EAST ANGLIAN ARCHAEOLOGY

Frontispiece
Aerial photograph of the Middle Bronze Age cemetery following removal of topsoil
(*Essex County Council*)

An Early Neolithic Ring-ditch and Middle Bronze Age Cemetery: excavation and survey at Brightlingsea, Essex

by C.P. Clarke and N.J. Lavender

with contributions by
Peter Berridge, Nigel Brown, Matthew Canti, A.N. Garland, Robin Holgate, Hazel Martingell, Peter Murphy and Patricia E.J. Wiltshire

and illustrations by
Roger Massey-Ryan, Hazel Martingell, Sue Holden, Stuart McNeil and Nick Nethercoat

East Anglian Archaeology
Report No. 126, 2008

Historic Environment
Essex County Council

EAST ANGLIAN ARCHAEOLOGY
REPORT NO. 126

Published by
Essex County Council
Historic Environment
Environment and Commerce
County Hall
Chelmsford CM1 1QH

in conjunction with
ALGAO East
http://www.algao.org.uk/cttees/Regions

Editor: Owen Bedwin
EAA Managing Editor: Jenny Glazebrook

Set in Times Roman by Jenny Glazebrook using Corel Ventura ™
Printed by Henry Ling Limited, The Dorset Press

ISBN 978 1841940717

This volume was published with the aid of funding from English Heritage

East Anglian Archaeology was established in 1975 by the Scole Committee for Archaeology in East Anglia. The scope of the series expanded to include all six eastern counties and responsibility for publication passed in 2002 to the Association of Local Government Archaeological Officers, East of England (ALGAO East).

For details of *East Anglian Archaeology*, see last page

Cover illustration
Urns from the Bronze Age cemetery

Contents

List of Figures vi
List of Tables vi
Contributors vi
Acknowledgements vii
Summary/Résumé/Zusammenfassung vii

Part 1. Introduction
I. Background 1
II. The wider archaeological setting 1
III. Geology and topography 1

Part 2. Excavation
I. The Neolithic ring-ditch site 5
Summary 5
Neolithic 5
Middle Bronze Age 10
Early Saxon 10
II. The watching brief 10
III. The Middle Bronze Age cremation cemetery 10
Summary 10
The ring-ditches 10
Cremation burials 10
Other features 15
IV. Radiocarbon dates 18

Part 3. The Brightlingsea Fieldwalking Survey
I. Introduction and background 19
II. Methodology 19
III. Assemblage totals and analysis 19
Burnt flint 19
Struck flint 22
Prehistoric pottery 22
IV. Discussion and conclusions 25

Part 4. The Finds
I. The human cremated remains from the Middle Bronze Age cemetery, by A. N. Garland 27
Summary 27
Methods 27
Results 27
II. Prehistoric pottery, by Nigel Brown 29
Pottery from the Neolithic ring-ditch 29
Catalogue of illustrated material 29
Discussion 34
Manufacture and use 35
Pottery from the watching brief 35
Catalogue of illustrated material 36
Discussion 36
Pottery from the Middle Bronze Age cemetery 36
Cremation urns 36
Catalogue of illustrated material 36
Form and decoration 38
Fabric, manufacture and function 40
Date 43
Other pottery 43
III. Worked flint 43
The flint from the Neolithic ring-ditch, by Peter Berridge 43
Raw material 43
Parent waste 43
Product waste 43
Utilised/retouched 44
Dating 45
Spatial variation 45
Comparison with other sites 45
The flint from the Middle Bronze Age cemetery, by Robin Holgate 46
The flint from the survey, by Hazel Martingell and C.P. Clarke 46
Early flint 48
Late flint 48
Notes on implement classes and illustrated pieces 49
Summary 49

Part 5. Environmental Evidence
I. Pollen analysis (Neolithic ring-ditch), by Patricia Wiltshire 51
II. Geoarchaeological analysis (Neolithic ring-ditch), by Matthew Canti 51
III. Carbonised plant remains, by Peter Murphy 51
The Neolithic ring-ditch 51
The Middle Bronze Age cemetery 51
Introduction 51
The cremations: descriptions 51
Methods 52
The carbonised plant remains 52
Distribution of carbonised plant material 53
Local habitats 53
Crop plants 54
IV. Mollusca 54

Part 6. Discussion
I. Neolithic 55
II. Bronze Age 57
III. Landscape 62

Appendix 1. Middle Bronze Age cemetery ring-ditch dimensions 64

Bibliography 65
Index, by Peter Gunn 68

List of Figures

Fig. 1	Location plan	2
Fig. 2	Cropmark plot	3
Fig. 3	Neolithic ring-ditch showing all features and the location of illustrated sections	6
Fig. 4	Neolithic ring-ditch phase plans	7
Fig. 5	Neolithic ring-ditch selected sections	9
Fig. 6	Middle Bronze Age cemetery plan, showing all features	11
Fig. 7	Middle Bronze Age cemetery: selected ring-ditch sections	12
Fig. 8	Middle Bronze Age cemetery, showing cremations by type and orientation	13
Fig. 9	Middle Bronze Age cemetery: inverted cremations, plans and sections	14
Fig. 10	Middle Bronze Age cemetery: upright cremations, plans and sections	16
Fig. 11	Middle Bronze Age cemetery: cremation group G5000 plan and sections	17
Fig. 12	Middle Bronze Age cemetery: unurned cremations, plans and sections	18
Fig. 13	Survey area and land use	20
Fig. 14	Distribution of burnt flint	21
Fig. 15	Distribution of early flint	23
Fig. 16	Distribution of late flint	24
Fig. 17	Neolithic pottery, 1–15	31
Fig. 18	Neolithic pottery, 16–34	32
Fig. 19	Neolithic pottery, 35–57	33
Fig. 20	Neolithic pottery, 58–63	34
Fig. 21	Grooved Ware from the watching brief	35
Fig. 22	Middle Bronze Age pottery, 1–5	37
Fig. 23	Middle Bronze Age pottery, 6–13	39
Fig. 24	Middle Bronze Age pottery, 14–19	40
Fig. 25	Middle Bronze Age pottery, 20–28	41
Fig. 26	Middle Bronze Age pottery, 29–32	42
Fig. 27	Mesolithic and Neolithic flint	47
Fig. 28	Prehistoric sites mentioned in the text	56
Fig. 29	Middle Bronze Age cemetery ring-ditch phase plan	58
Fig. 30	Comparative Middle Bronze Age cemetery plans	60

List of Tables

Table 1	Radiocarbon dates	18
Table 2	Fieldwalking survey. Finds assemblage totals	19
Table 3	Distribution of cremation weights from the Middle Bronze Age cemetery	27
Table 4	Recognisable bone found in each cremation	27
Table 5	Summary of total weights, age and sex determination of the remains	28
Table 6	Prehistoric pottery fabrics	29
Table 7	Rim forms	30
Table 8	Vessel forms	30
Table 9	Pottery from the watching brief: fabrics	36
Table 10	Categorisation of worked flint from the Neolithic ring-ditch excavation	44
Table 11	Parent waste from the Neolithic ring-ditch excavation	44
Table 12	Product waste from the Neolithic ring-ditch excavation	44
Table 13	Waste flake measurements from the Neolithic ring-ditch excavation	44
Table 14	Waste flake measurements compared with Tye Field, Lawford	44
Table 15	Struck flint assemblage from the survey	46
Table 16	Flint concentrations C1–C3 by type from the survey	47
Table 17	Flint concentrations C1–C3 by manufacture class, from the survey	47
Table 18	Pieces comprising EFC 1–2, from the survey	48
Table 19	Parent waste, product waste, retouched, implement and manufacture class categorisation (non-grid)	49
Table 20	Summary of carbonised plant remains from cremation samples	52
Table 21	Distribution of carbonised macrofossils between samples from different context-types	53

Contributors

Peter Berridge
Colchester Museum Resource Centre, Ryegate Road, Colchester, Essex CO1 1YG

Nigel Brown
Historic Environment Branch, Essex County Council, County Hall, Chelmsford CM1 1LF

Matthew Canti
Centre for Archaeology, English Heritage, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth P04 9LD

C.P. Clarke
Flat 5, 10 West Allington, Bridport, Dorset DT6 5BG

A.N. Garland
No address known

Dr Robin Holgate
Wardown Park Museum, Wardown Park, Luton LU2 7HA

N.J. Lavender
Independent Consultant, 12 Chatley Road, Great Leighs, Chelmsford, Essex

Hazel Martingell
Independent Consultant, 27 Sandwich Close, Braintree, Essex

Peter Murphy
English Heritage, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth PO4 9LD

Patricia Wiltshire
University College London, Institute of Archaeology, 31–34 Gordon Square, London WC1H 0PY

Acknowledgements

Fieldwork and post-excavation were funded by English Heritage, with support from Alresford Sand and Ballast Co. Ltd and Essex County Council. The 1989–90 excavations were directed by C.P. Clarke and supervised by S. Godbold and N.J. Lavender. The excavation team comprised M. Edgeworth, P. Ellison, C. Flood, C. Gathercole, A. Wade, M. Wane, J. Reed, M. Staddon, K. Twisk and S. Wallis. The laboratory excavation of the vessels was conducted by K. Bell, P. Benson, M. Cave, H. Ferguson, J. Girling, M. Halliwell, P. Nirmaier, B. Oppenheim-Yeo, K. Svenson-Taylor, J. Swannel, P. Van der Meulen and P. Williams, under the supervision of B. Ibbs.

The 1994–95 excavations were directed by N.J. Lavender and the excavation team consisted of L. Bashford, R. Clarke, R. Cleal, J. Cowley, A. Daykin, M. Edwards, D. Gadd, S. Gale, E. Heppell, M. Ingram, A.R. James, H. Jurgielewicz, I. McGregor, W. Muncaster, D. Platt and D.G. Smith.

The authors are grateful to N. Brown for his advice and support throughout the project.

Bridget Ibbs would like to thank D. Stubbs, then the EH contract conservator for the area, for involving the Ancient Monuments Laboratory (AML) and Institute of Archaeology in the project, and G. Edwards, of the AML, for valuable advice on the lifting and excavation of the urns.

Illustrations were prepared for publication by R. Massey-Ryan, S. Holden, H. Martingell, S. McNeil and N. Nethercoat.

Phil Clarke is grateful to the members of the fieldwalking team, M. Atkinson, D. Letch and K. Reidy for their unstinting help and enthusiasm throughout. M. Atkinson and K. Reidy undertook most of the finds processing and initial data input. I am grateful to the finds specialists who identified and described the artefacts. H. Major, H. Walker, N. Brown and E. Biddulph kindly reported on the pottery and other finds from the survey. I am particularly grateful to R. Holgate and H. Martingell, who found the time to look at the flint over the last ten years, and for H. Martingell's contribution to the survey lithics report.

Summary

The excavation of a sub-circular cropmark feature overlooking the Colne estuary to the north-west of Brightlingsea revealed a sequence of recutting indicative of a protracted programme of maintenance during the Early Neolithic period. A concentric inner ring-ditch was either earlier than or contemporary with the digging of the outer ditch, but had gone out of use before the abandonment of the site. The remains of a cremation burial and a series of deliberate deposits of flint artefacts and Mildenhall-style pottery indicate the date and ceremonial nature of the monument.

Four hundred metres to the south-east lay a Middle Bronze Age cremation cemetery comprising at least thirty-one ring-ditches and forty-eight burials. The burials were found to be distributed mostly between the ring-ditches, although a few were inside. It is suggested that this spatial pattern reflects the chronological development of the cemetery. Comparisons are drawn with the funerary complex at Ardleigh and other sites in the region.

Data collected during survey by fieldwalking within a 580ha area around the excavated sites is presented and discussed. The burnt flint spreads differ in character from one another with a string of very densely nucleated scatters between 5m and 10m OD interpreted as ploughed-out burnt flint mounds. Lithics concentrations almost certainly represent sites disturbed by ploughing. There is a long swathe of multi-period occupational remains on the southern crest of the peninsula's 20m plateau.

Résumé

La mise à jour d'un repère de culture sous-circulaire surplombant l'estuaire Colne au nord-ouest de Brightlingsea a permis de révéler qu'au début de la période néolithique, on a creusé une nouvelle tranchée destinée à l'entretien durable de l'endroit. Un fossé circulaire intérieur de forme concentrique est antérieur ou date de la même période que le creusement du fossé extérieur, mais il est devenu hors d'usage avant l'abandon du site. Les restes d'une tombe à crémation et un ensemble de dépôts intentionnels d'artefacts en silex et de poterie de style Mildenhall indiquent la date et la nature cérémonielle du monument.

A quatre cents mètres au sud-est s'étend un cimetière de crémations datant du milieu de l'âge du bronze et comprenant au moins trente-et-un fossés circulaires et quarante-huit tombes. La plupart des tombes se trouvaient entre les fossés circulaires, certaines étant toutefois à l'intérieur. Il semble que cette disposition spatiale reflète le développement chronologique du cimetière. Il est possible d'établir des comparaisons avec le complexe funéraire d'Ardleigh et d'autres sites de la région.

Au cours du relevé, des recherches ont été effectuées sur une zone de 580 ha autour des sites fouillés et les résultats obtenus sont présentés et font l'objet de débats. Les différents silex brûlés qui sont éparpillés sont de nature différente. On a ainsi trouvé un chapelet de fragments très nucléés situés à 5 à 10 mètres au-dessus du niveau de la mer. Ces éléments sont considérés comme des monticules de silex brûlés qui sont remontés à la surface à la suite des labours. Les concentrations lithiques corrrespondent certainement à des sites qui ont été perturbés par le labourage. On trouve également une longue bande de vestiges d'occupation correspondant à différentes périodes sur l'arête sud du plateau de 20m de la péninsule.

(Traduction: Didier Don)

Zusammenfassung

Die Ausgrabung eines fast kreisrunden Bewuchsmerkmals oberhalb der Colne-Mündung nordwestlich von Brightlingsea förderte eine Sequenz von Grabenerneuerungen zutage, die auf ein ausgedehntes Instandhaltungsprogramm im Altneolithikum hindeutet. Ein konzentrischer innerer Kreisgraben, der entweder älter oder zeitgleich mit der Aushebung des äußeren Grabens war, blieb noch vor Aufgabe der Stätte ungenutzt. Die Reste eines Brandgrabs und mehrere intentionelle Niederlegungen von Feuersteinartefakten und Keramikgegenständen im Mildenhall-Stil geben Hinweise auf das Datum und den rituellen Charakter des Monuments.

Vierhundert Meter im Südosten davon lag ein Brandgräberfeld aus der mittleren Bronzezeit, das mindestens 31 Kreisgräben und 48 Grabstätten enthielt. Die Grabstätten waren größtenteils zwischen den Kreisgräben angesiedelt, obwohl einige auch in ihrem Inneren lagen. Es wird angenommen, dass die räumliche Verteilung die zeitliche Entwicklung des Gräberfeldes widerspiegelt. Die Befunde werden mit dem Grabkomplex von Ardleigh und anderen Stätten der Region verglichen.
Die bei der archäologischen Begehung eines 580 Hektar großen Gebiets rund um die Ausgrabungsstätten gesammelten Daten werden vorgestellt und diskutiert. Die Streuungen gebrannter Feuersteine waren ihrem Wesen nach sehr unterschiedlich, wobei eine Reihe extrem dichter Ansammlungen zwischen 5 und 10 Metern ü. NHN als herausgepflügte Steinhaufen gedeutet wurden. Solche Steinkonzentrationen stellen fast immer Orte dar, die durch Pflugarbeiten gestört wurden. Auf der südlichen Kammlinie des 20 Meter hohen Plateaus der Halbinsel fand sich ein langgezogenes Landstück mit Siedlungsresten aus mehreren Perioden.

(Übersetzung: Gerlinde Krug)

Part 1. Introduction

I. Background
(Fig. 1)

Moverons Farm lies on the Brightlingsea Peninsula, to the north-west of Brightlingsea and *c.*9km south-east of Colchester (NGR TM 0716 1825). It is bounded to the west by the river Colne and to the north by Alresford Creek.

The excavations and survey were undertaken in advance of and during gravel extraction and were carried out by Essex County Council Field Archaeology Unit. English Heritage generously funded the excavations, fieldwalking survey and post excavation work. The ring-ditch group in the north-eastern part of Ford Field was excavated in 1989/90; the field survey took place in the autumn and winter of 1990–91 as a MAP1 survey proposal in the context of an extensively quarried prehistoric landscape threatened by further mineral extraction. The Neolithic ring-ditch in the western part of Ford Field was excavated in 1994/95.

II. The wider archaeological setting

The Moverons Farm cropmark complex was identified from aerial photographs in 1976 (Fig. 2). These photographs showed a tightly grouped set of small ring-ditches in the north-eastern part of the field, and a solitary ring-ditch, some 20m in diameter, 400m away towards the north-western boundary. Between these features were a number of ditches indicative of field systems. Further cropmarks, which lay in fields beyond The Link and Long Plantation to the east, have subsequently been subjected to archaeological evaluation (Clarke 1996). Cropmarks to the south-west of the cemetery and to the west of the plantation known as The Belt had already been lost to quarrying.

Other cropmark complexes lie in the vicinity, including a long barrow or mortuary enclosure beside Alresford Creek *c.*1 km to the north-east (Figs 1, 14–16; Buckley *et al.* 1988) and a second cluster of approximately fifteen small ring-ditches *c.*600m to the south-east. A third group of ring-ditches lies *c.*2.5km to the north-east, off the peninsula near Greatmarsh Farm, Thorrington, roughly 100m north of a solitary concentric ring-ditch. A small group of ring-ditches of similar size to the north of Alresford Creek, at Broomfield Plantation, proved upon excavation to be post-Roman (Bedwin 1986). In addition to a number of linear cropmarks and enclosures of unknown date, there are known to be approximately thirty further ring-ditches scattered throughout the immediate vicinity of Brightlingsea.

A programme of mineral extraction has been carried out at Moverons Farm by Alresford Sand and Ballast Co. Ltd since the 1950s. As quarrying advanced, watching briefs were conducted in the fields between the Bronze Age ring ditch complex and the coast (Eddy 1980); these located prehistoric material, but no features. Grog-tempered (probably Late Iron Age) and quartz-tempered pottery were recovered in this area, and two scrapers came from topsoil over the larger ring-ditch near The Belt.

A pit containing Grooved Ware was recorded during a watching brief in 1993 in the area between the cemetery and the ring-ditch (watching brief, below; Part 2, Section II).

A subsequent evaluation (Clarke 1996) to the east of Long Plantation and The Link recorded an Early Bronze Age pit (pit 244, the first evidence for Early Bronze Age activity), Middle to Late Bronze Age and Late Iron Age enclosures, and evidence for Middle Iron Age, Roman and early Saxon activity. The diversity of the nature and date of the elements of the cropmark complex illustrates the attractiveness of the location.

III. Geology and topography

The Moverons Farm quarry is situated to the north-west of Brightlingsea town. The excavated sites, now quarried out, lie towards the northern edge of the Brightlingsea Peninsula overlooking the Colne estuary from a height of *c.*22 m OD. The peninsula is bounded to the north by Alresford Creek and to the south by Brightlingsea Creek (Fig. 1), with a very low-lying neck of land in between, on which there is at least one red hill. It is possible that at some time in the past this neck was submerged, and that the peninsula was an island, forming a mirror image of Mersea Island across the Colne. The ground slopes away steeply to the former marshland of the alluvial plain bounding the Colne 1km to the west and south-west.

The surface geology of the peninsula consists primarily of sand and gravel. The surface of the sand is often uneven, probably as the result of periglacial action, and a number of depressions, often extensive, are filled with brickearth, in which archaeological features are sometimes hard to discern. As a large part of the excavated areas comprised brickearth, some features (in particular ring-ditch 1087) did not become apparent until comparatively late in the fieldwork. Other features, which were indicated by aerial photographs, could not be located in the surface of the subsoil.

The site offers access to cultivable light soils on the higher ground and saltmarsh by the estuary. The river also provides salt-water resources and potential maritime communication, while the creeks flowing into it and the local springs would have provided fresh water.

It was noted that the topsoil is of a very light, sandy nature and is very prone to erosion by the strong winds that blow off the estuary during the colder months. This has implications for the depths of deposits recorded during the excavations, as a great deal of erosion has almost certainly occurred since the use of the monuments.

Prior to the excavations the site had a history of arable cultivation, predominantly of root vegetables, and the topsoil was, on average, 0.5m thick. Several recent plantations of sweet chestnut, scots pine and eucalyptus exist in the area, particularly to the west (The Belt) and the east (Long Plantation and The Link) of the excavated

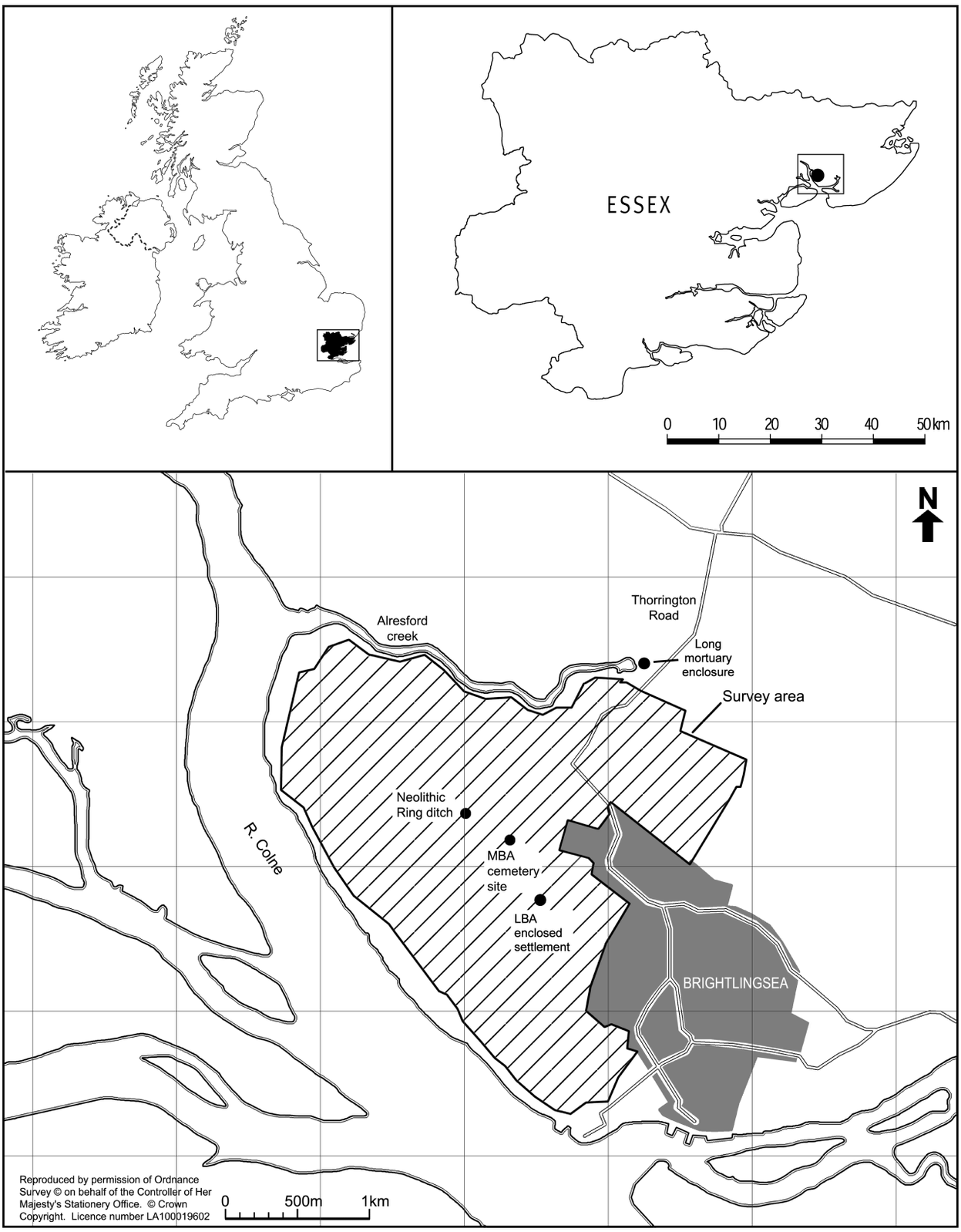

Figure 1 Location plan

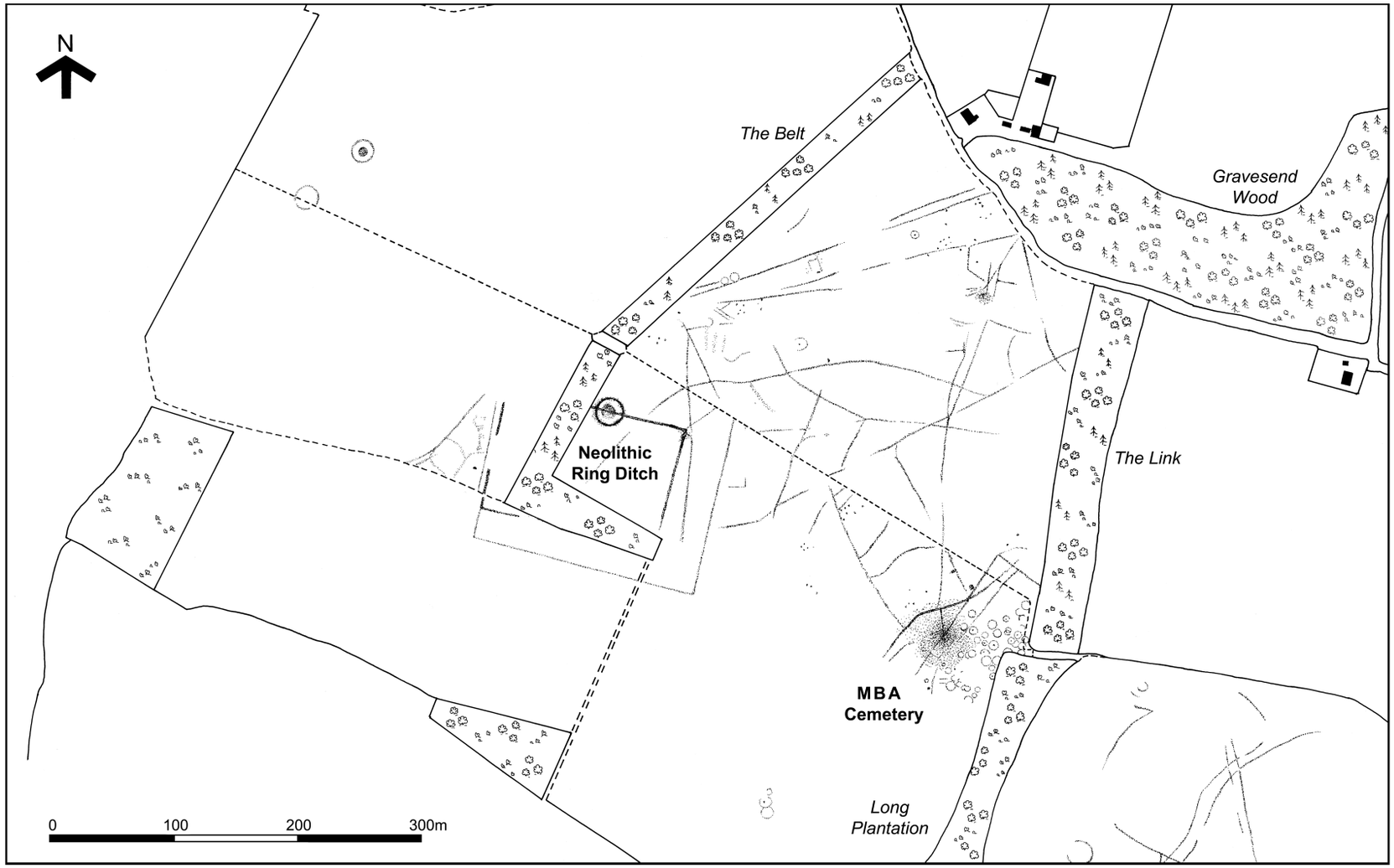

Figure 2 Cropmark plot

areas. The aerial photographic evidence suggests that the Middle Bronze Age cemetery extended beneath both Long Plantation and The Link.

The survey area (Figs 1 and 13) comprises the western half of the Brightlingsea Peninsula, which forms a level plateau at 20–22m OD with long south-facing slopes to the Colne estuary in the south and west and a steeper slope down to Alresford Creek in the north-west. A spring line runs along the southern edge of the plateau, below the 20m contour.

Some 269ha within a survey area of about 500ha were fieldwalked, the remaining area being quarried, wooded or otherwise inaccessible for survey purposes (see Fig. 13). Saltmarsh is present in the lowest parts of much of the survey area from sea level to the 5m contour, being much more extensive in the southern and western parts of the survey area until its conversion to grazing marsh and subsequently, in the early 1970s, to arable. The numbers of finds from these areas of former saltmarsh are very much lower than elsewhere, although an extensive group of medieval pottery was found on the edge of the estuary (centred on TQ 606531 218141). In addition, a spit of partially quarried higher ground on the western edge of the estuary does contain a sizeable Roman site.

The trend of rising sea levels since the last glaciation has progressively reduced the size of the Brightlingsea Peninsula, submerging any sites close to earlier water edges; it is likely that the mean sea level would have been some 4m below that of the present day (Wilkinson and Murphy 1995). It is taken as given that alluvium and saltmarsh deposits mask prehistoric finds in these low areas, and likely that prehistoric remains extend into the inter-tidal zone, which was extensively sampled by Wilkinson and Murphy (1995).

Part 2. Excavation

I. The Neolithic ring-ditch site

Summary
During December 1994 and January 1995 a field evaluation was carried out to establish the date and nature of the single ring-ditch (Figs 1, 2 and 3). The results of this evaluation were expected to be instrumental in determining the form of further archaeological intervention prior to the destruction of the site by the advance of quarrying.

Topsoil was stripped from an area 60m by 35m using a 360° tracked excavator with a toothless ditching bucket. The ring-ditch, which lay approximately centrally within this area (Fig. 3), was shown by subsequent hand-cleaning and planning to be a sub-circular enclosure measuring 21m by 26.5m externally. It contained an area of disturbed activity, the edges of which could be recognised as roughly concentric to the main feature. The ring-ditch was bisected by a ditch (13) that appeared to be the latest feature (other than those which were clearly modern) within the cleaned area.

Three segments were excavated through the enclosure ditch at this stage. Sufficient information was recovered to indicate a ditch over 2m deep which had been recut on several occasions during the Early Neolithic period. In its original form it was probably of segmented construction with an east-facing entrance causeway. This causeway had not been visible on the surface, as the latest recuts did not respect it.

Following the evaluation it was decided that excavation of the ring-ditch should be continued, and that a minimum of 50% of the circuit should be examined. English Heritage funding was sought and obtained and excavation recommenced in March 1995. The strategy adopted was to excavate fully the upper fills in order to identify any further causeways through the earlier phases of the monument. Temporary sections through these later recuts were drawn and later conflated with the nearest section drawn through the lower recuts. This approach was also useful with regard to the safety aspects of excavating a ditch nearly 2m deep.

Because these excavations through the main ditch cut through several recuts of the ditch, they have been designated 'box-sections' to distinguish them from 'segments' cut through distinct, single-phase ditches.

In some box-sections, notably 76, soil conditions were such that very little of the stratigraphic sequence could be recognised. While layers and cuts have been identified in these box-sections, their relation to the sequence in the better examples is insufficiently clear, so they have not been used in the stratigraphic description or the discussion.

The internal features comprised a large and very disturbed area of greyish silty sand. A sondage through this showed it to be badly damaged by animal burrows, shown by dashed lines on Figs. 3 and 4. In an attempt to understand the surviving archaeological features and distinguish them from the animal burrows, the interior was excavated in 1m squares set in a chessboard pattern. All other features were excavated either in segments if linear, or by half-sectioning if discrete.

Neolithic
The Neolithic component of the site (Figs 3–5) consisted primarily of two concentric ring-ditches. Several pits outside the outer ditch contained small amounts of flint and rather abraded pottery, and may have been of Neolithic origin, although the pottery recovered from one pit (427), 15m south of the outer ring, was identified as Middle Bronze Age.

The earliest identifiable activity comprised the creation of the two concentric ring-ditches. The outer ditch was oval, with its long axis orientated north–south, and measured *c.*21m by 26m. A causeway, *c.*0.5m wide at the time of excavation, but probably originally wider, had been left through the ditch to the north-east. The base of the ditch was identified in all twelve of the box-sections. Additionally, the sides of the original ditch generally survived to some extent; for example, in box-sections 24 and 695 they were visible to a maximum height of 0.4 to 0.5m from the base of the ditch. In many cases it was also clear that subsequent recuts had respected the steep, often near-vertical sides. Thus the profile of this first cut could be discerned to a height of 1.2m in box-section 24, and up to a metre in several others, although the tendency of the latest recuts to be much wider and shallower has destroyed the upper profile in most cases. It is, however, likely that the upper edges of the ditch, dug through relatively loose sand, began to erode into a funnel-shaped profile at a very early stage.

The depth of the ditch varied between 1.9m (box-section 295) and 2.3m (box-section 253) below the modern ground surface. The location of the deepest and shallowest parts is of interest. The ditch was at its deepest at the causeways, and directly opposite (box-sections 24, 229 and 253), and at its most shallow in box-sections 515 and 295, both of which lay midway between the deepest points, and directly opposite each other. This was evidently deliberate; the causeway and opposing deep section of Phase I (Fig. 4) appear to be approximately aligned on the midsummer sunrise.

Given that erosion of the light sandy soils has almost certainly occurred in this exposed, very windy location during the last 5,000 years, it seems probable that the ditch was originally substantially deeper.

At its base, the original ditch was of variable breadth. In some sections it was as narrow as 0.6m (*e.g.* in box-section 76), while in others it was over twice as wide. Extrapolation of the edges suggests that the maximum width at the modern ground level would have been 2.5m but in places probably as little as 2m. The ditch would have been very deep, narrow and steep-sided.

The irregularity of the base of the ditch (its quite sudden changes in depth and width) suggests that it may have been segmented in its original construction. There is no evidence, however, to show that it was left as a series of individual pits, and it seems likely that, if it was

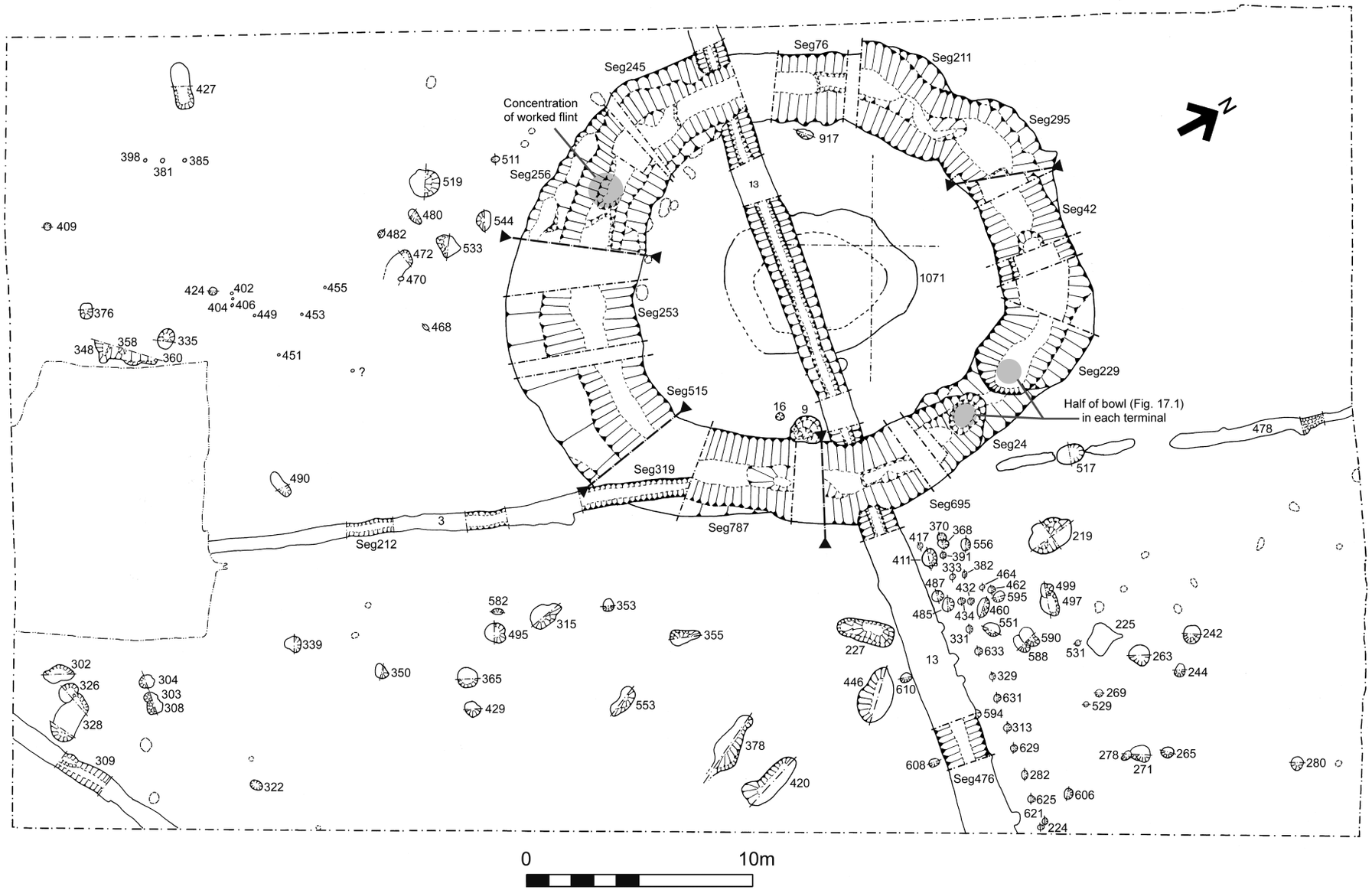

Figure 3 Neolithic ring-ditch showing all features and the location of illustrated sections

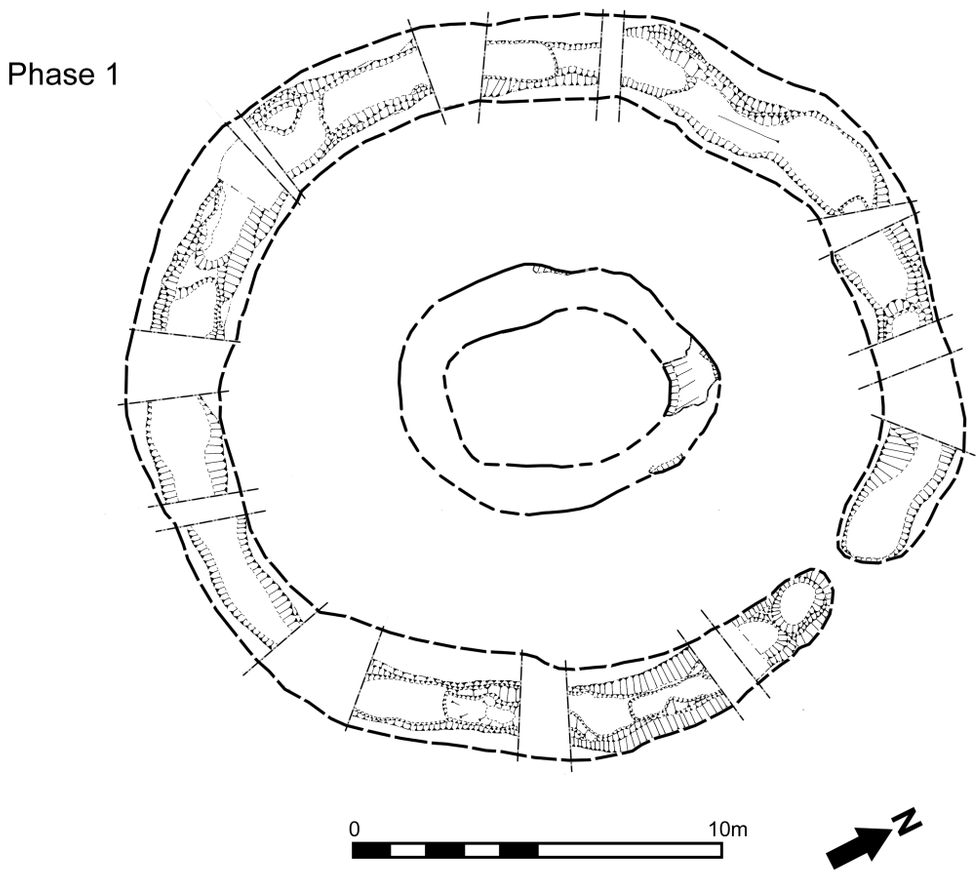

Figure 4 Neolithic ring-ditch phase plans

segmented, the intervening baulks were knocked through before any silting had occurred.

