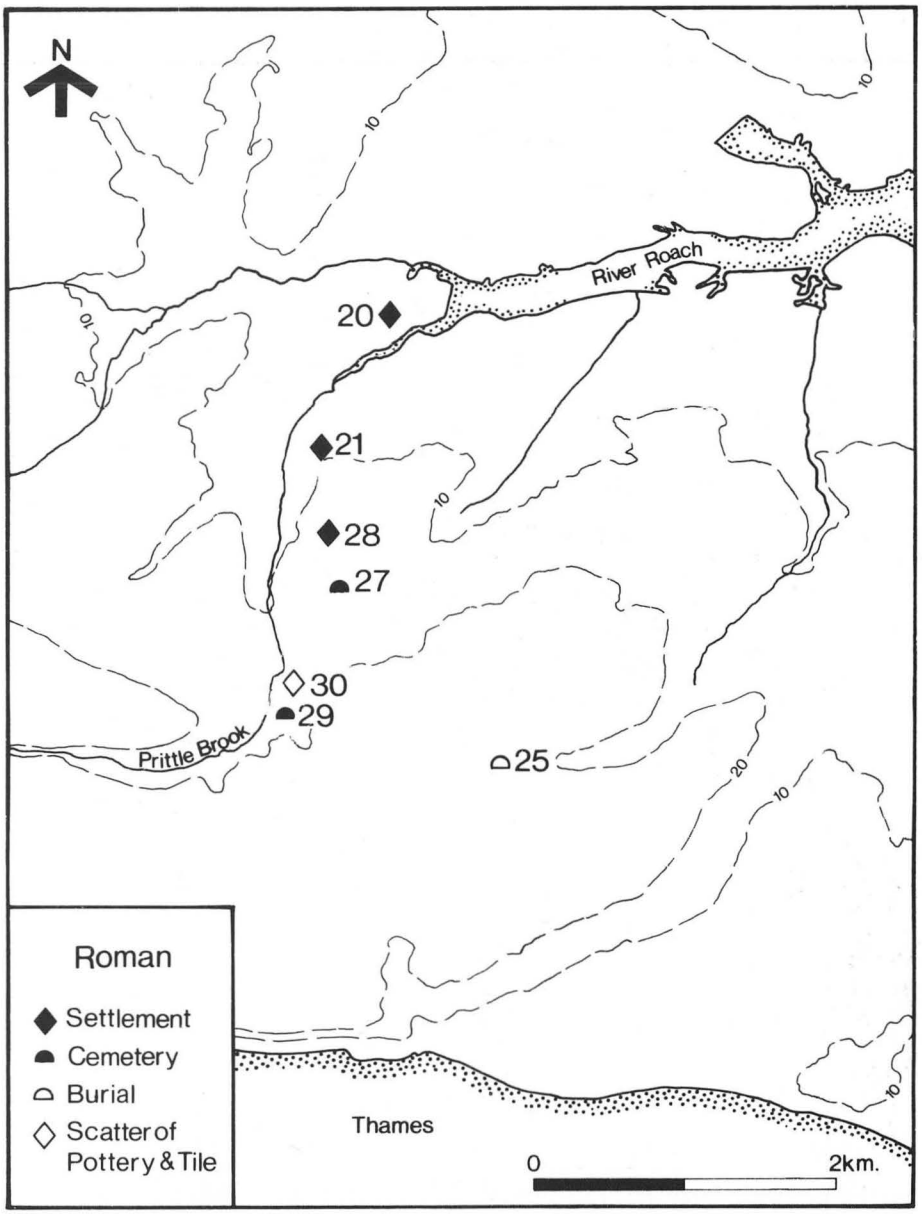

Figure 98 Distribution of Roman sites and finds along the Prittle Brook. Numbers refer to entries in the Roman section of the gazetteer (pp 179–180).

railway construction in 1923 and 1930 (Pollitt 1923, 1935; Tyler 1988). Loomweights were recorded during construction work in 1909 east of the cemetery site, and another was recovered from North Street to the south. Prittlewell church has a Saxon arch (possibly 7th century) in the chancel. To the north excavations at Temple Farm have revealed a sunken floored structure. Further north again at Hampton Barns, Stambridge, on the Roach Estuary 5th-century pottery has been recorded (Helliwell 1971).

A fragment of loomweight was recovered from the Temple Farm building, and taken with the other finds of loomweights noted above, this indicates the continued importance of cloth production. A cluster of Leah placenames in the west of the peninsula indicates that this area was well wooded as it is today (Reaney 1935, Helliwell 1971, Rackham 1986). A crucible fragment from Temple Farm appears to have been used for melting glass.

The cemetery at Prittlewell produced some rich grave goods, and a large number of weapons. However, it is hard to interpret in detail as only part of the site was recorded. Given the conditions of discovery, graves with few or no grave goods could easily have gone unrecorded. The grave goods show links with Kent (Tyler 1988). Some of the swords show pattern welding similar to examples known from Kent, however the clearest parallels are with the rich grave goods from female graves, some of which show signs of wear (Tyler 1988). This appears to be an example of archaeological evidence indicating out marriage of high ranking females, as predicted by Rowlands (1980, 30). The cemetery contains imported Frankish pots, like those from North Shoebury (above p.48; Tyler 1988). One of the combs from Wakering may be of Frisian origin (Tyler 1987). Occasional finds of Merovingian and Byzantine coins (Helliwell 1971) may also be a reflection of external contacts.

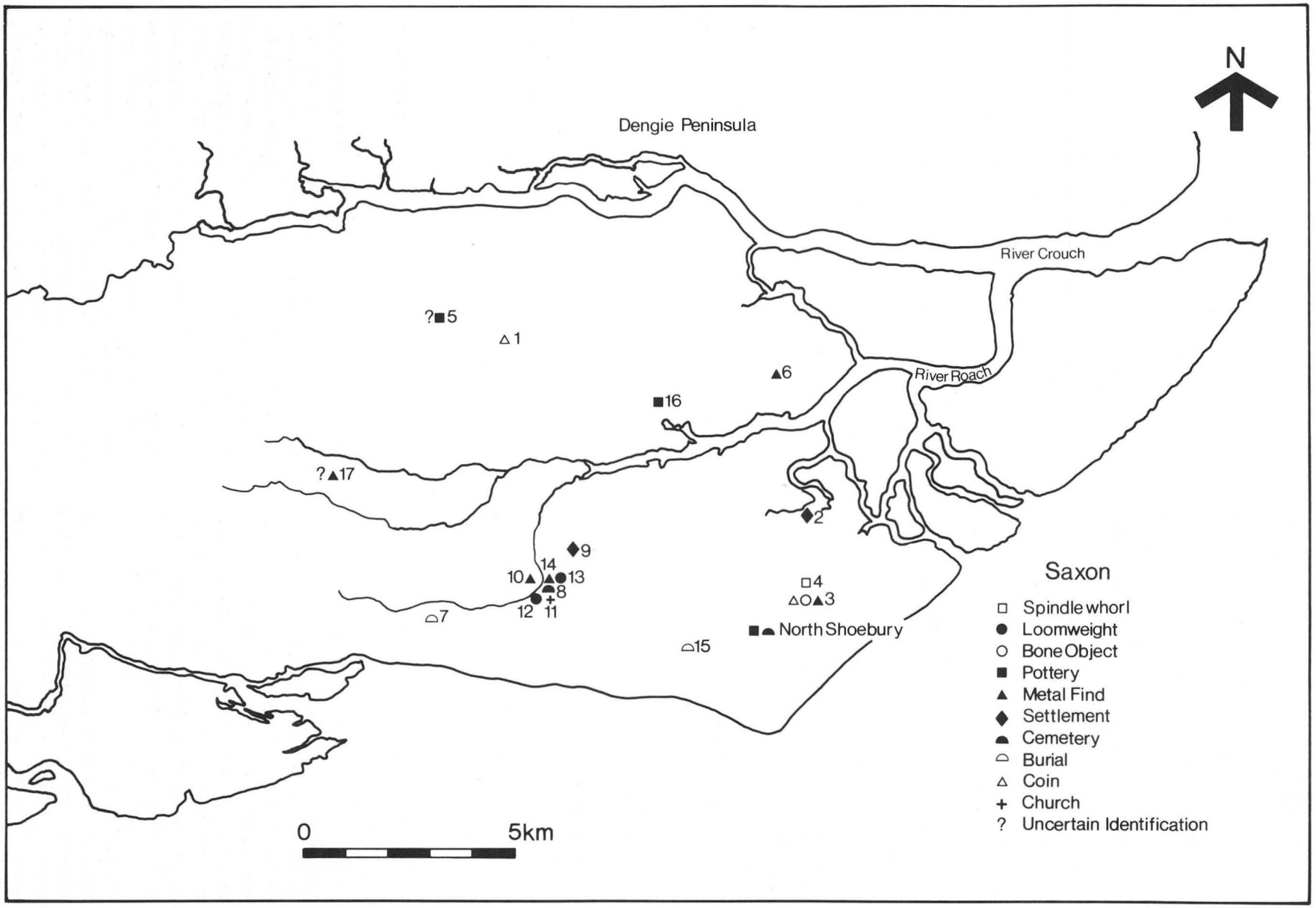

Figure 99 Distribution of Saxon sites and finds in south east Essex. Numbers refer to Saxon section of the gazetteer (pp 180–181).