The first episode of recutting (examples in Fig. 5) occurred after the accumulation of at least 1m of silting in the base of the ditch, and was identified in all box-sections. Again, the depth was variable, being between 1.8m and, in box-sections 787 and 245, 2.2m below the modern ground surface. It was apparent that the lower part of this cut respected the sides of the original, preserving the steep angle. This recut was as deep as the original ditch. The width could not be ascertained because the recut almost invariably had one or other of its sides completely truncated by subsequent recuts, but in those sections where an upper side was recorded, there is a suggestion of breadth in excess of 3m, and a funnel-shaped profile. Whether this was deliberate or the result of erosion is impossible to say. The base was sometimes V-shaped (*e.g.* in box-section 245), varying from the broad and gentle to the very sharp, and sometimes bowl-shaped or flat.

The second recut was visible in all box-sections except 42 and 76. The depth varied between 1.60m and 2.10m from the modern ground surface. The base was concave, sometimes with a sharp V-shaped profile, but generally rounded. The sides were steep, and, again, appear to have followed those of the first cut in their lower parts, but they were at a shallower angle towards the top, where subsequent truncation has made it impossible to judge the width of the recut. Again, it is suggested that a surface width of around 3m is probable.

The third recut was visible in all box-sections except 76. The depth varied between 1.56m and 1.94m below the modern ground surface and the base was generally a fairly broad V-shape in profile. The sides appeared to respect the earlier cut, but towards the top in some sections they could be seen to be flaring outwards, which again may have been the result of erosion rather than a deliberate widening. As a result of this, the ditch was (where evidence survived) over 3m wide at the modern ground surface.

The fourth recut was visible in all box-sections except 42. The depth varied between 1.46m and 1.80m below the modern ground surface and the base was a gently sloping broad V-shape in profile. This was the first of the recuts that did not respect the earlier sides towards the base of the profile, and again it flared out towards the top. This recut does not appear to have been as wide as the previous one.

The fifth recut was visible in all box-sections except 76. Its depth varied between 1.10m and 1.72m below the modern ground surface. The profile was a broad V-shape, and no attempt appears to have been made to respect the earlier ditch sides The width at ground level was probably between 2m and 2.5m. In box-section 211, this recut terminated in a rounded butt-end *c.*1.3m from the south-west section. An apparently corresponding recut was identified in the north-east section, but unfortunately no sign of a terminal was observed in plan. It then appeared in two of the three remaining box-sections, not being recorded in 42. This cut was generally rounded in profile, its depth varying between 1.22m and 1.76m from the modern ground surface, and was rather narrower than some of the previous recuts, probably being only 3m wide at ground surface.

The sixth, penultimate, recut was recorded in every box-section. This was shallow and tended to be heavily truncated by the final cut. It was broad in plan, being identified as 3.2m wide in box-section 229, but shallow, being only *c.*1m from the modern ground surface. The profile was irregular, but generally it was a shallow bowl-shape.

It was with the digging of the sixth recut that the original entrance went out of use. By this time the surviving natural at the causeway was only about 0.5m wide, probably as a result of the erosion caused by use and recutting. At ground surface, it may have been even narrower. Instead of leaving a larger amount of earlier fill *in situ* to compensate, a new causeway was created, facing slightly west of due north. The evidence for this new causeway is slight because of truncation by the seventh recut, which had very clearly defined terminals in this new position.

The final, seventh, recut was recorded in every box-section. It varied in depth between 0.55m and 0.92m below the modern ground surface, and had a generally bowl-shaped profile, once again tending to be steeper on the inner edge. The width varied between 1.40m and 2.10m, and as noted above, the causeway was to the north.

The maintenance of the ditch appears to involved steadily diminishing effort. The sequence of identified recuts became gradually shallower with time, the maximum depth of the ditch in its final state being at least a metre less than the original cut. There is evidence for an increase in the quantity of flintwork and pottery deposited within the upper recuts. This could be a product of residuality, however, as the earlier fills were dug out and then silted back into the ditch over the course of several recutting episodes.

Within the outer ditch lay a small, shallow concentric inner ring, 1071. Because of severe damage caused by burrowing animals this was not identified as a ditch during the evaluation, nor properly understood during the excavation. It has had to be reconstructed, therefore, from fragments of its plan and section. It measured 8.5m by 7.5m, and was *c.*1.5m wide and 0.90m deep from modern ground level. In plan it was oval and its orientation was, again, north–south. Within the inner ring there was some evidence for a very irregular central pit or depression. A number of deposits in this central area contained charcoal, soot and possibly ash residues, as well as quantities of broken pottery and struck flint.

This inner ring appears to have fallen out of use and had either been back-filled or allowed to silt up during the life of the outer ring. The fragmentary remains of a cremation burial were discovered in a small pit cutting the inside edge of the inner ring-ditch at its northern end. Only a few tiny fragments of burnt bone were recovered, but the rim of a bowl (apparently placed rim-downwards over the burial) survived well enough to be identified as a remarkable pot similar to an unusual vessel from the outer ditch terminals (Brown, below).

It is conceivable that the inner ring pre-dated, and was replaced by, the outer. Alternatively, they could be coeval, with the inner being abandoned at some undetermined date during the use of the outer.

Outside the ring-ditch (Fig. 3) lay a number of comparatively small features that can probably be assigned a Neolithic date. These comprised pits and post-holes. Many of these were in the south-eastern part of the site, clustering especially around the south side of the original causeway.

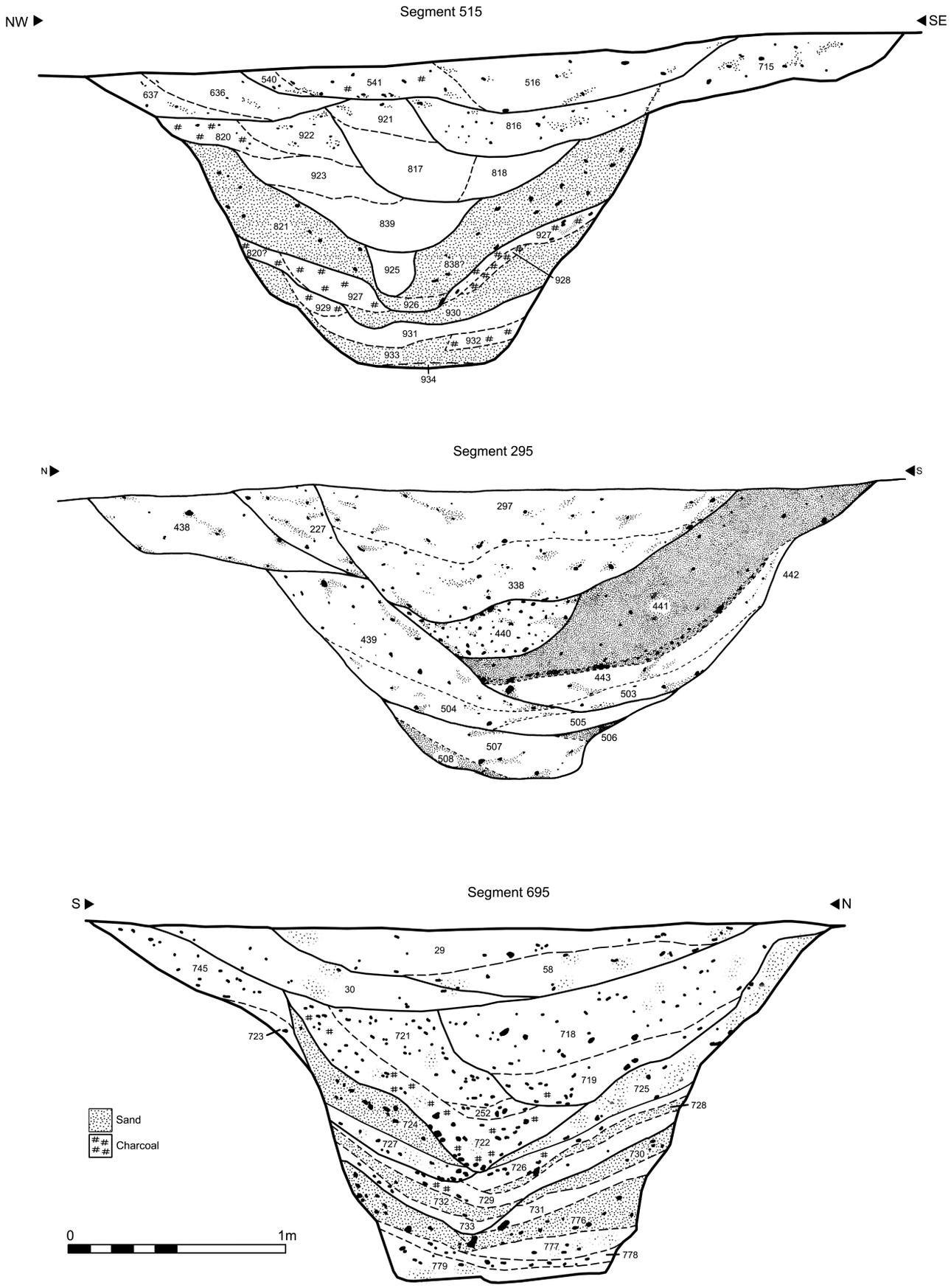

Figure 5 Neolithic ring-ditch selected sections

Middle Bronze Age
An oval pit (427, Fig. 3) in the north-west corner of the site produced a small quantity of Middle Bronze Age pottery. This isolated feature comprises the only evidence for later prehistoric activity in the immediate vicinity of the Neolithic ring-ditch, although it remains possible that other, undated, features may be of the same date.

Early Saxon
A ditch (13, Fig. 3) cutting obliquely across the site and bisecting the ring-ditch contained a few sherds of abraded Roman and Early Saxon pottery. The almost precise bisection of the ring-ditch suggests that it was used as a landmark when laying out boundaries during the Saxon period and that, despite the easily eroded nature of the soil, the monument was still visible at that time. It is possible that ditches 3 and 478 which are undated, but cut the top fills of the ring-ditch and are very nearly at 90° to 13, are also Saxon, although their relationship is not known.

II. The watching brief

A watching brief was maintained in the area between the ring-ditch and the Bronze Age cemetery on an intermittent basis. The only feature recorded was a small pit which produced Grooved Ware. However, the topsoil was stripped by a box-scraper (resulting in an uneven, poorly cleared and ill-defined surface), and not all parts of the area were observed during the watching brief. In particular, the subsoil below the concentration of late flint in the southern part of the field containing the excavated sites was not observed.

III. The Middle Bronze Age cremation cemetery
(Figs 6–12)

Summary
Excavation of the greater part of the ring-ditch group was undertaken between October 1989 and February 1990. The area was bounded to the north by a track running across the field, and to the east by two plantations: The Link and Long Plantation. Five of the ring-ditches lay only partly within the excavated area, being partly beyond the eastern baulk. Further ring-ditches are believed to lie beneath the plantations.

Topsoil was stripped from an area *c.*60m by 100m using a 360º tracked excavator with a toothless ditching bucket. The surface of the natural was then manually cleaned with hoes. The ring-ditches lay within the central and eastern part of the stripped area (Fig. 6). Examination of the aerial photographs, however, indicated that a further ten ring-ditches lay towards the western end of the site (Fig. 2) None of these were visible after topsoil removal, and despite weathering of the site they were never located (see frontispiece) This seems likely to have been the result of the fact that the natural subsoil in this area was composed of brickearth, in which features were completely invisible. A number of features which were identified cutting the brickearth were only visible for a short period as the ground dried out following rain, or through differential thawing after a hard frost, and it is possible that there were features which were not apparent even under these conditions.

A number of cremation burials were also identified at this stage. Eight of the burials lay within the ring-ditches, but most were distributed in groups between them.

In addition to the ring-ditches and cremation burials, other features, including ditches, pits and post-holes, lay within the stripped area. Several of these features had been visible on the aerial photographs.

The excavation policy adopted was to excavate a minimum of one segment through each ring-ditch, to excavate fully all cremation burials and to sample all other ditches, pits and post-holes. Samples for bioarchaeological analysis were taken from most feature fills, many of which were also sampled for radiocarbon dating (Part 2, Section IV).

The ring-ditches
(Fig. 7)
Thirty-one ring-ditches were located within or partly within the excavated area. As stated above, aerial photographic evidence (Fig. 2) indicated that there were more within the area, but these could not be found. One ring-ditch (1040) was fully excavated and a second (1051) was almost completely excavated, leaving only a short length on the western side. The rest were planned on the surface and all had at least one segment dug through them. In plan the ring-ditches tended to vary between almost perfect circles and distinctly ovoid shapes; in profile the ditches were generally U-shaped, although some were of a broad V-shape. The profile sometimes varied quite widely within ditches (*e.g.* 1060, Fig. 7). The fills comprised mainly yellowish-brown silty sands and sandy silts with varying amounts of clay. Summary descriptions of the individual ring-ditches are given in Appendix 1.

None of the excavated fills appeared to result from deliberate backfilling of the ditches, but had accumulated naturally from erosion of the barrow mounds. This is in contrast to the site at Chitts Hill, Colchester, where the barrows appear to have been deliberately levelled to clear the ground for agriculture during the Iron Age (Crummy 1977). At Chitts Hill, this had resulted in burials placed within the body of the mound being redeposited in the ditches. Any burials deposited in comparable positions at Brightlingsea would have been lost to the effects of ploughing and, probably, wind erosion of the light sandy soils.

The ring-ditches varied in external diameter between 4m and 12.05m, with a mean of 7.34m (Appendix 1), and in internal diameter between 2.2m and 7m, with a mean of 4.95m. The surviving depths were between 0.21m and 0.8m, with a mean of 0.45m, and the excavated widths were between 0.5m and 2m, with a mean of 1.16m.

Only three of the ring-ditches, 1047, 1087 and 1140, surrounded cremation burials. These were in the western part of the cemetery, and were among the smallest on site.

Cremation burials
(Fig. 8)
Of the forty-eight (maximum) cremation burials, thirty-four were contained within or covered by urns. Of the urned burials, sixteen were upright, sixteen were inverted, one was on its side and one was too badly damaged for the orientation to be discerned. Eight burials (seven urned, one unurned) were within ring-ditches.

It should be noted that, although urns are described as 'cremation' burial vessels, some produced only very small

Figure 6 Middle Bronze Age cemetery plan, showing all features and location of illustrated sections

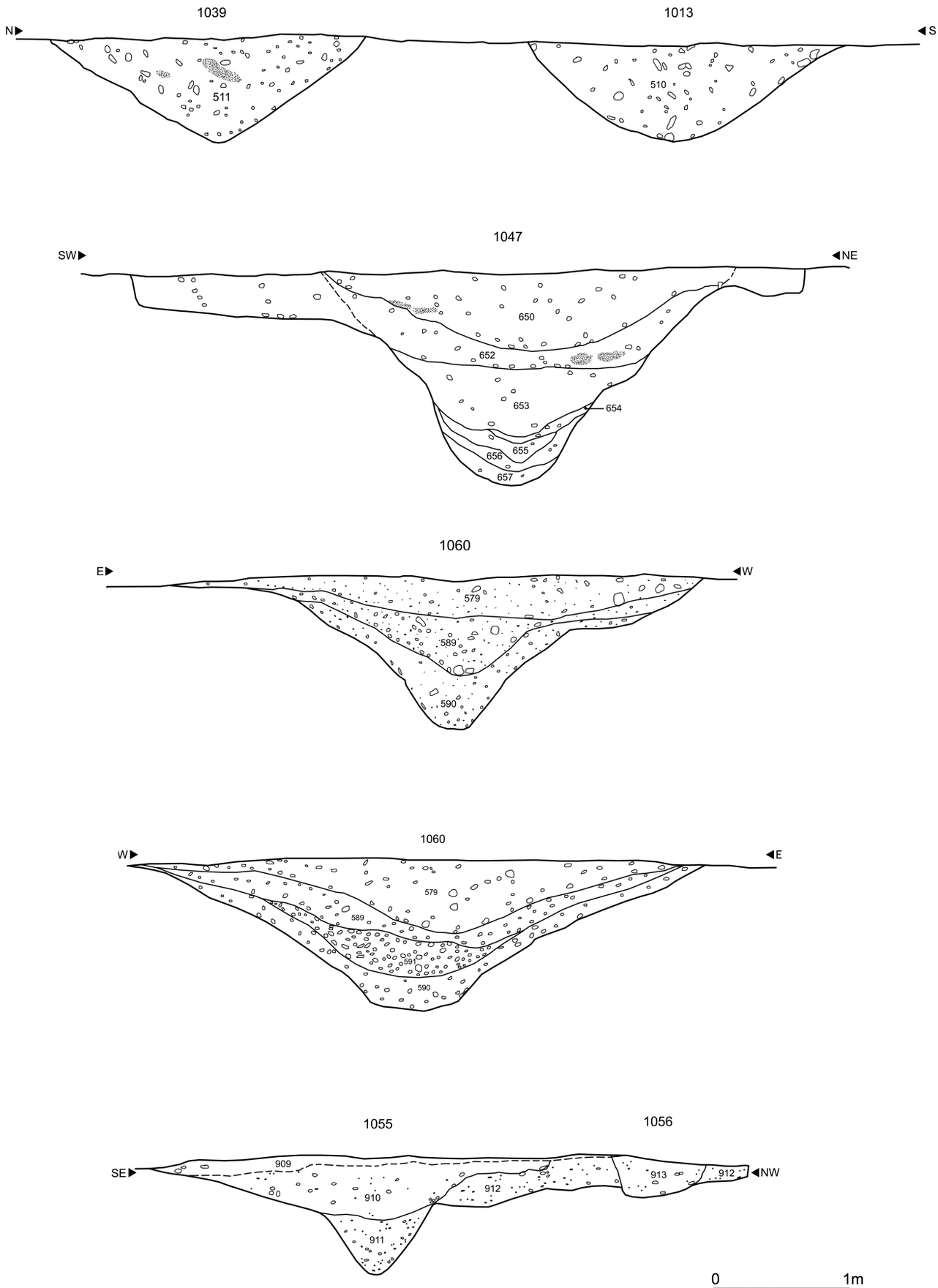

Figure 7 Middle Bronze Age cemetery: selected ring-ditch sections (see Figure 6 for locations)

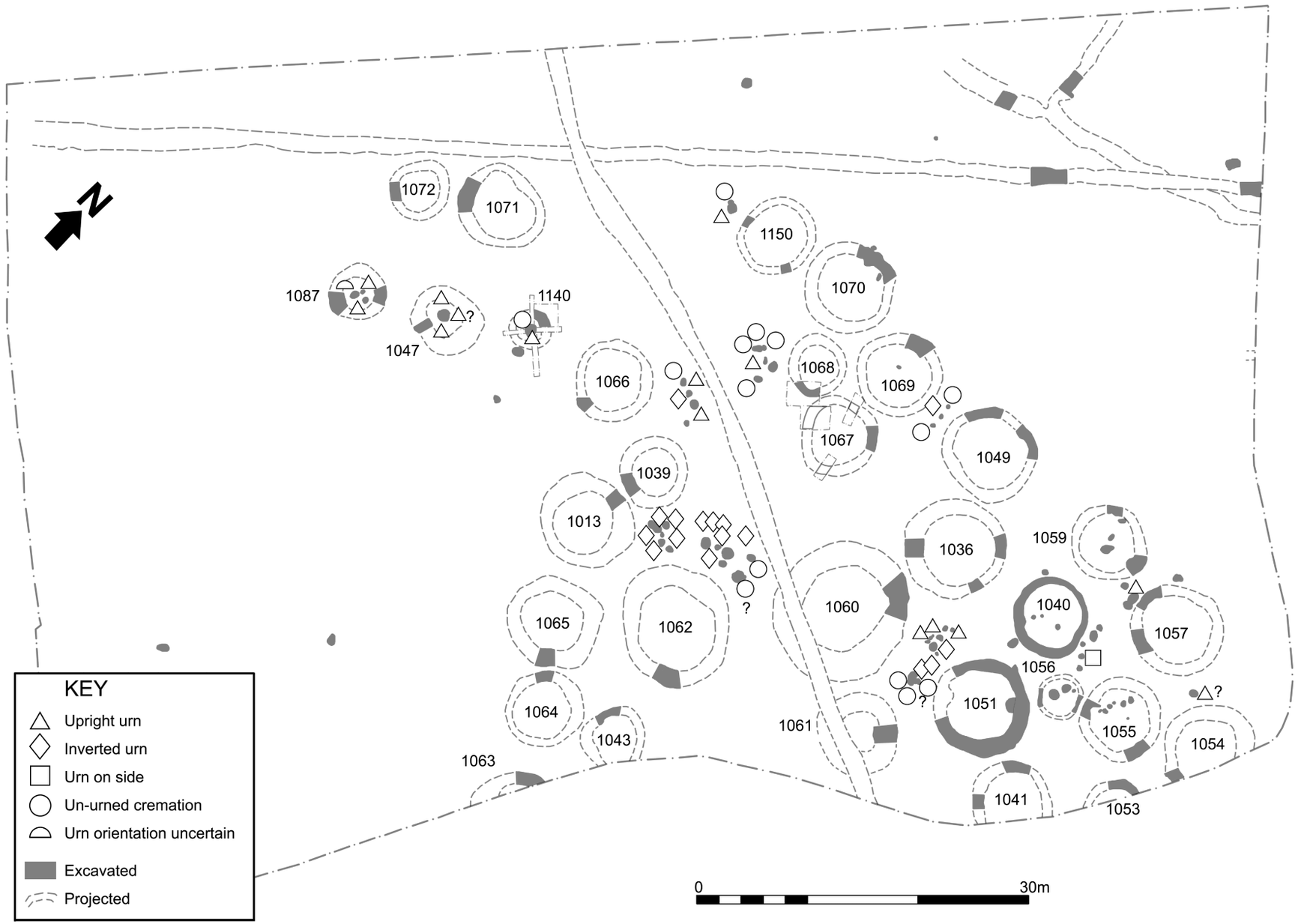

Figure 8 Middle Bronze Age cemetery plan, showing cremations by type and orientation

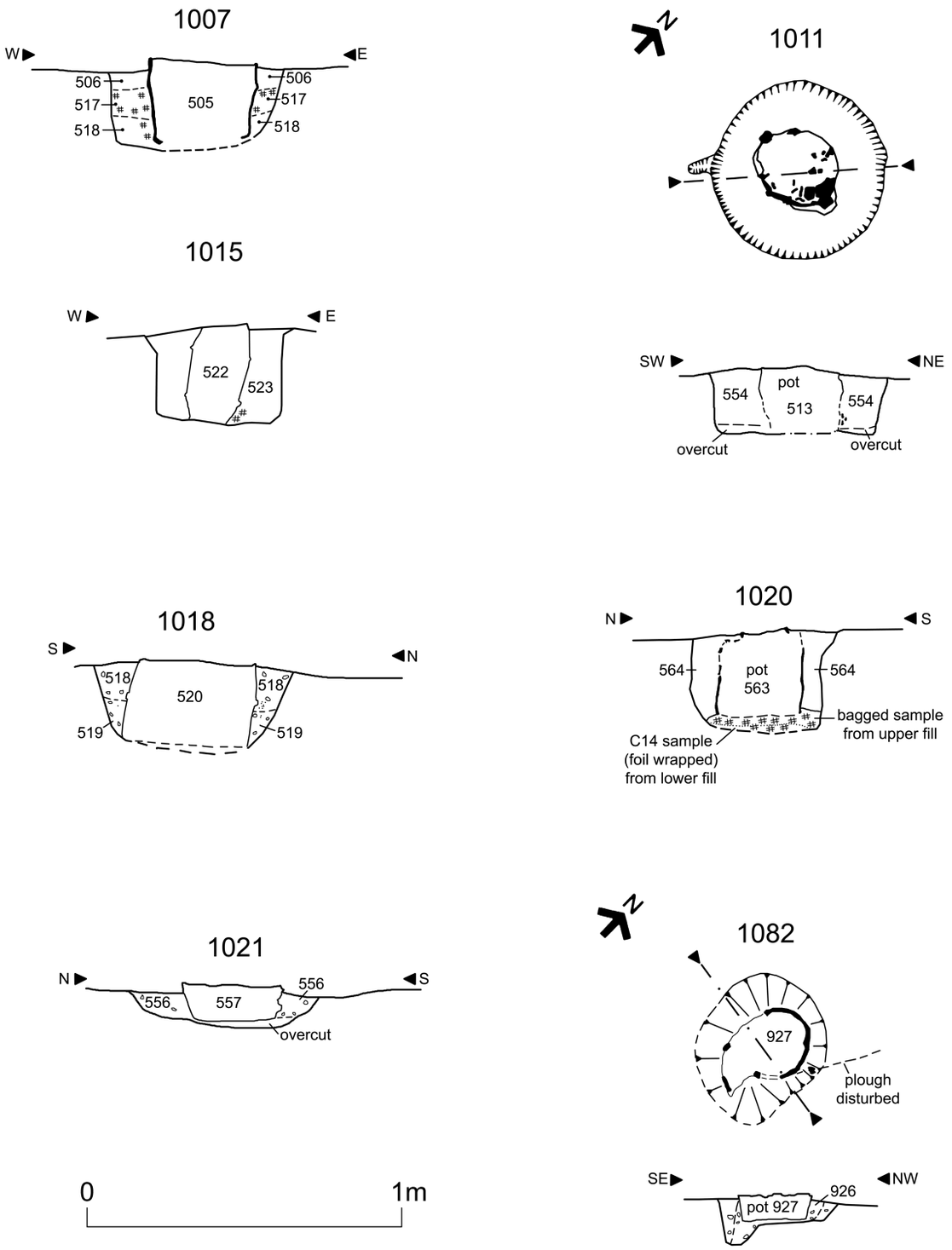

Figure 9 Middle Bronze Age cemetery: inverted cremations, plans and sections

amounts of bone (Garland, below) and several contexts contained no bone whatsoever (*e.g.* within urns 717 in pit 1100 and 721 in pit 1108). The small amounts of bone recovered from some contexts appear not to result solely from plough-disturbance, and in some cases it seems likely that the original 'burial' did not involve the burial of any bone (*e.g.* complete inverted vessel 717 in pit 1100). As regards practices of burial of cremated bone in general on this site, it is clear from Garland's report (below) that cremated bone was often crushed prior to burial, and preparation for burial did not involve the collection of all bone remains; in this sense the symbolic value of the burial of cremated remains seems to have been more important than totality of burial. The variability in bone content within bioarchaeological samples is also noted by Murphy (below).

Generally speaking, inverted urns were often underlain by a deposit of bone and charcoal which had spread beyond the circumference of the vessel, and had evidently spilled from the vessel in the process of

inversion and burial (*e.g.* 1015 and 1020, Fig. 9). In the case of inverted burial 1011 (Fig. 9), a deposit of charcoal was present around the lower, buried, part of the vessel, but no bone was present in this context or within the pit. However, this vessel was the only one to contain a secondary vessel buried within it. Not all inverted urns are associated with spilt contents, and the use of a lid, made from some perishable material such as hide may be indicated. The fills surrounding the lower part of urn 927 in 1082 (926), and urn 520 in 1018 (519) contained no traces of either burnt bone or charcoal (Fig. 9). In one case (1007, Fig. 9), the urn had apparently been inserted into an earlier pitfill, 517; 517 was described in the field as a cremation deposit containing charcoal but only small amounts of burnt bone. The urned cremation burials within ring-ditches were placed upright, with the exception of vessel 542 in Pit 1004 (within ring-ditch 1087), which was inverted.

Multiple burials within a single pit occurred in three cases. Pit 1001, within ring-ditch 1047, contained two highly decorated upright bucket urns: 514 and 515 (Fig. 10). Pit 1096 contained two highly fragmentary upright bucket urns: 713 and 714 (Fig. 11). Finally, in pit 1098, two decorated bucket urns, 715 and 716 (Fig. 11), were inverted over burials. Beneath these was a third, unurned, cremation deposit, 734.

Group 5000 (Fig. 11) comprised a total of at least eight, and probably nine, burial deposits. These consisted of a double burial (upright(?) urns 715 and 716) within a single pit (1098); the pit fills were also rich in burnt bone (719 and 734), and context 734 may well represent an inserted unurned cremation cut into 719, the latter apparently being contemporary with the burial of urns 715 and 716. Further unurned cremations (718 in pit 1097 and 723 in pit 1099) lie adjacent to pit 1098. The group also contains urn 717 in pit 1100, and urns 715 and 713 in, and adjacent respectively to, pit 1098 At least an adult, a young adult, a sub-adult and a juvenile are represented; all burials are unsexed. Urn 717 contained no bone. The group is possibly associated with pit 1108 to the immediate north-east, containing upright urn 721, which also contained no bone. The cut for unurned cremation 718 (in pit 1097) probably cut the fill of pit 1096 (containing urn 714); thus unurned cremation 718, and the probable unurned cremation 734, post-date the burials of 714, 715 and 716.

There is only one other definite double burial within a single pit: upright urned burials 514 and 515 in pit 1001 within ring-ditch 1047 (section: Fig. 10; urns: Figs 22.3, 22.4). Burial 514 contained the remains of an unsexed adult, and 515 those of a ?female of indeterminate age. One further possible candidate for a double burial occurs, also in G5000, in pit 1096 (urns 713 and 714), although it is more likely that 713 was inserted on the edge of pit 1096 rather than within it. These two urns were extremely damaged (by ploughing), and contained very small quantities of bone. There were no instances of a multiple burial within a single urn.

No obvious correlation emerges from the data between the age of buried persons and burial types. A large majority of adult remains are from upright vessels (eight out of twelve), although they also occur in inverted burials (two, one of which is from pitfill below the vessel rather than the vessel itself) and unurned cremations (two). The young adult remains came from the pitfill underlying an inverted vessel, the sub-adult came from an inverted vessel, and the juvenile was from a unurned burial.

The majority of the cremation burials — forty out of forty-eight (83%) — lay in the areas between the ring-ditches. None cut or were cut by the ditches, and therefore the chronology is difficult to assess. On spatial grounds it is, however, probably safe to assume that they were deposited after the creation of the ditches. An alternative, possibly less likely, explanation might be that the burials were clearly marked and deliberately avoided by the ditch-builders. In any case, it is reasonable to assume that the displaced soil from the burial would probably have been piled up in a small mound above the grave that would be visible for several years after deposition. This has been demonstrated by the Central Archaeology Unit (now Central Archaeology Service) at Ardleigh by the burial of an inverted plastic bucket (Brown 1999).

There are, however, a few instances where one burial cut another. Unurned cremation burial 1128 was cut by similarly unurned burial 1121, which was in turn truncated by pit 1020, which contained a cremation burial below an inverted urn. Pit 1010, containing an inverted cremation vessel, was cut by pit 1012, which also contained an inverted cremation vessel. Further north, pit 1025, containing an upright cremation vessel, was cut by unurned burial 1024 (Fig. 12). These are, however, the only instances where a sequence could be determined, apart from the two unurned cremations in the 5000 group, which had apparently been placed over the top of buried urns.

This intercutting could indicate that the burials were not all clearly marked. However, it seems more probable that later burials were deliberately deposited tightly adjacent to earlier ones, possibly because of kinship or some other relationship. It further indicates that there is no chronological relevance attached to the method or orientation of deposition. One instance of such intercutting, at Martell's Gravel Pit, Ardleigh (Couchman and Savory 1983), was probably the result of the deliberate reopening of a marked (unurned) burial for the deposition of a second (urned, upright) burial (Brown 1999).

A number of sherds from additional vessels were associated with the burials; these were sometimes within the urn and sometimes loose within the pit.

Other features

(Fig. 6)

Three ditches in the northern part of the site (1008, 1045 and 1047) contained no finds and are undatable. All are visible on the aerial photographs. Ditch 1008 runs out of the excavated area to both the east and west, and forms the northern side of what was probably a rectangular enclosure. The others are probably boundary ditches of unknown date and extent.

Various pits and post-holes were spread around the site; none produced any reliable dating evidence, except pit 1142 in the north-west of the site. The charcoal from this feature yielded a radiocarbon date of 1530±50BP (GU-5106): the only evidence of Saxon activity from the site. It is possible that some of the other undated features may also be of Saxon date. Pit 1084, cutting the inside of ring-ditch 1051, produced sherds of possible Late Bronze Age date. Apart from these, all features with dating evidence were Middle Bronze Age.