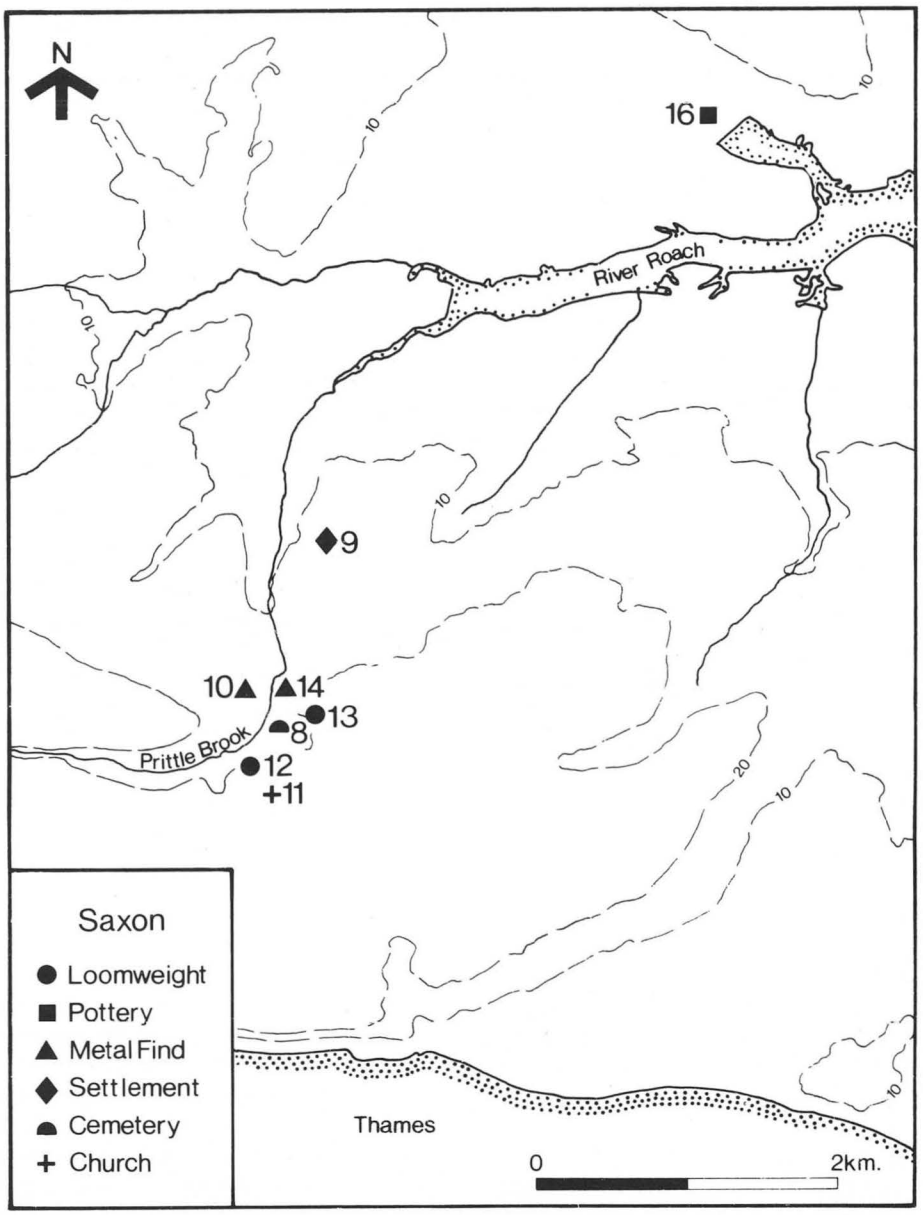

Figure 100 Distribution of Saxon sites along the Prittle Brook. Numbers refer to the Saxon section of the gazetteer (pp 180–181).

The position of the cemetery at Prittlewell close to the Roman burials may reflect continued importance of the area from the Roman into the Saxon period. The early establishment of a church at Prittlewell reflects the importance of the Saxon settlement in the area. It has been suggested that the church at Prittlewell was a minster for the area (Helliwell 1971). Given the apparent concentration of Saxon settlement and the strategic location of Prittlewell, this suggestion seems reasonable.

Phase IV.2 AD 700–1006

There is little evidence for occupation at North Shoebury during this phase, although the stray find of a spearhead from the south of the Hall may date from this period (above p.68). Some of the features assigned to the Early Medieval period may contain some sherds which predate the conquest. Middle Saxon pottery has been recovered from Shoebury (Dunning *et al.* 1959, 21). Evidence from elsewhere in south-east Essex is similarly sparse. A hoard of *sceattas* dated to about 700 AD was recovered from Thorpe Hall Brickfield. In the 9th century the Anglo-Saxon Chronicle records the Danes using fortified bases at Shoebury and Benfleet. During construction of a railway at Benfleet in the 19th century, charred timbers were thought to be remains of Viking ships, destroyed in the Battle of Benfleet in 894. It has been suggested that the silver pennies of King Alfred and Plegmiund (Archbishop of Canterbury 890–914) from a grave at Leigh-on-Sea represent a Viking burial (Richards 1991, 114). Thorpe placenames in the Southchurch area may represent Scandinavian settlement, although they are more likely to be of English origin (Reaney 1935). A coin of King Canute is said to have been recovered from grave digging in Ashingdon Churchyard, and local tradition holds that the battle of *Assandune* was fought somewhere between Ashingdon and Canewdon. Ashingdon church claims to be the minster built by Canute at the battle site, and maintains links with Denmark on that basis. However

current opinion favours Ashdon in north Essex as the site of the battle, with, perhaps, Hadstock church as Canute's minster.

X. Period V AD 1066–1500

Phase V.1 AD 1066–1300

The *Domesday Survey* indicates that the manor of North Shoebury included some woodland. A map (Plate XIII, Fig. 102) of the demesne lands of North Shoebury Manor in 1703, shows 'Gotch Grove Wood'. This wood occupied the north west corner of the parish, where it adjoined the parishes of Southchurch and Great Wakering. Two adjacent fieldnames 'Little Gotch Grove' and 'Great Gotch Grove' imply the wood had once been larger. It may be that the woodland of medieval North Shoebury lay in this area. The main wooded areas in south-east Essex were in the west (Rackham 1986) and some manors like South Shoebury had a detached woodland enclave. The sheep pasture recorded for North Shoebury at Domesday may have been on the marshland fringe of the Southend peninsula. It appears to have been usual during the medieval period in south-east Essex for land holdings to include detached marshland enclaves. Thus Southchurch Hall had two sheep pastures, one on Southchurch marshes the other at Canvey, 5 miles to the west (Fig. 101). This pattern of marshland enclaves continued into the post medieval period. The practice may be reflected in the old parish boundaries, with the pasture of Canvey, Wallasea and Foulness islands divided up between distant parishes (Round 1903; Darby 1971).

As noted above (p.54) there is some archaeological evidence for strip cultivation at North Shoebury, and at least one documentary reference indicates the existence of common fields (above p.7). The map of North Shoebury demesne lands in 1703 may preserve evidence of the former existence of open fields, some at least divided into strips. The regular rectangular fields east of 'Wakering Lane' (now Star Lane), all with the word 'Neys' in their names, may represent the sub-division of a single large field. The shape of the field named 'Crows' may indicate the enclosure of former strips, as may the elongated stepped boundaries of the land between 'Great Gotch Grove' and 'Stocks' Field. Three narrow strips of land, each held by different individuals, are marked north of 'Clam field'. A similar strip appears to have been incorporated into the north east corner of 'Long Field' (Fig. 102). The boundaries around the church and hall are aligned roughly north to south. The archaeological evidence for strip cultivation lies to the west of Long Field (Figs 41 and 102). The strips are aligned roughly north-west/ south-east, broadly parallel with the road marked on the 1703 plan (Fig. 102) as 'The Road to Great Wakering and the Sea Shore' (now Poynters Lane). This presumably indicates that the furlongs were laid out following the slope of the land (Hall 1982). Although the land around North Shoebury is fairly flat; there is a fall off from north to south in the area of the church and hall; and from north-west to south-east, west of Long Field, as can be seen from the spot heights on the 1:10,000 Ordnance Survey map.

The North Shoebury settlement focus is a church/hall complex. The estate map of 1703 (Fig. 102, Pl. XIII) and the Chapman and Andre map show unnucleated settlement in the 18th century. Archaeological work has revealed no medieval nucleated village. Whilst such a site may exist north of the church in Grid Squares DO and DD, areas not affected by brickearth extraction or development, it may well be that settlement at North Shoebury was always dispersed. Finds of 13th-century ceramics in Grid Square LE associated with possible ovens (above p.54) and at the Tithe Barn, Wakering may derive from the sites of scattered homesteads.

The ditched enclosure *0300* defined an important site, possibly the earliest manorial centre. The substantial ditch would have provided an impressive boundary to enhance the site's prestige, the suggestion of revetment and bank on the west side may indicate that the enclosure was also intended to be defensible. The absence of evidence from the interior unfortunately makes the nature of the occupation uncertain. However domestic debris from the ditch fills may be indicative of a high status site. The bone remains contain a number of sucking pigs, an extravagant form of pig consumption associated with feasting. The upper fills of *0300*, the ditches which cut its butt end (*0343, 0750*), and ditch *0448* all appear to have been backfilled in the early 13th century. This probably indicates that the enclosure was abandoned and the centre of occupation shifted elsewhere. The pottery from the backfill of these ditches is so similar as to suggest manufacture by the same potter (above p.108). The bone assemblage from these deposits represents kitchen/table refuse and includes the remains of the sucking pigs noted above (p.141). The ceramic refuse may be the remains of pots made as a single batch used, and discarded, along with food remains from festivities, perhaps those associated with the reorganisation of the site and abandonment of the enclosure.

Economic evidence recovered during the excavations indicates that the same range of marine molluscs was exploited as during the Roman period, with oysters gathered from managed beds (p.145). Marine fish, herring and cod, were brought to the site. Carbonised plant remains included, wheat, barley, oats, rye and peas. The assemblage was dominated by wheat grains, possibly the result of the dispersal of carbonised remains of a processed crop following a granary fire (above p.149). Pigs, sheep, cattle, chickens and possibly pheasants were all represented in the bone assemblage (above pp 132–135).

The discovery of a large quantity of carbonised wheat from North Shoebury is an indication of the importance of cereal production in the area. It has been suggested that the main function of the Essex estates of St Paul's Cathedral, which included lands in south-east Essex, was grain production (Hallam 1981, 52). The dominance of wheat at North Shoebury may be a fortuitous consequence of the supposed granary fire. That large quantities of bread wheat were stored in or near the area enclosed by ditch *0300* may reflect the status of the enclosure. As a whole Early Medieval Essex may not have grown a large amount of wheat (Hallam 1981, 53). A study of the records of Christ Church Canterbury's manor of Milton Hall (which occupied what is now the Westcliff area of Southend, Fig. 101) indicates that barley and oats were the main cereals grown, followed by rye, with wheat in fourth place (Nichols 1930). Ward (1987) notes the importance of oats as a crop in south Essex. Given the relatively restricted areas sampled, the carbonised plant remains recovered from North Shoebury (above p.146) are unlikely to represent the full range of cultivated plants. A *compotus*