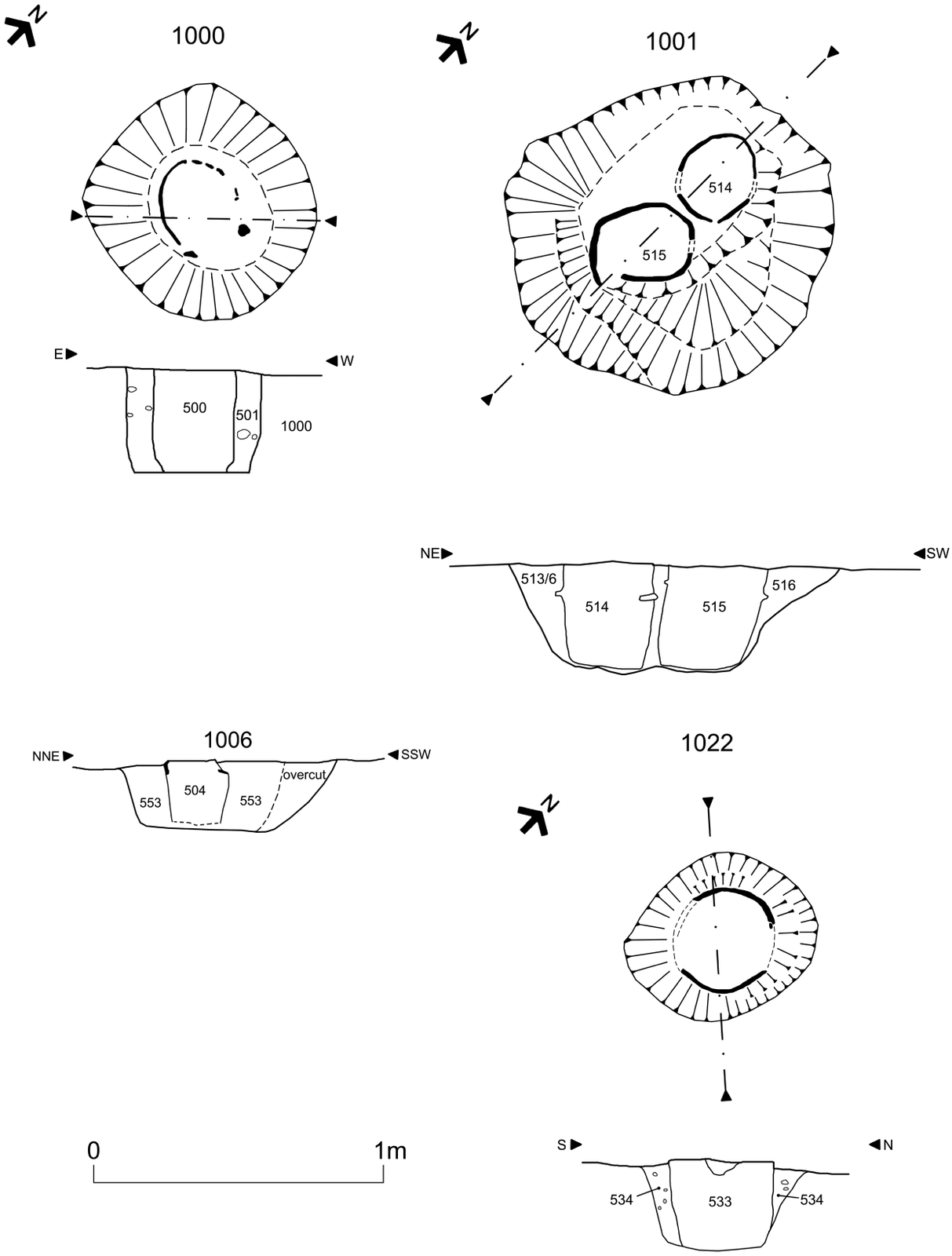

Figure 10 Middle Bronze Age cemetery: upright cremations, plans and sections

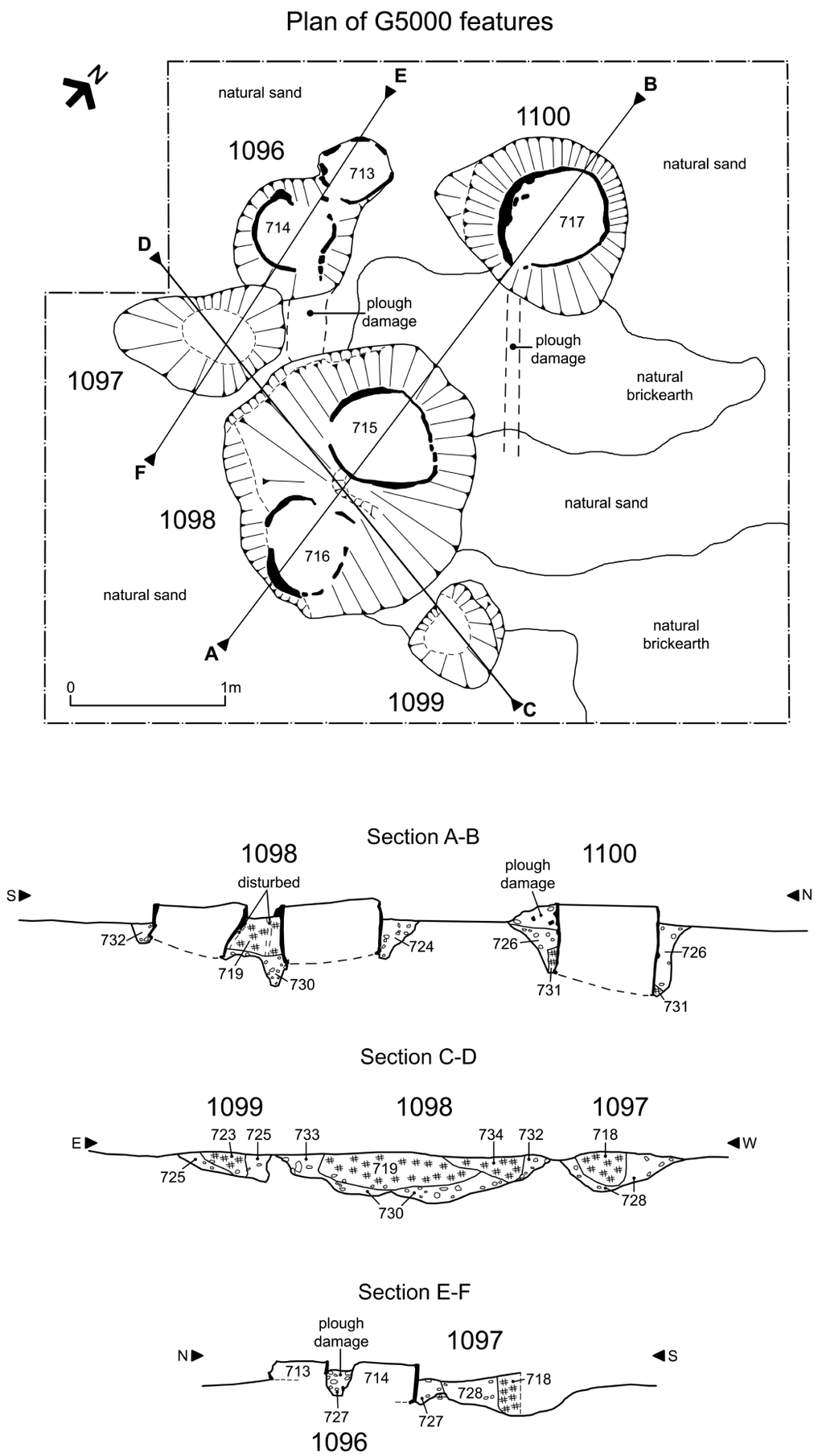

Figure 11 Middle Bronze Age cemetery: cremation group G5000, plan and sections

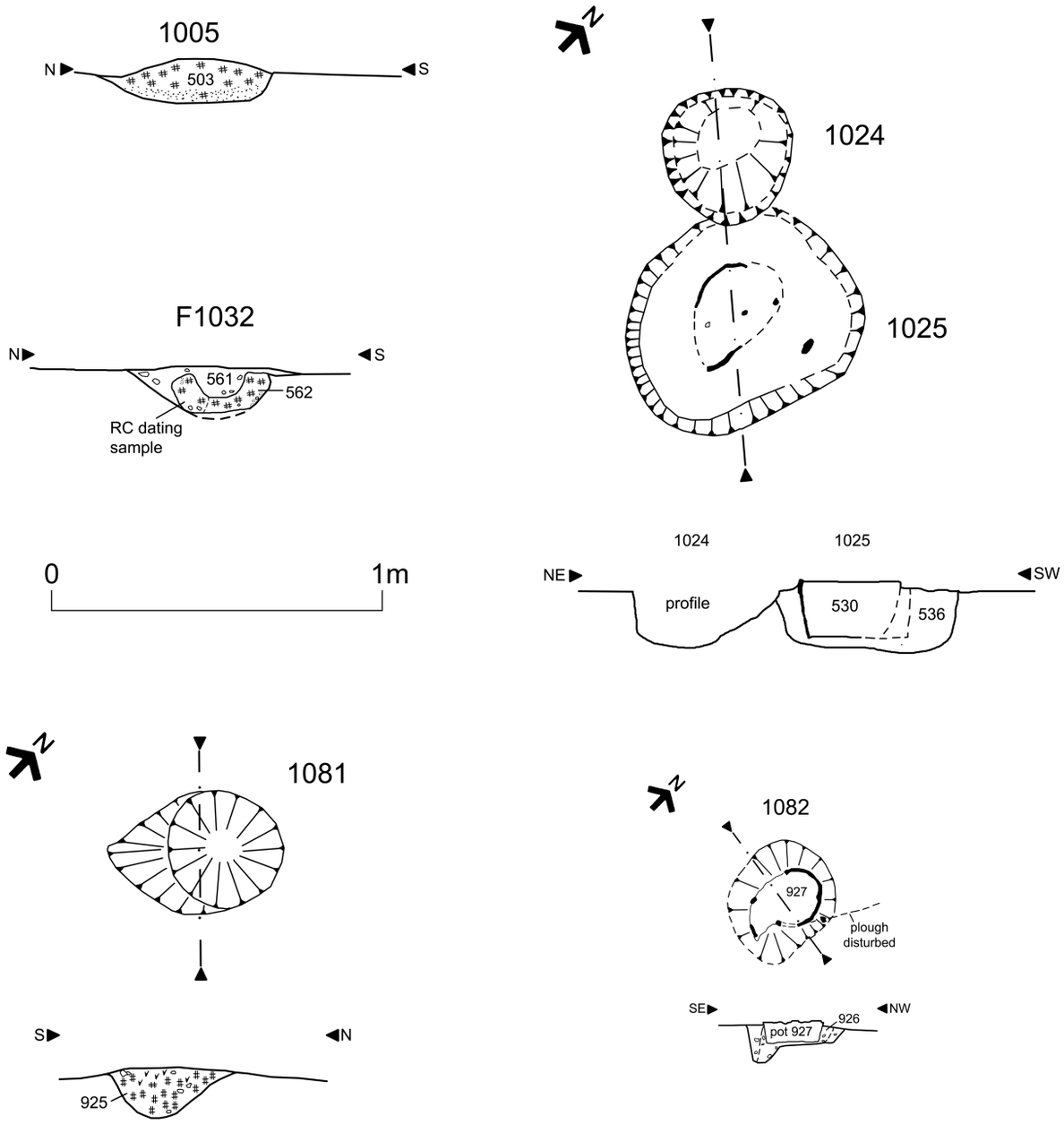

Figure 12 Middle Bronze Age cemetery: unurned cremations, plans and sections

IV. Radiocarbon dates

Lab no.	*δC (0/00)*	*Radiocarbon age (BP)*	*Calibrated date range (1σ)*	*Calibrated date range (2σ)*	*Context*
GU-5102	-23.7	3490±140	Cal BC 2027–1670	Cal BC 2199–1510	Charcoal, cremation 1001
GU-5099	-24.2	3180±50	Cal BC 1517–1419	Cal BC 1592–1328	Charcoal cremation 1018
GU-5104	-24.4	3450±50	Cal BC 1878–1695	Cal BC 1900–1670	Charcoal cremation 1024
GU-5105	-25.0	3080±60	Cal BC 1424–1269	Cal BC 1510–1214	Charcoal cremation 1130
GU-5106	-25.9	1530±	Cal BC 440–597	Cal BC 410–630	Charcoal pit 1142

Table 1 Radiocarbon dates from the excavation of the Middle Bronze Age cemetery

Part 3. The Brightlingsea Fieldwalking Survey

I. Introduction and background

The principal objective of the survey, which was undertaken in 1990–91, was to record as much of the surviving and accessible landscape as possible, identifying sites of all periods, with particular emphasis on locating any settlement sites associated with the excavated Middle Bronze Age cemetery (Table 2). The following account details prehistoric material only, with later finds being published separately (Clarke in prep.). Wider interpretations relating to the landscape are included in the Discussion (Part 6, below). Detailed description relating to the lithics is given in the survey lithics report (below: Part 3, Section III).

The survey area comprises approximately 580ha, of which 269ha (2.69 sq. km) was available for field survey (Fig. 13).

Material	*Transects*	*Grids*	*Total*	*% of total*
Struck flint	1927	354	2281	29.1
Prehistoric pottery	17	5	22	0.3
Burnt flint	4464	1069	5533	70.6
Totals	**6408**	**1428**	**7836**	**100**

Table 2 Fieldwalking survey: finds assemblage totals

II. Methodology

The survey was undertaken by a team of three over a four-month period. The survey sample was 10% of the available land, achieved by means of transects 2m wide set at intervals of 20m. Conditions were generally conducive to a high recovery rate, although occasionally field surfaces were partially obscured by stubble or a growing crop. This has resulted in differential collection rates in restricted areas; however, resultant data biases are considered to be slight.

All finds, except obviously post-medieval pottery and pegtile, were collected. Finds were bagged and left *in situ* until the end of the day, when they were collected and uniquely numbered, and their positions marked as closely as possible on a scale field plan (positions are reckoned as accurate to within about 15m). In addition to the transects, twelve grids, each between 100 and 400 sq. m in area, were defined for very intensive survey (100% coverage); in general, however, these small areas do not add much to the transect data, and are not considered below except where relevant or as numerical components of the assemblage. Digitising of point data and subsequent analysis were undertaken using ArcView GIS version 3.2 with the Spatial Analyst extension. Search radii from selected objects used in density analysis have generally been 25m, 50m and 75m, accessing data from three, five and seven transects respectively.

III. Assemblage totals and analysis

In all, 10,664 finds were recovered from the sample area. After the discarding of over-zealously collected flint and the elimination of Late Iron Age and later material, the finds category totals, aggregating to a digitised prehistoric assemblage of 7,836 finds (of which 6,408 were collected from transects and 1,428 from the intensive grids), are given in Table 2. The analysis below is based on the 6,408 finds from the transects

Burnt flint
(Fig. 14)
Burnt flint is typified by pieces which are crazed and white in colour. It makes up 70% of the prehistoric assemblage (4,464 pieces from the transects) and occurs in all parts of the survey area. The density of burnt flint pieces, if extrapolated to a hectare level, ranges from fewer than 20 to the maximum of 1,080 pieces per hectare (p/ha) which occurs in Burnt Flint Area (BFA) 1 (Fig. 14). The burnt flint concentrations are characterised by a fairly rapid fall-off in density from the centre of the concentration: in the case of BFA 2, the highest density is in the range 520–40 p/ha, reducing to 220–240 p/ha within 50m of the highest density patch (for comparison, the average density of burnt flint per hectare from the East Hampshire Survey was in the range 0–71 pieces per hectare (Shennan 1985, 50)). Burnt flint was categorised according to size (small, medium, large and very large) and apparent degree of burning.

Eight sample areas were selected for further study of the burnt flint scatters, examining high-density (BFA 1–4) and lower-density (BFA 5–8) scatters. The burnt flint areas appear generally to be of two kinds, although certain spreads show mixed characteristics. Firstly, high-density nucleated scatters, up to 1080 p/ha, occur on the south- and west-facing slopes overlooking the river Colne in the 5–10m contour band (described below as BFA 1–4). Secondly, the remaining spreads (BFA 5–8) are generally of lower density (<100 p/ha), However, small locally high-density patches do occur within these lower-density scatters, particularly on the southern edge of the plateau (*e.g.* within BFA 5, to a less marked extent BFA 6).

On a 30m radius search, BFA 4 and the area to its immediately west show strong local concentrations of burnt flint, and these also occur within BFA 5, to 120–350 p/ha. These tend to be closely spatially associated with local densities of struck flint in excess of 30 p/ha. In the case of BFA 5, there is some tendency for concentration within the south-western part of the underlying trapezoidal enclosure in Trinity Field, immediately east of The Link (Figs 1, 14–16; identified during field evaluation: Clarke 1996), in which area prehistoric pottery of A and B fabrics (Part 4, Section II, Table 6) also occurs.

Analysis of burnt flint size in BFA 1–8 is provided in the archive. In general, the relative numbers of small, medium, large and very large burnt flint pieces in the

Figure 13 Survey area and land use

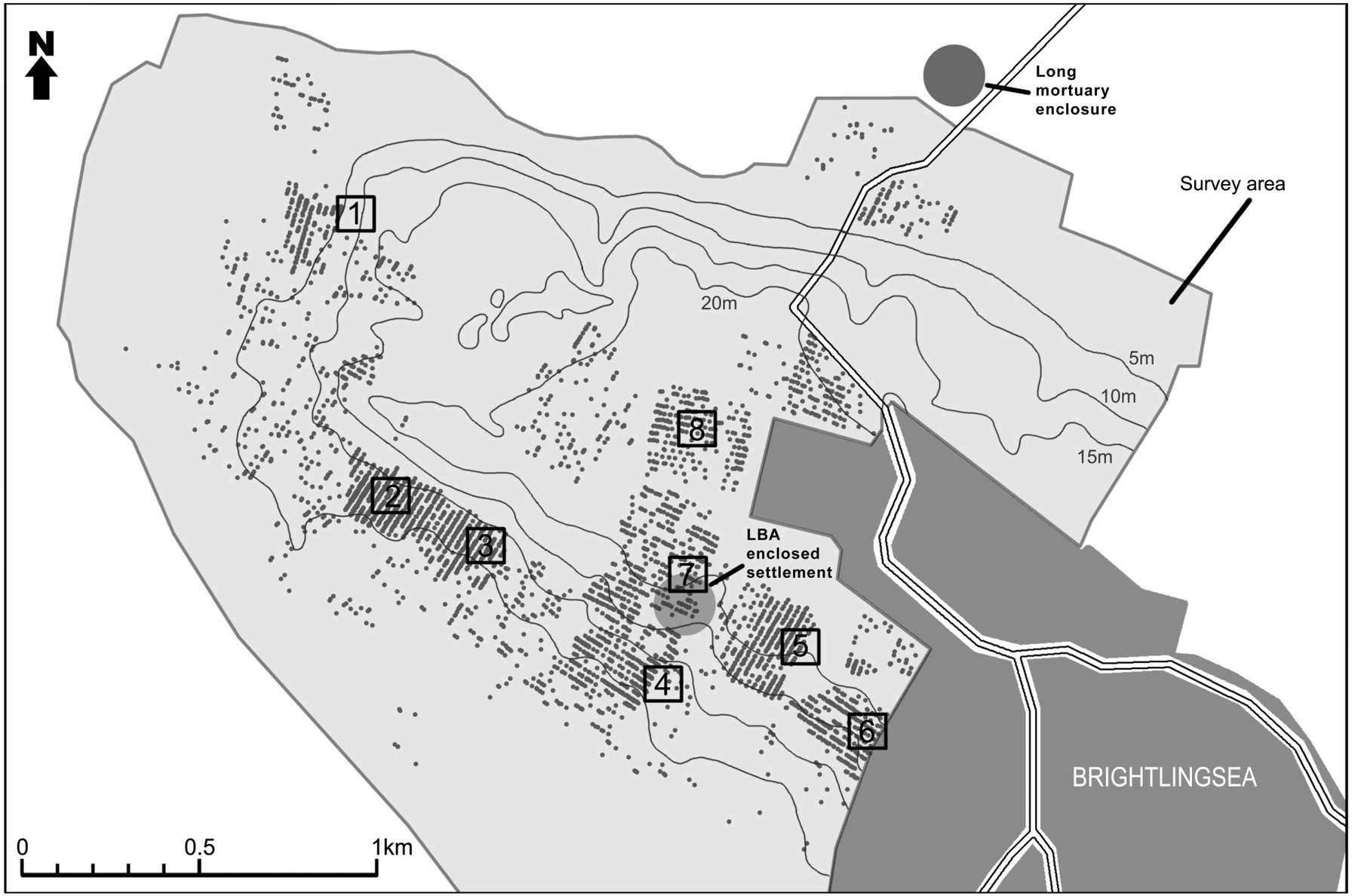

Figure 14 Distribution of burnt flint; the numbers refer to burnt flint concentrations BFA1–8

nucleii are similar to those for the survey area as a whole (3%, 71%, 25% and 1% respectively).

No absolute scientific dating technique has been applied to any of the burnt flint pieces. Fifteen pieces of burnt struck flint (BSF) might potentially provide a relative date for some of the burning activity. Two of these are early blade-based pieces and one a notched piece of probable Late Bronze Age/Early Iron Age date. Nearly all the BSF occurs on the south-facing slope; however, none of the three datable pieces occurs within a burnt flint spread, and may well anyway be residual flintwork incorporated into the pebble assemblages prior to heating.

The impression from the densest areas (BFA 1–4) is one of intense seats of burning, which may be long-lived, later spread around by ploughing. The paucity of burnt flint from the Early Neolithic ring-ditch may indicate that the activities leaving the burnt flint do not belong to this earlier phase. In contrast, one concentration of burnt flint (BFA 8) lies to the east of the Middle Bronze Age cemetery and overlies the Trinity Field enclosure (Clarke 1996). It may well be that the burning is intermittent throughout the Bronze Age. The presence of clear burnt flint nucleii may indicate intense, relatively short-term, activity in certain places or episodic activity over a longer period, with some degree of tradition or custom determining the positions of the fires. In particular, BFA 1–4 are clear candidates for 'burnt flint mounds'.

The areas BFA 7–8 contain lower concentrations of burnt flint than BFA 1–6, and appear likely to be associated with the underlying features to the east of The Link and Long Plantation. The highest local concentrations of burnt flint in BFA 8 occur in the central part of the Trinity Field enclosure, and it is likely that decreasing density of burnt flint radiating around the enclosure at least in part represents plough-spread burnt flint from its interior. The less dense and nucleated spreads in these areas appear likely to be due to gradual accumulation of burnt flint over a considerable length of time, and as these occur over cropmark areas it seems reasonable to interpret them as representing a range of domestic and industrial activities associated with habitation of the plateau area. The tendency for locally dense patches of burnt flint to occur within the larger amorphous spreads BFA 5–6 suggests either that more specialised activities producing these local high-density patches are also represented in Figs 14–16, or that activities producing burnt flint were particularly intense or long-lived in these particular areas. A wide range of activities might be represented.

In general, there is a closer correspondence between the positions of burnt flint concentrations and late flint concentrations than with those of early flint (Figs 15 and 16). The occurrence of two late flint concentrations to the immediate south-west of BFA 1 may be coincidental (Fig. 16), or may indicate contemporary, perhaps associated, activities undertaken near the burning areas. Flint implements do not show any particular association with burnt flint spreads, though notched pieces and occasional scrapers occur in spatial association more frequently than other tool types. There is also, however, some correlation between one early flint concentration (Fig. 15) and BFA 5, possibly implying contemporaneity. The very low density of burnt flint east of the excavated Early Neolithic ring-ditch and in the area of the possible mortuary enclosure may mean that the production of large amounts of burnt flint was not a characteristic of this period, or perhaps that these activities were undertaken elsewhere.

Concentrated areas of burnt flint (often identified as burnt mounds) are usually of Middle to Late Bronze Age date. While this cannot be irrefutably demonstrated at Brightlingsea, the correlation between the later Bronze Age excavated sites, the late struck flint scatters and these burnt flint concentrations seems to indicate such a date for most of the burnt material.

Struck flint

Detailed analysis and description of the struck flint are provided in the survey lithics report (below). Broadly, pieces were categorised as belonging to an earlier (blade-based) or later (flake-based) industry. All flint was also categorised according to its end product type, following the treatment by Peter Berridge of the material from the excavated Neolithic ring-ditch (below, Part 4 section III); this comprised assignment of all pieces to one of the four categories of parent waste, product waste, retouched pieces and implements. Details of separation into these groups are given below in the survey lithics report (Part 4, Section III), and concentrations of early flint and later flint are discussed. Attention is drawn to the relatively small assemblage size for early flint in particular.

The general appearance of the flint density plots is one of small, high-density concentrations some 50–100 m in diameter, occurring both on and off the plateau over nearly all of the survey area (Figs 15 and 16). In some cases, as noted above, there is a suggested coincidence of concentration nuclei for burnt and struck flint. This occurs in the case of BFA 1 and BFA 2 (Figs 14, 15 and 16).

The assemblages are small, particularly for the earlier industry. However, the early flint density plots do suggest a concentration of activity in two areas (Fig. 15). The assemblage EFC 1, which is situated between Alresford Creek and the Thorrington Road, occurs close to the putative mortuary enclosure, and is similar to the smaller burnt flint assemblage lying a few metres north of the excavated ring-ditch, thus lending some support to the hypothesis that the ring-ditch and mortuary enclosure are contemporary. The concentration of early flintwork coincident with BFA 5 (EFC 2) comprises a mixture of parent and product waste, and retouched blades, suggesting that it represents an early site with a range of functional activity, with some or all of the burnt flint present in BFA 5 possibly relating to this phase of occupation.

While it seems likely that spreads such as those over Early Bronze Age pit 244 (Part 1, Section II and Clarke 1996) represent areas of sustained prehistoric activity, sites are not necessarily marked by surface spreads. In the case of the Grooved Ware pit (Part 1, Section II) there was no overlying spread (and the artefact content of the pit fill comprised a single flint flake); this may imply very short-term activity in which the accumulation of cultural material did not occur. Areas of prehistoric activity are thus not necessarily restricted to areas of *high*-density surface spreads.

Prehistoric pottery

Seventeen sherds of prehistoric pottery were recovered during surface collection. Of these, fifteen come from around BFA 5, where they occur over an area of

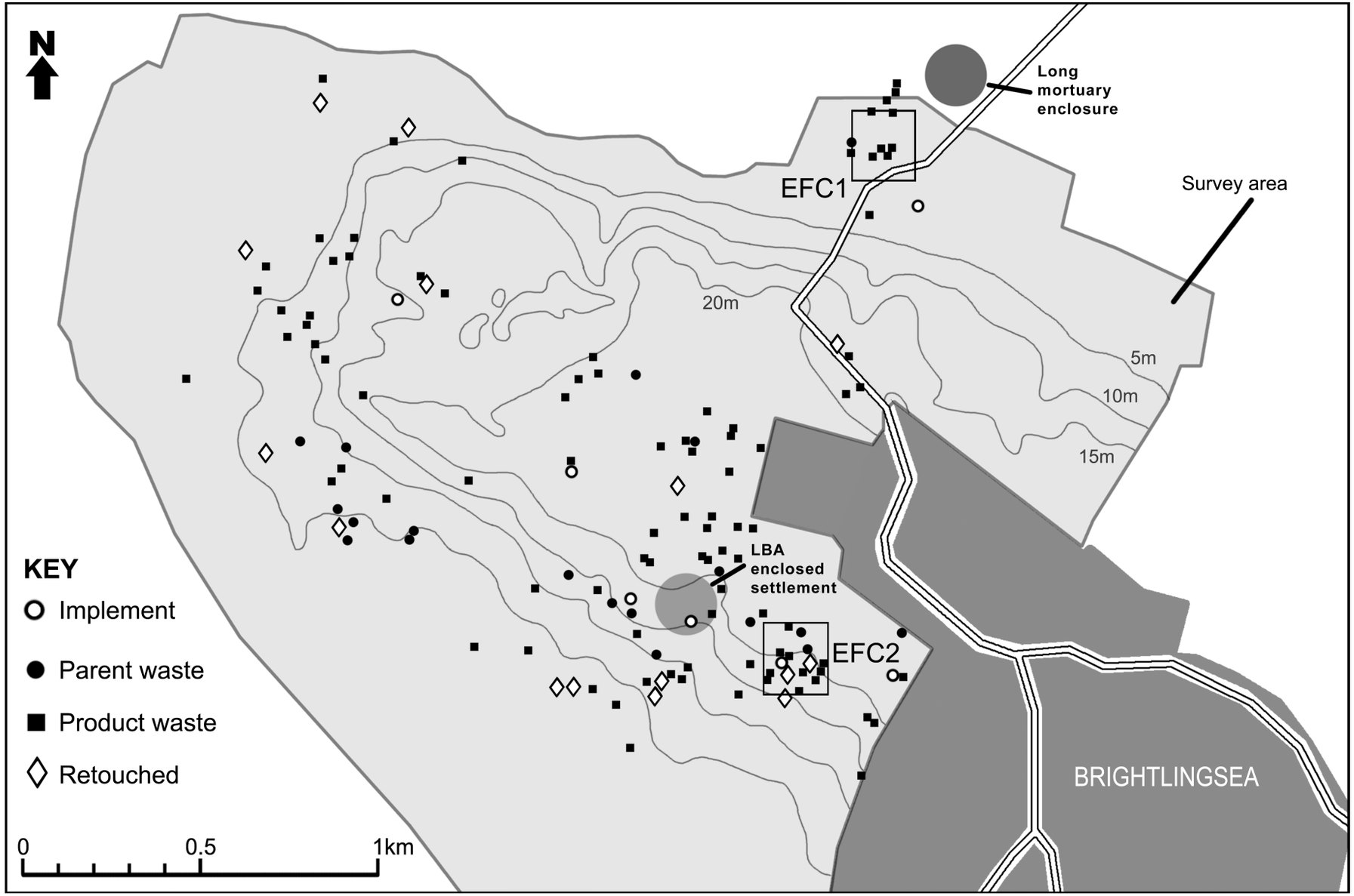

Figure 15 Distribution of early flint; EFC1–2 are early flint concentrations

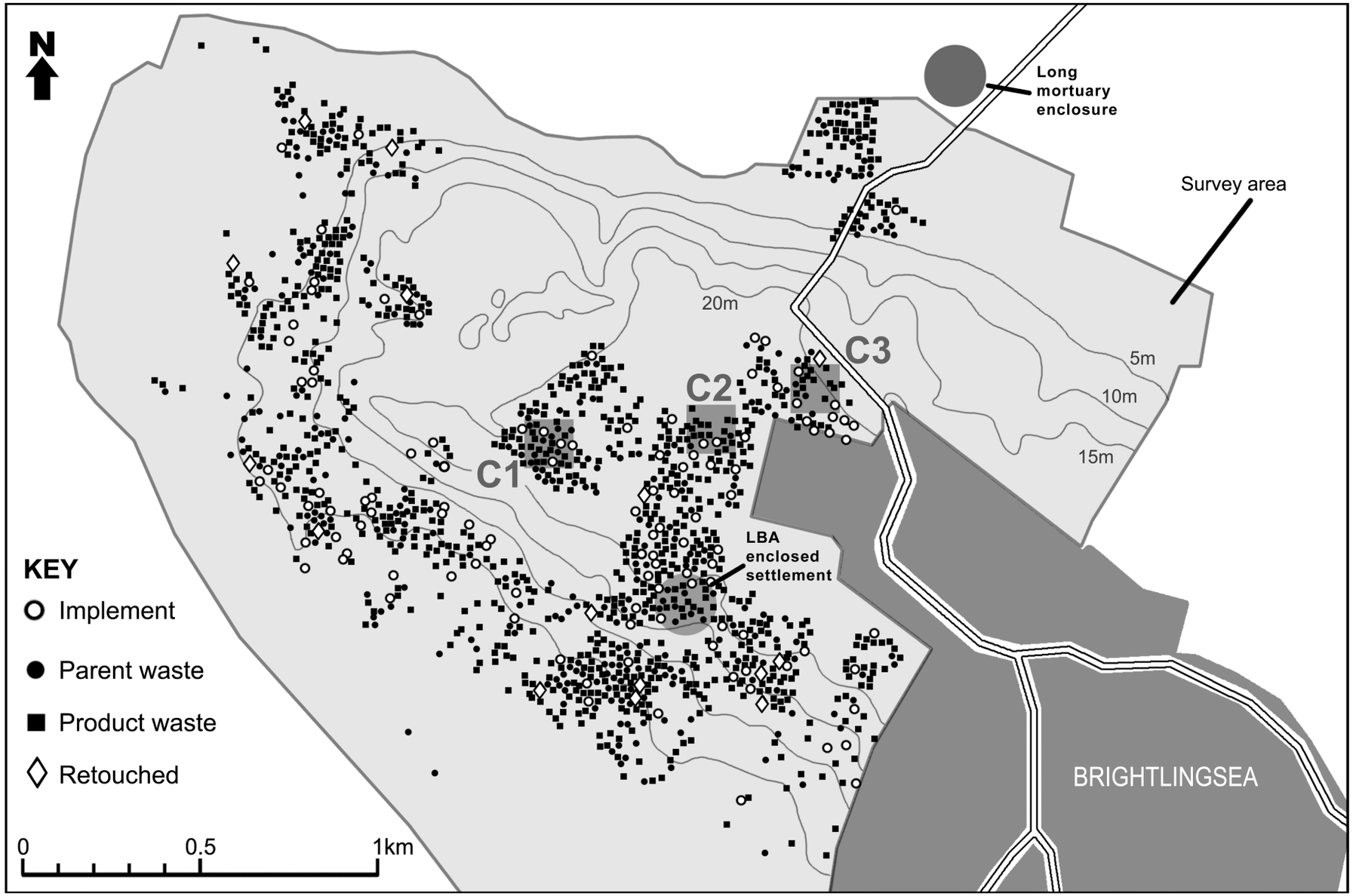

Figure 16 Distribution of late flint; C1–3 are late flint concentrations

approximately 200m by 200m. The two sherds found away from this area are of Fabric A.

Prehistoric pottery was also recovered from above the excavated cemetery before the removal of topsoil. It appears likely from the recovered pottery that the unexcavated ring-ditch cluster (above; Part 1, Section II) under BFA 5 is broadly contemporary with the excavated cemetery. However, six sherds are in Fabrics J and H, which are almost certainly of Iron Age date. The presence of prehistoric pottery suggests that it is relatively plentiful in this area, since regularly ploughed acid soils tend to militate against its survival. The recovery of pottery here is, however, not very helpful. The assemblage comprises small, abraded, undiagnostic sherds, all but six of which are in fabrics current from the Early Neolithic to the Middle Iron Age. The recovery of prehistoric pottery from the ploughsoil above cropmarks that appear to represent Middle Bronze Age ring-ditches suggests that this interpretation of their date is correct, but is far from conclusive. Sand-tempered sherds of fabrics H and J indicate Middle Iron Age activity in the vicinity (which is known from the 1996 evaluation), but the quantities involved are too small to draw any worthwhile conclusions.

IV. Discussion and conclusions

The assemblage of artefacts from the 10% of ground surface sample is, it transpires, too small in terms of absolute numbers to achieve any very clear definition of settlement history and activity over the peninsula, although broad patterns are discernible. If the artefacts visible on the surface at any one time represent between 1% and 5% of the total present in the ploughsoil, the 6,408 prehistoric finds from the transects might represent only 0.1% to 0.5% of the total ploughsoil assemblage. In addition, the separation of transects by 20m intervals precludes the identification of small scatters which might represent small or short-term sites in addition to the larger flint densities, and those which for other reasons yield only small numbers of durable artefacts. Artefact-producing sites will, under most conditions, be discernible at ploughsoil surface level, and where such activity has occurred in the same location for a long period of time, material from different phases of occupation will tend to become mixed and difficult to separate.

In the Brightlingsea survey, in some cases the distribution of artefacts has been shown by aerial photographs and more intrusive techniques to closely mirror the positions of underlying cut features; however, lack of information about subsoil features usually precludes the drawing of any conclusiona about associations between features and artefacts. The flint assemblage from the survey for the northern part of Trinity Field, to the east of The Link, was supplemented by the recovery from the surface during evaluation works in 1996 of a Late Neolithic/Early Bronze Age flint sickle. This piece is at least broadly contemporary with pit 244; within the context of the survey data, this single find is very significant in extending the range of evidence for this Early Bronze Age phase of occupation, otherwise afforded only by the pit and probably its overlying flint scatter. It offers evidence for farming activities, with implications for settlement type and longevity, not otherwise recorded in the archaeological record for Brightlingsea.

Within the same field, a Late Bronze Age enclosure was identified from cropmarks and intrusive evaluation. The spread of burnt flint BFA 8 is most concentrated in the central part of the enclosure (Fig. 14). The distribution of prehistoric pottery over the ring-ditch group to the east of Trinity Field also demonstrates a correlation between surface collection and buried features. Nevertheless, identification of sites from topsoil survey is generally dependent on the quantity of artefacts remaining from associated site activities, and this could be a function of site extent, artefact-producing characteristics reflecting the type of site, and/or its longevity. The Grooved Ware pit in Ford Field was not indicated in ploughsoil spreads; however, the character of the deposit suggests that the pit may have been a 'one-off' event, without associated artefact scatters reflecting long-term usage or intense activity. Similarly, the Early Neolithic ring-ditch site in the same field produced virtually no finds during fieldwalking. This is reflected in the paucity of finds from the upper fills of the ring-ditch, which means that there was no material for the plough to bring to the surface. Any subsequent activity at the site apparently did not involve the deposition of pottery or flint or the production of burnt flint. Thus, without the cropmarks, working on fieldwalking data alone, the site would have remained undetected. A Late Iron Age and Roman site in the southern part of Trinity Field provides another example of the difficulties inherent in identifying sites from surface scatters: it was not detected before the intrusive evaluation because of soil slippage from upslope of the cut features and consequent topsoil depth. Conversely, assemblages occurring near the original ground surface, such as surface rubbish disposal scatters, or surface scatters of waste material from flint knapping, are particularly likely to be visible.

The benefits of large area survey with reference to the location of prehistoric sites in particular has been demonstrated notably in the recently published data from Boeotia in central Greece (Bintliff 2000), where prehistoric sites in the survey area increased from a known density of one per 33 sq. km to one per 1.6 sq. km (Bintliff 2000, 126). Bintliff cautions that prehistoric sites are often represented by very low quantities of prehistoric pottery in isolation or among large later assemblages; on the basis of this low visibility factor, the author concludes that, despite the remarkable increase in the numbers of prehistoric sites from the survey, only larger or longest-used sites would tend to be identified, and that the central Greek landscape could conceal very significant numbers of smaller prehistoric sites in a 'secret landscape'.

It seems likely that much of the ploughsoil assemblage reflects the positions of heavily plough-eroded sites which have few, or no, surviving cut features. The possible Early Bronze Age domestic site represented by pit 244 is an example of a site which has very poor survival today, and appears to be represented only by the pit and overlying flint scatter. If this association is correct (and the dangers of wrong association of surface scatters with underlying features has been noted, *e.g.* by Richards (1990, 116)), it follows that most of the artefact scatters come from surface spreads on the original ground surface, or from artefact-rich upper fills in deeper features, or from the fills of shallow-cut features. Shallow-cut features of less than *c.*400mm original depth clearly could not have survived ploughing in any recognisable form unless protected by accumulated deposits, and the entire assemblage of

durable artefacts from such sites must be resident in the ploughsoil only. Such ploughsoil scatters will often, therefore, be the only indication of the former locations of shallow-cut sites, particularly those of prehistoric date. The tendency to shallowness of cut features on some prehistoric Essex sites is demonstrated at the well-preserved Stumble site in the Blackwater inter-tidal zone, where excavated features in Areas B and D have a maximum depth of 200mm, and are usually much shallower (Wilkinson and Murphy 1995, 100–38).

Part 4. The Finds

I. The human cremated remains from the Middle Bronze Age cemetery

by A.N. Garland

Summary

This report considers the cremated human remains recovered from the Middle Bronze Age burials. A total of 41 cremations was examined. Age was determined from the remains in 15 features (13 adults, 1 subadult and 1 juvenile) and sex was determined in 2 (1 possible male and 1 possible female). No pathology was evident.

Methods

The methodologies used in this study were adopted from Gejval (1981), Herrmann (1988) and McKinley (1989), and, briefly, were as follows. Each individual cremation feature was weighed and then sorted into different anatomical elements. The various anatomical groups were then weighed. In addition, several bags of 'pea grit' with bone residue less than 5mm in length were submitted for examination. The human bone was separated from the 'pea grit' by placing the contents of each bag in chloroform and scooping off the bone from the surface of the chloroform; the 'pea grit' sank. The weight of this human cremated bone residue was then added to the total cremation weight.

The number of individuals represented in each cremation was determined by assessing whether there was duplication of the skeletal elements.

The length of the longest and shortest fragment in each cremation was measured and an indication was given as to whether the average size of the fragments tended towards the longest or the shortest.

The predominant and minor colours of each feature were recorded using the *Munsell Soil Colour Chart*. This system records colours by hue, value and chroma, and so offered a standardised and reproducible system of describing colours.

Sexing of the cremated remains depended on the presence of the appropriate bones in the assemblage. A single sexually dimorphic feature was not sufficient evidence on which to base the sex of a cremation. A categorisation of male or female was used, followed by a ? for probable, according to the quality and quantity of the available information.

The following criteria were used to age juveniles (5–12 years): non-fusion of the epiphyses, unerupted tooth crown and incompletely formed roots. The age group sub-adult (13–17 years) was ascribed depending on the state of fusion of the epiphyses. The subdivision of adults (18 years and over) into young adult, mature or older proved impossible with this collection of cremations: tooth wear could not be used as the enamel had tended to shatter and the crowns were not present; nor were sufficient cranial sutures present to assess the state of fusion.

The remains were, finally, inspected for evidence of skeletal pathology.

Results

A total of forty-one cremations was submitted for examination (Table 3). These varied in amount from a few fragments totalling less than 10g to remains which weighed over 1kg and which must have represented a substantial part of the whole skeleton. No duplication of skeletal elements was found in any of the cremations. Several putative cremation urns contained no bone, and are excluded from the discussion below.

The bone fragments ranged in size from 90mm to less than 5mm, but the average size tended towards the lower

Weight (g)	*No. of cremations*
0–100	26
100–200	3
200–300	3
300–400	0
400–500	2
500–600	1
600–700	1
700–800	2
800–900	0
900–1000	0
1000+	3

Table 3 Distribution of cremation weights

Skeletal element	*No. of cremations*
Skull	36
Maxilla	0
Mandible	1
Teeth	4
Vertebrae	8
Sacrum	1
Ribs	10
Clavicle	1
Humerus	3
Radius	7
Ulna	7
Metacarpals	2
Hand phalanges	2
Pelvis	2
Femur	5
Tibia	4
Patella	0
Fibula	1
Talus	0
Calcaneus	1
Metatarsals	1
Feet phalanges	4
Unidentified cancellous bone	9

Table 4 Recognisable bone found in each cremation

limit. This suggested that a number of the features were crushed following cremation. In addition, the typical elliptical cracking and torsion of the long bones and the cross-hatching of skull fragments, all characteristic of cremation, were seen. Relatively few of the bones could be fully identified. The number of recognisable bones is listed in Table 4. In only two features could a probable or possible sex be attributed to the cremations, but it was possible to assess the age of 15 adult cremations, 12 young adult, 1 sub-adult and 1 juvenile (Table 5). Although all the remains were scanned for pathology, none was found; this result certainly reflected the small size of many of the cremated fragments and the incompleteness of the cremations.

Feature	*Context*	*Weight (g)*	*Age*	*Sex*
1000	500	271.5	Adult	
1000	501	6.0		
1001	514	1511.1	Adult	
1001	515	1668.6		?Female
1001	516	4.0		
1002	526	3.5	Adult	
1004	542	52.3		
1005	503	32.6	Adult	
1006	504	1.7		
1007	505	218.2	Adult	
1007	506	1.4		
1012	559	95.1		
1015	522	6.4		
1016	528	77.8		
1018	521	91.4		
1019	537	40.7		
1020	564	1.0		
1020	565	474.0	Adult	
1020	571	53.6	Adult	
1020	557	113.7		
1022	533	436.7	Adult	?Male
1023	535	91.9		
1024	531	170.9		
1025	530	34.5		
1026	569	5.8		
1027	544	270.5	Adult	
1027	545	1.4		
1028	870	11.3		
1030	548	607.4		
1031	549	29.2		
1032	562	1.9		
1077	758	81.1		
1081	925	134.7		
1082	927	19.4		
1083	928	1.9		
1096	713	10.0		
1096	714	32.6		
1097	718	44.3	Juvenile	
1097	728	15.4		
1098	715	767.3	Sub-adult	
1098	716	783.8	Adult	
1098	719	1250	Adult	
1098	724	16.1		
1098	734	1299.3	Young adult	
1121	785	13.6		
1121	786	1.4		
1130	919	514.1	Adult	
1130	924	13.7		

Table 5 Summary of total weights, age and sex determination of the remains

II. Prehistoric pottery

by Nigel Brown

Pottery from the Neolithic ring-ditch

(Figs 17–20)

A substantial quantity of pottery (3,555 sherds weighing 20.95 kg) was recorded using a system adapted from that used for later prehistoric pottery in Essex (Brown 1988). Fabrics, rim forms and vessel forms are described in Tables 6–8, although often sherds could not be assigned to the broad categories given in Tables 7–8; many rim sherds could be classed as from open or closed vessels.

The assemblage is well preserved, and in particular lacks the ferromanganiferous concretion which has afflicted some other Essex Neolithic pottery from gravel sites with fluctuating water tables (*e.g.* Brown 1988). While the record of abraded sherds appears quite high (32% by sherd count; 19% by sherd weight), of the abraded pottery 60% by weight (22% by sherd count) has abrasion which affects only one surface or occurs as patches likely to reflect use rather than post-breakage damage. The majority of heavily abraded pottery (with abrasion on surfaces and edges) consists of tiny sherds and crumbs of pottery which were so small that they could not be attributed with any confidence to one of the fabric categories below and so were classified as Fabric Z.

The material was searched for cross-context joins; in fact, very few were noted (listed in archive). However, cross-context joins were achieved between sherds from two segments (515, 787) of the south-west quarter of the outer ditch, and between sherds from one of the ditch segments and the interior (square 299). In addition, sherds with a highly distinctive carination and neck form, closely matched in colour, fabric and surface finish, were recovered from opposite sides of the enclosure ditch (segs 253 and 295). Although these two sherds do not join, there is little doubt that they are from the same pot.

The illustrated pottery (see Figs 17–20) represents the full range of decoration and form, includes all the largest diagnostic pieces and reconstructable forms and comprises about 30% of all the rims and decorated fragments.

Catalogue of illustrated material

Figure 17

17.1 Complete rim and upper body of S-profile bowl, large part of lower body and base missing. Incised line decoration on neck, rim and interior of rim. Double row of impressed dots below shoulder. Burnish sheen survives over much of the interior. Burnishing was clearly carried out after the incised decoration. Rim thickened by addition of extra strip of clay, and some coil joins visible in break. Differential abrasion to top of rim and large patch of abrasion on exterior. Two post-firing perforations and scars where others started but not completed. While the fabric has been tempered with very finely crushed flint, very fine sand is also present. Form/rim form C/1 Context 32, 31, 236 Fabric A

17.2 Form/rim form C/10 Context 29, 31, 32 Large part of rim and upper body, many sherds are heavily burnt and the surfaces are missing. Where they survive surfaces are well smoothed and may originally have been burnished. Indeed, ripple burnish survives on the top of some of the rim sherds. Dense random shallow impressed dots on neck. Fabric C

17.3 Form/rim form A/9 Context 29 Horizontally wiped interior. Fabric C

17.4 Form/rim form -/2 Context 29 Coil join visible in break. Fabric D

17.5 Form/rim form -/2 Context 29 Smoothed interior. Fabric B

17.6 Form/rim form -/2 Context 30 Smoothed surfaces, exterior of rim squared off, probably with tool. Fabric A

17.7 Form/rim form -/2 Context 31 Abraded, smoothed surface survives on interior of rim. Fabric B

17.8 Form/rim form E/1 Context 229 Roughly rounded rim, patches of ?sooting on exterior. Fabric O

17.9 Form/rim form -/3 Context 803 Abraded interior post-firing perforation, with scars of two others started but not finished on interior. Fabric C

17.10 Form/rim form -/3 Context 848 Ripple burnish on exterior, top and interior of rim. Rim thickened by addition of extra strip of clay to exterior. Fabric C

17.11 Form/rim form -/2 Context 848 Rolled rim, burnish on interior. Fabric C

17.12 Form/rim form -/7 Context 790 Horizontal wiping on exterior and interior. Fabric O

17.13 Form/rim form A/12 Context 794 External finger wiping/ smearing. Fabric C

17.14 Form/rim form -/2 Context 540 Smoothed surfaces, possibly originally burnished. Exterior of rim squared off, probably with a tool as in 17.6, but in this case the outer edge of the rim is somewhat abraded. Fabric B

17.15 Form/rim form A/1 Context 540 Rim of cup, surfaces show finger-pinched construction. Fabric B

Fabric		*% of total no.*	*% of total weight*
A	Flint, S, 2, well-sorted	12	15
B	Flint, S–M, 2	10	19
C	Flint, S–M with occasional L, 2	22	22
D	Flint, S–L poorly sorted 2–3	17	29
E	Flint and sand, S–M, 2	10	11
L	Quartz, S–L, 2–3	<1	<1
O	Quartz and flint with some sand, S–L, 2	6	8
P	Largely temperless, some sparse and very fine, and may have occasional flint inclusions or sparse irregular voids	<1	<1
V	Flint, S–L, 1	<1	<1
Z	Unclassifiable	20	4

S = less than 1mm diameter; M = 1–2mm diameter; L = more than 2mm diameter
1 = less than 6 per cm^2; 2 = 6–10 per cm^2; 3 = more than 10 per cm^2

Table 6 Prehistoric pottery fabrics

Figure 18

18.16 Form/rim form -/2 Context 635 Smoothed, slightly abraded surfaces. Fabric E

18.17 Form/rim form -/2 Context 636 Traces of horizontal wiping on exterior. Fabric O

18.18 Form/rim form A/2 Context 933 Smoothed surfaces, slightly abraded. Fabric O

18.19 Form/rim form E/2 Context 716 Horizontal wiping on exterior, with small patches of ?sooting. Fabric C

18.20 Form/rim form -/7 Context 257 Smoothed interior. Fabric C

18.21 Form/rim form -/2 Context 258 Burnished interior with ripple burnish on rim, smoothed exterior partly abraded. Fabric A

18.22 Form/rim form -/3 Context 258 Rim thickened by addition of separate strop of clay. Fabric C

18.23 Form/rim form -/3 Context 639 Ripple burnish on top of rim. Zone of differential abrasion below rim on exterior. Fabric C

18.24 Form/rim form E/2 Context 639 Horizontal wiping on interior, patches of ?sooting on exterior. Fabric E

18.25 Form/rim form -/2 Context 539 Smoothed surfaces with differential abrasion below rim on exterior. Fabric E

18.26 Form/rim form -/7 Context 539 Heavy finger wiping on interior producing flattened facets on interior of rim. Fabric C

18.27 Form/rim form -/2 Context 292 Smoothed surfaces, rim added as a separate strip of clay. Fabric A

18.28 Form/rim form D/2 Context 22 Most of rim missing. Smoothed surfaces, possibly originally burnished. Fabric B

18.29 Form/rim form -/1 Context 22 Smoothed exterior. Fabric O

18.30 Form/rim form -/8 Context 238 Smoothed surfaces, perhaps originally burnished. Fabric E

18.31 Form/rim form -/2 Context 239 Burnished interior, ripple burnished rim. Fabric C

18.32 Form/rim form A/2 Context 254 Horizontal wiping on exterior. Fabric C

18.33 Form/rim form A/2 Context 255 Firing spalls on exterior just above break. Fabric C

18.34 Form/rim form E/2 Context 321 Exterior appears to show signs of having been burnt and large parts of the exterior surface are missing. Patch of ?sooting or ?mineral concretion on exterior. Fabric C

Figure 19

19.35 Form/rim form n/a Context 586 Smoothed surfaces, marked angular carination formed by an applied strip of clay. Zone of differential abrasion below. Fabric E

19.36 Form/rim form n/a Context 705 Smoothed surfaces, sharp ledge-like carination produced by application of separate strip of clay. Fabric E

19.37 Form/rim form C/9 Context 1024 Smoothed exterior, partly abraded interior, decoration on interior of rim, rather slight carination. Fabric E

19.38 Form/rim form -/7 Context 213 Smoothed surfaces, slightly abraded. Fabric E

19.39 Form/rim form -/2 Context 213 Rolled rim, light furrowed decoration on interior of rim. Fabric D

19.40 Form/rim form A/9 Context 213 Slightly abraded exterior. Fabric D

19.41 Form/rim form -/2 Context 215 Irregular rolled rim, straw/grass impressions on surface. Scars of two post-firing perforations survive on break. Fabric E

19.42 Form/rim form n/a Context 438 Smoothed surfaces, burnished exterior. Sharp ledge-like carination. Fabric E

19.43 Form/rim form -/1 Context 43 Smoothed surfaces, burnished interior. Fabric A

19.44 Form/rim form -/2 Context 252 Abraded interior. Fabric C

19.45 Form/rim form -/3 Context 423 Smoothed ?originally burnished interior with temper well hidden. Large pieces of flint and quartz protrude through the exterior. Fabric O

19.46 Form/rim form -/1 Context 423 Horizontal wiping on interior. Fabric E

19.47 Form/rim form C/11 Context 38 Complete rim and part of neck survive in places to just beyond slight shoulder. Surfaces smoothed and originally burnished. Ripple burnish on top, interior and exterior of rim, on neck and just below shoulder. Burnish sheen has been abraded from much of the rim and almost all of the surviving interior. Scar of incomplete post-firing perforation on neck. The fabric is tempered with very fine crushed burnt flint; very fine sand is also present. Fabric A

19.48 Form/rim form A/3 Context 38 Trace of wiping on exterior. Fabric C

19.49 Form/rim form B/5 Context 14 Smoothed surfaces. Fabric C

19.50 Form/rim form -/3 Context 82 Smoothed interior. Fabric E

19.51 Form/rim form -/7 Context 82 Smoothed surfaces, coil join visible in break, ?sooting on exterior. Fabric E

19.52 Form/rim form -/2 Context 82 Smoothed surfaces, originally burnished. Ripple burnish on top of rim, which, instead of the usual pattern running across the rim, runs in very neat parallel lines along the circumference. Differential abrasion below the rim on exterior with patch of ?sooting below. Fabric C

19.53 Form/rim form C/2 Context 82 Smoothed interior, slightly abraded exterior. Part of rim missing. Fabric D

19.54 Form/rim form -/1 Context 90 Smoothed surfaces, stump of a lug plugged into vessel wall survives at break. Exterior has fine irregular scratch marks which do not appear to be recent or part of a decorative scheme. They may have occurred during vessel use, but could be post-depositional. Fabric D

19.55 Form/rim form -/4 Context 91 Wiped surfaces. Fabric C

19.56 Form/rim form A/1 Context 91 Wiped exterior. Fabric C

19.57 Form/rim form -/2 Context 300 Smoothed surfaces ?originally burnished. Fabric E

Figure 20

20.58 Form/rim form -/7 Context 300 Ripple burnish on interior of rim. Fabric E

20.59 Form/rim form -/1 Context 366 Impressed decoration on top of rim made with a tool rather than finger, with pre-firing perforations below. Fabric C

20.60 Form/rim form -/9 Context 428 Rough exterior, wiping on interior. Fabric D

20.61 Form/rim form -/2 Context 548 Smoothed surface. Fabric V

20.62 Form/rim form -/4 Context 605 Smoothed surfaces. Rim added as a separate strip of clay. Fabric A

20.63 Form/rim form A/2 Context 685 Lightly furrowed decoration on interior of rim. Fabric O

		% all identifiable rims	
Rim form		*No.*	*Wt*
1	Simple rounded	13	7
2	Rolled	30	32
3	Externally thickened	4	4
4	Expanded	1	1
5	T-shaped	1	1
7	Everted rounded or flattened	4	5
8	Pointed	2	1
9	Simple flattened	2	3
10	Internally bevelled	4	10
11	Everted, rounded and externally thickened	39	36

Table 7 Rim forms

		% sherd no.	*% sherd weight*
Vessel form			
A	Open bowl, uncarinated	12	6
C	Open bowl, carinated	50	44
D	Closed bowl, carinated	6	5
E	Bag-shaped jar	32	45

Table 8 Vessel forms

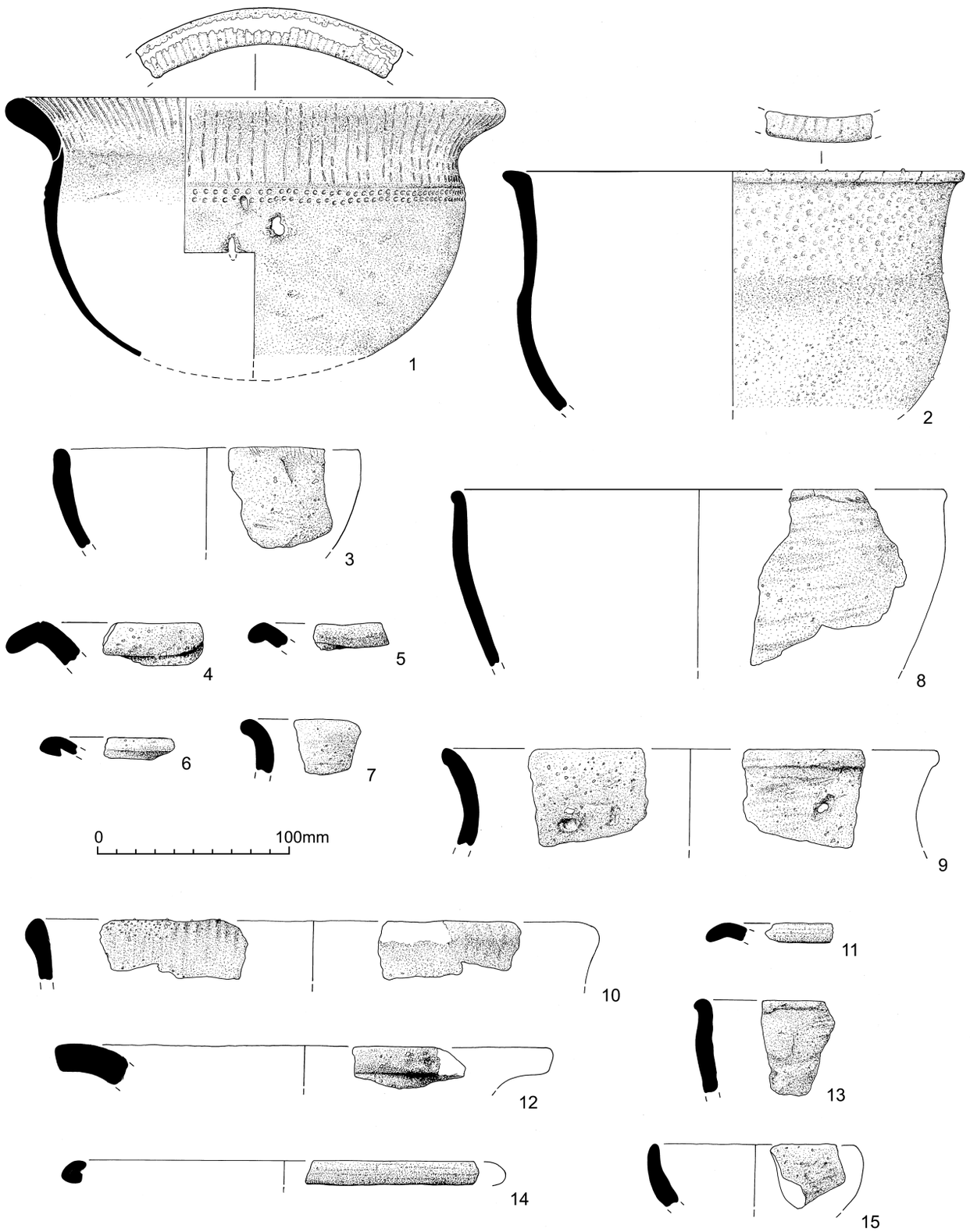

Figure 17 Neolithic pottery 1–15

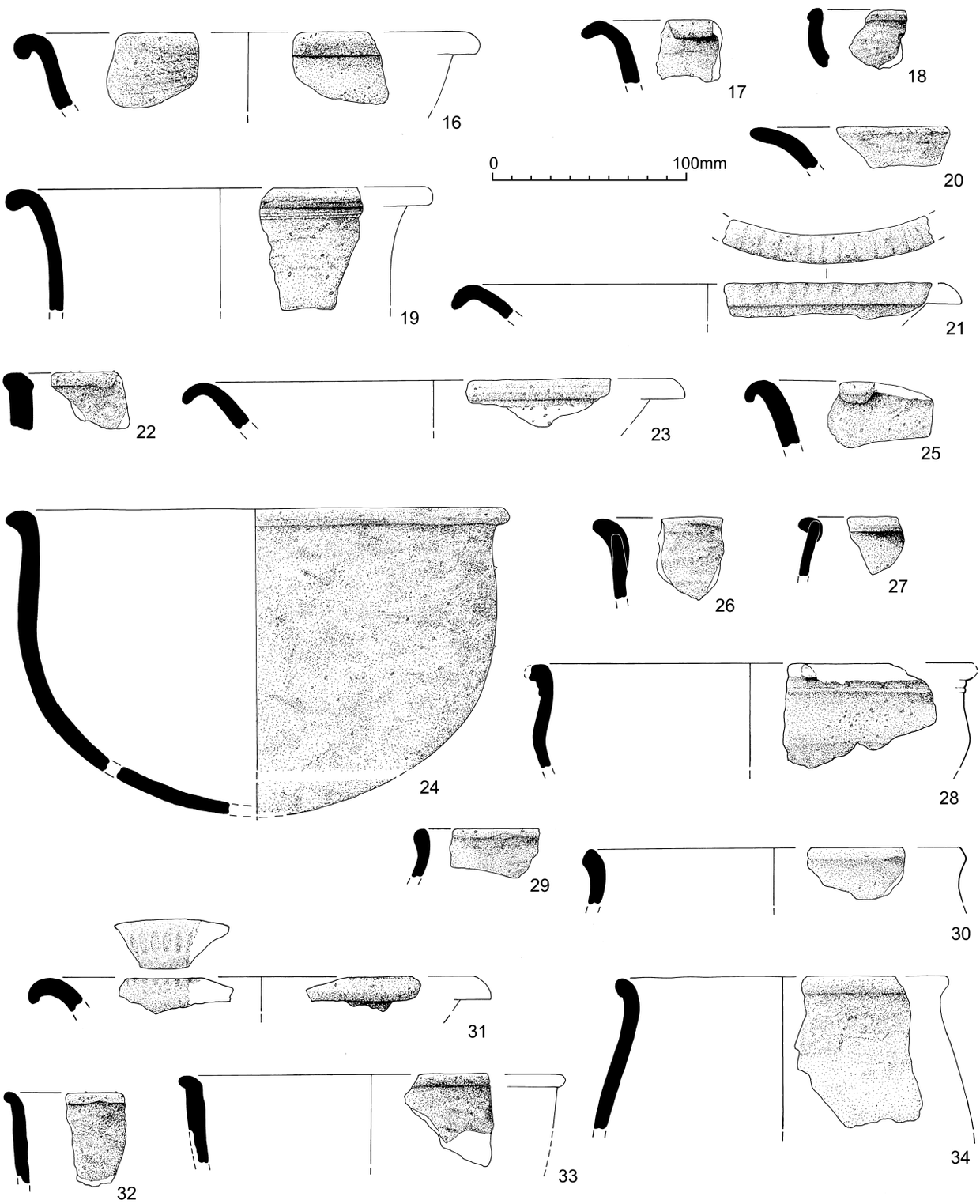

Figure 18 Neolithic pottery 16–34

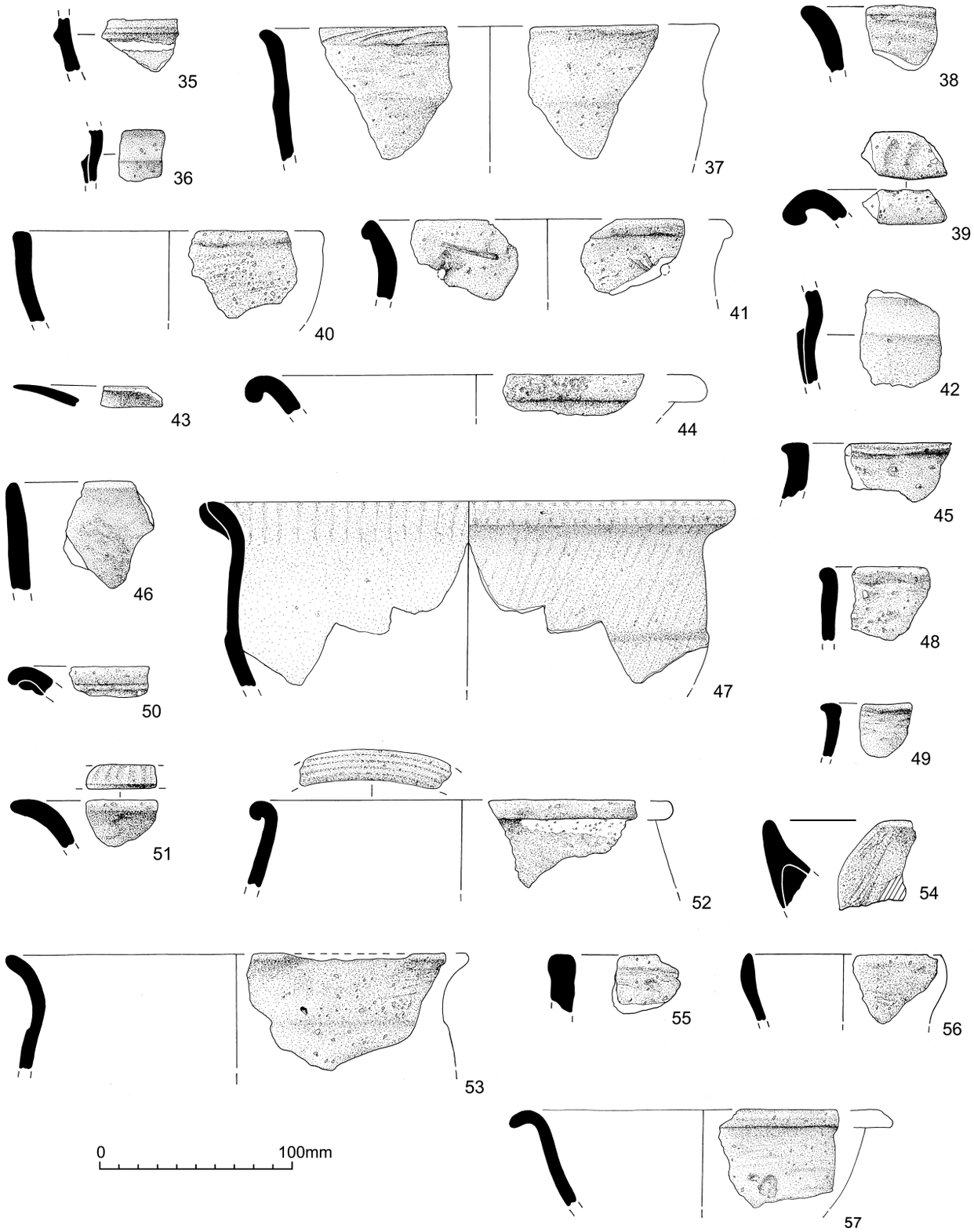

Figure 19 Neolithic pottery 35–57

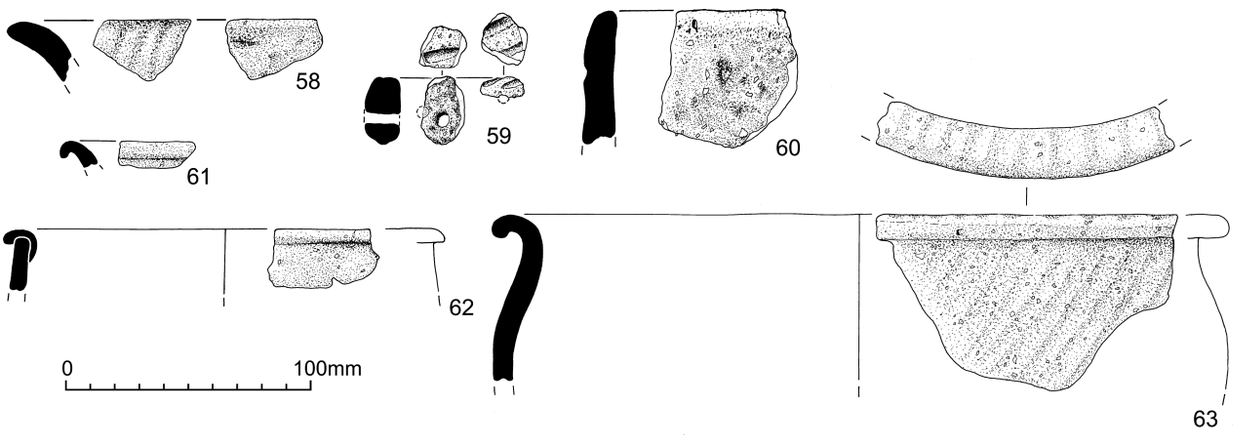

Figure 20 Neolithic pottery 58–63

Discussion

The pottery is broadly appropriate to the Mildenhall style (Longworth 1960), and the general range of forms and decorative techniques is matched by Mildenhall-style assemblages elsewhere in East Anglia. However, in a number of cases precise parallels are elusive; and the assemblage typifies the difficulty, noted by Cleal (1993), of attributing individual site assemblages to one of the broad regional zones traditionally used to characterise Early Neolithic pottery. Shouldered forms are more common at Brightlingsea than at Orsett, Springfield Lyons or The Stumble (Orsett, Kinnes 1978; Springfield Lyons, Brown in prep. a; The Stumble, Brown in prep. b). Shouldered forms appear to be more common in Mildenhall-style assemblages from further north in East Anglia, as at Hurst Fen, Mildenhall, itself (Longworth 1960) and Spong Hill (Healey 1988).

The only sherds which do not appear to be of Neolithic date are two small rim sherds (Fig. 20.59) from pit 427. This flat-topped rim has slanting impressions on the top made with some kind of tool, rather than the finger, together with a row of pre-firing perforations below the rim. Such pre-firing perforations occur in earlier Neolithic assemblages (*e.g.* Warren *et al.* 1936, fig. 2.7; Longworth 1960, fig. 21.25*)*. However, the combination of these perforations with the form and decoration of the rim would be better matched among the local Deverel-Rimbury ceramics (Brown 1995a). Such a date for these sherds would be broadly contemporary with the Bronze Age cemetery excavated in 1989, east of the Brightlingsea Neolithic ring-ditch.

The decorative traits noted at Brightlingsea — ripple burnish, light stroke patterns and occasional incised and impressed decoration — all occur in other Mildenhall assemblages. Incision is very rare at Brightlingsea, occurring on a remarkable bowl from the ditch butts (Fig. 17.1) as shallow, almost scratched, lines executed on the dried surface prior to burnishing. The only other examples are two very small sherds, each with narrow zones of quite deeply incised lines (not illustrated) clearly carried out when the clay was quite wet. A single small sherd has one curving line of cord impression (not illustrated). The presence of this sherd is of some interest since rather similar small sherds, decorated with single lines of cord impression, were recovered from the Neolithic causewayed enclosure at Springfield Lyons, where cord impression is otherwise unrepresented (Brown in prep. a).

The S-profile bowl (Fig. 17.1) deposited in two joining parts on either side of the causeway, cannot be closely paralleled in the major Mildenhall-style assemblages in East Anglia (Longworth 1960, Kinnes 1978, Healey 1988, Brown in prep. a; in prep. b). Nor are there similar pots in the material from Etton (Kinnes 1998 and pers. comm.), or in pottery from the Thames valley (Case and Whittle 1982, Robertson-Mackay 1987). The thickened everted rounded rim is particularly unusual; this, together with the elaborate decorative finish of incision, burnish and impressed dots, together with the extraordinary thinness of the vessel walls, particularly as they approach the round base, clearly distinguish this vessel from the rest of the Brightlingsea assemblage. There is a large patch of abrasion on part of the exterior, perhaps resulting from the use of the pot. Differential abrasion is also apparent on the top and part of the interior of the rim. This may indicate the use of a lid or perhaps that the bowl was frequently placed rim-down. It thus appears from the abrasion that this bowl had seen considerable use prior to its deposition. It also has post-firing perforations, presumably repair holes indicating that the pot was considered worth repairing, or at least could not be immediately replaced.

The vessel (Fig. 19.47) which accompanied the cremation burial is in some ways comparable. Unfortunately only the rim and a small part of the neck, in one place extending to the shoulder, survive. The vessel was apparently placed upside down over the cremation, and the lower part of the pot was destroyed by subsequent erosion and ploughing. Not only does the cremation pot have ripple burnish on the rim, but this decorative technique is also used on the neck and shoulder in a manner unmatched at Brightlingsea but comparable to vessels from elsewhere (*e.g.* Robertson-Mackay 1987, fig. 47). The rim form is closely comparable to that on the vessel from the ditch butts, even down to the same method of manufacture, the thickened rounded form being created by the addition of a separate strip of clay to the exterior. The vessel form is rather different, however: the cremation vessel has a more clearly marked shoulder and a much more upright neck.

The fabric of both pots is also distinctive; the tempering material is very finely crushed burnt flint

(Fabric A); however, in both cases very fine dense sand is also present. It is unclear whether this was deliberately added or a natural constituent of the clay. In either case its presence seems to reflect deliberate choice by the potter of the clay used to make these two pots, presumably to facilitate the manufacture of these elaborate and very thin-walled vessels. The contexts of both vessels indicate that they were selected and deliberately placed deposits. Indeed, the elaboration of these bowls would fit the criteria used by Howard (1981) to define ritual or special purpose vessels.

The butt end (contexts 29, 31, 32), which produced parts of bowl Fig. 17.1, also produced large parts of another very fine pot (Fig. 17.2) which was severely burnt, possibly after breakage, making full appreciation of the vessel difficult. Although the rim form is different, the vessel form, with its clearly defined shoulder and upright neck, is reminiscent of the pot which accompanied the cremation (Fig. 19.47). Where they survived, surfaces were well smoothed and probably originally burnished. The rim has ripple burnish on the top and the whole neck is covered with dense, shallow, random impressed dots. It is notable that this vessel and the fine bowl Fig. 17.1 are the only two examples with such decoration at Brightlingsea. In Mildenhall assemblages bands of impressed dots at the shoulder are a common component of decorated pots (*e.g.* Longworth 1960, figs 25–26; Kinnes 1978, fig. 32.56; Healy 1985, fig. 70), but the use of such impressions on the neck is most unusual; however, it may occur at Orsett (Kinnes 1978, fig. 32.55), and it occurs in other Early Neolithic decorated assemblages, notably at Abingdon (Case and Whittle 1982, figs 14.2, 19.68).

Selected and placed deposits at Brightlingsea were not confined to these distinctive fineware vessels. A large part of a coarse bag-shaped pot (Fig. 18.24) appears to have formed part of a placed deposit in context 639. As noted above, cross-context joins were not common and even joining sherds within contexts were also relatively uncommon. This might imply that much of the sherd material had undergone some kind of selection prior to deposition, and there are hints of this kind of practice in some of the deposits at The Stumble (Brown in prep. b).

Manufacture and use

The full range of vessel forms which would be expected in an Early Neolithic assemblage is present at Brightlingsea: small cups (Figs 17.3, 20.62), a range of coarse and fine bowls in various sizes (Figs 17.1, 17.2, 18.24), and fragments of very large ?storage pots (Fig. 20.60) similar to those which occur in other large Early Neolithic assemblages (*e.g.* Brown 1995b, fig. 60.33; Brown in prep. b).

Visual examination of the fabric reveals nothing which is of obviously non-local origin. Some small pots may have been formed from a single lump of clay, and evidence of coil joins is fairly frequent. These two manufacturing techniques were the only ones which appear to be present, as they were at Windmill Hill (Smith 1965; Howard 1981) and The Stumble (Brown in prep. b). This presents a clear contrast with later prehistoric assemblages, such as the Late Bronze Age pottery from Springfield Lyons, where a variety of techniques were employed in pottery manufacture (Brown in prep. c). The post-firing perforations on bowl Fig. 17.9 are rather ragged and distinctly oval in appearance. Such perforations are quite closely matched by those on a bowl from Eyford, Gloucestershire (Kinnes and Longworth 1985, 230), where not only the ragged oval shape of the perforation but also the form and position of the scar of the uncompleted hole are close parallels for the Brightlingsea perforations. Similar rather ragged oval perforations appear to be present on other Neolithic vessels (*e.g.* Robertson-Mackay 1987, fig. 41. p55; fig. 50, p150). Again, this is in marked contrast to later Bronze Age assemblages, where post-firing perforations are generally circular in plan and neatly cylindrical or hour-glass in profile (*e.g.* Figs 22–24 and Brown 1999, figs 115, 121, 128). As noted above, patches of differential abrasion indicative of use were observed on the fine bowl Fig.17.1. Similar abrasion occurs on the tops of some rims, perhaps indicating the use of lids or upside- down storage of round-based vessels. Also present on some rolled rims is a band of abrasion immediately below the rim. Similar bands of abrasion have been noted elsewhere (Brown in prep. b, figs 1.13, 2.21; Henshall 1983, fig. 24), and may result from the tying on of leather or fabric lids and/or carrying cords, as may the band of abrasion below the sharp carination on Fig. 19.35.

Pottery from the watching brief

(Fig. 21)

An assemblage of Grooved Ware (forty-nine sherds, weighing 273g) was recovered from a small pit (Table 9). The pottery illustrated here represents the full range of form and decoration. The only unillustrated piece is a small body sherd which has the same decorative traits as Fig. 21.1 and is probably from that vessel.

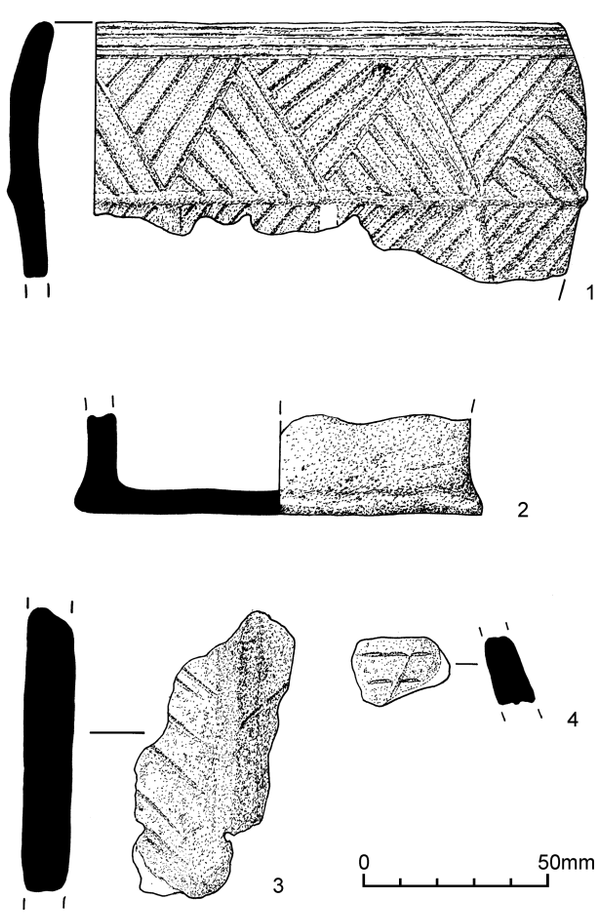

Figure 21 Grooved Ware from the watching brief

Fabric		% of total no.	% of total weight
G	Sand, 3	2	2
M	Grog, often with some sand or flint and occasional voids	72	93
Z	Unclassifiable	26	5

Table 9 Pottery from the watching brief: fabrics

Catalogue of illustrated material

Figure 21

21.1 Rim form 3 Context 976 Inturned rim and upper body of bucket-shaped vessel. Band of three horizontal grooved lines on exterior below rim, below which is grooved decoration forming a band of infilled triangles, and above which is an applied horizontal cordon at the shoulder. Below this, vertical applied cordons (in one case a scar where a cordon is missing), divide the walls into panels infilled by sloping grooved lines. Fabric M

21.2 Rim form n/a Context 976 Flat base and lower wall, outside edge of base slightly protruding due to the way it was pinched onto the wall. Abrasion underneath base as result of use. Fabric M

21.3 Rim form n/a Context 976 Body sherd of thick-walled straight-sided vessel, applied vertical cordon with sloping grooved lines on either side. Fabric M

21.4 Rim form n/a Context 976 Small bodysherd, probably from an open bowl, with incised lines on interior. Fabric G

Discussion

This small group of Grooved Ware can be ascribed to the Durrington Walls style (Wainwright and Longworth 1971, 240–42). It contrasts with the large assemblage of Grooved Ware from Clacton (Longworth *et al*. 1971), about 9km to the south-east, but has clear similarities with the large assemblage excavated at Lawford, 14 km to the north (Shennan *et al*. 1986), and a pit group excavated at Colchester (Brown 1992), 10km to the north-east. Indeed, the similarity between the material from Brightlingsea and the pit group from Colchester is quite striking: both contain similar large rim sherds and large body sherds displaying similar decorative schemes. Large base sherds, and small sherds with internal incised decoration, probably from open bowls, are also present in both groups. The way in which the Colchester pottery was quite deliberately placed in the pit leaves little doubt that it was a structured deposit, and the same may be true of the material from Brightlingsea. A review of the radiocarbon dates for Grooved Ware by Garwood (1999) indicates that the Durrington Walls style remained current throughout the third millennium BC. However, there is some indication that applied vertical cordons and the rigid structuring of decoration seen in the Brightlingsea material, and vessels of forms similar to Fig. 21.1, are relatively late developments (Garwood 1999, 157–159). On that basis a date in the second half of the third millennium may be suggested for the Grooved Ware from Brightlingsea.

Pottery from the Middle Bronze Age cemetery

Cremation urns

Thirty-three vessels accompanying cremations were recovered. Preservation ranged from near-complete urns to pots represented by a few sherds. Sherds of four other pots were recovered from the fills of the cremation urns. All the pottery has been recorded according to a system devised for prehistoric pottery in Essex (details in archive). The urns are illustrated in Figs 22–26 and described in the catalogue (below). Seven highly fragmentary pots (P504/F1006, P524/F1014, P526/F1002, P570/F1026, P870/F1028, P758/F1077, P581/F1078) are not illustrated (details in archive).

Catalogue of illustrated material

Fabric:

C = Flint, S–M with occasional L, 2
D = Flint, S–L, 2
M = Grog, often with some sand or flint and occasional voids
Q = flint, S–L and Grog, S–M, 2
R = Shell
V = Flint, S–M, 1
W = Flint, S–L, 2 with some sand and veg. voids often on exterior

Where size of inclusions is represented by:

S = less than 1mm diameter
M = 1–2mm diameter
L = more than 2mm diameter

Where density of inclusions is represented by:

1 = less than 6 per cm^2
2 = 6–10 per cm^2
3 = more than 10 per cm^2

Rim Form:

1 = Flat topped
3 = Rounded
5 = Expanded
6 = T-shaped

Figure 22

22.1 Feature & Pot No. F1000 & P500. Fabric D. Rim Form 1. Most of the rim missing, row of pre-firing perforations below rim. Close-set fingertip rustication arranged in rows. A narrow band where the orientation of the finger impressions is reversed lies opposite a gap 5–8cm wide down the side of the vessel. The vessel has a slab-like fracture pattern. The interior is wiped, near the base part of the wall has sagged.