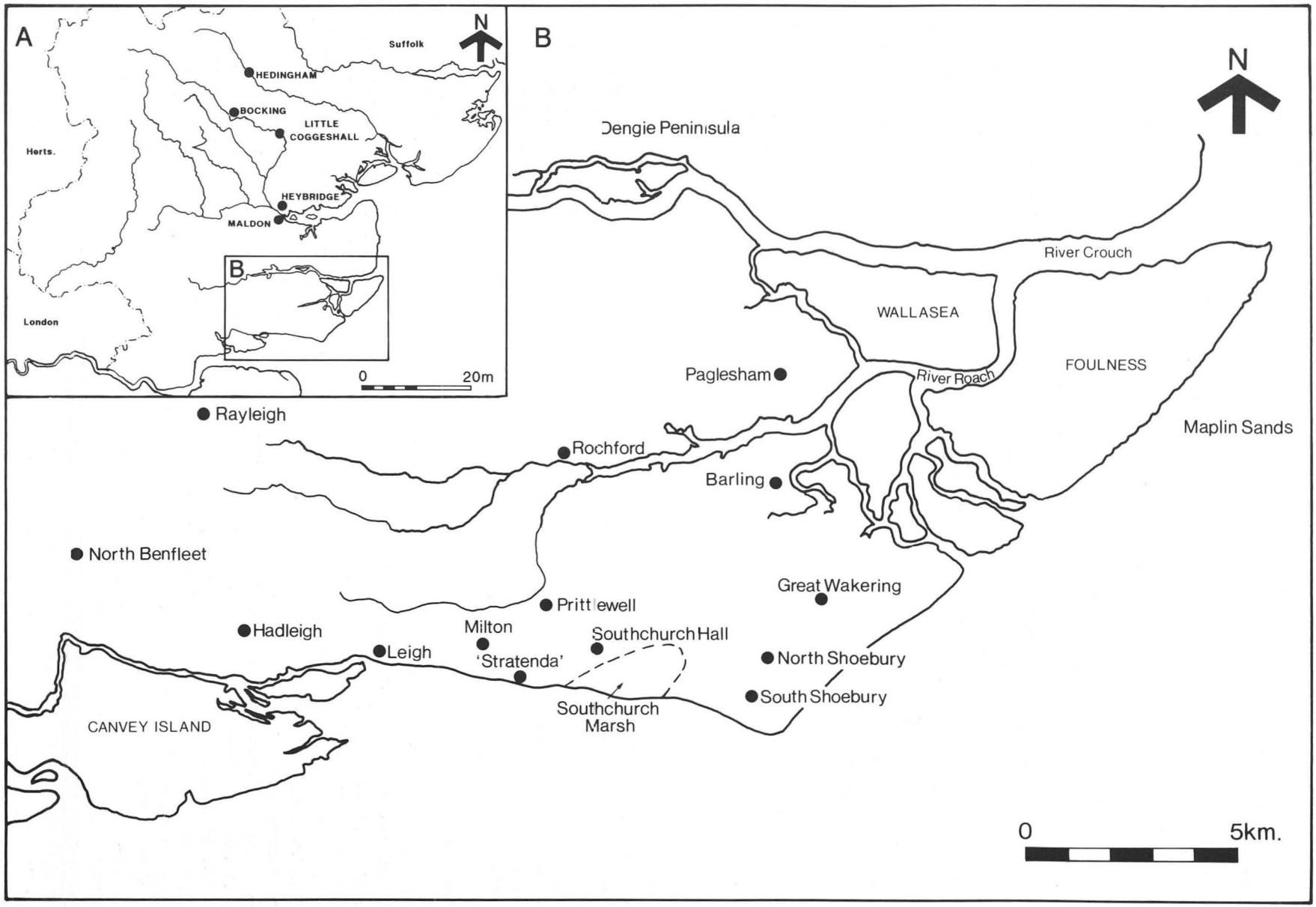

Figure 101 Medieval south east Essex: places mentioned in the text.

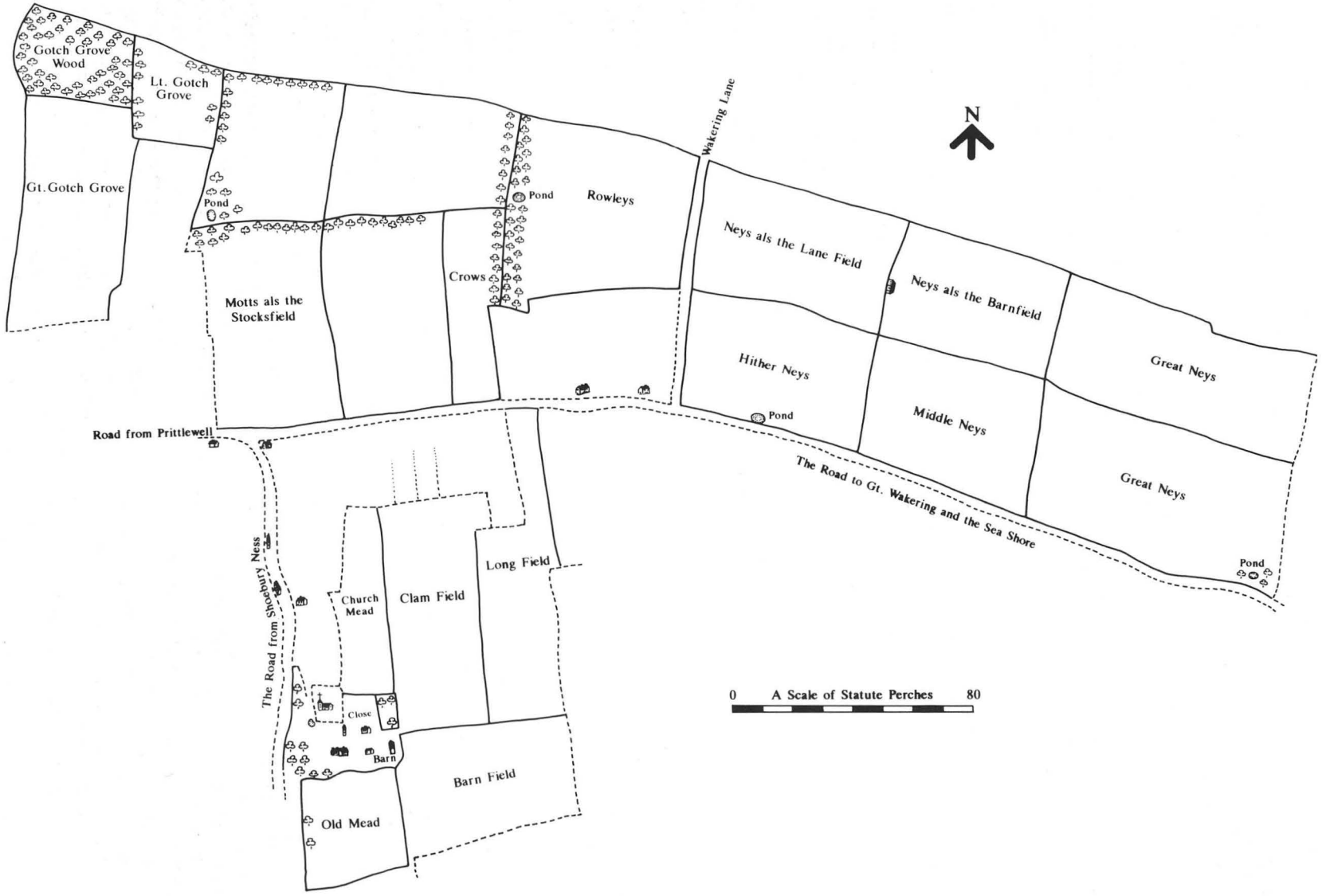

Figure 102 Simplified transcription of map of North Shoebury Demesne land in 1703. Original in Essex Record Office ERO D/DS 120. Part of this map is reproduced as Plate XIII.

of 1299 for Milton Hall (Nichols 1932) lists wheat, barley, oats, rye, beans, peas and vetches. Such a variety of crops would have allowed soil fertility to be maintained by crop rotation, the beans, peas and vetches being particularly important in this respect. The quantity of legumes grown in Essex does not appear to have been so great as further north, in Suffolk (Hallam 1981, 53). Ward (1987, 102) notes small acreages of legumes in south-east Essex, and therefore their usefulness in maintaining soil fertility may have been rather limited. Given the great fertility of soils developed on the brickearths of south-east Essex, high yields may have been relatively easy to maintain in areas such as Shoebury, although there appears to be some evidence to suggest soil exhaustion in parts of south Essex around AD 1300 (Ward 1987). Less obvious crops were also grown. Essex was relatively well provided with vineyards (Hallam 1981, 53). The *Domesday Survey* records a vineyard at Rayleigh. The records of Milton Hall show there was a vineyard there, and that the manor also grew apples and pears (Nichols 1926–28).

The importance of marsh pasture for sheep during the medieval period has been noted several times above. Sheep played an important role in the economy of Essex as a whole (Hallam 1981, 53) and south Essex in particular (Ward 1987, 100). In the Milton Hall *Compotus* of 1299 the profits from the sheep pasture were second in importance to the arable yields (Nichols 1932) and the loss of the manor's sheep walk in major flooding in 1327 was a considerable blow (Nichols 1924, 1932). A number of sites in south-east Essex have produced archaeological evidence of the exploitation of the marshes during the medieval period. The Red Hills left by Late Iron Age and Roman salt working seem to have provided convenient raised areas for temporary occupation by shepherds. A Red Hill on Canvey (Rodwell 1965) produced a series of medieval deposits almost 1m thick above the Roman levels which yielded ceramics from the early 12th to 15th centuries and remains of three hearths. The animal bone, as would be expected, was dominated by sheep, but with some pig and rabbit. Oyster was the most common shellfish with mussel, whelks, cockles and winkles also represented. At least two other excavated Red Hills on Canvey have produced similar evidence (Southend Museum Records) as has a Red Hill in Great Wakering (Helliwell 1971, 26).

The creeks and estuaries around the coast of south-east Essex provided valuable resources. The large quantity of oyster from the Early Medieval enclosure at North Shoebury derive from managed beds, and the rent of mussel layings, on the foreshore at Milton, contributed a considerable sum to the manorial income (Nichols 1932). Whole sea fish were brought to the North Shoebury site (above p.142) and there are documentary references to both fish traps and line fishing on manors in south-east Essex (Nichols 1926–28, 39–40). The recent discovery of a major fish processing site on Canvey Island (Wilkinson and Murphy 1987 and 1995) is of great significance in assessing the importance of the exploitation of marine resources in south-east Essex at this time. It seems likely that the produce from this site, together with fish and shell-fish, from elsewhere around the coast of south-east Essex served more than local needs, and may have been exported via the Thames to the London Market.

Certainly the creeks and esturies were important for the transportation of goods into and out of south-east Essex. Cheese and ale were exported from Fobbing to Flanders (Ward 1987, 104). Corn from the lands of St Paul's at Barling was shipped via Barling Creek and the Thames Estuary to London (Hallam 1981). The produce from Milton Hall was shipped out via *Stratenda* on the Thames Estuary (Nichols 1932), probably near the centre of what is now Southend (Fig. 101). Heavy timber for a new mill at Milton Hall, was brought from Christ Church Canterbury's manor of Bocking, by road to the port of Heybridge on the Blackwater Estuary, and thence by water to the Thames (Nichols 1932).

Patterns of transportation frequently reflect land tenure, as in the exchanges of livestock between John of Coggeshall's lands at North Benfleet, Bocking, Little Coggeshall and Paglesham (Ward 1987, 103).

There are frequent references to the transportation of timber by water from the Royal Parks in south-east Essex (Rackham 1986, 19). Osmund iron from the Baltic, and Spanish iron were brought to Milton Hall, presumably by water. Two millstones for a new mill were bought at Sandwich and brought, presumably up the Thames, to Milton Hall (Nichols 1932). Similarly the numerous fragments of lava, from the Early Medieval enclosure at North Shoebury, derive from querns brought into south-east Essex presumably by water. The Hedingham ware from the site may have been transported by water (above p.104), possibly along a similar route to that which brought timber from Bocking to Milton Hall (Fig. 101).

The importance of communication by water is further demonstrated by excavations undertaken by the Southend Historical Society, in the quite elaborate complex of earthworks around Southchurch Hall (Jackson 1987). During the Early Medieval period this property was held by the de Southchurch family, important local land owners (Helliwell 1969, Rackham 1986). With their considerable wealth and local power they were able to exploit the coastal location of Southchurch Hall, overlooking the creek system of the now reclaimed Southchurch mere close to the Thames Estuary, to acquire a wide range of exotic imports (Gaimster pers. comm.). As in previous periods the Thames Estuary linked south-east Essex with Kent. The lands held by Canterbury Cathedral in south-east Essex required frequent communication and visits across the estuary. Further west there were regular ferries across the Thames (Ward 1987, 104). The cooperation of the Essex and Kent peasants during the revolt of 1381 is a demonstration of the close contact between the two areas.

The above account of the economy of south-east Essex in the medieval period is very similar to that suggested for the Roman period (above p.160). Much of the evidence used is derived from the earlier medieval period (phase V.1 at North Shoebury), but as a generalisation it may hold good for the later middle ages. Clearly the economy of south-east Essex did not remain static during all this time (Ward 1987). The ecological setting of each settlement, its access to woodland, marsh and creek, compounded by the social and political needs of the owners, will have led to variations between estates.

XI. Period VI 1500–Present

Most of the archaeological deposits are related to boundaries and/or levelling/landscaping around North

Shoebury Hall, and a few are clearly the remains of features within the garden (above p.66).

The pottery and glass from 18th and 19th-century features indicate a prosperous but not wealthy establishment (pp 73–74, 109–114). This period coincides with the long tenancy of the Parsons family (p.7) whose name is preserved at Parson's corner, the junction of Poynter's Lane and what is now the A13. Their barn (p.2) survives, converted to a pub and incorporated in the new shopping and housing development around the church.

Throughout most of the post-medieval period south-east Essex remained essentially rural. During the 16th century sheep pastured on the marshes remained an important part of the economy. Norden noted the 'great and huge cheeses of such admiration for weight and magnitude' produced in south-east Essex. Whilst Camden (1607) said of Canvey

> '... so low-lying, that often it is all overflown, except for the higher hillocks, on which there is a safe retreat for the sheep. For it pastures about 4,000 sheep, of very delicate flavour, which we have seen youths carrying out a womanly task, milk, with small stools fastened to their buttocks, and make ewes cheese in those cheese sheds which they call there Wickes.'

The hillocks referred to are presumably Red Hills, and Camden's description would fit the archaeological evidence for recurrent occupation of the Red Hills noted above (p.169). Foulness also supported large flocks of sheep during the 16th century (Emmison and Hall 1975). The exploitation of fish and shellfish continued to play an important subsidiary role to agriculture (Emmison and Hall 1975). Leigh, already long associated with fishing came to be the focus of the industry in south-east Essex during the post-medieval period (Bride 1930). The importance of fishing in south-east Essex and the predominence of Leigh as a port are amply demonstrated by Emmison (1976, 59).

Oyster beds were particularly common in the creeks around the Crouch and Roach estuaries (Emmison 1976, 68–70), and in the 18th century along the foreshore of what is now Southend (Pollitt 1947). During the 19th century shrimps, whitebait and cockles became the staple products of the local fishing industry as they are today (Bride 1930, Grigson 1984, 88). This situation is demonstrated by the large dump of cockle shells, recovered from a post-medieval feature during the excavations at North Shoebury (above p.142). Other coastal activities which contributed to the economy of south-east Essex included the collection and sale of seaweed as manure, smuggling, and a form of wrecking on the Maplin sands (Bride 1930). The fishermen maintained contacts across the estuary. These were not always friendly as the early 18th-century raid of the 'Kentish Armada' on the oyster beds of south-east Essex demonstrates (Bride 1930; Pollitt 1947). Just as the Thames provided access to north Kent so the North Sea linked the area with the Netherlands and North Germany. The Thames Estuary was frequented by the English and Dutch fleets during the wars of the 17th century, and for a time Leigh was used as a base by Admiral Blake. More amicable relations are represented by the imported ceramics from around North Shoebury Hall, and by the circular 'Dutch' houses at Canvey and Rayleigh, traditionally associated with the employment of Dutch engineers in marshland reclamation (Francis 1934; Eddy 1991). Such close contacts between Essex and areas across the North Sea were not a phenomenon of the post-medieval period; they had operated since at least the later Bronze Age (O'Connor 1980, 281, 286; Brown 1988a, 294).

Whilst in many ways a fertile and productive area, south-east Essex (in common with much of south and east Essex) was deadly to outsiders throughout much of the post-medieval period. Aubrey (1972) records the numerous deaths which afflicted the family and household of John Pell when he took up the living of the '... Parsonage of Laindon cum Baselldon in the infamous and unhealthy (aguesh) Hundreds of Essex (they call it kill-priest sarcastically)...'. In the early 18th century Defoe (1724–6), referring particularly to Fobbing, Benfleet, Prittlewell, Wakering and Great Stambridge, said it was not uncommon to meet a man who had had numerous wives. The custom being to marry women from inland, when the brides '...came out of their native air into the marshes among the fogs and damp, there they presently changed their complexion, got an ague or two, and seldom held it above half a year or a year at the most.'

Southend began to be developed in the late 18th century (Pollitt 1939), but expanded rapidly in the second half of the 19th, after the arrival of railways. The expansion has continued throughout the present century. The town has linked a number of villages and hamlets into one urban area, engulfing North Shoebury in the early 1980s. Southend now stretches from Shoeburyness to Leigh and is linked by ribbon development to the urban areas of Rochford, Hockley, Rayleigh, Thundersley, Hadleigh, and Benfleet.

XII. The North Shoebury field systems and rectilinear field systems in the landscape

An examination of rectilinear patterns of fields and roads in the Thurrock area and Dengie Peninsula was published by Rodwell (1978) and a Roman date suggested. This study excluded the similar rectilinear landscape of south-east Essex. Christy (1926) had seen parts of this system as preserving the lines of Roman roads, one such being represented by the parish boundary between Great Wakering and North Shoebury. A sketch of the south-east Essex rectilinear system in relation to the adjoining area was published by Wright (1981b) as an indication of the Roman landscape. Rackham (1986) suggested that the system was laid out as a single planned landscape imposed by a central authority and pre-Roman in date. Recent study (Rippon 1989, 1991) indicates that the rectilinear system in south-east Essex, far from being a unitary feature, actually consists of several systems displaying varying degrees of planning and organic growth.

The extensive excavations at North Shoebury have provided an opportunity to study a variety of field systems from the MBA onwards. Following the initial establishment of rectilinear enclosures in the MBA, a more extensive field system was laid out in the LBA on a different alignment (above p.21). This system developed throughout the EIA, and therefore remained in use for perhaps five hundred years. It is unfortunate that this part of the site had to be recorded so rapidly, during the rescue work in the early 1970s, that detailed discussion of the development of the field system is impossible (above p.22). However two points are quite clear: the alignment of the field system is different, both to the later Iron Age

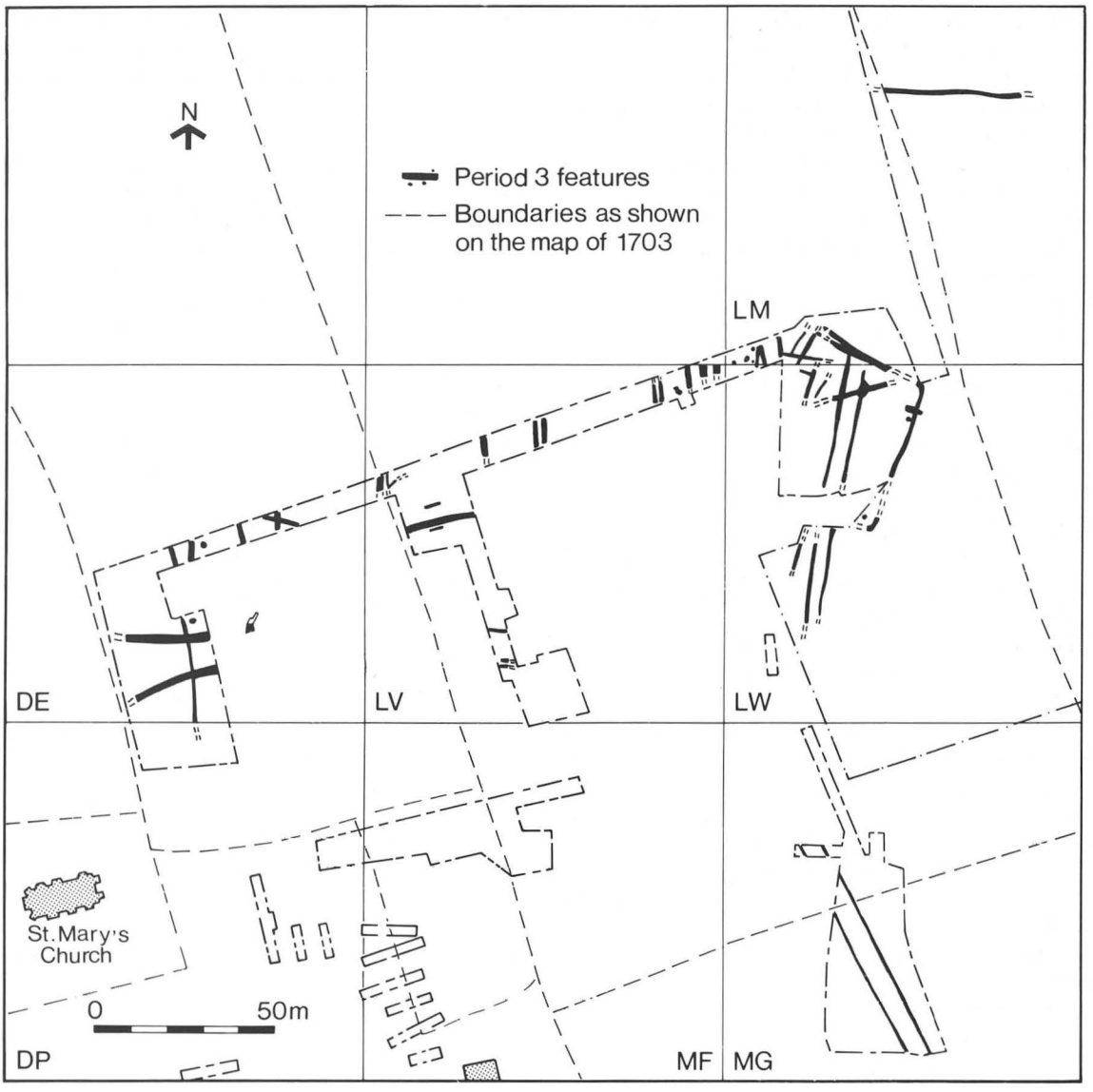

Figure 103 Plan of Period III features with boundaries shown on 1703 estate map.

system, and the post-medieval field boundaries (compare Figs 22, 25 and 104). The LBA/EIA landscape also embodies a clear division between the ditched enclosures of the eastern part of the site and the absence of such features to the west (Fig. 22). This may reflect a division between settlement, arable and non-arable land use.