22.2 Feature & Pot No. F1001 & P514A. Fabric D. Rim Form 1. Most of the rim and centre of the base missing. Fingertip rustication, ordered in roughly vertical lines above applied cordon, which has partly flaked off. Finger-impressed rows above and below cordon and around exterior of base. Slab-like fracture pattern. Vertical wiping on exterior below cordon. Horizontal wipe marks on interior.

22.3 Feature & Pot No. F1001 & P514B. Fabric D. Rim Form n/a. Base and lower walls only, found inside Fig. 22.2

22.4 Feature & Pot No. F1001 & P515. Fabric D. Rim Form 1. About half rim missing. Row of pre-firing perforations below rim. Fingertip rustication below finger-impressed cordon.

22.5 Feature & Pot No. F1004 & P542. Fabric C. Rim Form n/a. About half the lower wall surviving with fingertip rustication. Patch of fingertip rustication on interior near bottom of wall. A large part of detached finger-impressed cordon was also recovered, possibly from the same vesssel (not illustrated). A small comb-point decorated sherd, grog-tempered (fabric M), clearly from another vessel, was also present (not illustrated).

Figure 23

23.6 Feature & Pot No. F1007 & P505. Fabric M. Rim Form 1. Nearly complete rim. Fingertip arcade between row of fingertip impressions below rim and above finger-impressed cordon. Fingertip rustication below cordon. Single post-firing perforation.

23.7 Feature & Pot No. F1009 & P508. Fabric Q. Rim Form 1. Part of walls and most of rim missing. Interior surface of base partly missing, but where present has fingertip/nail impressions. Fingertip/nail impressions around base and on part of exterior.

23.8 Feature & Pot No. F1010 & P565. Fabric V. Rim Form 1. Rim only survives. Horizontally wiped surfaces. Large ?pre-firing perforation. Part of fingertip row survives at break.

23.9 Feature & Pot No. F1011 & P513. Fabric ?R. Rim Form 3. Globular urn, surfaces originally smoothed, vesicular fabric. Sharp carination with two surviving lugs, simply luted to the

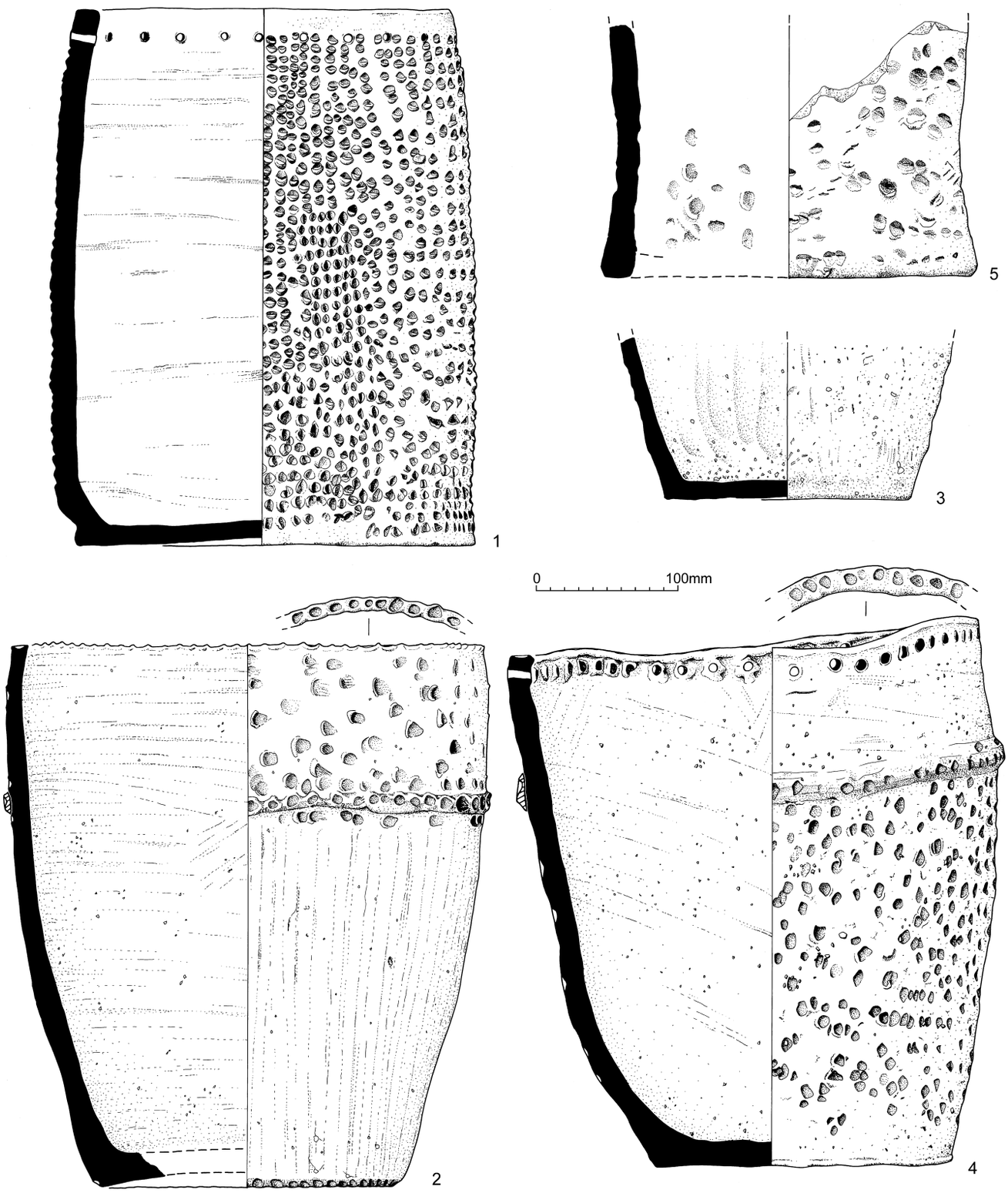

Figure 22 Middle Bronze Age pottery 1–5

surface. Pair of post-firing perforations. About 2/3 of circumference of pot survives and about 1/3 of rim.

23.10 Feature & Pot No. F1011 & P554. Fabric D. Rim Form n/a. Roughly rounded sherd, with fingernail impressions on exterior. Found in P513.

23.11 Feature & Pot No. F1012 & P559. Fabric D. Rim Form 1. Complete rim. Finger-impressed row below rim only continues for about half circumference of vessel. Applied finger-impressed cordon. Rectangular slab-like fracture.

23.12 Feature & Pot No. F1015 & P522. Fabric D. Rim Form 1. Base missing. Finger-impressed applied cordons. Carefully grass- or cloth-wiped exterior.

23.13 Feature & Pot No. F1016 & P528. Fabric M. Rim Form 1. Complete finger-impressed rim, part of finger-impressed cordon survives at break. Interior horizontally finger-wiped,

exterior grass-wiped horizontally and vertically. One part of the exterior has a series of lightly incised irregular lines.

Figure 24

24.14 Feature & Pot No. F1017. Fabric M. Rim Form 1. About 1/3 of rim survives with fingertip/nail impressions on exterior.

24.15 Feature & Pot No. F1018 & P551. Fabric D. Rim Form 1. Complete rim, applied thumb-impressed cordon. 'Soot' in thumb impressions on top of rim. Horizontal wiping of surfaces, particularly on interior.

24.16 Feature & Pot No. F1018 & P521A. Fabric Q. Rim Form 3. Two large rim sherds from within P521. Vertical rows of finger impressions between rim, and scar where an applied cordon has broken off. Extensive sooting covering sherds. Sooting occurs on the broken edges and scar of missing cordon, indicating the pot was already broken before sooting took place.

24.17 Feature & Pot No. F1019 & P537. Fabric D. Rim Form 1. Near-complete rim. Upper part of vessel has vertical rows of finger impressions linking two horizontal rows. A third horizontal row survives at break.

24.18 Feature & Pot No. F1020 & P565. Fabric V. Rim Form 3. About half rim survives. Upper body divided into panels by vertical and horizontal lines fingertip impressions, orderly vertical rows of fingertip impressions on lower body. The vessel has cracked along a clear horizontal join 13mm below rim.

24.19 Feature & Pot No. F1021. Fabric Q. Rim Form 1. Part of rim survives with orderly row of fingertip impressions below a blank zone. One of the rim sherds has what appear to be cord impressions in the blank zone adjacent to the break. Substantial body sherd with vertical and horizontal rows of fingertip impressions.

24.20 Feature & Pot No. F1022 & P557. Fabric Q. Rim Form 1. Vessel survives to applied cordon at shoulder. One 'side' of pot blank, two sets of two vertical rows of fingertip impressions and one set of five rows opposite blank 'side'.

Figure 25

25.21 Feature & Pot No. F1025 & P530. Fabric M. Rim Form n/a. Complete base and lower walls. Grass-wiped surface. Some of the grog inclusions are recognisable as pieces of pot.

25.22 Feature & Pot No. F1027 & P544. Fabric D. Rim Form 1. Complete rim to base profile and about half the total vessel survives. Horizontal finger-wiping on interior. Black deposit/sooting in patches on interior and exterior. Row of pre-firing perforations below rim.

25.23 Feature & Pot No. F1082 & P927. Fabric Q. Rim Form 1. About half rim survives. Vertical finger-wiping on exterior.

25.24 Feature & Pot No. F1093 & P927. Fabric D. Rim Form 1. Base of thin-walled pot.

25.25 Feature & Pot No. F1093 & P772A. Fabric W. Rim Form n/a. Large part of base of thin-walled pot, wall substantially thickened at base, which has a slightly protruding foot.

25.26 Feature & Pot No. F1096 & P772B. Fabric M. Rim Form 3. Highly fragmentary. Large part of base and one substantial rim sherd survive. Some of the grog inclusions are still clearly recognisable as pot.

25.27 Feature & Pot No. F1096 & P714. Fabric M. Rim Form 6. Highly fragmentary. A rim sherd with plain horizontal lug survives, together with some base and body sherds (not illustrated).

25.28 Feature & Pot No. F1098 & P715. Fabric D. Rim Form 5. Complete rim. Applied finger-impressed cordon at rim; another survives at break. Vertical rows of finger impressions tending to arcade pattern between cordons.

Figure 26

26.29 Feature & Pot No. F1098 & P716. Fabric Q. Rim Form 1. Complete rim, with fingertip impressions on top and a row immediately below the rim, with finger-impressed wavy line arcading between rim and finger-impressed applied cordon. Fingertip rustication below cordon. Pair of post-firing perforations.

26.30 Feature & Pot No. F1100 & P717. Fabric C. Rim Form 1. Complete finger-impressed rim. Surfaces grass-wiped. Fingertip rustication between rim and applied finger-impressed cordon.

26.31 Feature & Pot No. F1108 & P721. Fabric C. Rim Form n/a. Lower half of globular urn. One lug/strap handle survives; opposite is a scar where another has broken off.

26.32 Feature & Pot No. F1084. Fabric C. Rim Form 3. Rounded rim of high-shouldered jar, interior surface missing.

Form and decoration

The majority of the vessels are bucket urns. Some appear to have near-vertical walls (*e.g.* Fig. 22.1, 24.15, 25.28); on others, the lower walls curve gently in towards the base (*e.g.* Fig. 22.2). Some have a bipartite form: straight walls above a cordon set high on the vessel, the walls below sloping towards the base (*e.g.* Figs 23.13, 25.21). Occasionally there is a tendency to a biconical profile, with walls sloping in above and below the cordon towards the rim and the base (*e.g.* Fig. 23.6). Smaller vessels include a medium-sized ovoid bucket (Fig. 25.22) and a small pot of similar profile (Fig. 23.7). One of the bases from F1093 (Fig. 25.24) may also be from a small pot. However, small pots are generally lacking in the Brightlingsea assemblage. The measurable rim diameters show a predominance of large and medium-sized vessels, rather than the threefold division of vessel size noted by Ellison (1988, 49). Three globular urns are present (Figs 23.9, 26.31 and P524 (not illustrated)). One has a sharp carination (Fig. 23.9), and a shoulder sherd (not illustrated) from another has a similarly sharp carination.

The bucket urns tend to be highly decorated; it seems none are completely plain. However, some which survive only as a small part of rim or base (*e.g.* Figs 25.22–26) *might* have been undecorated; these all appear to be from relatively small vessels and it is noticeable that the two small pots from the assemblage have little decoration (Figs 23.7, 25.22). The decoration consists of finger and/or nail impressions; they occur on the top (*e.g.* Fig. 24.15) and/or the exterior of rims (*e.g.* Fig. 24.14), and on applied cordons (*e.g.* Fig. 26.29, 26.30). Some vessels have elaborate fingertip rustication (*e.g.* Fig. 22.4, 23.6), which is sometimes arranged in orderly rows (*e.g.* Fig. 22.1, 24.16). Others have walls divided into panels by vertical and horizontal fingertip rows (Fig. 24.17, 18). The small pot from F1009 (Fig. 23.7) has patches of fingernail impressions on the exterior wall, on the interior wall and on the base. Finger impressions on the inside of the lower wall occur on P594 (Fig. 22.5).

The frequency of decoration is typical of the Ardleigh Group (Erith and Longworth 1960; Brown 1995a; 1999). The urns with both random, and more orderly, rustication can be widely paralleled within the assemblages from Ardleigh (Erith and Longworth 1960; Couchman 1975). The division of vessel walls into panels also occurs at Ardleigh (Couchman 1975, fig. 3.A1). Finger-impressed arcading commonly occurs within the Ardleigh Group: at Ardleigh itself (Erith and Longworth 1960, fig. 3H2 and B6), at White Colne (Brown 1999) and at Colchester (Brown 1999). Finger-impressed rims and applied cordons are also common at Ardleigh but are traits that occur widely in Deverel-Rimbury ceramics. Comb point decoration occurs widely in eastern England, not only on Deverel-Rimbury and other Middle Bronze Age pottery, but also on cylindrical loomweights (*e.g.* Grimes Graves, Longworth 1981, fig. 29.159 and Longworth *et al*. 1988, fig. 32; Mildenhall Fen, Clark 1960, fig. 3.8, 14; Fengate, Pryor 1980). In Essex it occurs at White Colne (Brown 1999), Wix (Brown 1999), North Shoebury (Brown 1995b), Rook Hall (Adkins *et al.* 1984–5) and Ardleigh

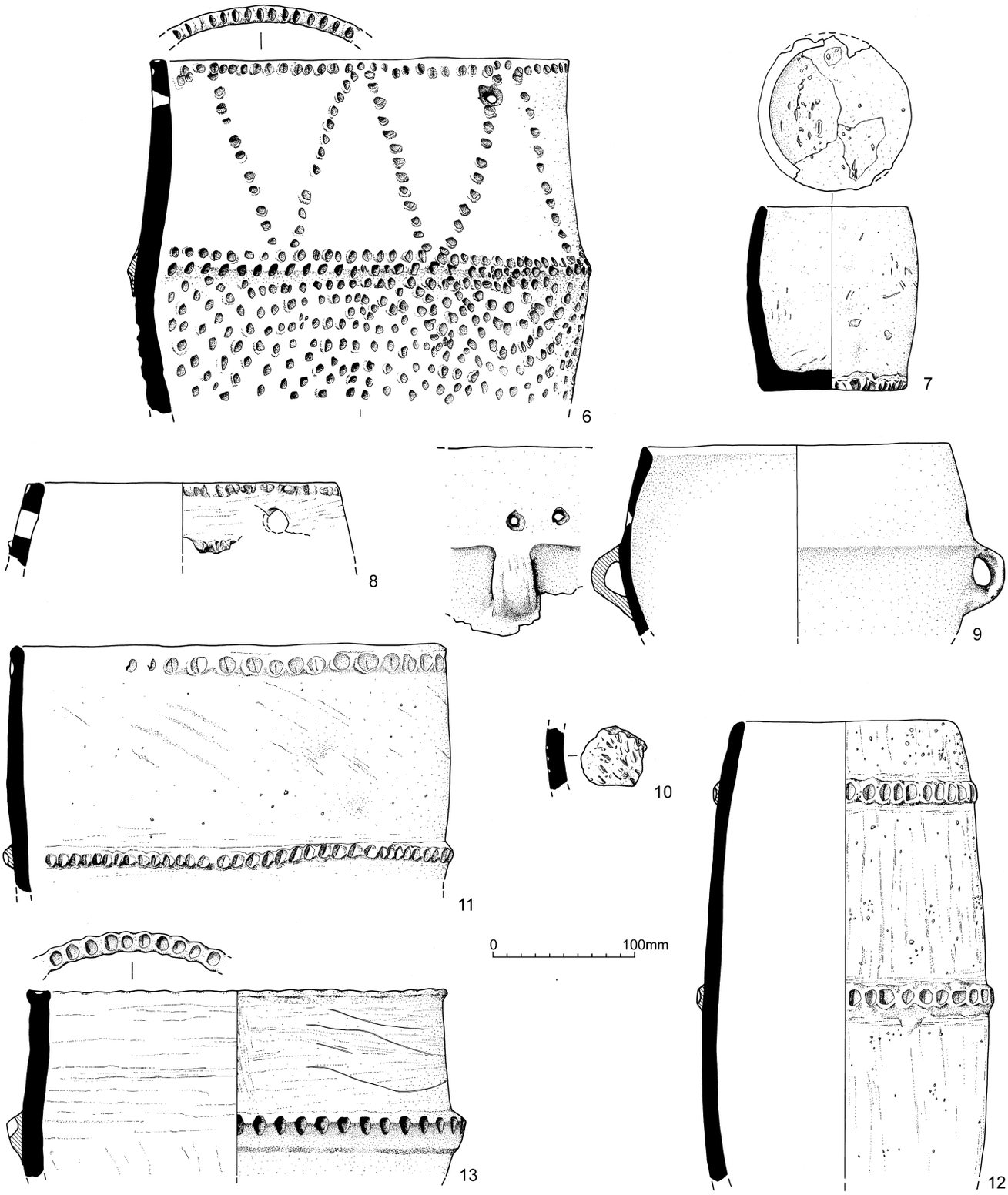

Figure 23 Middle Bronze Age pottery 6–13

(Erith and Longworth 1960, fig. 4 urn A). Rows of pre-firing perforations occur at Brightlingsea (Fig. 22.4, 25.23); they are as likely to be functional as decorative, and are a widespread trait in Deverel-Rimbury pottery (below and Brown 1995a; 1999). The three globular urns from Brightlingsea are undecorated; two (P513, Fig. 23.9, P524) have well-smoothed surfaces, probably originally burnished; the other is less well finished (P721, Fig. 26.31).

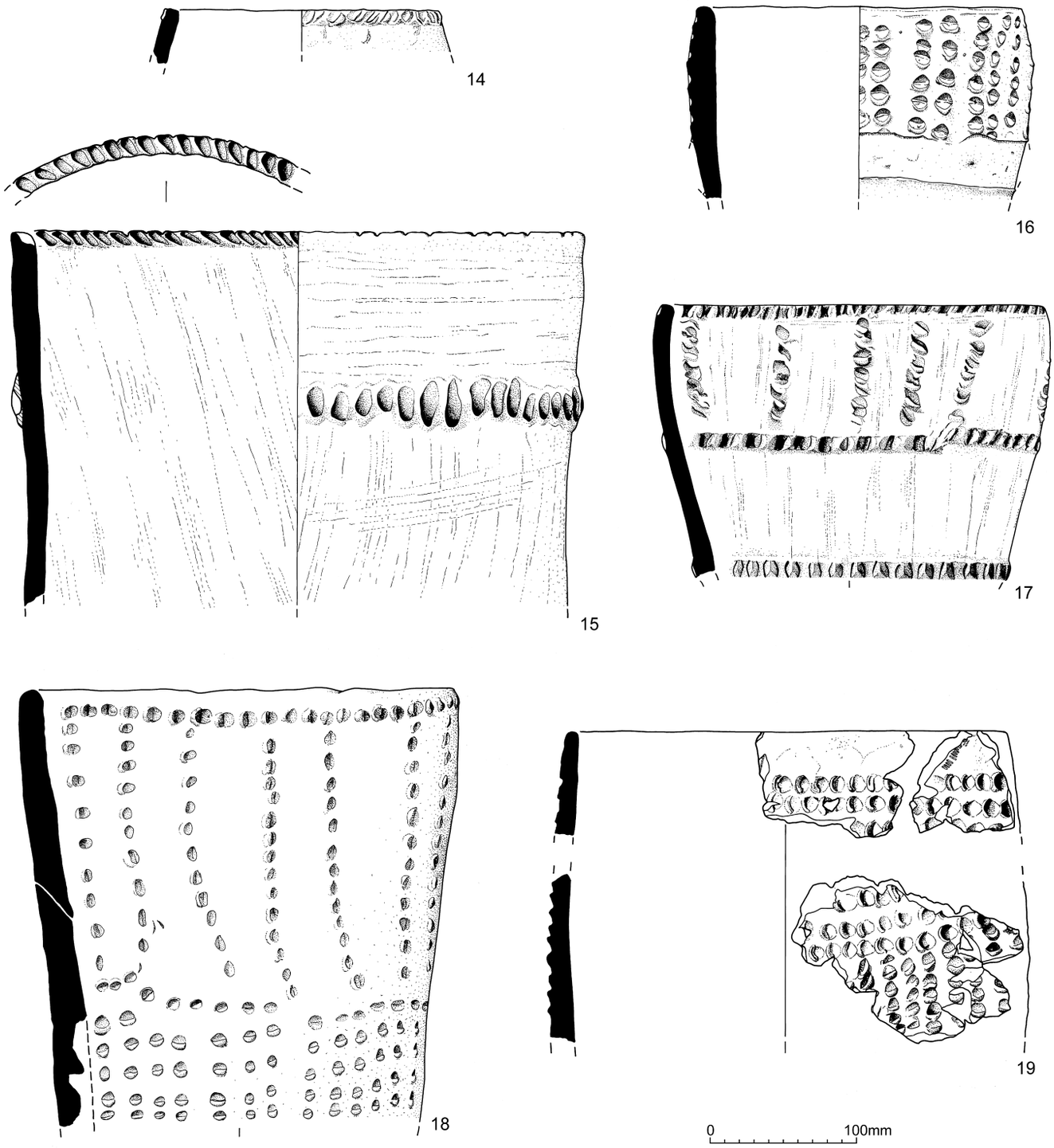

Figure 24 Middle Bronze Age pottery 14–19

Fabric, manufacture and function

The majority of the pots occur in flint-tempered fabrics (B, C, D, V, and W), with a large minority of grog (M) or flint and grog fabrics (Q). A substantial proportion of the fabrics of vessels from the Ardleigh urnfield are grog-tempered (Brown 1995a and 1999), and this pattern is typical of Deverel-Rimbury assemblages in Essex. The vesicular fabric of one of the globular urns (Fig. 26.31) may be the result of dissolved shell temper. Shell-tempered fabrics are rare in Essex Deverel-Rimbury assemblages, as they are in East Anglia as a whole (Ellison 1988, 47).

A number of the Brightlingsea pots show rectangular fracture patterns which may indicate slab building. Such fracture patterns are particularly clear in some Deverel-Rimbury vessels from elsewhere in Essex (Brown 1995a; 1999). However, there are also indications of coil building, and a variety of manufacturing techniques were probably employed. Urn P565 (Fig. 24.18) has a clear horizontal break where the upper half of the vessel has been joined to

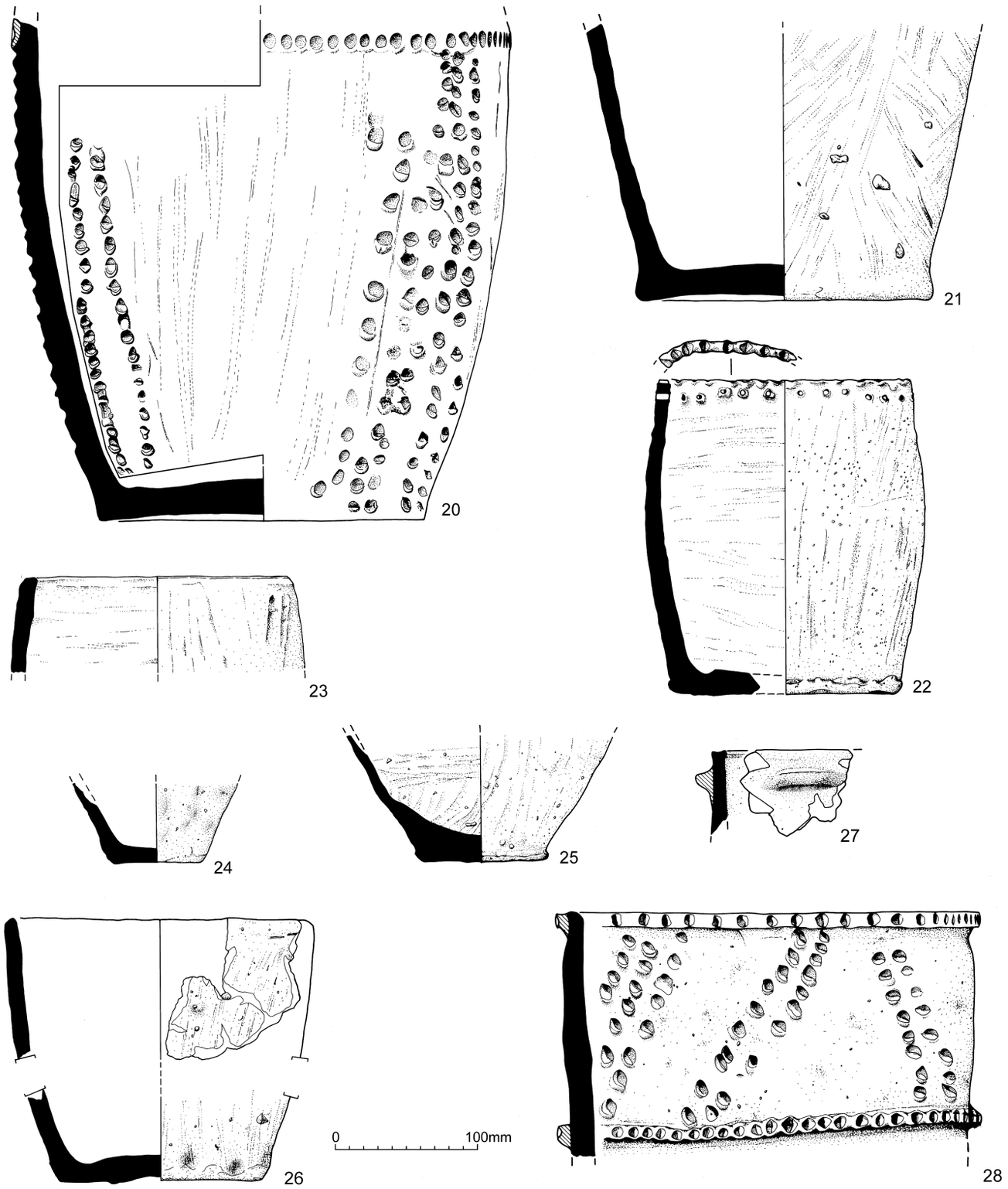

Figure 25 Middle Bronze Age pottery 20–28

the lower. Surfaces are frequently finished by 'grass' wiping, and occasionally by finger wiping (Fig. 22.2). In common with most other Deverel-Rimbury assemblages, a number of the Brightlingsea pots have post-firing perforations, which may well be repair holes. Rows of pre-firing perforations, below the rim (*e.g.* Fig. 22.1, 22.4), occur widely in Deverel-Rimbury assemblages in East Anglia (Ellison 1988), and most Essex assemblages contain several such vessels. The holes may well represent a method of attaching leather or fabric lids, although other explanations are possible (Mercer 1981, 38).

One vessel (P544, Fig. 25.22) has patches of black deposit/sooting on the interior and exterior which may be a reflection of use. Vessel P521 (Fig. 24.15) has sooting in the

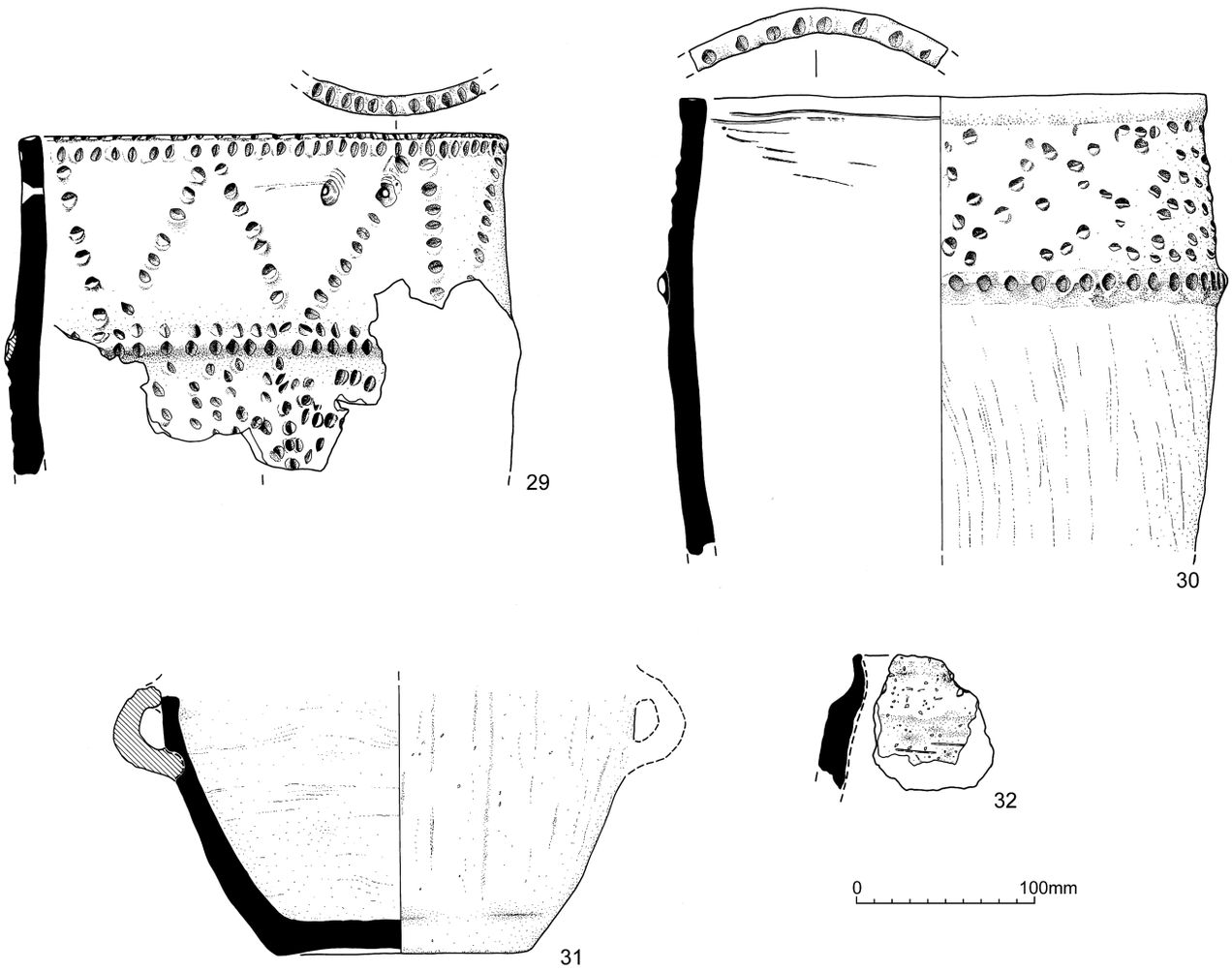

Figure 26 Middle Bronze Age pottery 29–32

finger impressions on the top of the rim. This seems likely to be the result of the vessel being inverted over an ashy cremation. The heavy sooting on the surfaces and breaks of the sherds found within this pot, P521A (Fig. 24.16), probably also occurred at the time of deposition. In common with most recently excavated Deverel-Rimbury assemblages, the fabrics of the Brightlingsea pots are quite soft and prone to breakage during handling. However, examination of museum collections during preparation of a gazetteer of Deverel-Rimbury pottery in Essex (Brown 1995a) showed the pottery to be very robust. This may be the result of the thorough dehydration brought about by 30–100 years in a dry museum store, and may indicate that the pottery was far tougher when in daily use than it may appear when recently excavated today.

It has not been possible to test the correlation of age of cremated individuals and vessel size, as at Pasture Lodge Farm, Lincolnshire (Allen *et al.* 1987). At Brightlingsea all the cremations for which age could be determined were of adults or young adults. The one exception was a cremation of a juvenile without an urn. If there is a widespread correlation between small vessels and child burials, it may be that the predominance of large pots at Brightlingsea indicates mainly adult burials. However, this would be contrary to the general pattern of Deverel-Rimbury cremations, which do not appear to be organised with regard to the age or sex of the cremated individuals (Ellison 1980).

As noted above there is a lack of small pots at Brightlingsea; assuming that the vessels were selected from domestic assemblages which comprised the full range of vessel sizes, it appears that the larger pots were selected for deposition in the cemetery (Ellison 1988, 148–50).

The blank 'side' of P537 (Fig. 25.21) and the occurrence of finger impressions on only part of the circumference of P559 (Fig. 23.12) may indicate that when in use the vessels were displayed in such a way that parts of them were invisible. The decoration of the two vessels from F1001 is of interest, rustication being confined in one case (P514, Fig. 22.2) above the cordon and in the other below (P516, Fig. 17.4). The base and undecorated lower walls of Fig. 22.3 had been jammed inside the larger vessel Fig. 22.2, apparently replacing its missing base.

In some cases the cremation vessels contained sherds which appear to be symbolic representations of other pots. In each case the decoration of the sherds is a clear contrast to that of the vessels they accompany; fingertip rustication with a plain globular urn (P513, P554, Figs 23.9 and 23.10), comb point decoration with fingertip rustication (P504, Fig. 22.5) and fingertip rustication with cordon removed accompanying a plain walled pot with applied cordon (P521, 521A, Figs 24.15, 24.16). This pairing of

pots with opposed decoration is relatively common within the Ardleigh Group and appears to reflect deliberate choice at the time of deposition (Brown 1995a; 1999). Two of the grog-tempered vessels contained fragments of grog still recognisable as pieces of pot (P713 and P530). Similar occurrences have been noted on Ardleigh-style vessels and are discussed elsewhere (Brown 1995a; 1999). A most striking example has been noted at Pasture Lodge, where part of a decorated pot was preserved in another vessel (Allen *et al.* 1987, 214, fig. 14.19). This practice may symbolise the transformation of one pot into another, or indeed the continuation of one pot by another, in the manner observed ethnographically by Sterner (1989, 458). Even where grog tempering is ground sufficiently small, so that it is no longer recognisable as pot, it could still have served a symbolic purpose. Conversely, it is quite possible to use grog for particular technical reasons, or merely as a convenient temper (Okpoko 1987, 453). In archaeological contexts the use of grog must be a matter of interpretation. It is tempting to see the use of grog tempering in a proportion of the vessels in most Essex Deverel-Rimbury assemblages as a reflection of symbolic practices.

Date

In general, Deverel-Rimbury ceramics can be dated to the second half of the second millennium BC, with origins rather earlier. The radiocarbon dates from Brightlingsea indicate a range between about 1600 and 1300 BC, with dates from one of the urns and one of the unurned cremations extending earlier. The chronology of Deverel-Rimbury assemblages from Essex, including the material from Brightlingsea, is discussed in detail elsewhere (Brown 1995a; 1999).

Other pottery

A small quantity of pottery (270 sherds weighing 1.68kg; details in Archive) was recovered from the surface of the site. The pottery mostly comprised abraded small body sherds, a few of which had fingertip rusticated surfaces. It seems likely that much of the material may derive from the cremation urns.

Very little pottery (76 sherds weighing 0.908kg; details in Archive) was recovered from the excavated segments of the ring-ditches, pits and post-holes. Three unurned cremations (1005, 1023, and 1032) produced pottery, mostly in the form of very small sherds. However, one (1032) produced several sherds of a rim of a rusticated bucket urn which may have been deliberately included with the cremation. As in most cases only small segments were excavated, discrete groups of sherds like those in the ring-ditch at Orsett (Milton 1987) could easily have been missed; however, the two completely (or near-completely) excavated ring-ditches (1040 and 1051) produced only a single sherd each. Insofar as it is possible to classify, there is no reason to suppose that this pottery derives from anything other than vessels of Deverel-Rimbury character, with the exception of the pottery from pit 1084. This pit cut barrow ditch 1051 (Fig. 5), and produced the flat base, body sherds and a rim sherd of a coarse jar (Fig. 26.32), together with a few sherds of other vessels, including a sherd of a fine cup or bowl. These vessels would be appropriate to a post-Deverel-Rimbury assemblage of Late Bronze Age date.

III. Worked flint

The three reports on worked flint (from the ring-ditch, the cemetery and the survey) were written by three different authors over a period of nearly fifteen years. Inevitably, there are certain differences in terminology and classification between these reports.

The flint from the Neolithic ring-ditch

by Peter J. Berridge

The lithic assemblage from this site consists of 1,645 pieces of flint. Apart from a very small number of patinated pieces, the assemblage gives every indication of being, broadly, a single-period group. Just over half (852 pieces, 51.8%) of the assemblage comes from the segmented Neolithic ring-ditch. The assemblage can be broken down into three broad categories: the parent waste (41 pieces, 2.5%); product waste (1,453 pieces, 88.3%); and utilised and retouched pieces (151 pieces, 9.2%). The basic details of these, as they relate to the major context groupings, are presented in Table 10.

Raw material

The assemblage is made up entirely of flint. Areas of cortex are retained on 756 pieces. Of these, 711 (94%) have crazed or smooth water-worn cortex indicating a beach, gravel or boulder clay source. Only 15 (2%) have a nodular cortex. These pieces may have been collected from an area of chalk, a primary flint location. However, this cortex type can be found in gravel and boulder clay deposits, though as a minor element. The remaining 29 pieces have cortex which is of uncertain type. It seems quite clear, based on the cortex types, that the vast majority, if not all, of the assemblage at Brightlingsea relates to locally derived raw material. The surface of the site and the general surrounding area is littered with naturally occurring flint. The cortex and colour variation seen among the assemblage is entirely consistent with that seen among the surface, gravel-derived, material.

Parent waste

Forty-one pieces (2.5% of the assemblage) can be placed in the category of parent waste (a breakdown by context is given in Table 11). Parent waste comprises cores, core fragments, rough flaked lumps and pebbles or nodules. Of these pieces, 21 can be categorised as formal cores and the other 20 as core fragments and lumps. Of the cores, 7 have only one striking platform, 8 have two, 4 have three and 2 are keeled (that is, flakes are struck in alternate directions along a single edge).

Product waste

A total of 1453 pieces (88.3% of the assemblage) can be placed in the category of product waste (a breakdown by context is given in Table 12). This term covers material, apparently unused, that is struck from the parent blocks or is created as by-products of tool manufacture. As is normal, this is the largest part of the assemblage.

Of special note among this group are 7 core preparation and rejuvenation flakes. These consist of 5 flakes and blades that have cresting, suggesting that they formed part of relatively careful core preparation, and 2 core tablets, which indicate core rejuvenation through the creation of fresh striking platforms. The 549 complete waste flakes can be broken down into the following categories: 19 (3%) primary flakes, those with dorsal

	Total	*Parent waste*		*Product waste*		*Utilised/retouched*	
Ring-ditch	**852**	19	1.2%	748	87.8%	85	10.0%
Lin. Dit	**69**	4	0.2%	53	76.8%	12	17.4%
Post/pit	**100**	5	0.3%	87	87.0%	8	8.0%
Box-sec	**550**	8	0.5%	516	93.8%	26	4.7%
Unstrat	**74**	5	0.3%	49	66.2%	20	27.0%
Totals	**1645**	**41**	**2.5%**	**1453**	**88.3%**	**151**	**9.2%**

Table 10 Categorisation of worked flint

		Cores								*Core frags*	
	Total	*1 plat*		*2 plat*		*3 plat*		*Keeled*		*Flaked lumps*	
Ditch	**19**	4	21.1%	3	15.8%	3	15.8%	0	0.0%	9	47.4%
Lin. Dit	**4**	1	25.0%	1	25.0%	0	0.0%	0	0.0%	2	50.0%
Post/pit	**5**	1	20.0%	1	20.0%	0	0.0%	1	20.0%	2	40.0%
Box-sec	**8**	0	0.0%	2	25.0%	0	0.0%	1	12.5%	5	62.5%
Unstrat	**5**	1	20.0%	1	20.0%	1	20.0%	0	0.0%	2	40.0%
Totals	**41**	**7**	**17.1%**	**8**	**19.5%**	**4**	**9.8%**	**2**	**4.9%**	**20**	**48.8%**

Table 11 Parent waste

		primary		*secondary*	
Ditch	748	10	1.3%	190	25.4%
Lin. Dit	53	0	0.0%	17	
Post/pit	87	1	1.1%	21	
Box-sec	516	6	1.2%	75	
Unstrat	49	2	4.1%	14	
Totals	**1453**	**19**	**1.3%**	**317**	

Table 12 Product waste

surfaces completely covered in cortex; 67 (12%) secondary flakes with more than 50% of the dorsal surface covered in cortex; 250 (46%) secondary flakes with less than 50% of the dorsal surface covered in cortex; and 213 (39%) tertiary flakes, those with no cortex on the dorsal surface. In an attempt to establish the preferred shape of the flake blanks in the assemblage, all the complete waste flakes from the Neolithic ring-ditch were measured in terms of length and breadth, and breadth to length ratios were calculated (see Tables 13 and 14).

	Length		*Breadth*	
0–10mm	0	0.00%	12	3.81%
10–20mm	40	12.70%	159	50.48%
20–30mm	124	39.37%	110	34.92%
30–40mm	97	30.79%	26	8.25%
40–50mm	43	13.65%	8	2.54%
50–60mm	9	2.86%	0	0.00%
60–70mm	1	0.32%	0	0.00%
70–80mm	1	0.32%	0	0.00%
Total	**315**	**100%**	**315**	**100%**

Table 13 Waste flake measurements

It can be seen from the results that broad flakes are a relatively rare feature of the assemblage, with less than 6% of pieces having a breadth in excess of length. There is also a relatively high proportion of blades, with about 44% of the pieces having breadth:length ratios less than 3:5.

Utilised/retouched

Of the assemblage, 152 pieces (9.2%) can be categorised as utilised and retouched. Of these, 106 pieces do not form a distinct classifiable tool type. They consist of 75 with macroscopic traces of edge damage which would seem to be consistent with use damage; 3 with distinctly round edges that seem to have been formed through use; 17 which have apparent utilisation damage that is beginning to merge into retouch; and 9 that have retouch which is not classifiable further either because it does not form a distinct tool type or because it occurs on a broken fragment.

It should be noted that there is a far higher proportion, among the material from unstratified or topsoil contexts (Table 10), of utilised and retouched pieces, at 27%, compared with the other grouped contexts; the figure for the Neolithic ring-ditch, for instance, is 10%. This seems

Breadth:length	*Brightlingsea*		*Tye Field*	
1:5–2:5	35	11.11%	15	3.20%
2:5–3:5	104	33.02%	55	11.73%
3:5–4:5	86	27.30%	87	18.55%
4:5–5:5	40	12.70%	144	14.93%
5:5–6:5	25	7.94%	70	14.93%
6:5–7:5	14	4.44%	43	5.76%
7:5–8:5	7	2.22%	27	5.76%
8:5–9:5	3	0.95%	16	3.41%
9:5–10:5	0	0.00%	7	1.49%
10:5+	1	0.32%	5	1.07%
Total	**315**	**100%**	**469**	**100%**

Table 14 Waste flake measurements compared with Tye Field, Lawford

likely to be due to post-depositional processes causing damage that is difficult to distinguish from utilisation traces and some types of retouch.

Knives
There are four pieces that have regular well-formed retouch down one or more edges. These are classified as knives. Only one is fairly well developed, with shallow flaking extending down both edges on the dorsal surface and down one edge on the ventral surface. This knife is made up of two joining pieces from different layers (821 and 839) in segment 515 of the Neolithic ring-ditch.

Piercers/awls
There are six pieces that can be classified as piercers or awls. Two from the Neolithic ring-ditch are worthy of further mention. These both have the piercing element at the distal end, formed between two distinct areas of retouch on the reverse sides. They come from ditch segments 515 (context 516) and 256 (context 258)

Scrapers
There are twenty-four scrapers, forming by far the largest element among the classifiable retouched pieces. They can be divided into fifteen end scrapers; four end scrapers with additional scraping edges down one or both sides; two side scrapers; and three unclassifiable broken fragments.

Leaf arrowheads
There are four leaf-shaped arrowheads, with three coming from the Neolithic ring-ditch (one from segment 256 and two from segment 253) and the remaining one being unstratified. One of the arrowheads from ditch segment 253 is burnt and consists of two joining pieces from different layers (584 and 616).

Laurel leaves
There are three bifacially worked pieces that can be classified as laurel leaves. They are all fragmentary and two are burnt. They all come from the Neolithic ring-ditch (segments 211, 253 and 256).

Polished axes
Polished flint axes are represented by six flakes. Though these may all represent different axes, based on slight colour variation, the minimum number of axes represented is two. None of the pieces come from definitely Neolithic contexts and it is noteworthy that none come from the ring-ditch. One of the pieces has traces of retouch that may indicate its reuse as an end scraper, though this is obscured by what appears to be later damage. This retouch could be, and is perhaps more likely to be, spontaneous retouch that was formed when the flake was struck (Newcomer 1975).

Dating
As stated earlier, the Brightlingsea industry does seem to be broadly of a single period and appears to relate to the Neolithic ring-ditch. All the chronologically diagnostic pieces (the laurel leaves, the arrowheads and the polished axe fragments) are indicative of a Neolithic date. In the absence of any certain Late Neolithic elements and the presence of leaf arrowheads and laurel leaves, the dating can be further refined to the earlier Neolithic (in its broadest sense). This dating is further confirmed by the evidence from the breadth/length analysis of waste flakes. The chronological trend from the production of blades to increasingly broad flakes, and the method of analysing this through waste flake measurements, is a well-established feature of British post-glacial lithic assemblages (Pitts 1978). On this basis the waste flake figures for Brightlingsea were compared with those for Tye Field, Lawford (Healy 1985, 185, fig. 12). Tye Field, which is also a Neolithic ring-ditch, is, based on distinct artefact types, predominantly later Neolithic in date and therefore Brightlingsea, being earlier, should show a greater proportion of more blade-like waste flakes, which it does, as can be clearly seen in Table 14.

Spatial variation
Some interesting spatial variation exists in the lithic assemblage at Brightlingsea. This mainly relates to the Neolithic ring-ditch. The first point to note is the exclusive presence of certain artefact types in the ring-ditch: knives, laurel leaves and leaf arrowheads (though in the case of the latter there is an unstratified specimen). Though the numbers are small, this does seem indicative of the deliberate placing of these artefact types within the ditch only. This seems unlikely to relate to use but rather to deliberate deposition.

A contrary pattern is seen in relation to the six polished axe fragments, as none of these are found in the ditch. These flakes could perhaps have formed accidentally, breaking off the parent axe during use. They may then reflect areas of use, with the area of the ditch being excluded from the relevant form, or forms, of activity involving axes. An alternative view, however, is that they also reflect the deliberate deposition of specific artefact types within restricted areas of the site. Though flakes can clearly break off an axe during use, it is worth considering that some or all of the pieces at Brightlingsea were deliberately struck from their parent axes. If this was the case, then each of the flakes may have been deliberately deposited, with each piece carrying part or all of the same social and symbolic properties of a complete axe (the deliberate deposition of axes is, of course, a well-attested feature at a number of sites during the British Neolithic). There is some suggestive evidence from a number of sites, relating to the use and formation of polished axe fragments, to support this idea.

Another aspect of spatial variation worth noting relates to the segments of the ditch. There is a clearly marked predominance of lithic material in the southern half of the ditch, with the northern segments (76, 211, 295, 41, 229 and 24) containing less than 14% of the total pieces from the ditch. Ditch segment 253 contained the largest concentration of material (286 pieces, 33.5%).

Comparison with other sites
In the general area of southern East Anglia there are two sites which are directly comparable with Brightlingsea: Swale's Tumulus (Briscoe 1957; Kinnes 1979, 14) and Tye Field, Lawford (Shennan *et al.* 1986). In the case of Swale's Tumulus, direct comparison is unfortunately difficult owing to the limited amount of information in the published excavation report, the different level of preservation and the different excavation strategy employed; however, in this case, part of the mound survived. This meant that evidence could be obtained from the mound, central features

protected by the mound and, particularly, the old land surface preserved under the mound (from which the bulk of the lithic material apparently came). This is in direct contrast to Brightlingsea, where none of the mound survived and all traces of an old ground surface and perhaps central features had been destroyed by ploughing. The one comparable context at Swale's Tumulus was the ditch, but unfortunately this was only sampled by three small cuttings and no information is given concerning artefacts recovered. The main comparisons that can be made are that there was apparently 'an extensive flint industry' associated with the site (Kinnes 1979) and that there are indications of deliberate deposition of lithic material that included polished axe fragments and leaf arrowheads (the deliberate deposition of a group of unused 'waste' flakes appears to be related to later, Earlier Bronze Age, reuse of the site).

Comparison with Tye Field, Lawford, has already been briefly discussed in relation to waste flake measurements. Apart from the obvious chronological differences, problems similar to those described above are also encountered when comparing Tye Field with Brightlingsea. Again, there was a higher degree of preservation, with some traces of the mound surviving, which had protected the remains of an extensive burnt deposit (which was associated with lithic material). There is, of course, no such comparable evidence surviving at Brightlingsea, and the use of lithic material within the area of the mound can only be conjectured. Again, as at Swale's Tumulus, the ditch was unfortunately only sampled (though this time about 25%), which again causes problems for direct comparisons. At Brightlingsea it is apparent that the deposition of lithic material was not consistent around the whole circuit and that the majority of material was concentrated in several ditch segments in the southern half. It is unfortunate that it is not possible to establish whether or not a similar pattern occurred at Tye Field.

The flint from the Middle Bronze Age cemetery
by Robin Holgate

A total of 220 flints was recovered (details in archive). The flint is grey, brown or dark brown to dark grey-brown in colour with cream cherty mottles. Cortex, where present, is consistent with that encountered on flint nodules in river gravel deposits. The gravels in the vicinity of the site contain rounded flint pebbles and it is likely that the flintwork from the site was flaked using small nodules obtained nearby. Eight of the humanly struck flints had acquired a blue-white or white patination, while five pieces were fire-fractured.

The assemblage includes a small quantity of Mesolithic material, mainly in the form of soft-hammer-struck blades and bladelets. The two Mesolithic bladelet cores consist of a single platform pyramidal core and a core with two opposing platforms. The remaining pieces in the assemblage consist of hard-hammer-struck debitage and a variety of implements dating to the Neolithic period and earlier Bronze Age.

The flint from the site, as with the flints from the Chitts Hill cremation cemetery at Colchester (Crummy 1977, 13), mostly pre-dates the later Bronze Age burials; only one piece, an end scraper, could possibly represent a flint implement deliberately deposited in one of the later Bronze Age cremations. Three flakes and a blade recovered from the ditch fill (702) of ring-ditch F1036 could have been struck from the same nodule of flint, but whether or not these pieces were residual or deposited in the ditch after it had begun to silt up is uncertain. Both the Mesolithic and the Neolithic–earlier Bronze Age flints were distributed across the site with no significant concentrations being detectable. The range of implements present among the Neolithic–earlier Bronze Age flintwork would be consistent with a domestic assemblage (*cf.* Holgate 1988a, 50–1), suggesting that the site was part of an area settled throughout the Neolithic period and Bronze Age, prior to the laying out of the later Bronze Age cremation cemetery.

The flint from the survey
by Hazel Martingell and C.P. Clarke
(Fig. 27)

Parts of the struck flint assemblage were examined at various times by Robin Holgate, Peter Berridge and Hazel Martingell. There was some variation in classifications by different specialists because no common thesaurus of terms was used. This led to a need to simplify the assemblage descriptions somewhat at the analysis stage in order to ease data manipulation and establish patterning. Details of original classifications of lithic pieces, and the way in which these have been reclassified to form the described groups below, are provided in the archive.

Initially the flints were examined in random order. The dates given to the individual pieces are arrived at without any awareness of grouping or provenance, but simply on their morphological and technical aspects. Struck flint was categorised according to technological attributes (blade/flake) in an attempt to differentiate generically early and later industries. In this way it was hoped that Mesolithic and Early Neolithic material could be separated from later pieces (later Neolithic and BA or later); this tendency to bladiness was noted by Peter Berridge for the Early Neolithic ring-ditch assemblage (Table 13, above). Where period affinities could be assigned typologically, details of date were included.

All flint was also categorised according to its end product type, following the treatment by Peter Berridge of the material from the excavated Neolithic ring-ditch (above). This process involved assignment of all pieces to the four categories of parent waste, product waste, retouched piece and implement. Separation for the transect surface material assemblage is given in Table 15.

Density plots of all transect struck flint were produced as part of the analysis, for the whole assemblage and also for early and late flint types. The small variation between all flint and late flint densities reflects the fact that some 93% of the struck flint assemblage is categorised as late.

Some of the larger struck flint concentrations were analysed for composition as C1–C3 (Fig. 16). C1 was selected because of the local concentration of scrapers; despite C1 having a concentration of scrapers, struck flint is generally not sufficiently dense in this area to form a distinct concentration in the density plots (see scrapers,

	Early pieces		*Late pieces*		***Total***	
Parent waste	19	14%	326	18%	**345**	**18%**
Product waste	97	70%	1189	67%	**1286**	**67%**
Retouched/ implement	22	16%	274	15%	**296**	**15%**
Total	**138**	**7.1%**	**1789**	**92.9%**	**1927**	**100%**

Table 15 Struck flint assemblage

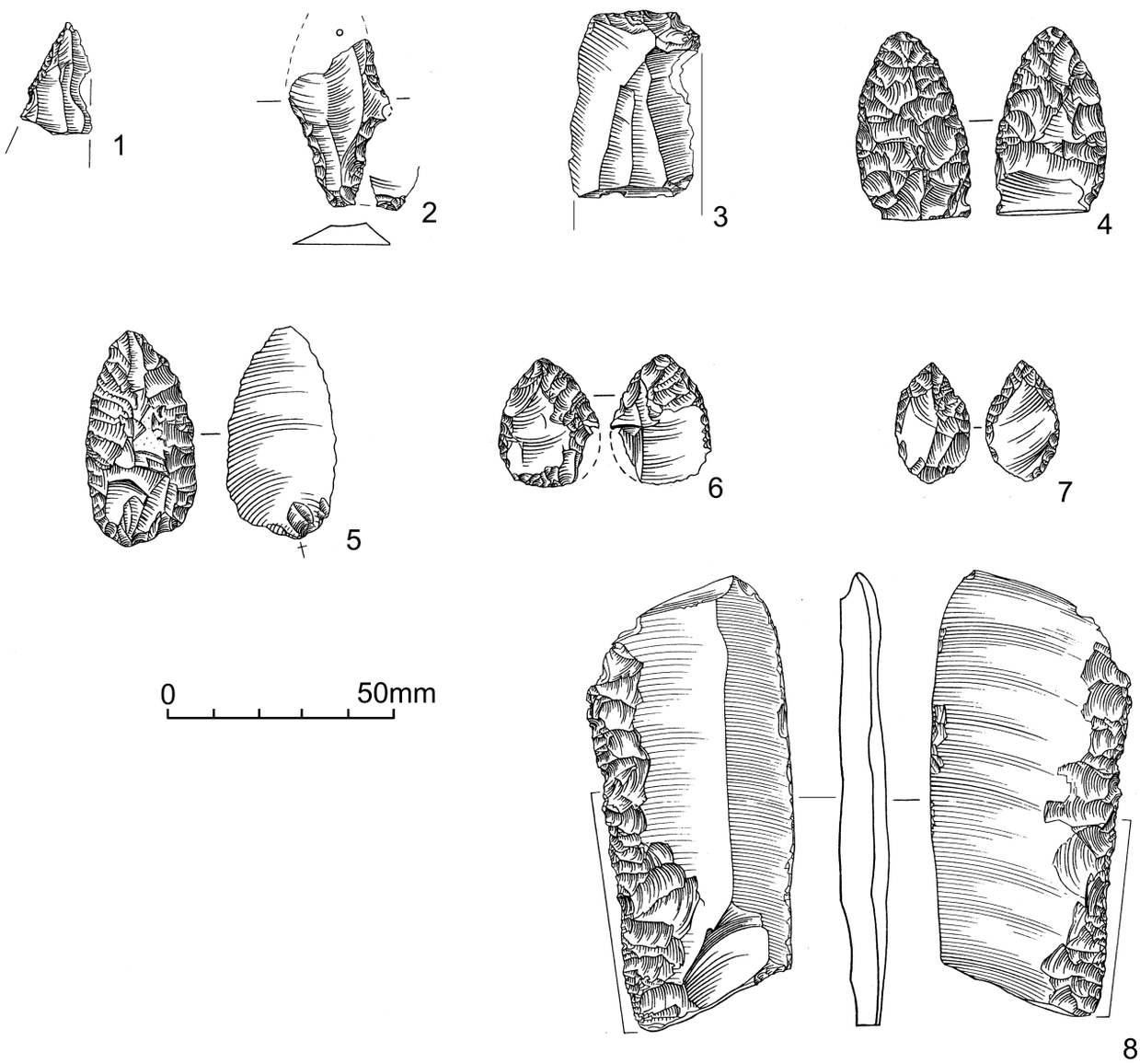

Figure 27 Mesolithic and Neolithic flint

	C1		C2		C3	
Artefact	*No.*	*%*	*No.*	*%*	*No.*	*%*
Core	3	6	1	1.5	4	7
Attempted core	2	4	1	1.5	7	12
Flake	19	40	54	78	42	72
Flakelet	6	13	1	1.5		
Blade	2	4	4	6	1	2
Chipping			2	3		
Fragment	3	6				
Arrowhead	1	2				
Knife	1	2				
Notched piece	1	2	1	1.5		
Piercer	1	2			1	2
Scraper	9	19	5	7	3	5
Totals	**48**	**100**	**69**	**100**	**58**	**100**

Table 16 Flint concentrations C1–C3 by type

	C1		C2		C3	
Group	*No.*	*%*	*No.*	*%*	*No.*	*%*
Parent waste	5	13	2	3	11	18
Product waste	21	55	67	88	46	75
Retouched/imp	12	32	7	9	4	7
Totals	**38**	**100**	**76**	**100**	**61**	**100**

Table 17 Flint concentrations C1–C3 by manufacture class

below). C2 and C3, however, were both selected as representative of local high densities of struck flint. The typological analysis is loosely based on Healey (1978). The compositions of C1–C3 are given in Tables 16 and 17.

A high percentage of implements dominates the C1 group (scrapers), and high percentages of product waste are present in C2 and C3.

Plots of artefact types, particularly scrapers, were undertaken (Figs 15 and 16), and the positioning of other tool types was examined. As stated above, although several plots showing relative distributions of particular lithic type pieces were produced during the analysis stage of the work (see archive), in general the quantities of most lithic types are small (mainly resulting from the small sample fraction of 10% employed during data recovery). This has occasioned instances where variations in distributions by date or type might be significant, but certainty is precluded by the low quantities of finds usually involved. Plots given are selected on the basis of apparent significance, but constitute a small fraction of plots created.

Early flint

The small size of the early flint assemblage does not justify detailed statistical analysis, although certain characteristics are discernible from simple plots of find positions. There was a concentration or nucleation of early flint pieces at EFC 2, over the southern part of burnt flint nucleation BFA 5, and at EFC 1, in the field containing the possible Neolithic mortuary enclosure (Fig. 15; Table 18).

The concentration EFC 1 shows knapping activity alongside Alresford Creek, below the 5m contour and in the same field as the possible Neolithic mortuary enclosure. The concentration is reminiscent of the small assemblage of waste blades and a core from the area north of the excavated Neolithic ring-ditch. No implements were recovered from either concentration (except the arrowhead from EFC 2), although retouched blades were present in EFC 2. The early flint density plot shows some concentration in both EFC 1 and 2, and the assemblage from EFC 2 is relatively heterogeneous, possibly implying a range of activity beyond simple knapping.

The nineteen blade cores were concentrated on the south-west-facing slopes of the peninsula, generally between the 5m and 10m contours (Fig. 15). There is a slight tendency for clustering, both to the west of BFA 2 and in the general area of BFA 4, particularly on the southern edge of the 20m plateau. Rare pieces were recovered elsewhere: two from the central area of the 20m plateau and one from the field containing the putative Neolithic mortuary enclosure. None of the cores are classified as 'attempted'.

The pattern of waste blade distribution is thin and fairly even across the surveyed area, on both the slopes and the 20m plateau. There appears to be a more widely spread pattern of distribution for the blades than for the cores, with a higher ratio of cores to blades on the south-facing slopes than elsewhere. It would seem likely that cores are under-represented away from the south-facing slopes, and this may be an accident of recovery, as cores must exist in association with the blades. Moreover, there are cores among the waste away from the south-facing slopes, to the north of the Neolithic ring-ditch and in the field containing the possible mortuary enclosure.

Class	*EFC 1*	*EFC 2*
Arrowhead		1
Retouched blade		3
Blade	11	13
Core	1	3

Table 18 Pieces comprising EFC 1–2

There is no particular relationship between early cores and the burnt flint scatters, although EFC 2 occurs in the same area as BFA 5. This might be coincidental, or might imply contemporaneity.

The very small assemblage of early implements and retouched pieces is most common on the slopes and the southern edge of the 20m plateau, implements showing a more restricted distribution than retouched pieces, which continue to occur well down on the flood plain.

The seven implements classified as early consist of a piercer/borer (Fig. 27.2, Find No. 4158); a burin on a break (6069); a retouched bladelet (6151); an end scraper (Fig. 27.3, 6889); a small leaf-shaped arrowhead (Fig. 27.6, 8929) and, most importantly, part of an Early Mesolithic microlith, the tip part of an obliquely blunted point (Fig. 27.1, 10614).

Late flint

The size of the late flint assemblage is quite small for detailed analysis; nevertheless, certain trends and anomalies are observable. Fig. 16 shows the positions of areas of late flint density. There is clear nucleation in several areas. In general, the positioning of these concentrations is closer to that of the burnt flint nucleii than is the case with the early flint concentrations. This is particularly clear for burnt flint nucleii BFA 2, in the areas of BFA 4 and BFA 5, and over the lower-density burnt flint spreads BFA 7 and BFA 8. The late flint area at BFA 5 is slightly displaced to the south relative to the burnt flint concentration. The classification of the late flint into manufacturing and product classes is shown in Table 19.

The late flint parent waste category (326 pieces) comprises 212 cores and 114 attempted cores, which occurred all over the survey area. The category of attempted core refers to those examples with minimal flake removals from a usually irregular nucleus; although it is possible that some of them are simply plough-damaged cobbles and nodules of flint, most appear to be genuine examples. The proportion of attempted cores to successful cores increases south of the 20m plateau, a phenomenon which is particularly marked in the area of BFA 4 in the two fields east of the sewage works. Here, of 54 pieces of parent waste, 28 are classified as cores and 26 as attempted cores. In the field to the north, on the plateau and over the multi-period cropmark complex, there are 23 cores and only 5 attempted cores. Although raw material selection and knapping appear to have occurred all over the survey area, most attempted cores lie on the peninsula slopes rather than the 20m plateau. However, the slopes are not always relatively rich in attempted cores. On the western slope of the peninsula, within a 500m radius from the centre of BFA 1, there is a high proportion of successful cores (44) relative to attempted cores (12). Parts of the 20m plateau have produced relatively low numbers of cores and attempted cores: particularly the northern part of Ford Field north of the excavated ring-ditch and cemetery, and Trinity Field, which contains the Bronze Age enclosure.

Late flint product waste is very commonly distributed across the whole of the survey area. Waste flakes are common east of the Trinity Field enclosure, despite the relative paucity of cores from this field. Reasons for this are unknown; however, a collection bias resulting from methodology seems unlikely. The patterning may be a chance result reflecting the randomisation of pieces after

the last pre-survey ploughing, and may be exacerbated by the single pass survey method; a second pass might have produced a compensating assemblage of cores in the same area.

There is a wide and reasonably even distribution of retouched flakes across the survey area. These tend to preponderate slightly over BFA 2/3, BFA 4, and the cropmarks under BFA 7 and to the east of the Trinity Field enclosure. The density of late retouched pieces is similar in Ford Farm field to that elsewhere, and there is no longer any strong tendency towards a paucity of artefacts in the area between the Early Neolithic ring-ditch and the excavated ring-ditch cemetery. Neither is there any particular tendency for late retouched pieces to be concentrated where dense nucleation in the spread of late flint is present. Indeed, there is a virtual absence of late retouched pieces from some nucleated areas, notably over the unexcavated cropmark complex below BFA 5. There is some tendency towards a concentration of late retouched pieces both over burnt flint concentrations (*e.g.* BFA 2/3) and over some cropmark features, notably the multi-period complex in the southern part of Trinity field.

The fairly small assemblage of late implements again makes this distribution difficult to interpret; however, certain observations about the distribution of tool types may be made. In particular, notched pieces do not occur on the 20m plateau, but are common on the slopes. Scrapers are relatively concentrated on the plateau (over the cropmark complex in Trinity Field), especially in the south; on the plateau, scrapers form the large majority of late flint implements. There is a strong cluster of scrapers at C1, north-east of the Trinity Field enclosure, although the overall assemblage of late flint is not concentrated here. Other tool types, such as the borer/burin/piercer pieces, show a wide distribution and form a common component of the late flint densities.

Late scrapers, as noted above, tend to occur on the 20m plateau, where they predominate in the late flint assemblage. In general, the spread of these follows the general pattern of late flint density, although there is a group of eight scrapers (concentration C1) from the eastern corner of Field 32, where the density of struck flint is too low to show as a concentration. The scrapers in this group comprise side (2), end (3), end and side (1) and hollow scrapers (2). Scrapers thus appear to predominate over areas where settlement occurs, on the plateau, but the C1 group also indicates the existence of scraper concentrations which are distinct from the long-term occupation scatters found over the multi-period cropmark complex in Trinity Field. This group may therefore represent the *locus* of an activity in which scrapers are particularly important, or, perhaps, a low density scatter of occupational debris including scrapers as a standard component of the site assemblage (*cf.* Richards 1990).

	No.	*%*
Parent waste	326	18
Product waste	1189	67
Retouched	158	9
Implement	116	6
Total	**1789**	**100**

Table 19 Parent waste, product waste, retouched, implement and manufacture class categorisation (non-grid)

Notes on implement classes and illustrated pieces

Late scrapers
A total of seventy-seven scrapers of all types was recovered. The types present comprise: end scraper on a long blade, Neolithic; end scraper, Neolithic/Bronze Age; round scraper, Late Neolithic; scraper with retouch all round except for platform, Bronze Age; side scraper, Bronze Age.

Late piercers
A notable component of the late assemblage is the piercers. There are twenty-eight small piercers, usually with fine retouch on both converging edges and sometimes with one edge retouched on the ventral surface. There is also a larger piercer/borer and four other pieces that may be piercers. The variety of forms (one illustrated) comprises: double-ended piercer, Neolithic; piercer; piercer, Bronze Age and piercer/borer, Bronze Age.

Sickles (not illustrated)
Two sickle pieces of recognisable form were recovered from the survey area (one came from the central part of Trinity Field North, being found during evaluation works in 1996 (Clarke 1996), not during the 1990/91 survey). It may be supposed that many of the minimally retouched blades and flakes were also derived from broken sickles. Of the two identified sickles, one is part of a single piece bifacial sickle (6286), and of Late Neolithic/Early Bronze Age date; the other is an Early Bronze Age sickle/knife with careful invasive shallow retouch along one edge.

Bifacial arrowheads (not illustrated)
In total, seven arrowheads were recorded. Four are Neolithic leaf-shaped arrowheads, two of which are small. The remaining three are bifacial fragments. Five of these pieces were recovered from the central part of the survey area. The arrowhead assemblage comprises: small leaf-shaped arrowhead; leaf-shaped arrowhead, slightly patinated; small leaf-shaped arrowhead; leaf-shaped arrowhead.

Prior surface collections
It is likely that a significant assemblage of artefacts have been collected from this land in the past. Among pieces known to have been recovered in this way are about fourteen Neolithic flint axes, and pieces from Moverons Pit (three scrapers and three flakes).

Summary
The Brightlingsea surface scatter of lithic material has some interesting aspects. It is seldom that such a large surface area is covered in a single survey, particularly where the survey area contains excavated sites.

The computerised distribution plots reveal the usual amalgam of 'Neolithic–Bronze Age' artefacts spread over the area, principally over the central, higher ground, and with three 'hot spots' of more densely grouped worked flints. The groups do not appear to be related to the excavated features amd are more likely to be separate working floors. Bearing in mind that much of this landscape has been quarried for gravel, it is probable that all the raw material is local, although there are some pieces made from black flint from the chalk.

Rather than dismiss this information simply as a dragged and mixed group of artefacts from the ploughsoil, an alternative hypothesis — that we are looking at a continuing overlapping of artefact deposition from the Neolithic to the Late Bronze Age — seems a more positive reaction, and is one with which further study may be pursued.

Part 5. Environmental Evidence

I. Palynology (Neolithic ring-ditch)

by Patricia E.J. Wiltshire

A single monolith sample was taken from the section of the evaluation sondage excavated through the central area. Sub-samples were prepared from five horizons within the sequence which were considered likely to yield information. Standard procedures were adopted for palynology preparations and a minimum of ten traverses of each palynology slide were made.

Not a single palynomorph was observed in any of the samples. There was a moderate amount of microscopic charcoal and frequent fungal hyphae. The only thing that can be concluded is that organic matter did find its way into the central area (as evidenced by fungal hyphae) but conditions were so favourable for microbial activity that all traces of pollen and plant spores have gone. This probably means that sediments were well aerated and moist enough for microbial growth.

II. Geoarchaeological analysis (Neolithic ring-ditch)

by Matthew Canti

The uneven central area of the inner Neolithic ring-ditch contained one or two dark layers near the base and dumped layers of material over the top. The main dark layer was initially thought to be a buried soil, although the possibility of the whole profile being ash and charcoal was later considered. The primary reason for suggesting that the dark layer was not a soil was that there was no immature bleached layer underneath the dark material. These coarse parent materials would usually be expected to support only podzolised soils or at least soils that were going acid by the Neolithic, and a dark humic layer would therefore normally have a bleached layer beneath it. Moreover, the dark material consisted of more than one layer in places.

Confusion between ash and bleached podzol Ea horizons is not new — podzol is a Russian word literally meaning 'under-ash'. However, since ash is mainly calcium carbonate it would mostly have dissolved away since the Neolithic, although there is a possibility that higher concentrations of phytoliths (opaline silica bodies found in most plant matter) would be left behind in previously ash-rich soil. These are generally moderately soluble, but are least susceptible to dissolution under acidic conditions.

Micromorphology samples were taken, therefore, to clarify the true nature of the materials (full report in the archive). This showed that the dark layers have clearly been heavily affected by ash inclusions, but that after prolonged weathering only the fine soot and charcoal remains. Wood ash can be as much as 62% carbonates, and contains bicarbonates and hydroxides as well (Etiégni and Campbell 1991), meaning that a considerable part of the physical bulk of the ash is soluble over the timescale involved at this site. It may well be that the depressed and undulating nature of the dark sooty/charcoal layers has arisen from being 'let-down' as the bulk of soluble ash disappeared to the groundwater, although excavation further away from the sampled area revealed considerable rabbit damage, rendering much of this part of the stratigraphy uncertain.

III. Carbonised plant remains

by Peter Murphy

The Neolithic ring-ditch

Samples were taken from the Early Neolithic ring-ditch and were analysed for plant macrofossils (Peter Murphy), pollen (Patricia Wiltshire) and soil micromorphology (Matthew Canti, AM Lab), but in each case after initial assessment of the material it was concluded that detailed analysis would not be worthwhile.

Middle Bronze Age cemetery

Introduction

Excavations at this Middle Bronze Age cremation cemetery provided an opportunity for extensive soil sampling in order to retrieve carbonised plant remains. In the past, cremation deposits have frequently been treated as though they were in some way distinct from any other soil sample. In many cases they have been coarsely sieved to separate identifiable bone and large charcoal fragments, while the finer fractions have been discarded. Obviously such a technique may involve loss of potentially informative small macrofossils. At Brightlingsea the cremations and fills of associated features were flotated, as detailed below, to ensure the retrieval of all size categories of material. It was anticipated that information on the environment of the site would be gained, together with data on Bronze Age crops. More speculatively, it was hoped that the samples might shed some light on the cremation rite and changes in ritual practices through time.

The cremations: descriptions

The matrices of the cremation deposits were fairly uniform, being derived from coarse sandy fluvio-glacial drift with overlying horizons of silty loess material. Full descriptions of all samples were therefore not made: the following notes are based on five typical samples from unurned cremations (F1005/503, F1026/569, F1032/562, F1098/719 and F1130/919) and three from urned cremations (F1000/500, F1001/515 and F1100/717).

Soil matrix texture varied from sandy silt to loamy sand, and colour from strong brown through brown and dark greyish-brown to near-black. These colour variations were related to charcoal content, the presence of ferrimanganiferous concretions, and humic content, but were quite misleading: some samples selected on site for radiocarbon dating proved to contain very little charcoal (details in archive). The samples were consistently slightly stony, with mainly rounded to subangular flints

and rare quartzites up to 60mm, but usually smaller. Their content of cremated bone fragments was extremely variable: some samples included no bone or only token amounts, but in others bone fragments were abundant.

Methods

The samples from unurned cremations were received entire, as excavated. The fills of the cremation urns had been extracted by the conservators, who had in some cases picked out the large charcoal and bone fragments and had occasionally reconstructed and consolidated the latter. Apart from this, the urned and unurned cremations were treated identically. Soil volumes were initially recorded and the samples were gently disaggregated under running water on a 5mm mesh. Large bone fragments, charcoal and sherds retained on this mesh were removed from this coarse fraction before discarding the pebbles. Carbonised plant material was then separated from the fraction under 5mm by manual flotation, using a 0.5mm collecting mesh. The non-floating residue was wet-sieved on a 1mm mesh and dried. The residue 1–5mm fraction still included small bone fragments but the extraction of all of these would have been prohibitively time-consuming. This fraction was therefore retained unsorted for the bone specialist to scan over for diagnostic small fragments.

Bulk samples were also taken from pit and ditch fills and other contexts for bulk sieving/flotation, using 0.5mm meshes throughout. In total, bulk samples from 283 contexts were processed and the majority of these produced some flots. Assessment indicated that a few (568, 572, 576, 577, 720, 769, 795, 796, 798, 811, 892, 895 and 896) were conspicuously rich in charred plant material (mainly charcoal), and these flots were sorted. The remaining samples were of two types: some produced virtually no flot and others had flots composed largely of intrusive modern material. It did not seem that sorting all these was likely to be a profitable use of time; instead, thirty samples (just over 10%) were selected on a random basis for sorting, in order to determine whether any useful additional information to that already gained from the cremation deposits could be obtained from them. The results of this assessment were not thought to justify further work, but all flots have been retained.

The dried flots were graded into size fractions prior to sorting, and charcoal fragments >2mm were extracted for weighing. The carbonised macrofossils almost all have a silty coating which may have reduced the rate of retrieval during flotation and recognition during sorting. Contaminants include fibrous roots and modern fruits and seeds, particularly of *Veronica hederifolia*, *Spergula arvensis*, *Scleranthus annuus* and *Chenopodaceae*. Details of carbonised macrofossils identified from the cremations, other charcoal-rich contexts and the thirty bulk samples are listed in the archive and summarised in Table 20.

The carbonised plant remains

Apart from charcoal and a few charred fragments of thorns and buds, the plant material from the cremations falls into four categories: cereal remains, fruits and seeds of grassland and weed plants, remains of scrub plants, and charred vegetative material. Frequencies and counts (where possible) are given in Table 20.

The cereal remains are quite sparse and often poorly preserved. Indeterminate grains occur sporadically and include both barley and wheat. F1096/714 produced a slightly larger assemblage of barley grains, in rather poor condition; because of deformation and loss of surface detail it is not clear whether two- or six-row barley is represented. A few grains seem to be of a hulled variety and some grains show very large scars in the embryo area and may have germinated before carbonisation. Single glume bases of emmer and spelt are present in F1012/559 and 1006/504 respectively, and there is a single large robust free-threshing wheat rachis node in F1077/758.

The fruits and seeds of grassland and weed taxa are of common species and do not call for detailed comment. The specimens of *Vicia/Lathyrus* spp. consist of isolated cotyledons and intact seeds which do not, however show clear hilums. The seed of *Lathyrus nissolia* is identified from its surface detail. Two grass fruits, probably of the

	Frequency	*Total counts*
1. Cereals	7	27
Cereal indet. caryopses	2	21
Hordeum sp(p) caryopses	1	1
cf. *Hordeum* sp rachis nodes	1	1
Triticum sp caryopses	1	1
Triticum diccoccum Schübl. glume bases	1	1
Triticum spelta L glume bases	1	1
Triticum aestivum s.l. rachis nodes	1	1
2. Weeds/grassland plants (fruits/seeds)		
Raphanus raphanistrum L	3	3
Montia fontana L. subsp. *chondrosperma*	7	12
Chenopodium album L	1	2
Medicago-type	2	11
Vicia/Lathyrus sp(p)	13	17s+19co
Lathyrus nissolia L	1	1
Fabaceae indet	1	1
Polygonum aviculare agg	1	1
Rumex acetosella agg	2	21
Rumex sp	2	4
Polygonaceae indet	1	1
Plantago lanceolata L	6	15
Galium aparine L	2	4
Poaceae indet	4	5
cf. *Sieglingia decumbens* (L) Bernh.	1	2
3. Scrub plants (fruits/nuts)		
Prunus spinosa L	1	
Corylus avellana L	2	
Sambucus nigra L	1	1
4. Vegetative plant material		
Type 1 *Arrhenatherum elatius* 'tubers'	17	
Type 2 'tubers'	18	
Type 3 rhizomatous fragments	14	
Type 4 rhizomatous fragments	30	
Total no. of samples	**58**	

s = seeds
co = cotyledons

Table 20 Summary of carbonised plant remains from cremation samples

heath grass *Sieglingia decumbens*, are present in F1000/500: these match *S. decumbens* well in overall size, shape and embryo size, but have abraded and silt-encrusted surfaces.

Scrub plants are represented by fragments of hazel nutshell (*Corylus avellana*) a rough-surfaced endocarp of sloe (*Prunus spinosa*) and a single seed of elder (*Sambucus nigra*).