During the later Iron Age a field system was laid out on a north south axis to the west of the LBA/EIA systems. As argued above (p.40) this system seems to have been developed throughout the Roman period and probably survived into the early Saxon period, therefore the general alignment of the field system again seems to have lasted for five hundred years or more. Whilst some of the ditches were recut many times, others show only occasional recutting or no recuts at all (above p.40). As noted above (p.40), this may reflect the main function of the ditches as boundaries, drainage being of secondary importance. This would not necessarily require regular ditch maintenance, since a largely silted ditch if accompanied by a hedge would serve the purpose adequately. As with the earlier system a similar broad division in land use is evident — ditched enclosures now occur in the western area of the site and are absent from the east (Fig. 25). The alignment of the later Iron Age/Roman systems appears to run largely at variance to the layout of recent field boundaries (Fig. 103).

The lack of correlation between these early field systems and the more recent landscape is clearly indicated by the boundary between Clam Field and Long Field (Figs 3 and 10). This remained in use until the brickearth extraction of 1971–72, and during archaeological recording, could clearly be seen cutting across the line of the LBA/EIA fields and running on a different alignment to the later Iron Age/Roman system.

Following the early Saxon period there is little evidence for occupation at North Shoebury (above p.46) until the digging of the substantial enclosure ditch *0300* in the late Saxon or Early Medieval period. This enclosure is aligned with the churchyard and both fit with the pattern of field boundaries on the map of 1703 (Fig. 104). A boundary shown on the 1703 map marking the east side of an area called the 'close' (Plate XIII, Fig. 102) east of the churchyard, roughly coincides with the western arm of enclosure ditch *0300*. The 1981 excavation has shown that the line of a boundary ditch (*0448* above p.53, Figs 51 and 52), backfilled in the early 13th century, survived well into

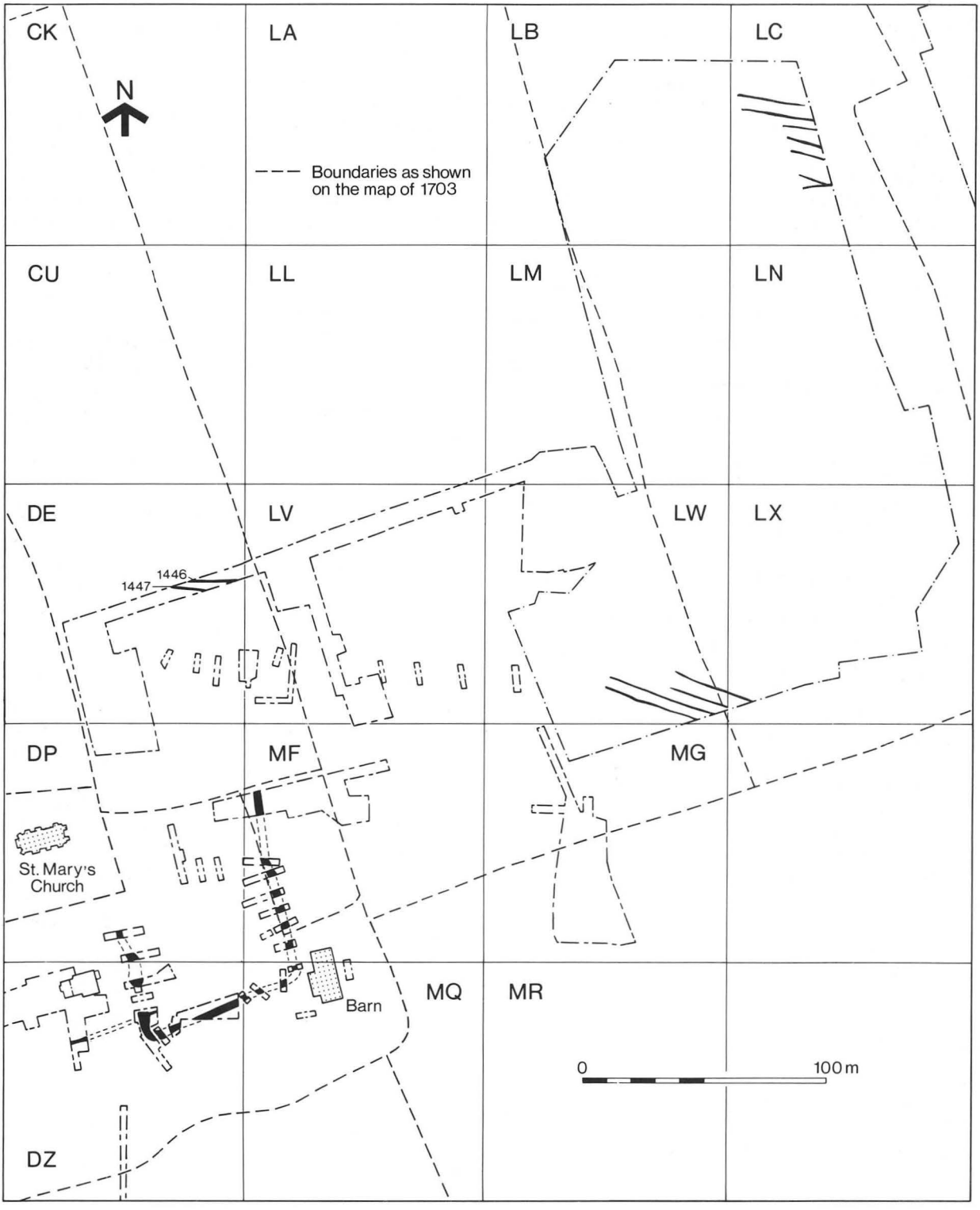

Figure 104 Plan of major Period V features with boundaries shown on 1703 estate map.

the post-medieval period. Interestingly this boundary does not appear on the map of 1703. Not all features of Early Medieval date at North Shoebury fit the rectilinear layout, ditches *1446* and *1447* in Grid LV (Fig. 104) ran at variance to it.

It can therefore be demonstrated that the recent rectilinear landscape in the North Shoebury area bears no relation to the prehistoric and little to the Roman boundaries. The earliest features which clearly fit the pattern are of Early Medieval date. This conclusion is similar to that reached for part of the Thurrock system (Wilkinson 1988). Rippon (1989, 1991) favours a Late Saxon date for the Shoebury system and suggests it represents a deliberate planned landscape. Hall (1982, 46–47) notes that on largely flat terraces, '...furlong patterns are simple rectangular systems. This rectangularity seems to be the objective of a mature open field system...'. Given the evidence for open fields cultivated in strips at North Shoebury (above p.166), it may be that the broad division of the landscape into a rectilinear pattern resulted from the adoption of these fields (Hall 1982,1985). If this is so, a Late Saxon origin might well be appropriate for the rectilinear pattern of landscape around North Shoebury.

XIII. Future Archaeological Policy

There is a long history of archaeological recording in south-east Essex focussed at Southend Museum, and represented by a number of local individuals and societies. Important collections covering many periods accrued during the late 19th and early 20th centuries, are now housed in Southend and Colchester Museums. Full publication of this material is vital to an understanding of the archaeology of the area. Some effort has been put into this recently (Tyler 1988, Crowe forthcoming) but much remains to be done.

As noted above the area is now, in large part, a highly urban landscape. Southend-on-Sea occupies most of the land between the Thames and Roach estuaries, whilst a string of small towns has grown covering a large part of the west of the area. Continued urban development and mineral extraction is to be expected and will require a coherent archaeological response. The woods of south-east Essex (Rackham 1986), an important part of the historic landscape now largely surrounded by housing, are fine examples of a successful preservation and management policy by a number of local authorities.

A number of archaeological monuments now lie on the edges of the built up areas. The most obvious of these, and probably the best protected, lie to the west of Southend at Hadleigh. Hadleigh Castle (Drewett 1975) lies within a country park and is in the guardianship of the Historic Buildings and Monuments Commission. The nearby cropmark enclosure is a Scheduled Ancient Monument, as is the surviving stretch of earthwork of Shoebury camp to the east of Southend. The earthworks of Prittlewell camp are also scheduled. However the important cropmark enclosure at Bournes Green (above p.157) is distinctly more vulnerable. This site now lies immediately beyond the northern edge of the built up area of Southend, and every effort should be made to preserve it.

Recently large areas of brickearth covered gravel terrace at Great Wakering, Cherry Orchard Lane and Temple Farm have been destroyed by brickearth extraction and building. Rescue work is being conducted by Southend Museum and local societies, and has produced some useful results. However the full potential of these sites lies in the calcareous nature of the subsoil. The 1981 excavation at North Shoebury showed the enormous potential of such sites to preserve bone, shell and carbonised plant remains. Only large scale excavation geared to the recovery of faunal remains and incorporating an extensive flotation programme would provide adequate results. Such work would greatly enhance our understanding of the past economy and society of south-east Essex. Deposits of calcareous brickearth within the area are limited and rapidly diminishing, and every effort should be made to protect or ensure full archaeological investigation of the remaining areas.

The estuaries, and marshland fringing them, have clearly played an important role in the economy of the area for thousands of years. Canvey Island is representative of these areas: the eastern part of the island is already largely built up, and the island's location means pressure for further development is highly likely. Survey and selective excavation of Red Hill sites on the island would add significantly to our understanding of the original function of these sites and their reuse during the medieval and post-medieval periods. Full publication of the material from earlier excavations of Red Hill and other sites is desirable. Any programme of work on Canvey should include further investigation of the Roman/Medieval fish processing site on the west of the island as recommended by Wilkinson and Murphy (1995, 224). The archipelago of marshland islands in the east of the area is less obviously threatened, protected in part by the inaccesibility provided by the Atomic Weapons Research Establishment on Foulness. However, extensive ploughing of former pasture is particularly destructive to the numerous Red Hills on these islands.

The land between the Roach and Crouch estuaries and immediately south of the Roach is still largely rural. It is likely that this area contains extensive early settlement, probably similar to that revealed during the construction of Southend in the late 19th and 20th centuries. The records and air photographs contained in Southend Museum, and Essex County Council Site and Monuments Record, should provide the basis for a coherent response to development and/or mineral extraction in this area, although further aerial and other surveying is clearly desirable.

Gazetteer: Antiquities of the Rochford Hundred, Essex — Neolithic to Saxon — Compiled in Conjunction with the North Shoebury Project

by J.J. Wymer with additions by N.R. Brown

Alphabetical list of parishes in the Rochford Hundred, as defined prior to the Local Government Act of 1972, effective from April 1974.