Vegetative plant material, including stem fragments, 'tubers' and rhizomatous fragments, is common. Four main types are distinguished in this report. Type 1 comprises swollen basal internodes ('tubers') of the grass *Arrhenatherum elatius* (L) Beauv. ex J. and C.Presl. var. *bulbosum* (Willd.) Spenner. These vary greatly in bulbosity: some are distinctly pyriform; others consist of scarcely enlarged internodes. A few are still attached to their nodes. Type 2 consists of ovoid to elongate rounded 'tubers', sometimes attenuated at one end, sometimes 'waisted' and prone to fragmentation at the constrictions. Some have split into thin discs. They are up to 4mm wide and have small projections on their surfaces. In fractured TS an outer epidermal layer and central parenchymatous tissue is visible. Elongate rhizomatous fragments with short internodes, longitudinal ribbing and, sometimes, root scars are listed as Type 3. Type 4 includes a heterogeneous collection of rhizome/root fragments with root/shoot stumps, usually rather poorly defined.

Charcoal weights (g of charcoal >2mm) were recorded for each of the cremation samples and other charcoal-rich deposits to give an indication of charcoal densities. The material has not been fully identified, though examination of representative fragments from the larger charcoal deposits (in cremations F1034/568 and F1076/811) indicates that oak charcoal (*Quercus* sp.) from mature timber vastly predominates. Other samples contain little charcoal, which occurs in in small fragments from which it proved difficult to prepare the requisite fractured sections. However, an outline examination indicates that *Quercus* charcoal occurs frequently but some fragments of Pomoideae and *Prunus* charcoals are also present.

Distribution of carbonised plant material

Examination of the distribution of carbonised plant material at Bronze Age sites, spatially and between different types of context, has revealed patterns which may be interpreted in terms of types of activity and the utilisation of space within the settlement (*e.g.* Lofts Farm, Murphy 1988; Springfield Lyons, Murphy 1990). While the full interpretation of assemblages of charred material resulting from ritual activity may always prove impossible, it nevertheless seemed worth inspecting the data from Brightlingsea to see whether any patterning could be distinguished.

The samples from features containing only low-density background scatters of material have not been considered. The remaining samples from cremations and charcoal-rich pit fills were examined. For each sample the density of charcoal (g/litre of soil) was calculated and the presence/absence of carbonised cereals, nutshell and weed seeds noted (it seemed conceivable that the latter might perhaps be related to seasonality). However, when these characteristics were drawn up on the site plan no spatial patterning could be distinguished: virtually all feature-groups produced samples varying widely in composition.

A consideration of the data in terms of feature-type (Table 21) adds little. There do not seem to be significant differences in composition between samples from urned and unurned cremations: the slight differences in charcoal densities are small when compared with the total range of densities from the site, and both types of cremation produced different cereals and nutshells. The pit fills (568, 572, 576, 577, 720, 769, 795, 796, 798, 811, 892, 895 and 896) are obviously quite different, with much higher charcoal densities and no cremated bone. They occur both in isolation and in feature-groups with cremations. Other than their apparently ritual character, nothing can be said about them.

Local habitats

The high frequency of vegetative plant material (stems, tubers, rhizomes, *etc.*) in these samples is notable. Most cannot at present be identified, apart from the characteristic tubers of *Arrhenatherum elatius var. bulbosum*, the onion couch These are common and characteristic charred macrofossils from Bronze Age cremations (Robinson 1988, 102), to which can be added specimens from Bronze Age cremations at Rush Green, Clacton (Murphy 1983, 127), and North Shoebury (Murphy 1995) *A. elatius* is characteristically a grass of coarse grassland, which occurs nowadays on verges, poorly managed pasture and meadow and abandoned cultivated land which is ungrazed or only lightly grazed (Robinson 1988). The samples from Brightlingsea produced remains of other taxa which could occur in tall grassland of this general type, including *Medicago*-type (medicks, and so on), *Vicia/Lathyrus* spp. (vetches/tares), *Lathyrus nissolia* (grass vetchling), *Plantago lanceolata* (ribwort plantain) and *Galium aparine* (goosegrass). These taxa were also present at Rush Green and North Shoebury. *Rumex acetosella* and the tentatively identified fruits of *Sieglingia decumbens* point to the presence of acidic grassland types, as would be expected on the sand and gravel-based soils of the site. *Montia fontana* (blinks) is also represented and may be derived from damper grassland downslope towards the river Colne or perhaps from damp patches closer to the site caused by locally impeded drainage.

In summary, the short species list from Brightlingsea is dominated by grassland plants possibly representing more

	Cremations		
	Urned	*Unurned*	*Charcoal-rich pit fills*
Mean charcoal densities (g>2mm per litre of soil)	Mean 0.64 Range 0.01–2.49	Mean 0.29 Range 0.01–2.28	Mean 82.15 Range 0.67–583.7
Frequency of carbonised cereals	10/44	1/14	1/14
Frequency of charred hazel nutshells	1/44	1/14	0/14

Table 21 Distribution of carbonised macrofossils between samples from different context-types

than one type of community but including species typical of rough ungrazed grassland growing, probably, on abandoned land. The taphonomy of the assemblages is not entirely clear: Robinson (1988) suggests that the use of uprooted grasses for kindling pyres could account for the presence of *Arrhenatherum* tubers; the carbonisation of tubers in their position of growth beneath a pyre, followed by their being scraped up with the cremation for interment, is another possibility.

The remaining plants identified include weeds such as *Raphanus raphanistrum* (wild radish), *Chenopodium album* (fat hen), *Polygonum aviculare* (knotgrass), *Fallopia convolvulus* (black birdweed) and *Rumex* spp. (docks). Scrub plants are represented by a few fragments of sloe fruitstones (*Prunus spinosa*), hazel nutshells (*Corylus avellana*) and an elder seed (*Sambucus nigra*), besides charcoals of the Pomoideae and *Prunus* sp. These sparse macrofossils obviously give no useful indication of the extent of scrub in the vicinity.

Crop plants

Cereals identified from carbonised grains and spikelet fragments are *Hordeum* sp. (barley), *Triticum dicoccum* (emmer), *Triticum spelta* (spelt) and bread-type wheat (*Triticum aestivum s.l.*). In Essex the presence of cereal remains in Bronze Age cremation deposits seems to be quite characteristic: grain fragments also came from the Rush Green cremation, and the cremation from North Shoebury produced an emmer spikelet fork and grains of *T. aestivum*-type and *Hordeum* sp. Quantities of material are, however, generally very low and could, perhaps, merely represent accidental inclusions in the cremation pyre. The sample from F1096/714 at Brightlingsea is exceptional in producing markedly more material: at least thirty-seven grains in a 4.0 litre sample. The absence of any spikelet or rachis fragments may imply that this abundance cannot be explained as a consequence of incompletely threshed ears and straw being used as kindling. Rather, the deposit seems to represent intentional inclusion in the pyre of cleaned grain, apparently sprouted barley grain, which could represent malt.

At present few Early–Middle Bronze Age settlement sites have been excavated in Essex and the sparse results from these cremation deposits provide the only information available on crop production at this time. Extensive sampling at the Neolithic settlement Blackwater Site 28 produced low-density scatters of cereals, consisting mainly of emmer, with some einkorn, bread wheat and naked barley (Murphy 1989). At Late Bronze Age sites — Lofts Farm and Springfield Lyons — denser cereal deposits, implying larger-scale processing of a different range of cereal crops (emmer, spelt, bread wheat, naked and hulled barley) have been sampled (Murphy 1988; 1990). The single spelt glume base from Brightlingsea provides a useful indication that spelt had been introduced to this area by the Middle Bronze Age.

Mollusca

Context F1036/701 produced small fragments of mussel shell (*Mytilus edulis*) and F1036/702 contained a single winkle shell (*Littorina littorea*). It seems improbable that these would survive for long in the acidic sandy deposits prevalent at the site and they are thought to be intrusive and fairly recent, perhaps related to some form of marling.

Part 6. Discussion

I. Neolithic

(See Fig. 28 for Essex and Hertfordshire sites mentioned in the text)

Before the excavation of the Brightlingsea ring-ditch, earlier Neolithic sites known or postulated within the county comprised two interrupted-ditched enclosures Orsett (Hedges and Buckley 1975) and Springfield Lyons (Buckley and Hedges, in prep.), and fourteen enclosures believed to be ploughed-out long barrows or mortuary enclosures. Of these, only two, Rivenhall End (Buckley *et al.* 1988) and Slough House Farm (Wallis and Waughman 1998) have been excavated. Both investigations indicated a third-millennium BC date. These results are similar to those obtained from sites further afield, such as Dorchester-on-Thames, where a long enclosure (Site VIII) was demonstrated to pre-date the cursus (Whittle *et al.* 1992). A further, similar, cropmark, at Maldon Hall Farm, Essex (Lavender 1991), however, was found to be of Late Iron Age date, as was that at Mill Close, Caldecotte, Milton Keynes (Loveday and Petchey 1982; Zeepvat *et al*. 1994).

A fifteenth oval enclosure in Essex has recently been identified, *c.*1km west-south-west of the causewayed enclosure at Orsett (Strachan 1996). The relationship is similar to that noted between Springfield Lyons and the long enclosure cropmark east of the cursus (Buckley and Hedges 2001).

Thus the Brightlingsea ring-ditch represents a hitherto unknown form of monument within the county, although a segmented, possibly Neolithic, ring-ditch of comparable size has been identified from cropmarks at Langford (Harding and Lee 1987). The Brightlingsea site was clearly one of importance, as is demonstrated by the level of maintenance conducted there, although the progressively diminishing effort expended on its recutting may indicate that its relevance to its builders and their descendants waned over the years.

In 1978 John Hedges (1980) presented a series of research priorities for the Neolithic in the county. These priorities may be summarised as the need for survey work in order to identify further sites of potential Neolithic date, and a programme of controlled sampling and trial excavation. Since then a number of major sites have been excavated in Essex: Springfield Cursus (Buckley and Hedges 2001), Springfield Lyons causewayed enclosure (Buckley and Hedges in prep.), Rivenhall long mortuary enclosure (Buckley *et al.* 1988) and the Brightlingsea ring-ditch. Other sites with important Neolithic features, such as Langford Reservoir (Heppell and Roy in prep.), have also been investigated.

Parts of the north coast of the Blackwater estuary have revealed pit groups (Lofts, Chigborough, Howells and Slough House Farms, Wallis and Waughman 1998) containing Mildenhall ware. At Elms Farm, a large pit contained Mildenhall Ware and there were also deposits in other pits of Peterborough Ware, Grooved Ware and Beaker pottery. The presence of Deverel-Rimbury burials suggests a very long-lived focus of ritual/funerary activity (Brown 2001b).

Ring-ditches, when investigated, have usually turned out to be of later date; examples include Lawford (Shennan *et al.* 1986), Swale's Tumulus (Briscoe 1957) and Langford Reservoir (Heppell and Roy, in prep.). On the whole, the Upper Thames ring-ditches and hengiform monuments have also tended to be later Neolithic, although some have produced limited evidence of earlier origins (Bradley *et al.* 1984).

The only site of comparable date is Rainham, which was excavated in 1963 by Isobel Smith and D.D.A. Simpson and remains unpublished. The internal diameter was comparable to that at Brightlingsea, as was the absence of associated domestic evidence and the suggestion of a central burial. The central pit at Rainham, however, contained Beaker sherds, which may suggest that the putative burial results from reuse of the monument during the Late Neolithic or Early Bronze Age. There are a number of other causewayed circular enclosures extending up the North Sea coast from Kent to north-east England (Kinnes 1979), which have been classed as either variant round barrows or 'short' long barrows (Bradley 1992; forthcoming; pers. comm.)

The ceremonial nature of the monument is suggested by the presence of placed deposits and by the cremation burial which, while rare, is part of a growing body of cremation burials found in association with Early Neolithic pots (Bradley forthcoming; pers. comm.). The recovery from the terminal segments of two almost equal parts of the same vessel (Figs 3, 17.1) clearly represents structured deposition, as does that of a group of worked flint and pottery from directly opposite the causeway. If organic deposits had been placed in the ditch, as at the causewayed camps at Etton or Hambledon Hill, these would not have survived in the acid soil. A number of 'domed' layers occurring among the fills of the ditch, however, may represent deliberate backfilling over such deposits.

With regard to the distribution of finds within the ditch, it is notable that there seems to be a degree of segregation of flint and pottery. Most of the flint — both the waste material and the completed artefacts —was recovered from the southern part of the feature (Fig. 3). Pottery tended to be concentrated around the causeway in the northern part of the ditch's circuit.

Further flint and possibly pottery lay in the pits outside the ring-ditch in a manner reminiscent of the interrupted-ditched enclosure at Springfield Lyons, where Mildenhall Ware and flint have been recovered from similar contexts.

The flint assemblage is largely of one period, the earlier Neolithic, and is materially consistent with readily available flint from the local gravels. A large percentage of the assemblage is waste (mostly product waste: 88.3% of the total; see Berridge, above), implying that a flint industry was conducted on site. This is a feature common to a number of Neolithic and Bronze Age monuments (Kinnes 1979), and comparable flint industries were noted

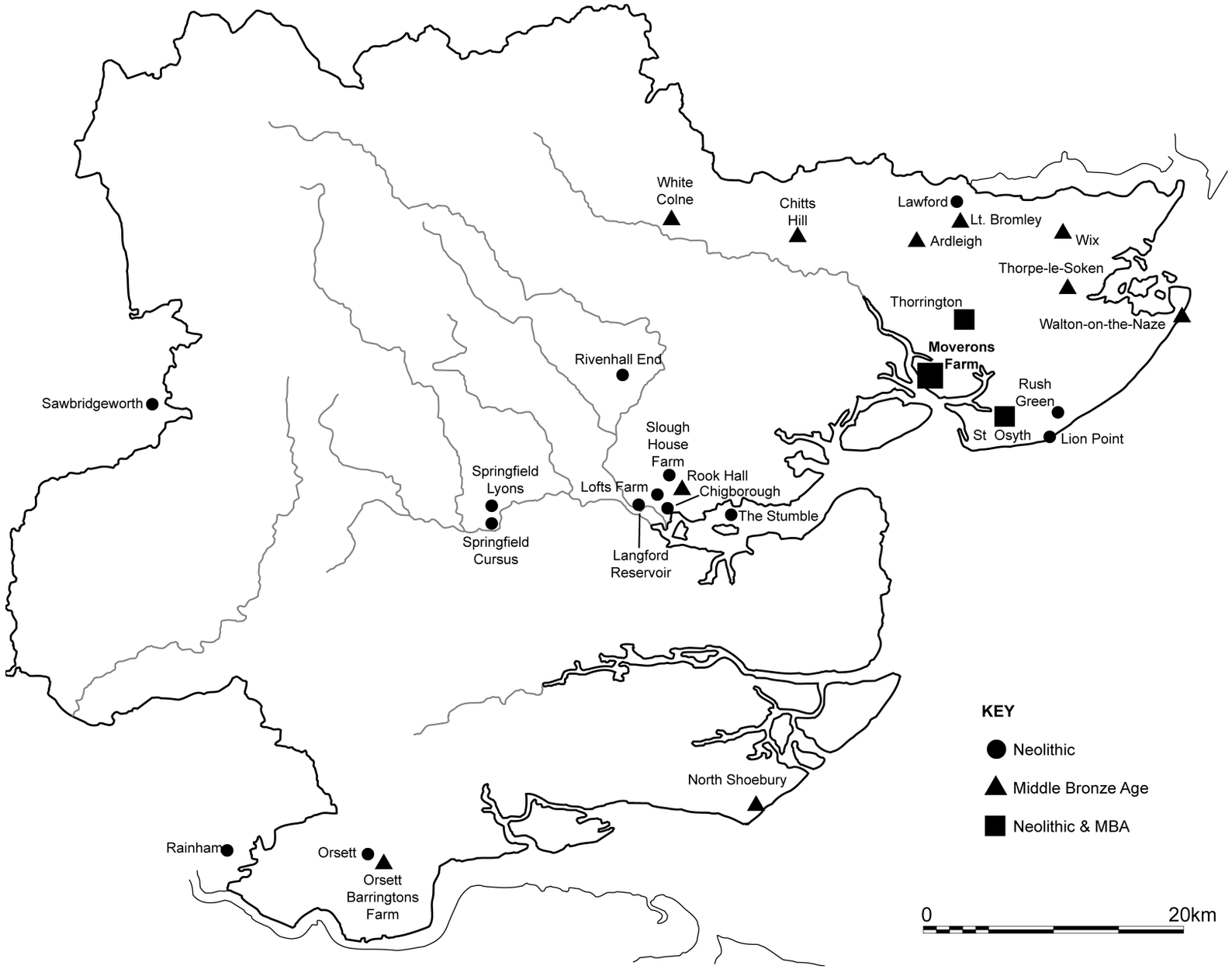

Figure 28 Prehistoric sites mentioned in the text

at both Swales Tumulus (Briscoe 1957) and Tye Field, Lawford (Shennan *et al.* 1986). Nevertheless, the presence of typologically early flint recovered during survey to the immediate north of the ring-ditch, and its virtual absence elsewhere, particularly to the east, suggests that this knapping activity is very local in nature.

II. Bronze Age

The excavation of thirty-one ring-ditches at Brightlingsea represents the investigation of only a part of the Middle Bronze Age cemetery. Aerial photographs (Fig. 2) show further ring-ditches running north below the trackway, and apparently continuing under Long Plantation and The Link to the east. In addition to these, there are faint traces of a further ten towards the west of the excavated group that could not be identified during the excavation. This may have been because of the brickearth that comprised the natural in this area, or because they had been completely ploughed out since the photograph was taken. In all, approximately forty ring-ditches can be discerned on the photograph and several more were identified during the excavation. Thus it seems that at least fifty ring-ditches were included in the cemetery. In addition, it seems likely that further clusters of burials comprising the flat urnfields exist to the north and east of this area.

The ring-ditches were sited carefully, respecting one another, and there were no instances of a ditch cutting an earlier one. The flat burials were similarly positioned so that very little intercutting took place, and none cut or were cut by the ring-ditches. This absence of a detailed stratified sequence at Brightlingsea means that it is not possible to devise a chronology for the site with any degree of certainty. The pottery from the cremation burials falls within a general date range of *c.*1600 to *c.*1300 BC and no grave or pyre goods were recovered. Radiocarbon dates obtained for the cremated material range from 3490±140BP (GU-5102) to 3080±60BP (GU-5105).

However, the distribution of ring-ditches and burials does appear to show a relative chronological progression (Fig. 29) based on size and location within the cemetery and comparison with evidence from Ardleigh (Brown 1999). According to this chronology, the earliest features of the cemetery (Fig. 29; Phase I) probably lie towards the north-east, and comprise ring-ditches associated with burials which have left no trace in the archaeological record. It must be remembered, however, that further ring-ditches do lie to the south, north and east of the excavated area, and that these may exhibit features indicating that later development occurred in this direction as well.

Careful excavation of the natural in the centre of three ring-ditches (1013, 1051 and 1057: see Fig. 6) failed to locate any evidence of ground disturbance. A combination of ploughing and natural erosion of the sandy soil has evidently removed all traces of any burials within the majority of the ring-ditches (assuming that these were originally present). These were probably very shallow or surface deposits in the form of either cremation or inhumation burials covered by, or dug into the body of, a mound.

Further development of the cemetery, at its south-western limit (Fig. 29; Phase II), involved an apparent change in the burial tradition. The cremated remains were deposited in funerary vessels within the area defined by comparatively small ring-ditches. The three ring-ditches which surround burials are well below the average in both their internal (average 4.95m) and external (average 7.34m) diameters; indeed, ring-ditch 1140 had an internal diameter of only 2.2m. The suggestion that the small ring-ditches are relatively late in the sequence is supported by the fact that one of the smallest ring-ditches (1056) appears to be a late insertion into the gap between 1051 and 1055, probably representing, therefore, along with 1053 and 1068, the beginning of the contraction of the cemetery (Fig. 29; Phase III). This accords with the evidence from Ardleigh, where the small Group 4 ring-ditches were inserted between those of Groups 1 and 2 (Brown 1999). At Brightlingsea, 1056 contained no surviving burials, but did possess an off-centre pit which may have held a burial at a higher level (see below). It has been noted (Brown 1999) that the Group 4 ring-ditches at Ardleigh all had evidence for central burials, while none of the others within Central Excavation Unit Area 7 had. Very few of the larger (assumed earlier) ring-ditches, at either Brightlingsea or Ardleigh, had any internal features at all.

A final phase (Fig. 29; Phase IV) saw the insertion of burials, usually in groups, between the ring-ditches. The absence of any stratigraphic relationship between the flat, mainly linear, urnfield groups and the ring-ditches is not in itself indicative of a chronology either way (provided that one assumes that the graves were clearly marked). However, the spatial distribution of the burials suggests that they were deliberately fitted into the gaps between the existing barrows. Furthermore, Crummy (1977) has suggested that the distribution of burials at Chitts Hill indicated that the urnfield was a later phase than the construction of the barrows.

An alternative chronology at Brightlingsea may be suggested, in which the two large ring-ditches, 1060 and 1062, were created first, with the cemetery spreading out from this focus. An apparent grouping of slightly smaller ring-ditches, serving as satellites and forming a rough semi-circle around the western side of 1062, may support this interpretation. Attempts to phase the ring-ditches using diameter and ditch profile as criteria, as at Ardleigh (Brown 1999), have not proved satisfactory. The ring-ditches did not fall into groups of closely related size because the distinctions in diameter were not sufficiently marked and the progression from the smallest to the largest was too regular. The barrows and the flat burials could be broadly contemporary developments but it seems probable that at least some of the ring-ditches were in existence before the flat burials of the urnfield were deposited between them. On balance, therefore, it seems more probable that the smallest ring-ditches and flat burials are late in the sequence. Bradley (forthcoming; pers. comm.) has identified a tendency for small ring-ditches to persist into the Late Bronze Age, which may suggest that a more extended chronology than previously supposed should be considered for Deverel-Rimbury cemeteries.

Unfortunately, there is no stratigraphic evidence at Brightlingsea to support either hypothesis. Several closely adjacent ring-ditches (*e.g.* 1013 and 1039; 1055 and 1056) were examined for relationships but none were identified. The steep-sidedness of these features suggests that, even if a great depth of soil has been lost through ploughing and erosion, it is unlikely that these features could ever have

Figure 29 Middle Bronze Age ring-ditch phase plan

been intercutting. Thus it is almost certain that space, albeit sometimes very narrow, invariably existed between the ring-ditches.

Examination of other cemeteries within the Ardleigh Group consistently reveals three major traits: larger ring-ditches with no internal burials; small ring-ditches often (though not always) with internal burials apparently inserted between the larger ones; and, finally, flat burials between the ring-ditches (Fig. 30). There is also a tendency for the cemeteries to include fairly large open spaces, most obviously at Brightlingsea and Hill Farm. The function of these spaces can only be conjectured, but they may have been the sites of ceremonies or pyres, or possibly both.

Very little pottery, and no bone, was recovered from the ring-ditch fills. This pottery is likely to have been derived from cremation vessels, but none are from obvious disturbed burials as was the case at Chitts Hill. At Barringtons Farm, Orsett, features inside the ring-ditch produced small quantities of charcoal and burnt bone, and at least one of these may represent a ploughed-out primary burial (Milton 1987). Sherds from three vessels, associated with burnt bone, were recovered from the Orsett ditch and it seems likely that these, like those at Chitts Hill, were the result of secondary burials within the mound being dumped in the ditch when the barrow was levelled. While it is likely that there were secondary burials in the body of the mounds at Brightlingsea these, like most of the primary burials (if they existed), have long since disappeared from the archaeological record.

The cemetery at Brightlingsea falls into the 'Ardleigh Group' of the Deverel-Rimbury culture, epitomised by the use of fingertip rustication, cordons and arcading to decorate the pottery (Brown, above). These elements distinguish this tradition from that which occurs in the southern part of the county, where decoration tends to be confined to single rows of finger impressions, cordons and finger-impressed rims. The latter tradition belongs to Ellison's 'Lower Thames Group' (Ellison 1980). Burial practices also vary between the two groups (Brown 1996): the large cremation cemeteries with tight concentrations of ring-ditches, seen at Ardleigh, Brightlingsea, Chitts Hill and almost certainly White Colne, do not occur in the southern group, where the ring-ditches tend to be widely dispersed, as at Mucking (Jones and Bond 1980, fig. 1), Orsett (Milton 1987) and Slough House Farm (Wallis and Waughman 1998).

At Ardleigh (Brown 1999), like Brightlingsea, most of the ring-ditches showed no evidence of funerary deposits. This is probably the result of burials being placed relatively high in the mound or the underlying topsoil. Ardleigh Ring I surrounded a central burial pit which had been allowed to accumulate silt to a depth of nine inches (230mm) before the deposition of the funerary vessels (Erith 1960). Ardleigh Ring VI surrounded two pits which appear to have been allowed to silt up completely (Erith 1962). Erith suggested that this was the result of the pits having been prepared during the winter, when the ground was softer, in preparation for an imminent death. When the death finally occurred the burial was deposited on top of the accumulated silts. Milton (1987), however, has argued that it would have been a simple task to remove the silt from the base of the grave before the burial took place, and suggests that the apparent silting is more likely to result from the deposition of perishable items below the funerary urns. Brown (1999) suggests that the funerary process was a long one and that the pits were dug at an early stage.

At Brightlingsea, ring-ditch 1056 surrounded two shallow pits, 1114 (0.17m deep) and 1115 (0.19m deep). Neither of these produced any finds, and 1115 was considered to be natural. 1114, however, was only slightly off-centre and appeared to be the base of a truncated pit. As this ring-ditch was probably the last to be dug — it is inserted within the main body of the cemetery and comparable with the small ring-ditches surrounding burials at the south-west limit (and the Group 4 ring-ditches at Ardleigh, also assumed to be very late in the sequence) — it is conceivable that here we are seeing a type of burial comparable with those at Ardleigh (Ring V) and Orsett. Assuming this as a possibility, the practices suggested by Milton may not have been confined to burials within ring-ditches. Some of the empty pits lying within the flat burial clusters could, therefore, have originally held burials.

Ellison (1980, 119) states that 'the most common form of burial practice involves the burial of between 10 and 25 individuals in a cluster of urns within or beside a barrow or, occasionally, forming a small flat cemetery.' Essentially, the pattern of the Wessex and Lower Thames Groups is one of single barrows often with a primary burial dug into the underlying ground surface and several secondary burials within the body of the mound. Often the number of secondaries within a single barrow was high: twenty-three at the Deverel Barrow, Dorset (Miles 1826); twenty-six at Sunningdale Station, Surrey (Shrubsole 1907); twenty-one at Woodminton, Wiltshire (Clay 1927); and twelve at Itford Hill, Sussex (Holden 1972).

The Ardleigh Group varies from this, with its characteristic large cemeteries containing densely packed groups of barrows with linear urnfields in the spaces between. In addition to the excavated examples (Ardleigh, Chitts Hill, Brightlingsea and White Colne) others, such as Little Bromley and Thorpe Hall, Thorpe-le-Soken, are known only as cropmarks. Solitary ring-ditches and more scattered cemeteries are not unknown in the area of the Ardleigh Group. At Rush Green, Clacton (Buckley and Priddy 1983), radiocarbon dates place the ring-ditch and its burial within the Middle Bronze Age, but the pottery was merely undiagnostic Middle to Late Bronze Age and cannot be directly related to the Ardleigh style.

At Brightlingsea the urn clusters were at the lower end of Ellison's range: there was one group of thirteen, one of nine and one of seven. These may have been larger if the apparently empty pits originally held burials which have since been ploughed out, or if there were cremation burials in very shallow pits, all traces of which have vanished. The evidence for secondary burials is sparse because the majority of barrows in Essex and Suffolk have been ploughed out. Secondary burials tend to be identified only at sites such as Orsett and Chitts Hill, where they have been redeposited in the barrow ditch.

The absence of burials cut into the natural within many of the ring-ditches at Brightlingsea, Ardleigh and Chitts Hill may be at least partly explained by the diversity of burial practices during the Middle Bronze Age. Bradley (1981; 1996) has seen the Deverel-Rimbury tradition as having its origins alongside the Wessex burial tradition.

This failure of burials to penetrate the natural must be considered with the reuse of earlier barrows for the

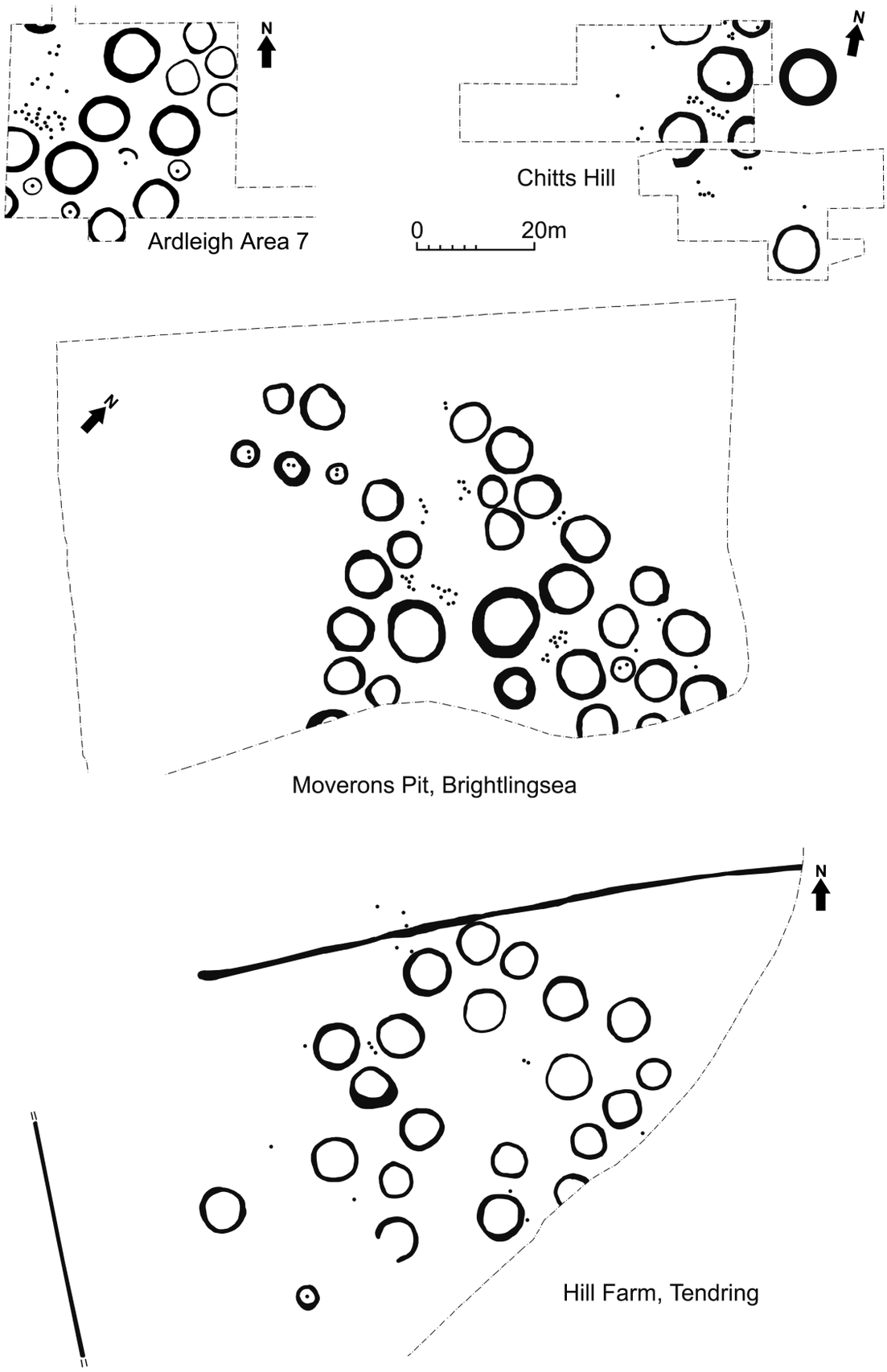

Figure 30 Comparative Middle Bronze Age cemetery plans

deposition of Middle Bronze Age burials. At Steyning Round Hill, Sussex (Burstow 1958), a Beaker burial appears to have been built over by a barrow containing thirty-six secondary burials. The reuse (or continued use) of Early Bronze Age barrows is common in Wiltshire and Dorset but mostly in the case of bowl barrows rather than the more unusual forms (Ellison 1980). Bradley (1981) sees these secondary burials as those of 'lower ranking individuals, rather than those of a separate community.'

The notion that the Deverel-Rimbury tradition spread with a subordinate population into Kent, Essex and Holland (Erith and Longworth 1960) is no longer generally entertained, but the practice of reuse of existing barrows seems to be widespread. The notion of placing burials within the body of a mound, rather than below it, may therefore have been regarded as the normal burial rite. Building a mound over a burial may have been a practice reserved for specific members of the community or for exceptional circumstances. The interment of burials in the mound allowed large numbers of deposits to be made over a long period of time in a relatively small area. This would have been important to a population with a communal burial practice.

It is likely that the burials recovered from Brightlingsea represent only a percentage — possibly a small one — of the total number originally interred. While it would be dangerous to assume the same scale of burial as at Deverel or Sunningdale Station, it is possible that each barrow could have contained ten or more burials. Thus between 250 and 500 burials, possibly more, may have been lost to us from the population at Brightlingsea. At Simons Ground, Dorset (White 1982), a cemetery of seven barrows (two of which were destroyed before they could be excavated) and a flat urnfield produced over 300 burials. The original population at Brightlingsea could easily have been as high. This is, however, conjecture and the true number could equally have been much lower. Assuming an approximate duration of 400 years for the cemetery's use and the loss of 200–400 burials would imply an average burial rate of one or two persons a year.

Of the 48 burials recovered, 13 (27%) were unurned, a percentage comparable to that at Conegre Farm, Thurgaton, Notts. (Allen *et al.* 1987), where 14 out of 51 (27%) were unurned. At Pasture Lodge Farm, Lincolnshire (Allen *et al.* 1987), all 26 identified burials were urned and upright; and at Simons Ground (Ellison 1982), where a total of 300 burials was identified, the linear urnfield contained a higher proportion of upright pots than the barrows. At Conegre Farm 31 burials were in stone cists, while at Pasture Lodge Farm a number of comparable stones were found and, because of the disturbed nature of the site, their original status as cists cannot be ruled out. Cists are relatively common at burial sites in stony regions, particularly the south-west of England (Johnson 1980). At Brightlingsea cists would not have been used because of the absence of suitable stone.

Attempts to analyse cemeteries in terms of vessel-type, orientation, age and gender have mainly failed to produce reliable results, and it is better to look at each burial as an elaborate sequence of choices (Barrett *et al.* 1991). This sequence has been discussed in detail by Brown (1999), but may be summarised as the selection of material for interment, of container and of burial location (with regard to other burials).

A number of barrows appear to have had some sort of mortuary structure; for example, the post-ring at Itford Hill. At Brightlingsea very few ring-ditches had any internal features; sometimes there appear to have been post- or stake-holes. However, none show any sign of being the remains of a coherent structure.

The ring-ditches at Chitts Hill were generally of greater diameter (both internal and external), but were shallower and narrower, probably as a result of greater truncation through the removal of *c.*25cm of cover loam through which the features were cut. Making allowances for extra original depth and width, the means work out as approximately 0.51m wide and 1.24m deep respectively, slightly greater than those at Brightlingsea. The sample at Chitts Hill was, however, comparatively small and it is probably not surprising that it does not reflect the range of dimensions seen at Brightlingsea.

There were no multiple burials (*i.e.* burials in the same container) within the Brightlingsea cemetery; multiple burials in the same pit did occur, see p.15. Brown (1999) suggests that the relatively large numbers of multiple burials at Ardleigh represent a period of storage prior to burial, but that some woman and child burials may result from death during childbirth. This cannot be the case with all, however, and different criteria must have affected the choice of inclusion. The absence of multiple burials at Brightlingsea may indicate a slightly different funerary rite, or it may simply be the chance result of the site taphonomy or of any multiple burials being in positions where they have not survived. Of course, the choice of those positions may in itself be relevant to the arrangement of burials within the cemetery.

There are now several sites where the relationship of settlement to cemetery is known. One of the earliest examples to be identified was Itford Hill, Beddington, Sussex, where a barrow cemetery was located *c.*90m north of the settlement. This identification occurred some twenty years after the excavation of the settlement, but parts of a single pot were found at both sites, confirming the link between the two. Further examples are Durrington Egg, South Lodge Camp and Down Farm (Bradley 1981, fig. 7.5). In each case the burial site was located between 100m and 150m from the settlement. At North Shoebury, Essex, two unurned burials were found. One lay *c.*250m, and the other *c.*400m, away from the settlement. The second burial was close (*c.*70m) to two cropmark ring-ditches, which were not excavated. Bradley (1981) has summarised the situation as one in which cemeteries lie within a maximum distance of 700m from the settlements, and are usually at a distance of between 50 and 300m. Evidence from Holland indicates a similar range.

The type of land chosen for the cemetery would also be important. Bradley (1981) sees the relationship of settlement to cemetery and the adoption of communal burial as relevant to the farming economy and the agricultural quality of the land. A pattern is emerging whereby pasture or land was chosen for the cemetery and taken out of agricultural use. At Ardleigh, Brown (1999) has argued that the relatively stone-free ring-ditch fills are the result of prolonged use of the land as pasture, resulting in a considerable depth of stone-free soil overlying the gravel. At Brightlingsea the ditch fills are also less stony than might be expected. A period when the site was used as pasture, or simply abandoned, may be inferred from this, especially when considered with the frequency of onion

couch grass (*Arrhenatherum elatius* var. *bulbosum*) tubers and other rough grassland plants incorporated with the cremated remains. Murphy (above) has stated that this grass is characteristic of verges, poorly managed pasture and abandoned arable land. Assuming that cremation took place at or near the site of burial, this is also an indication of previous land use. Similar plants to those at Brightlingsea were also present in both the burial and ring-ditch at Rush Green (Murphy 1983).

There is no obvious candidate for the location of Middle Bronze Age settlement at Brightlingsea apparent from the accumulated evidence. The extensive cropmarks of the peninsula include none of the linked enclosures characteristic of many sites (Itford Hill; Holden 1972, Black Patch; Drewett 1980). During the evaluation of the fields to the east of the cemetery (Clarke 1996), sherds of Middle to Late Bronze Age pottery were recovered from a large sub-square enclosure *c.* 120m east of the ring-ditches (Trinity Enclosure). None of this pottery was of distinctive Deverel-Rimbury form, but it must be borne in mind that the assemblage comprised only twenty-five sherds from a 1.5m segment through a ditch 2m wide and 80cm deep. While it was noted at the time that this enclosure appears to be similar in plan to the Late Bronze Age settlements at Lofts Farm (Brown 1988) and Broomfield (Atkinson 1995), it also bears a close resemblance to the Middle Bronze Age sites at Down Farm and South Lodge (Pitt-Rivers 1898), both of which lay approximately 100m from their associated burial areas. Nevertheless, the plainness of this pottery in comparison to the invariably decorated pottery from the cemetery may indicate a deliberate distinction in the use of plain and decorate vessels, at least at the stage at which the enclosure ditch began to silt up.

The only other indication of Middle Bronze Age activity comprises pottery from a pit close to the Neolithic ring-ditch *c.*400m north-west of the cemetery, and the pottery from the second ring-ditch group under BFA 5 (Fig. 14).