Ashingdon
Barling Magna
Canewdon
Foulness
Great Wakering
Hadleigh
Hawkwell
Hockley
Hullbridge
Paglesham
Rayleigh
Rochford
South Benfleet
Southend-on-Sea:
- Eastwood
- Leigh-on-Sea
- Prittlewell
- Southchurch/
- Thorpe Bay
- North Shoebury
- South Shoebury
- Shoeburyness

Stambridge
Sutton
Thundersley

Notes on the gazetteer:

Site: N.S.P. = no specific provenance, *i.e.* cannot be located more accurately than somewhere within the parish in question

National Grid Refences: Given to six figures
A = accurate
E = estimated
G = general
NL = not located

Rochford Hundred

Neolithic

Parish		Site	Grid	Description	Reference	Whereabouts
Barling Magna	1	Baldwins Farm Gravel Pit	TQ 937896(E)	Flint sickle	Couchman, C.R. 1977b, 60, 65	Southend Mus.
Canewdon	2	Ballard's Gore in a gravel pit, 1923	TQ 904930(E)	'Hoard' of 2 ground axes (one with splayed edges) and a ground ?pick	Pollitt 1931, 1935, 46,Pl.V	Southend Mus.
	3	Creeksea gravel pit, 1962	TQ 917940(E)	Ground axe		Southend Mus.
Great Wakering	4	NSP	TQ 945875(G)	'axe heads'	Pollitt, 1935	Southend Mus. ex. Benton Coll.
Paglesham	5	N.S.P.	TQ 940920(G)	Ground axe	Southend Mus.	
	6	Nr. South Hall	TQ 932923(A)	Jadeite axe	Rodwell 1970; Smith 1972, 409; Clough and Green 1972, 147	Southend Mus.
Rayleigh	7	Hamborough Hill	TQ 813921(E)	Scrapers, arrowheads, part of axe, *etc.*	Reader 1911, 251	Southend Mus.
	8	N.S.P.	TQ 810900(G)	Flint sickle	Clark 1934, 68, 72	Cambridge Mus.
Rochford	9	Feeches Road, 1934	TQ 865883(E)	Ground axe		Southend Mus.
	10	Cherry Orchard Lane	TQ 861889(E)	Ground axe		Southend Mus.
	11	SE of Airport	TQ 872886(A)	Broken stone axe	6" OS Map	Southend Mus.
	12	Airport	TQ 873895	Grooved Ware sherd in pit with crouched inhumation	Macleod 1971	Southend Mus.
Southend-on-Sea	13	Chalkwell, on beach, 1925	TQ 850855(E)	?point of 'spear'	Pollitt 1935, 47	Southend Mus.
	14	Coleman St	TQ 884860(A)	Axe	Pollitt 1935, 47	Southend Mus.
	15	Foreshore, opposite Elizabeth Rd. 1913	TQ 900848(A)	Ground axe	Pollitt 1935, 47	Southend Mus.
	16	Foreshore, N.S.P. 1908	TQ 930830(G)	Axe, thin butted		London Mus.
	17	Lancaster Gardens, 1936	TQ 887858(A)	Axe	Pollitt 1953, 54	Southend Mus.
	18	Westcliff High School for girls, Leigh	TQ 852871(A)	Axe	Pollitt 1935, 46	Southend Mus.
	19	North Road cemetery from grave	TQ 875862(A)	Ground axe	Pollitt 1953, 43	Southend Mus.

Parish		Site	Grid	Description	Reference	Whereabouts
	20	167 Poynings Avenue cutting, 1887	TQ 906866(A)	Ground axe		Southend Mus.
	21	Prittlewell, 1937	TQ 876876(A)	Ground axe		Southend Mus.
	22	Prittlewell Priory, 1933	TQ 876875(A)	Ground axe		Southend Mus.
	23	Prittle Brook NSP	TQ 878885(G)	Perforated flint ?broken axe hammer		Southend Mus.
	24	Shoebury	TQ 930850(G)	3 leaf and 1 lozenge shaped arrowheads *(a)*, 6 ground axes, scrapers and other artefacts *(b,c)*	Pollitt 1935, 47, 48	*a)* Brit.Mus. *b)* Col.Mus. *c)* Southend Mus.
	25	Shoebury NSP	TQ 930850(G)	1 leaf and 1 basal notched arrowhead		Southend Mus.
	26	Shoebury	TQ 944864(E)	Black quartzite adze (Probably throw-out of Polynesian ethnographic collection)	Pollitt 1953, 52	Southend Mus.
	27	South Shoebury Richmond Avenue 1924	TQ 928848(A)	Ground axe	Pollitt 1935, 47	Southend Mus.
	28	Shoebury, brickfield, 1952	TQ 937856(A)	Jadeite axe	Pollitt 1953, 52	Southend Mus.
	29	Shoeburyness, 'Danish Camp'	TQ 938846(A)	Unspecified flint artefacts	Hull 1963a, 178	
	30	Southchurch foreshore	TQ 900840(G)	Ground, stone axe, Group 1	Clough and Green 1972, 146	Col. Mus.
	31	N.S.P.		2 axes		Pollitt 1953, 47 (Col. Museum records)
	32	N.S.P.		ground axe		Southend Mus.
	33	Southchurch, Wick Estates	TQ 905864(E)	notched scraper/knife	Pollitt 1953, 52	
	34	Town Centre, 1927	TQ 877861(G)	Axe		
	35	Town Centre, 1942	TQ 876862(A)	Axe		
	36	Westcliff, cliffs opposite Westcliff Hotel, 1923	TQ 873851(A)	Axe	Pollitt 1935, 47	Southend Mus.
	37	Westcliff, N.S.P.	TQ 875855(G)	leaf arrowhead	Southend Mus.	
	38	Southend-on-Sea NSP	TQ 880850(G)	3 ground axes	Pollitt 1935, 47; Pollitt 1953, 42	Southend Mus.
Stambridge	39	Broomhill	TQ 892902(E)	Axe and sickle axe	Pollitt 1935, 47	Southend Mus.
	40	Gt. Stambridge, 1924	TQ 900916(A)	end of ground axe and scraper	Pollitt 1935, 47	Southend Mus.
	41	Little Stambridge	TQ 890920(G)	Axe	Southend Mus. Records	Southend Mus.
Sutton	42	Nr. Fleethall Creek, 1949	TQ 887900(A)	Ground axe		Southend Mus.
Thundersley	43	Dawes Heath near Thundersley Lodge	TQ 793880(E)	broken discoidal knife scrapers and other artefacts	Pollitt 1935, 13, 47; Mapey 1906	Southend Mus.

Beaker and Early Bronze Age

Great Wakering	1	N.S.P.	TQ 945875(G)	Plain bowl, published as food vessel	Pollitt 1935, 51	Colchester Mus.
	2	Nr. Oldbury Farm	TQ 925876(A)	Barrow, now levelled, ?ass. with beakers	K. Crowe pers. comm.	
	3	Milton Hall Brickfields	TQ 935870(E)	Conical amber bead. Beaker sherds	Couchman 1980	Southend Mus.
Hadleigh	4	N.S.P.	TQ 810870(G)	b. & t. arrowhead	Pollitt 1935, 16, 47	Colchester Mus.
Hockley	5	Churchyard	TQ 826933(A)	b. & t. arrowhead	Pollitt 1935, 16, 47	Southend Mus.
Rayleigh	6	Hamborough Hill	TQ 813921(B)	b. & t. arrowhead	Pollitt 1935, 16, 48	Southend Mus.
	7	Elephant & Castle Lane (NL)	TQ 805900(G)	b. & t. arrowhead	Pollitt 1935, 16, 48	Southend Mus.
	8	Dawes Heath Road, near Castle Lane (?Road)	TQ 807903(E)	b. & t. arrowhead	Pollitt 1953, 48	Southend Mus.

Parish		Site	Grid	Description	Reference	Whereabouts
Rochford	9	In 1914 'Whilst digging trenches near Rochford'	NL	Large cinerary urn inverted over ashes. 6 amber beads, 2 gold-covered shale beads	Pollitt 1935, 17, 48; Erith 1963	Colchester Mus.
	10	Three Ashes Farm	TQ 880897(A)	Jet bead	Crowe forthcoming	Southend Mus.
Southend-on-Sea	11	Eastwood, N.S.P.		b. & t. arrowhead		Southend Mus.
	12	20 Meadway, 1937	TQ 856859(A)	b. & t. arrowhead		Southend Mus.
	13	Prittlewell, Priory Park, 1927	TQ 875875(E)	perforated axe hammer or mace head, and b. & t. arrowhead	Pollitt 1935, 48	Southend Mus.
	14	Prittlewell, Prittle Brook	TQ 878885(G)	perforated axe hammer or mace head	Pollitt 1935, 48	Southend Mus.
	15	Prittlewell N.S.P.	TQ 875870(G)	'Tumulus' now destroyed	Benton 1888, 476	
	16	E. Shoebury beach, 1967	TQ 937849(A)	b. & t. arrowhead		Southend Mus.
	17	Shoebury N.S.P.	TQ 930850(G)	3 b. & t. arrowhead	Pollitt 1935, 48	British Mus.
	18	Shoebury		2 beakers	Pollitt 1935, 16, pl. XVI(i), 49; Clarke, 1970	Colchester Mus.
	19	Shoebury		Small bowl published as food vessel	Pollitt 1935, 50	Colchester Mus.
	20	Southchurch N.S.P.	TQ 910860(G)	beaker	Clarke 1970	
	21	Southchurch	TQ 904857(A)	b. & t. arrowhead	Southend Mus. 6" OS Map	
	22	Southchurch, Bournes Green Farm, ?from shell mound.	TQ 915864(E)	Small bowl published as food vessel	Pollitt 1935, 51	Colchester Mus.
	23	Thorpe Bay, west of Thorpe Hall Avenue, 1939	TQ 911856(E)	perforated stone axe hammer	Pollitt 1953, 60	Southend Mus.
	24	Thorpe Hall, Brickfield 1924	TQ 919856(A)	beaker fragments, flint dagger and flexed burial	Grimes 1932; Pollitt 1935, 50, 14–16 Pls VI, XVI(ii), 45; Clarke 1970	Southend Mus.
	25	Thorpe Hall, Brickfield 1929		beaker	Pollitt, 1935, 50; 1953, 17–18, 58; Clarke 1970	Southend Mus.
	26	Thorpe Hall, Brickfield 1960		4 beakers, 2 assoc. with inhumations	Clarke 1970	Southend Mus.
Thundersley	27	Dawes Heath, Wyburn Height Estate, 1928	TQ 810887(E)	flint dagger	Grimes 1932; Pollitt 1935, 14, 51, Pl. VI	Southend Mus.

Bronze–Early Iron Ages

Barling Magna	1	N. of church	TQ 931901(G)	Pit. Occupation MBA and LBA pottery and other finds	Crowe 1981a; Eddy & Priddy 1981	Southend Mus.
	2	Sewage Works, Roper's Farm	TQ 920903(E)	MBA sherd IA sherds	Crowe 1981a	Southend Mus.
	3	Baldwins Farm Gravel Pit	TQ 937896(A)	Pits. MBA sherds C14 1340+90 bc (BM-1631)	Couchman 1977b	Southend Mus.
	4	Potten Island	TQ 955915(G)	Palstave	Couchman 1980	Cast in Southend Mus.
	5	A Red Hill	TQ 948895(A)	IA sherds	Crowe 1981a	Southend Mus.
	6	N.S.P.	TQ 930895(G)	LBA sherds	Crowe 1981a	Southend Mus.
Canewdon	7	East Lambourne Hall Pit	TQ 919941(A)	Socketed axe	Eddy 1980b	Private poss.
	8	Crouch Estuary	TQ 924958	Paddle	Wilkinson and Murphy 1995	National Maritime Museum
Great Wakering	9	Milton Hall Brickfields	TQ 935870(E)	MBA–EIA settlement evidence	D.G. Macleod pers. comm.	Southend Mus.
	10	From field surface	TQ 955875(E)	Palstave	Crowe forthcoming	Southend Mus.
	11	Tithe Barn	TQ 936867	LBA pottery and pits	Helliwell and Macleod 1959	Southend Mus.

Parish		Site	Grid	Description	Reference	Whereabouts
	12	N.S.P.	TQ 950875(G)	Palstave.	Butcher 1923a	Colchester Mus.
				Socketed axe	Butcher 1923b	Colchester Mus.
				Bucket urn	Crowe, forthcoming	Southend Mus.
				LBA sherds	Crowe, forthcoming	Southend Mus.
				Perf. clay slabs	Crowe, forthcoming	Southend Mus.
				Spindle whorl	Pollitt 1935, 53	Colchester Mus.
	13	Star Lane	TQ 943873	MBA, LBA and EIA settlement	Crowe 1986	Southend Mus.
Hockley	14	Hockley Woods	TQ 830920(G)	Tip of LBA axe	K. Crowe pers. comm.	Poss. of finder
Hullbridge	15	N.S.P.	TQ 820950(G)	Spearhead	Pollitt 1935, 47	Unknown
Paglesham	16	Nr. Cupola House	TQ 939923(E)	1 Collared urn and fragments of another urn	Pollitt 1935, 40, Pl. VII	Southend Mus.
	17		TQ 934927(E)	Ring ditch	ECC SMR 11216 and 11268	County Hall
	18		TQ 935921(E)	Ring ditches, one double concentric		
Rayleigh	19	Gravel Pit	N.S.P.	Spearhead, socketed	Pollitt 1953, 56	Colchester Mus.
Rochford	20	Southend Airport	TQ 873895(E)	Crouched burial Grooved Ware sherd & IA sherds ass.	Southend Museum Records	Southend Mus.
	21	Cherry Orchard Lane Brickfields	TQ 858895(E)	EIA Occupation material	Couchman 1977b	Southend Mus.
South Benfleet	22	Southwell Road	TQ 783876(A)	EIA sherds	K. Crowe pers. comm.	Southend Mus.
Southend-on-Sea	23	Eastwood	TQ 853890(A)	Rect. ditched enclosure MBA and LBA pottery	Couchman 1980; Eddy 1981, 51	
	24	Leigh-on-Sea	TQ 831885(A)	Axe, socketed		Southend Mus.
	25	Leigh-on-Sea before 1884	TQ 830861(A)	Bronze Hoard I: 4 socketed axes frags. of socketed axe gouge, leaf shaped spearhead, lump of bronze	Butcher 1923a; Pollitt 1935, 47–48; Davies 1979	Colchester Mus.
	26	Leigh-on-Sea found 1926	TQ 838868(A)	Bronze Hoard II: Includes 14 socketed axes, 17 blades of others and numerous fragments of swords, spears etc.	Pollitt 1926, 309; Pollitt 1935, 48, Pls XVII, XVIII	Southend Mus.
	27	Milton Hall Brickfields	TQ 885865(A)	LBA Loomweight BA pottery and perforated clay slabs	K. Crowe pers. comm.	Southend Mus.
	28	Porters Town	TQ 874876(E)	LBA pot		Southend Mus.
	29	Prittlewell, Railway cutting W. of Temple Lane	TQ 876884(A)	2 Palstaves	Pollitt 1935, 48	Southend Mus.
	30	Prittlewell, Harps Corner	TQ 871887(A)	Biconical jar LBA	Pollitt 1953, 61	Southend Mus.
	31	Prittlewell Priory	TQ 875875(E)	2 EIA pots	Pollitt 1935, 52	Southend Mus.
North Shoebury (excluding material which is the subject of this report).	32	E. of Moat House	TQ 931858(A)	2 ring ditches, sub-rectangular enclosure and linear feature	ECC SMR 11080	County Hall
	33	Milton Hall Brickfields	TQ 936866(A)	2 BA pot bases and many antlers	Colchester Mus. Records	Colchester Mus.
	34	Recreation Ground	TQ 932856(A)	Flat axe or palstave	Southend Mus. Records	Lost
	35	North Shoebury, 1891	TQ 945858(A)	Bronze Hoard Shoebury I	Read 1892; Trench 1909; Butcher 1923a; Pollitt 1935, 48–49	British Mus.
Shoebury/ Shoeburyness	36	North Shoebury	TQ 929862(A)	Part of socketed axe	K. Crowe pers. comm.	Private possession
	37	Richmond Avenue, 1930	TQ 928850(A)	Bronze Hoard Shoebury II	Pollitt 1935, 49, Pl. VIII	Southend Mus.
	38	Shoebury N.S.P.	TQ 930850(G)	Shoebury Hoard III	Butcher 1923a; Pollitt 1935, 49	Colchester Mus.

Parish		Site	Grid	Description	Reference	Whereabouts
	39	Shoeburyness N.S.P.	TQ 940850(G)	2 Socketed axes Palstave. Spearhead, socketed gouge	Butcher 1923a	Colchester Mus.
	40	Shoebury N.S.P.	TQ 930850(G)	'Urn' fragment with fabric impression. Possibly fragment of clay for bronze casting mould.	Pollitt 1935, 50	Colchester Mus.
	41	Shoebury N.S.P.	TQ 930850(G)	Lower part of urn and other pottery	Pollitt 1935, 50	Colchester Mus.
	42	Shoebury N.S.P. (SE Essex, but attributed to Shoebury by Pollitt)	TQ 930850(G)	2 gold penannular armlets and portion of a third	Pollitt 1935, 49; Taylor 1980	Colchester Mus.
	43	Shoebury N.S.P.	TQ 930850(G)	Gold torc	Pollitt 1935, 49	Lost
	44	Shoeburyness 'Danish Camp' near the Barracks	TQ 938845(E)	Palstave	Pollitt 1935, 49	Colchester Mus.
	45	Shoeburyness 'Danish Camp' near the Barracks	TQ 938845(E)	Human burial	Gould 1903, 206–207; Hull 1963a, 178	Unknown
	46	Shoebury N.S.P.		Frag. of pot with finger-impressed ornament	Pollitt 1935, 52	British Mus.
Southchurch/Thorpe Bay	47	Riviera Drive	TQ 894858(A)	Collared urn and cremation burial Pl. VII	Pollitt 1935, 51	Southend Mus.
	48	Thorpe Hall, Brickfield 1929	TQ 923857(A)	Palstave and Ballintober sword	Pollitt 1935, 50	Southend Mus.
	49	Thorpe Hall, Brickfield 1929	TQ 918860(A)	EIA sherds		Southend Mus.
	50	Southchurch N.S.P.	TQ 900860(G)	Palstave	Butcher 1923a	Colchester Mus.
	51	Southchurch N.S.P.		2 Bucket urns	Pollitt 1935, 51	Colchester Mus.
	52	66 Willingale Way	TQ 910861(A)	LBA/EIA sherds		Southend Mus.
	53	Southchurch Hall	TQ 894855(A)	Sword	Southend Mus. Records	Unknown
	54	Southchurch Brickfields 1896	TQ 905850(A)	Bronze Hoard	Pollitt 1935, 51; Davies 1979	Colchester Mus.
	55	Thorpe Hall Avenue	TQ 913858(A)	Urn assoc. with six lumps of bronze	Pollitt 1935, 50; Francis 1931	Southend Mus.
	56	Thorpe Bay	TQ 905849(A)	Palstave	Crowe forthcoming	Southend Mus.
	57	Thorpe Bay	TQ 920858(A)	Palstave	Crowe forthcoming	Southend Mus.
	58	Thorpe Bay N.S.P.	TQ 920850(G)	EIA small vessel	Pollitt 1935, 53	Southend Mus.
	59	'Off Southend'		Flanged axe, Rapier		British Mus. Cast in Southend Mus.
Stambridge	60	Martin's Gravel Pit, 1924	TQ 898918(A)	EIA Sherds	Hull 1963a, 181	Southend Mus.
Sutton	61	Butlers Farm Gravel Pit	TQ 905892(A)	BA, IA Occupation material, near ditched enclosure	Southend Mus. Records	No longer extant
	62	Gallows Field	TQ 914889(A)	?Cinerary urns	ECC SMR 11097	Unknown
Thundersley	63	Dawes Heath	TQ 815885(E)	2 cylindrical loomweights	Crowe forthcoming	Southend Mus.
	64	Little Common	TQ 790895(E)	Bronze Hoard	Pollitt 1935, 51	Lost but for 1 socketed axe in Southend Mus.

Middle and Late Iron Age

(for Late Iron Age coins see Haselgrove 1987; Rodwell 1981)

Barling Magna	1	Sewage works, 1940	TQ 920901(E)	Bowl and other sherds	Pollitt 1953, 61	Southend Mus.
	2	N.S.P.	TQ 920901(E)	Pot	Pollitt 1935, 52; Thompson 1982, 605	Colchester Mus.
	3	Near Hadleigh	TQ 806872(E)	Group of vessels and sherds	Thompson 1982, 822	Colchester Mus.
	4	Canvey	TQ 823833	Pottery	Thompson 1982, 667	Southend Mus.
Canewdon	5	East of village, gravel digging	TQ 918943(E)	Amphorae (3)	Rodwell 1976b, 244	Lost
	6	Butts Hill	TQ 899948(E)	Cremation. Date uncertain	Couchman 1976	Southend Mus.

Parish		Site	Grid	Description	Reference	Whereabouts
	7	Gravel pit near Scotts Hall, 1924	TQ 895932(E)	14 urns including example with curvilinear decoration	Pollitt 1935, 22, 52, Pls XIX, XX	Southend Mus.
	8	Wick Farm 1927	TQ 911948(G)	7 urns	Pollitt 1935, 52, Pl. XIX	Southend Mus.
Great Wakering	9	In brickearth pits	TQ 944881(G)	Burial with 3 vessels	Pollitt 1935, 53	Colchester Mus.
	10	In brickearth pits		Burial with 4 vessels, flint flake and fibula fragment	Pollitt 1935, 53, Pl. XXI; Thompson 1982, 908	Colchester Mus.
	11	Burial with 3 vessels		Pollitt 1935, 53; Thompson 1982, 806		
	12	Tithe Barn	TQ 936867	Pottery	Helliwell and Macleod 1959; Thompson 1982, 710	Southend Mus.
Rayleigh	13	Hamborough Hill	TQ 813921(E)	8 or 9 urns	Pollitt 1935, 52, Pl. X(i); Thompson 1982, 806	Some in Col. and Southend Mus.
	14	N.S.P.		3 urns	Pollitt 1953, 61	Lost
Southend-on-Sea	15	Hastings Road, 1887	TQ 889855(E)	Fragments of urns	Pollitt 1935, 53; Thompson 1982, 824	Southend Mus.
	16	Marine Parade	TQ 886850(E)	Urn	Pollitt 1935, 53; Thompson 1982, 827	Southend Mus.
	17	North Avenue, 1924	TQ 895865(E)	Part of urn	Pollitt 1935, 53	Southend Mus.
	18	Prittlewell, Temple Farm	TQ 800883(A)	Settlement and coin hoard	Brown & Arscott 1986	Southend Mus.
	19	Prittlewell	TQ 878872(E)	Curvilinear decorated pottery	Brown 1983	Southend Mus.
	20	Prittlewell, Roots Hall Estate *c.* 1926	TQ 874896(A)	12 urns	Pollitt 1935, 52, Pl. IX; Francis 1925, 1930a, 1930b, 1931; Thompson 1982, 799	Southend Mus.
	21	Shoebury N.S.P.	TQ	5 urns	Pollitt 1935, 22, 52, Pl. X(ii)	Colchester Mus.
	22	Shoebury N.S.P.		'Fragment of bronze nave of Chariot wheel'. Probably recent (P Sealey pers. comm.)	Pollitt 1935, 52	Colchester Mus.
	23	Southchurch, Daines Way, 1927	TQ 915860(E)	7–8 urns	Pollitt 1935, 53	Southend Mus.
Stambridge	24	Hampton Barns gravel pit	TQ 900915(A)	Sherds	Southend Mus. Records	Southend Mus.

Roman

(excluding individual coins, occasional sherds, *etc.*, for Red Hills see Fawn *et al.* 1990)

Barling Magna	1	North of church	TQ 931901(A)	Ditches and pits ?3rd century	Crowe 1981a	Southend Mus.
	2	Mucking Hall	TQ 914897(E)	Sherds and box tile	Pollitt 1935, 55	Southend Mus.
	3	Sewage Works, 1940	TQ 925904(E)	Much pottery	Crowe 1981a, 27	Southend Mus.
	4	Barling Hall	TQ 937899(E)	Pottery	Crowe 1981a	Southend Mus.
	5	Wick Farm	TQ 911948(E)	Burial	Thompson 1982, 657	Southend Mus.
Canvey	6	Blackmore Ave. (Furtherwick Rd)	TQ 783835(E)	Cremation burial	Found 1949 (Pollitt 1953, 68)	Southend Mus.
	7	Thorney Bay Rd.	TQ 787831(E)	Cremation burial	Rodwell 1971b	Southend Mus.
	8	Thorney Bay	TQ 794819(E)	Numerous pottery finds from Foreshore	Rodwell 1965, 1970b	Southend Mus.
	9	Canvey Point	TQ 832838(E)	Numerous pottery finds from Foreshore recovered from dredging	Pollitt 1953, 68; Eddy 1980b	
	10	Leigh Beck	TQ 823831(E)	Numerous pottery finds from Foreshore	Rodwell 1965, 1970b	Southend Mus.
	11	Canvey Point	TQ 828835(E)	Possible fish processing site	Wilkinson & Murphy 1987	
Foulness	12	Little Shelford c. 1848	TQ 980905(A)	Cremation burial in Red Hill. 7 pots assoc. with ivory bracer or wrist guard of medieval date	Pollitt 1935, 56; 1953, 68; James & James 1979	Southend Mus.

Parish		Site	Grid	Description	Reference	Whereabouts
	13	Little Shelford c. 1848	TQ 983906(G)	3 hectares of settlement with one substantial building	Couchman 1978; James & James 1979	AWRE Archaeol. Soc.
	14	Little Shelford c. 1848	TQ 979905(A)	Cremation burials with urns	James & James 1979; Eddy 1980	AWRE Archaeol. Soc.
Great Wakering	15	Brickfields, 1924–1925	TQ 937873(G)	Numerous finds of pottery, ironwork including some military, and other objects	Pollitt 1935, 59, Pl. XXII	Southend Mus.
	16	Brickfields, 1924–1925	Possible pottery kiln	Rodwell 1971a; Toller 1980		
	17	Rushley Island	TQ 965890(G)	Cremation burials in '4 tumuli' possibly Red Hills	Pollitt 1953, 71 citing Benton 1867–88	Lost
Hadleigh	18	South of Florence Gdns	TQ 805869(E)	Cropmark identified as possible fort	Rodwell 1971b; Dunnett 1975, 41, fig. 13	
	19	Near Castle	TQ 813860(E)	Bronze statuette of 'lar'	Rodwell 1971a	Southend Mus.
Rochford	20	Near Purdey's Farm and Tinkers Lane	TQ 882899(A)	Ditches and sherds	Crowe 1978	Southend Mus.
	21	Marshall's Farm	TQ 878890(A)	Ditches, corn drying kilns and other features	Couchman 1978; Eddy 1980a; Crowe 1981a	Southend Mus.
Rochford	22	Cherry Orchard Brickfield, 1953	TQ 858896(A)	Cemetery	Pollitt 1953, 71	Southend Mus.
South Benfleet	23	Excavations for new bridge over Benfleet Creek, 1971	TQ 765863(A)	Much pottery	Rodwell 1976c, 259–263	Southend Mus.
	24	New road and railworks 1961	TQ 718858(A)	Bronze stylus	Rodwell 1971b	Southend Mus.
Southend-on-Sea	25	Bournemouth Park Road	TQ 888865(E)	5 urns	Draper 1896	Southend Mus.
	26	Leigh, post-med dumped material at Leigh Creek		Pipe-clay statuette of boy carrying fruit	Rodwell 1971a; Jenkins 1979 Pl. 11	Private poss.
	27	Prittlewell Sutton Road	TQ 882883(A)	2 cremation groups	Couchman 1977b	Southend Mus.
	28	Prittlewell Temple Farm	TQ 800885(A)	Settlement	Brown & Arscott 1986	Southend Mus.
	29	Prittlewell, in sewer trench, 1923	TQ 878874(E)	Inhumation and cremation burials	Pollitt 1923, 1935, Pl. XI	Southend Mus.
	30	Prittlewell Sewage Works 1909	TQ 881875(E)	'Midden' incl. mortar rims of Colchester Products	Pollitt 1935, 31, 50, Pl. XII; Rodwell 1971a	Southend Mus.
	31	Westcliff, Southbourne Grove	TQ 859878(E)	Burial	Thompson 1982, 827	Southend Mus.
	32	Shoebury, Brickfields, 1892 and 1895 N. of Shoeburyness firing station	TQ 944857(A)	Kilns. Numerous sherds coins, some ironwork and stone head from a monument	King 1893; Read 1895; Laver 1896b; Pollitt 1935, 58; Toller 1980; Pollitt 1935, 58–59	Southend and Colchester Mus.
	33	Shoebury, brickfields		Burials	VCH 1963	Colchester Mus.
Thundersley	34	Pounds Wood	TQ 819889(A)	Cropmark of possible villa and surface finds	Drury, Rodwell and Wickenden 1982	
Saxon						
Ashingdon	1	Churchyard, find from grave digging	TQ 868937(E)	Silver penny of Canute	Pollitt 1935, 62	Southend Mus.
Barling Magna	2	Baldwins Farm Gravel Pit	TQ 937896(A)	Sunken floored building with ?5th century pottery	Couchman 1977b	Southend Mus.
Great Wakering	3	Brickfields	TQ 944881(G)	Saxon bone combs, pin needle and bone pommel. Two iron knives with bone hafts, strap end. Loomweights. *Sceata.*	Pollitt 1935, 61–2; Tyler 1987	
	4	Vicarage Garden	TQ 949875(E)	Spindle whorl	Huggins 1975	

Parish		Site	Grid	Description	Reference	Whereabouts
Hockley	5	Plumberow Mount	TQ 840939(E)	Possible Saxon pottery from excavation of barrow	Pollitt 1935, 56	Lost
Paglesham	6	South Hall Farm	TQ 920858(E)	Great square headed brooch	Pollitt 1935, 61; Helliwell 1971, 16	Southend Mus.
Southend	7	Leigh West St.	TQ 842854(E)	Burial associated with coins of Plegimund and Alfred	Pollitt 1935, 37; Pollitt 1957, 42	Some finds lost, others in Southend and Colchester Mus.
	8	Prittlewell, Priory Crescent	TQ 878813(A)	Cemetery	Pollitt 1923; Tyler 1988	Southend Mus.
	9	Prittlewell, Temple Farm	TQ 880883(A)	Sunken floored building with part of a glass cone beaker, fragment of crucible used for melting glass and 5th/6th century-pottery	Brown & Arscott 1986	Southend Mus.
	10	Prittlewell, north side of Priory St.	TQ 878875(E)	Lobe of foot of square headed brooch	Pollitt 1935, 61	Southend Mus.
	11	Prittlewell, St. Marys Church	TQ 878868(A)	Arch in chancel	Rodwell & Rodwell 1977, 22	
	12	Prittlewell, junction St. Mary's Rd and North St.	TQ 877868(E)	Loomweight	Pollitt 1935, 61	Southend Mus.
	13	Prittlewell, sewage works	TQ 875879(E)	Two loomweights	Pollitt 1935, 97	Southend Mus.
	14	Prittlewell railway cutting	TQ 878873(G)	Spearhead, possibly from cemetery	Pollitt 1935, 61	Southend Mus.
	15	Southchurch, Thorpe Hall Brickfield	TQ 920858(E)	*Sceatta* with burial	Pollitt 1935, 61; Helliwell 1976, 16	Southend Mus.
Stambridge	16	Hampton Barns	TQ 899916(E)	Early Saxon pottery	Pollitt 1935, 61	Southend Mus.
Thundersley	17	Dawes Heath	TQ 810890(G)	Iron spear and knife point	Pollitt 1935, 61	Southend Mus.

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Placenames refer to Essex unless otherwise stated. Other county names are abbreviated as follows: (C)=Cambridgeshire; (N)=Norfolk; (S)=Suffolk

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