The relationship of the Middle Bronze Age cemetery to the Neolithic ring-ditch is one which occurs elsewhere, often with the cemetery lying to the east or south-east of the earlier monument. Several possible examples have been noted in Essex. At Thorpe Hall, Thorpe-le-Soken, a ring-ditch cemetery lies 400m east of a substantial concentric ring-ditch. A second site, at Little Bromley, comprises a ring-ditch cemetery 100m south-east of a possible henge monument (Harding and Lee 1987). The Little Bromley example, however, is unreliable, as it has been recently suggested that the putative henge is the site of a medieval windmill (Nigel Brown, pers. comm.). However, there is a second large ring-ditch some 200m to the south of the cemetery, which may be relevant, and a second ring-ditch cemetery 300m to the west, so clearly the relationship of the monuments is complex. A third example lies at Thorrington, to the north of Brightlingsea, where a small group of ring-ditches lies 100m to the north of a large concentric ring-ditch. No such relationship has been observed at Ardleigh, but any features lying more than 200m west of the cemetery are likely to have been destroyed by quarrying or railway construction (Brown 1999).

There appears, therefore, to be a tendency for Middle Bronze Age cemeteries to be sited in relatively close proximity to large monuments of earlier dates. The examples quoted above represent four which have been observed within the relatively small area of the Tendring Peninsula, and are probably not exceptional.

III. Landscape

Human activity on the Brightlingsea Peninsula during the Mesolithic period is indicted by occasional pieces of worked flint, and during the Early Neolithic by non-microlithic early pieces in the lithics assemblage. The long-lived excavated ring-ditch belongs to the Early Neolithic, and it is possible that the enclosure in the field west of Gatehouse Farm, interpreted as a possible mortuary enclosure, is contemporary. No settlement site is known for this period, although the small concentration of early flint at EFC 2, on the southern lip of the 20m plateau, may indicate that this part of the peninsula was used for habitation from the time of initial detectable land use. There is also a single sherd of probable Neolithic date from Trench 15 in the middle of Trinity Field south.

There is a remarkable paucity of finds from Ford Field, both in the southern part of the field between the excavated Neolithic ring-ditch and the excavated MBA cemetery, and in the northern part of the field, south of the road. There are only two pieces of early flint from the area between the ring-ditch and cemetery (a blade and a piercer), and only six pieces in the field to the immediate north of the ring-ditch (five blades and a blade core). This tendency is not reflected so strongly in the late flint distribution, where there is a strong concentration of late flintwork (C3) in the southern part of the field, and weaker concentrations elsewhere.

The small amount of early flint recovered from north of the ring-ditch indicates probably contemporary knapping activity (as, indeed, do the lithics for the excavated site), and this apparently also occurred in the field containing the possible mortuary enclosure. The presence of the Neolithic ring-ditch and the paucity of finds for both whole fields, with rare exceptions, suggest that use of the area, insofar as this is reflected in durable objects, remained very low for a considerable length of time. It is tempting to suggest that the ritual value of the area during the Neolithic, with any concomitant requirement for reservation of the area for ritual purposes, was sufficiently high to have persisted through time, and the suggestion that the ring-ditch was a long-term feature of the landscape is supported by evidence for multiple recutting. The increasing density of late flint in Ford Field may indicate that any such ritual reservation in the Ford Field area gradually declined through time, and was less important in the later Bronze Age.

There is a concentration of early flint waste (EFC 1: Fig. 15) near the putative mortuary enclosure. A second occurs near the excavated ring-ditch, possibly suggesting similar dates for the two features. There is a very low density of burnt flint in this field, reminiscent of the paucity east of the Neolithic ring-ditch. Apart from a small concentration of burnt flint in the area of EFC 2, there is no strong coincidence of burnt flint with the Early Neolithic background, and it would appear unlikely that the massive burning of flint evident in BFA 1–4 belongs to the Early Neolithic period. It is, however, possible that burnt flint, if earlier Neolithic, is merely not connected with ritual activities. Therefore, some of the burnt flint from the EFC 2 and BFA 4 areas may be of Neolithic date; however, this would probably belong to any domestic site in this area,

which might have been a precursor to the MBA and later settlement site.

The patchiness of the struck flint density plots, and such evidence as we have from the pits that these local concentrations are meaningful, tend to suggest that there are a large number of small sites which are not properly defined because of low sample and artefact levels, and are undated beyond being of between Late Neolithic and Late Bronze Age date.

Later Neolithic land use is represented solely by the Grooved Ware pit in Ford Field. The pit was not overlain by a lithics concentration, and the pit contained only a single flint flake. The deposition of the pottery, with accompanying pieces of unformed burnt clay, suggests a placed deposit, while the absence of contemporary material in the overlying ploughsoil suggests a short period of use, and it may have been that this pit was isolated and did not form part of a more extensive site. It should be noted that the deposition of Grooved Ware at or near earlier Neolithic monuments is not uncommon in Essex, particularly in the Chelmer Valley, where both Springfield Lyons (Brown in prep. a) and the Springfield cursus (Brown 2001a) have produced small quantities of material. An isolated pit containing Grooved Ware was also recorded at Great Baddow, although no Early Neolithic monument is known there (Brown and Lavender 1994).

As far as remains can be assigned to the period later Neolithic–Early Bronze Age, these comprise the possible Early Bronze Age occupation site represented by the lithics scatter associated with pit 244; the two ring-ditches in Trinity Field south are also tentatively assigned to the Early Bronze Age. The cemetery lithics report shows that Neolithic and Early Bronze Age pieces are spread across the site; these are described by Holgate (above) as consistent with a domestic assemblage, suggesting that the area was settled throughout the Neolithic and Early Bronze Age prior to the laying out of the cemetery. The presence of the utilised Late Neolithic/ Early Bronze Age and Early Bronze Age flint sickles recovered from the surface of Trinity Field north during geophysical survey in 1996 indicates crop growth and harvesting during this period.

Middle Bronze Age activity is indicated by the excavated ring-ditch cemetery, the Trinity Field enclosure and field system (Clarke 1996), and the scatter of pottery and late flint work over BFA 5 (this site apparently extending into the Late Bronze Age). It is probable that the burnt flint concentrations and late flint scatters represent domestic activity connected with the cemetery (or rather that the cemetery is the resting place of those producing the lithic material). This cannot be proved, but the correlation between the Middle to Late Bronze Age enclosure in Trinity Field with concentrations of both burnt and late struck flint is probably indicative of such a relationship.

The palaeoenvironmental evidence from the cemetery indicates that barley, emmer, spelt and bread-type wheat were being grown during the Middle Bronze Age, and the non-cereal species list, dominated by grassland plants, indicates the presence during this period of rough ungrazed grassland, probably abandoned land (Murphy, above); this was perhaps the land being farmed in the Early Bronze Age.

A Late Bronze Age date is assigned to an enclosure in the southernmost part of the 1996 evaluation complex, and it is possible that the Trinity Field enclosure extends into the Late Bronze Age. There is also a Late Bronze Age pit cutting one of the cemetery's ring-ditches (Part 2, Section III).

The overall impression is one in which all parts of the peninsula saw some activity from the Mesolithic onwards. In the earlier period, from the Early Neolithic, the western part of the 20m plateau appears to have had a strong ceremonial tradition associated with the ring-ditch and possible mortuary enclosure.

Settlement may have been concentrated on the southern lip of the 20m plateau, overlooking the Colne. There is a slight suggestion of a Neolithic settlement site in the area of BFA 5, and a strong suggestion that settlement on this vantage point overlooking the Colne estuary continued through the Middle and Late Bronze Age. The settled area appears to have comprised a strip of land on the edge of the plateau measuring some 600m east–west and extending patchily northwards to the Trinity Field enclosure on the plateau. The western edge of this strip, as it survives, also contains traces of Middle Iron Age, Late Iron Age and early Roman settlement. The spread of this intensely exploited strip towards the western tip of the plateau cannot be traced through the quarried land to the west, although there are cropmarks in this area suggesting that it may have originally spread across the whole southern edge of the plateau.

The interpretation of distributions and concentrations of material from this assemblage is bedevilled by the scarcity of the data. There are numerous instances in the analysis work where the distributions of artefact types had discernible trends, but because of the relatively low numbers it is not clear to what extent this reflects real and meaningful distribution or is the result of chance or unknown random factors. The prevalence of notched pieces in the low-lying late flint concentrations (Martingell and Clarke, above), for example, is interesting, and may be significant, but conclusions, beyond the suggestion that activities on the foreshore appear to have included those for which notched pieces are useful, cannot be drawn. A second example may be cited in the distribution of failed cores and used cores in the late flint industry, where failed cores are generally much more common in lower-lying areas than on the higher parts of the slopes or on the peninsula plateau. While this suggests a tendency for the gathering of core material from the lower slopes, and *in situ* testing of nodules prior to knapping elsewhere, the data set is by no means large enough to allow certainty on this point.

The small percentage of finds recovered during the survey (possibly as low as 0.1% of the total ploughsoil assemblage) could obviously have been raised by increasing the intensity of collection, but even 100% surface collection would only bring the finds up to between 1% and 5% of the total and it is doubtful whether this would justify the time and resources involved. A better solution would be to use fieldwalking as one of a portfolio of survey techniques.

The Brightlingsea survey used only two methods, study of aerial photographs and fieldwalking, locally supplemented by watching briefs, excavations and evaluations, though these were not an integral part of the survey. Today these techniques would be part of a wider range of tools that would include hand-dug test pits (with 100% finds recovery), selective trial trenching, magnetic susceptibility, magnetometer prospecting, auguring and possibly ground-penetrating radar.

Appendix 1. Middle Bronze Age cemetery ring-ditch dimensions

Context	*Ext. diam. (m)*	*Int. diam. (m)*	*Depth (m)*	*Width (m)*
1013	8.50	5.60	0.35	1.50
1036	8.00	6.60	0.43	1.50
1039	6.40	3.40	0.39	1.10
1040	7.40	5.80	0.26	1.00
1041	7.70	4.50	0.45	1.00
1043	6.00	4.00	0.30	0.60
1047	5.80	3.40	0.80	1.50
1049	8.60	6.50	0.35	0.90
1051	8.60	6.20	0.51	1.70
1053	6.00	4.20	0.40	0.80
1054	8.40	5.60	0.58	1.10
1055	7.20	5.40	0.43	1.00
1056	4.10	3.30	0.23	0.50
1057	8.40	6.40	0.43	1.20
1059	6.80	5.00	0.32	0.80
1060	12.05	7.00	0.57	2.00
1061	7.40	3.25	0.48	2.20
1062	11.00	7.00	0.50	1.10
1063	8.00	4.00	0.40	1.10
1064	7.00	5.00	0.21	0.80
1065	8.40	5.50	0.48	1.50
1066	7.20	5.00	0.70	1.20
1067	7.20	5.00	0.40	1.10
1068	5.80	3.75	0.35	0.80
1069	8.00	6.00	0.50	1.10
1070	8.00	6.00	0.47	1.20
1071	8.20	6.00	0.70	1.50
1072	5.40	3.60	0.32	0.90
1087	5.20	3.00	0.60	1.50
1140	3.70	2.20	0.56	1.00
1150	7.10	5.40	0.36	0.80
MEAN	7.34	4.95	0.45	1.16
St. deviation	1.71	1.30	0.14	0.38
1 above	9.05	6.25	0.58	1.55
1 below	5.63	3.66	0.31	0.78
>1 above	1.00	3.00	0.00	1.00
<1 below	4.00	5.00	2.00	1.00

Bibliography

Adkins, P., Brown, N., Murphy, P. and Priddy, D., 1984–5 'Rook Hall', in Priddy, D. (ed.), 'Work of the Essex County Council Archaeology Section 1983–4', *Essex Archaeol. Hist.* 16, 82–122

Allen, C.S.M., Harrison, M. and Wheeler, H., 1987 'Bronze Age cremation cemeteries in the East Midlands', *Proc. Prehist. Soc.* 53, 187–222

Atkinson, M., 1995 'A Late Bronze Age enclosure at Broomfield, Chelmsford', *Essex Archaeol. Hist.* 26, 1–24

Barrett, J., Bradley, R. and Green, M., 1991 *Landscape, Monuments and Society: The Prehistory of Cranborne Chase* (Cambridge, Cambridge University Press)

Bedwin, O., 1986 'The excavation of 3 ring-ditches at Broomfield Plantation Quarry, Alresford, Essex, 1984', *Essex Archaeol. Hist.* 17, 69–81

Bintliff, J., 2000 'Deconstructing 'the sense of place'? Settlement systems, field survey and the historic record: a case-study from central Greece', *Proc. Prehist. Soc.* 66, 123–50

Bradley, R., 1981 'Various styles of urn — cemeteries and settlement in southern England *c*.1400–1000 BC', in Chapman, R., Kinnes, I. and Randsborg, K. (eds), *The archaeology of death* (Cambridge, Cambridge University Press), 93–104

Bradley, R., 1992 'The excavation of an oval barrow beside the Abingdon causewayed enclosure, Oxfordshire', *Proc. Prehist. Soc*. 58, 127–42

Bradley, R., forthcoming *The Prehistory of Britain and Ireland* (Cambridge, Cambridge University Press)

Bradley, R., Holgate, R. and Ford, S., 1984 'The Neolithic sequence in the Upper Thames Valley', in Bradley, R. and Gardiner, J. (eds), *Neolithic Studies: a review of some current research*, Brit. Archaeol. Rep. British Ser.133 (Oxford), 87–134

Briscoe G., 1957 'Swale's Tumulus: A combined Neolithic and Bronze Age barrow at Worlington, Suffolk', *Proc. Cambridge Antiq. Soc.* 50, 101–12

Brown, N., 1988 'A Late Bronze Age enclosure at Lofts Farm, Essex', *Proc. Prehist. Soc.* 54, 249–302

Brown, N., 1992 'The prehistoric pottery', in Crummy, P., *Excavations at Culver Street, the Gilberd School, and other sites 1971–85*, Colchester Archaeol. Rep. 6, 317–20

Brown, N., 1995a 'Ardleigh reconsidered: Deverel-Rimbury pottery in Essex', in Kinnes, I. and Varndel, G. (eds), '*Unbaked Urns of Rudely Shape' Essays on British and Irish Pottery for Ian Longworth*, Oxbow Monogr. Ser. 55, 123–144

Brown, N., 1995b 'Neolithic and Beaker pottery', in Wymer, J. and Brown, N., *North Shoebury: settlement and economy in south-east Essex 1500BC–AD1500*, E. Anglian Archaeol. 75, 74–6

Brown, N., 1997 'A landscape of two halves: The Neolithic of the Chelmer Valley/Blackwater Estuary, Essex', in Topping, P. (ed.), *Neolithic Landscapes*, Oxbow Monogr. Ser. 86, 87–98

Brown, N., 1999 *The archaeology of Ardleigh, Essex: excavations 1955–80*, E. Anglian Archaeol. 90

Brown, N., 2001a 'Prehistoric pottery', in Buckley, D.G., Hedges, J.D. and Brown, N., 'Excavations at a Neolithic cursus, Springfield, Essex, 1979–85', *Proc. Prehist. Soc.* 67, 123–34

Brown, N., 2001b 'Pottery', in Atkinson, M. and Preston, S., 'Prehistoric settlement and burials at Elms Farm', *Essex Archaeol. Hist.* 32, 42–74

Brown, N., in prep. a 'Neolithic and Early Bronze Age pottery', in Buckley, D.G. and Hedges, J.D., *Excavations at Springfield Lyons, Essex: II. Prehistoric*, E. Anglian Archaeol.

Brown, N., in prep. b 'Neolithic pottery', in Wilkinson, T. and Murphy, P., *Archaeology of the Essex Coast II. Excavations at The Stumble*, E. Anglian Archaeol.

Brown, N., in prep. c 'The Late Bronze Age pottery', in Buckley, D.G. and Hedges, J.D., *Excavations at Springfield Lyons, Essex: II. Prehistoric*, E. Anglian Archaeol.

Brown, N. and Lavender, N.J., 1994 'Later Bronze Age sites at Great Baddow and settlement in the Chelmer Valley 1500–500 BC', *Essex Archaeol. Hist.* 25, 3–13

Buckley, D.G., Major, H. and Milton, B. 1988 'Excavation of a possible Neolithic long barrow or mortuary enclosure at Rivenhall, Essex', *Proc. Prehist. Soc.* 54, 77–91

Buckley, D.G. and Priddy, D., 1983 'Excavation of a Bronze Age ring-ditch. Clacton, Rush Green, TM156154', in Priddy, D. (ed.), 'Work of Essex County Council Archaeology Section, 1982', *Essex Archaeol. Hist.* 15, 121–8

Buckley, D.G. and Hedges, J.D., 2001 'Excavations at a Neolithic Cursus, Springfield, Essex, 1979–85', *Proc. Prehist. Soc.* 67, 123–34

Buckley, D.G. and Hedges, J.D., in prep. *Excavations at Springfield Lyons, Essex: II Prehistoric*, E. Anglian Archaeol.

Burstow, G.P., 1958 'A Late Bronze Age urnfield on Steyning Round Hill, Sussex', *Proc. Prehist. Soc.* 24, 158–64

Case, H.J. and Whittle, A.W.R., 1982 *Settlement patterns in the Oxford region: excavations at the Abingdon causewayed enclosure and other sites*, Counc. Brit. Archaeol. Res. Rep. 44

Clark, J.G.D., 1960 'Report on a Late Bronze Age site in Mildenhall Fen, West Suffolk', *Antiq. J.* 16, 30–50

Clarke, C.P., 1996 *Moverons Pit, Brightlingsea, Essex: Archaeological Evaluation* (Essex County Council Evaluation Report)

Clarke, C.P., in prep. 'Field survey of the Brightlingsea Peninsula', *Essex Archaeol. Hist.*

Clay, R.C.C., 1927 'The Woodminton group of barrows, Bowerchalke', *Wiltshire Archaeol. Natur. Hist. Mag.* 43, 313–24

Cleal, R., 1993 'Significant form: ceramic styles in the earlier Neolithic of southern England', in Sharples, N. and Sheridan, A. (eds), *Vessels for the Ancestors* (Edinburgh, Edinburgh University Press), 286–304

Couchman, C., 1975 'The Bronze Age cemetery at Ardleigh, Essex: a further consideration', *Essex Archaeol. Hist.* 7, 14–32

Couchman, C. and Savory, L., 1983 'The cropmark complex and a group of Deverel-Rimbury burials at Ardleigh, Essex', *Essex Archaeol. Hist.* 15, 1–10

Crummy, P., 1977 'A Bronze Age Cemetery at Chitts Hill, Colchester, Essex', *Essex Archaeol. Hist.* 9, 1–16

Drewett, P., 1980 'Black Patch and the Later Bronze Age in Sussex', in Barrett, J. and Bradley, R. (eds), *Settlement and Society in the British Later Bronze Age*, Brit. Archaeol. Rep. British Ser. 83 (Oxford), 377–96

Eddy M.R., (ed.) 1980 'Brightlingsea, Moverons Pit', in 'Work of the Essex County Council Archaeology Section, 1979', *Essex Archaeol. Hist.* 12, 57

Ellison, A.B., 1980 'Deverel-Rimbury urn cremations: the evidence for social organisation', in Barrett, J. and Bradley, R. (eds), *Settlement and Society in the British Later Bronze Age*, Brit. Archaeol. Rep. British Ser. 83, 115–27

Ellison, A.B., 1982 'A spatial analysis of the Simons Ground urn cemeteries', in White, D.A., *The Bronze Age Cremation cemeteries at Simons Ground, Dorset*, Dorset Natur. Hist. Archaeol. Soc. Monogr. Ser. 3 (Dorchester), 59–64

Ellison, A.B., 1988 'Discussion', in Longworth, I., Ellison, A.B. and Rigby, V., *Excavations at Grimes Graves, Norfolk 1972–1976 Fascicule 2, The Neolithic, Bronze Age and Later Pottery* (London, British Museum), 36–50

Erith F.H., 1960 'Ardleigh — Ring I, 1960', *Colchester Archaeol. Group Bull.* 3 (4), 51–5

Erith, F.H., 1962 'Ardleigh — Ring VI', *Colchester Archaeol. Group Bull.* 5 (3), 105–9

Erith, F.H. and Longworth, I.H., 1960 'A Bronze Age urnfield on Vinces Farm, Ardleigh, Essex', *Proc. Prehist. Soc.* 26, 178–92

Etiégni, L. and Campbell, A.G., 1991 'Physical and chemical characteristics of woodash', *Bioresource Technology* 37, 173–8

Garwood, A., 1999 'Grooved Ware in Southern Britain: chronology and interpretation', in Cleal, R. and MacSween, A. (eds), *Grooved Ware in Britain and Ireland*, Neolithic Studies Group Seminar Papers 3 (Oxford), 145–76

Gejval, N.G., 1981 'Determination of burned bones from prehistoric graves. Observations on the cremated bone from the graves at Horn', *OSSA Letters* 2 (Stockholm)

Harding, A. and Lee, G., 1987 *Henge Monuments and Related Sites of Great Britain*, Brit. Archaeol. Rep. British Ser. 175 (Oxford)

Healey, E., 1978 'The flint', in Drury, P.J., *Excavations at Little Waltham 1970–71*, Counc. Brit. Archaeol. Res. Rep. 26

Healy, F., 1985 'The struck flint', in Shennan, S.J., Healy, F. and Smith, I.F., 'The excavation of a ring-ditch at Tye Field, Lawford, Essex', *Archaeol. J.* 142, 177–201

Healy, F., 1988 *The Anglo-Saxon cemetery at Spong Hill, North Elmham, Part VI: Occupation during the Seventh to Second Millennia B.C.*, E. Anglian Archaeol. 39

Hedges, J.D., 1980 'The Neolithic in Essex' in Buckley, D.G. *Archaeology in Essex to AD 1500.* Counc. Brit. Archaeol. Res. Rep. 34, 26–39

Hedges, J.D. and Buckley, D.G., 1975 'Excavations at a Neolithic causewayed enclosure, Orsett, Essex, 1975', *Proc. Prehist. Soc.* 44, 219–308

Heppell, E. and Roy, M., in prep. 'A prehistoric landscape at Langford Hall Reservoir, near Heybridge; excavations 1995–6', *Essex Archaeol. Hist.*

Herrman B., 1988 'Behandlung von Leichenbrand', in Knussmann, R. (ed.), *Anthropologie* 1, (Stuttgart, Gustav Fischer)

Henshall, A.S., 1983 'The Neolithic pottery from Easterton of Roseside, Moray', in O'Conner, A. and Clarke, D.V. (eds), *From the Stone Age to the 'Forty-Five* (Edinburgh, Donald), 19–44

Holden, E.W., 1972 'A Bronze Age cemetery barrow on Itford Hill, Beddingham, Sussex', *Sussex Archaeol. Collect.* 110, 70–117

Holgate, R., 1985 'Identifying Neolithic settlements in Britain: the role of field survey in the interpretation of lithic scatters', in Haselgrove, C., Millett, M. and Smith, I. (eds), *Archaeology from the Ploughsoil* (Sheffield, Department of Archaeology and Prehistory, University of Sheffield), 51–8

Holgate, R., 1988a *Neolithic Settlement of the Thames Basin*, Brit. Archaeol. Rep. British Ser. 194 (Oxford)

Holgate, R., 1988b 'A review of Neolithic domestic activity in southern Britain', in Barrett, J.C. and Kinnes, I. (eds), *The Archaeology of Context in the Neolithic and Bronze Age: Recent Trends* (Sheffield, Department of Archaeology and Prehistory, Sheffield University), 102–11

Howard, H., 1981 'In the wake of distribution: towards an integrated approach in ceramic studies in prehistoric Britain', in Howard, H. and Morris, E. eds *Production and distribution: a ceramic viewpoint*, Brit. Archaeol. Rep. International Series 12**,** 1–30

Johnson, N., 1980 'Later Bronze Age settlement in the South-West', in Barrett, J. and Bradley, R. (eds), *Settlement and Society in the British Later Bronze Age*, Brit. Archaeol. Rep. British Ser. 83,141–80

Jones, M.U. and Bond, D., 1980 *Excavation at the North Ring, Mucking, Essex,* E. Anglian Archaeol. 43

Kinnes, I., 1978 'The earlier prehistoric pottery', in Hedges, J.D. and Buckley, D.G., 'Excavations at a Neolithic causewayed enclosure, Orsett, Essex. 1975', *Proc. Prehist. Soc.* 44, 219–308

Kinnes, I., 1979 *Round barrows and ring-ditches in the British Neolithic*, Brit. Mus. Occas. Pap. 7

Kinnes, I. and Longworth, I.H., 1985 *Catalogue of the excavated prehistoric and Romano-British material in the Greenwell Collection* (London, British Museum)

Kinnes, I., 1998 'The pottery' in Pryor, F. *Etton, excavations at a Neolithic causewayed enclosure near Maxey, Cambridgeshire, 1982–7*, English Heritage Rep. 18, 161–214

Lavender, N.J., 1991 'A Late Iron Age cemetery enclosure at Maldon Hall Farm, Essex: excavations 1989', *Proc. Prehist. Soc.* 57(2), 203–9

Longworth, I.H., 1960 'Pottery', in Clark, J.G.D., 'Excavations at the Neolithic site at Hurst Fen, Mildenhall, Suffolk', *Proc. Prehist. Soc.* 26, 228–40

Longworth, I.H., 1981 'Neolithic and Bronze Age Pottery', in Mercer, R.J., *Grimes Graves, Norfolk. Excavations 1971–72*, vol. 1 (London, HMSO), 39–41

Longworth, I.H., Ellison, A., and Rigby, V., 1988 *Excavations at Grimes Graves, Norfolk 1972–1976 Fascicule 2, The Neolithic, Bronze Age and Later Pottery* (London, British Museum)

Longworth, I.H., Wainwright, G.J. and Wilson, K.E., 1971 'The Grooved Ware site at Lion Point, Clacton', *Brit. Mus. Quarterly* 35, 93–124

Loveday, R. and Petchey, M.R., 1982 'Oblong ditches: a discussion and some new evidence', *Aerial Archaeology* 8, 1–106

McKinley, J., 1989 'Cremations: expectations, methodologies and realities', in Roberts, C.A., Lee, F. and Bintliff, J., *Burial Archaeology: Current Research, Methods and Developments*, Brit. Archaeol. Rep. British Ser. 211 (Oxford)

Mercer, R.J., 1981 *Grimes Graves, Norfolk. Excavations 1971–72*, vol. 1 (London, HMSO)

Miles, W.A., 1826 *A Description of the Deverel Barrow* (London)

Milton, B., 1987 'Excavations at Barringtons Farm, Orsett Cock, Thurrock, Essex, 1983', *Essex Archaeol. Hist.* 18, 16–33

Murphy, P., 1983 'Plant macrofossils', in Buckley, D.G. and Priddy, D., 'Excavation of a Bronze Age ring-ditch. Clacton, Rush Green, TM156154', *Essex Archaeol. Hist.* 15, 127

Murphy, P., 1988 'Plant macrofossils', in Brown, N., 'A Late Bronze Age enclosures at Lofts Farm, Essex', *Proc. Prehist. Soc.* 54, 281–93

Murphy, P., 1989 'Carbonised Neolithic plant remains from The Stumble, an intertidal site in the Blackwater Estuary, Essex, England', *Circaea* 6 (1), 21–38

Murphy, P., 1990 *Springfield Lyons, Chelmsford, Essex: Carbonised plant remains from Neolithic, Late Bronze Age, Iron Age, Roman, Early and Late Saxon contexts*, Ancient Monuments Laboratory Report Series 11/90

Murphy, P., 1995 'Botanical evidence' in Wymer, J. and Brown, N. *Excavations at North Shoebury: settlement and economy in south-east Essex 1500BC–AD1500*, E. Anglian Archaeol. 75, 146–150

Newcomer, M.H., 1975 'Spontaneous retouch', in Engelen, F.H.G. (ed.), *Second International Symposium on Flint, Staringia.* 3 (Maastricht, Nederlanse Geologische Veriening), 63–4

Okpoko, A.I., 1987 'Pottery-making in Igboland, Eastern Nigeria: an ethno-archaeological study', *Proc. Prehist. Soc.* 53, 445–56

Pitt-Rivers, A.H.L.F., 1898 *Excavations in Cranborne Chase, nr. Rushmore, vol. IV*

Pitts, M.W., 1978 'Towards an understanding of flint industries in post-glacial England', *Bulletin of the Institute of Archaeology, University of London* 15, 179–97

Pryor, F., 1980 *Excavation at Fengate, Peterborough, England. The Third Report*, Northamptonshire Archaeol. Soc. Monogr. 1 (Northampton)

Richards, J., 1990 *The Stonehenge Environs Project* (London, English Heritage)

Robertson-Mackay, R., 1987 'The Neolithic causewayed enclosure at Staines, Surrey: excavations 1961–63', *Proc. Prehist. Soc.* 53, 23–128

Robinson, M., 1988 'The significance of the tubers of *Arrhenatherum elatius* (L) Beauv. from site 4, Cremation 15, 11', in Lambrick, G.H., *The Rollright Stones*, English Heritage Report 6 (London)

Shennan, S.J., 1985 *Experiments in the Collection and Analysis of Archaeological Survey Data: The East Hampshire Survey* (Sheffield, Department of Archaeology and Prehistory, University of Sheffield)

Shennan, S.J., Healey, F. and Smith, I.F.S., 1986 'The excavation at Tye Field, Lawford', *Archaeol. J.* 142, 150–215

Shrubsole, O.A., 1907 'On a tumulus containing urns of the Bronze Age, near Sunningdale, Berks. And on a burial place of the Bronze Age at Sulham, Berks', *Proc. Soc. Antiq.* 21, 303–14

Smith, I.F., 1965 *Windmill Hill and Avebury* (London, Oxford University Press)

Sterner, J., 1989 'Who is signalling whom? Ceramic style, ethnicity and taphonomy among the Sirak Bulahay', *Antiquity* 63(240), 451–60

Strachan, D., 1996 'Cropmark of a possible long mortuary enclosure north of Rose Cottage, Chadwell St Mary', *Essex Archaeol. Hist.* 27, 305

Wainwright, G.J. and Longworth, I.H., 1971 'The Rinyo Clacton Culture reconsidered', in Wainwright G.J., *Durrington Walls: Excavations 1966–1968*, Rep. Res. Comm. Soc. Antiq. London 29 (London)

Wallis, S.P. and Waughman, M., 1998 *Archaeology and the landscape in the Lower Blackwater Valley*, E. Anglian Archaeol. 82

Warren, S.H., Piggott, S., Clark, J.G.D., Burkitt, M.C., Godwin, H. and M.E., 1936 'Archaeology of the submerged land-surface of the Essex coast', *Proc. Prehist. Soc.* 2, 178–210

White, D.A., 1982 *The Bronze Age Cremation Cemeteries at Simons Ground, Dorset*, Dorset Natur. Hist. Archaeol. Soc. Monogr. Ser. 3 (Dorchester)

Whittle, A., Atkinson, R.J.C., Chambers, R. and Thomas, N., 1992 'Excavations in the Neolithic and Bronze Age complex at Dorchester-on-Thames, Oxfordshire. 1947–52 and 1981', *Proc. Prehist. Soc.* 58, 143–202

Wilkinson, T.J. and Murphy, P., 1995 *Archaeology of the Essex Coast, Volume I: The Hullbridge Survey*, E. Anglian Archaeol. 71

Zeepvat, R.J., Roberts, J.S. and King, N.A., 1994 *Caldecotte, Milton Keynes. Excavation and fieldwork 1966–91*, Buckinghamshire Archaeol. Soc. Monogr. Ser. 9 (Aylesbury)

Index

Page numbers in *italics* denote illustrations. Places are in Essex unless otherwise indicated.

Abingdon (Oxon), Neolithic pottery 35
aerial photography 1, 10, 15, 25, 57, 63
agriculture 1, 61
Alresford Creek 1, 4, 22, 48
Alresford Sand and Ballast Co. Ltd 1
animal burrowing damage 5, 8
Ardleigh
  Martell's Gravel Pit 15
  prehistoric burials 15, 38–9, 40, 43, 57, 59, *60*, 61, 62
arrowheads, flint
  bifacial 49
  leaf-shaped 45, 46, *47*, 48, 49
axes, flint 49
  polished 45, 46

Barringtons Farm, Orsett 59
barrows 55
  reuse of 59, 61
  see also Chitts Hill; long barrow/mortuary enclosure
Beaker
  burial 61
  see also pottery
Belt, The 1
Black Patch (Sussex) 62
Blackwater estuary 26, 54, 55
Boeotia (Greece) 25
bone, human, cremated 14, 15, 27–8, 52, 59
Brightlingsea Creek 1
Bronze Age 1, 22, 49–50, 55
  Early Bronze Age 1, 22, 25, 46, 63
  Late Bronze Age 25, 46, 63
  Late Bronze Age/Early Iron Age 22
  see also Middle Bronze Age cremation cemetery; pottery
Broomfield 1, 62
burins 48, 49
burnt flint mounds 22

causeways
  Neolithic ring-ditch site 5, 8
  see also Orsett; Springfield Lyons
cemeteries *see* cremation burials
cereal remains, carbonised 52, 53, 54, 63
ceremonial evidence *see* ritual/ceremonial
charcoal remains 8, 14, 15, 51, 52, 53
Chelmer Valley 63
Chigborough Farm 55
Chitts Hill, Colchester, cremation cemetery 10, 46, 57, 59, *60*, 61
cists 61
Clacton
  Grooved Ware from 36
  Rush Green 53, 54, 59, 62
Colchester
  prehistoric pottery 36, 38
  see also Chitts Hill; White Colne
Colne, River 1, 53, 63
Colne estuary 1, 4, 63
Conegre Farm, Thurgaton (Notts) 61
cremation burials
  Neolithic ring-ditch 8, 34, 55
  see also Chitts Hill; Middle Bronze Age cremation cemetery
cropmarks 1, *3*, 63

Deverel Barrow (Dorset) 59, 61
Dorchester-on-Thames (Oxon), long enclosure 55
Down Farm (Dorset) 61, 62
Durrington Egg (Dorset) 61

East Hampshire Survey, burnt flint 19
Elms Farm, Neolithic pottery 55
enclosures
  Late Bronze Age 25
  see also Orsett; Springfield Lyons; Trinity Field
English Heritage 1, 5
environmental evidence 51–4
Etton (Cambs), Neolithic pottery 34, 55
Eyford (Glos), prehistoric pottery 35

Fengate (Cambs), prehistoric pottery 38
field systems 1, 63
fieldwalking survey 19–26, *20–1*, *23–4*, 46–50, *47*, 63
flints 1, 55, 57, 62, 63
  fieldwalking survey 25, 46–50, *47*
    early (blade-based) industry 22, *23*, 46, 48, 62
    late (flake-based) industry 22, *24*, 46, 48–9, 62, 63
  Middle Bronze Age cemetery 46
  Neolithic ring-ditch 5, 8, 22, 43–6, 55
  see also flints, burnt
flints, burnt 19, *21*, 22, 25, 48, 62
  mounds 22
Ford Field 1, 25, 48, 49, 62, 63

Gatehouse Farm 62
geology 1, 4
Great Baddow, Neolithic pottery 63
Greatmarsh Farm, Thorrington 1
Greece, prehistoric sites 25
Grimes Graves (Norfolk) 38

Hambledon Hill (Dorset) 55
hengiform monuments 55, 62
Hill Farm, Tendring 59, *60*
Howells Farm 55
Hurst Fen, Mildenhall (Suffolk), Neolithic pottery 34

Iron Age 1, 63
  Early Iron Age 22
  Late Iron Age/Roman period 25, 55
  see also pottery
Itford Hill (Sussex) 59, 61, 62

knives, flint 45

land use *20*, 61–3
Langford, ring-ditch 55
Langford Reservoir 55
laurel leaves, flint 45
Lawford 55
  see also Tye Field
Link, The 1, 4, 10, 19, 22, 25, 57
Little Bromley 59, 62
Lofts Farm, Bronze Age site 53, 54, 62
long barrow/mortuary enclosure, Alresford Creek 1, 22, 48, 62, 63
Long Plantation 1, 4, 10, 22, 57
loomweights, ceramic 38

Maldon Hall Farm, late Iron Age site 55
Martell's Gravel Pit, Ardleigh 15
Mesolithic/Neolithic period 46, *47*, 48, 62, 63
microliths *47*, 48
micromorphology 51
Middle Bronze Age cremation cemetery 4, 10–18, *11*, *16–17*, 19, 34, *60*, 63
  age and sex of burials 15, 27, 28
  burial practices 59, 61
  carbonised plant remains 51–4, 61–2, 63
  chronology 57, *58*
  cremated bone remains 14, 15, 27–8, 52
  discussion 57–62
  flints 46
  multiple burials 15, 61
  pottery from 15, 36–43, *37*, *39–42*
  radiocarbon dating 10, 15, 18
  ring-ditches 10, *12*, 64
  unurned burials 10, *13*, 15, *18*, 42, 43, 51, 52, 53, 61
  urned burials 10, *13*, 14–15, *14*, 42, 52, 53
Mildenhall Fen (Suffolk), prehistoric pottery 38
Mill Close, Caldecotte, Milton Keynes (Bucks) 55

mollusca 54
mortuary enclosure *see* long barrow/mortuary enclosure
Moverons Farm 1, 49, *60*
Mucking, ring-ditches 59

Neolithic period
  Early Neolithic 46, 49–50, 62, 63
  Late Neolithic/Early Bronze Age 25, 63
  see also long barrow/mortuary enclosure; Mesolithic/Neolithic period; Neolithic ring-ditch; pottery
Neolithic ring-ditch 1, 5–10, *6–7*, *9*, 22, 25, 55, 57, 62
  Middle Bronze Age pottery 5, 10
  Early Saxon pottery 10
  flints 5, 8, 22, 43–6, 55
  palynology and micromorphology 51
North Shoebury
  burials 61
  carbonised plant remains 53, 54
  prehistoric pottery 38

oak charcoal 53
Orsett 43, 55, 59
  Barringtons Farm 59
  causewayed enclosure 55
  Neolithic pottery 34, 35

palynology 51
Pasture Lodge Farm (Lincs), cremation burials 42, 43, 61
piercers/awls, flint 45
piercers/borers, flint *47*, 48, 49
plant remains, carbonised
  Neolithic ring-ditch 51
  Middle Bronze Age cemetery 51–4, 61–2, 63
pottery
  prehistoric 1, 19, 22, 25
    Neolithic 29–35, *31–4*, 55
      Grooved Ware 1, 10, 22, 25, 35–6, *35*, 55, 63
        Durrington Walls style 36
      Mildenhall style 34, 35
      Mildenhall Ware 55
      Peterborough Ware 55
    Beaker 55
    Middle Bronze Age 5, 10, 15, 36–43, *37*, *39–42*, 62
      bucket urns 15, *37*, 38, *39–41*
      Deverel-Rimbury 34, 38, 39, 40, 41, 42, 43, 55, 57, 59, 61
      globular urns 38, 39, *39*, 40, *42*
    Late Bronze Age 15, 35, 43
    Iron Age 25
  Roman 10
  Early Saxon 10
  medieval 4

quarrying 1, 4, 5

radiocarbon dating 10, 15, 18, 36, 43, 57, 59
Rainham, prehistoric site 55
red hills 1
ring-ditches 1, 25, 43, 55, 57, *58*, 59, *60*, 61
  see also Middle Bronze Age cremation cemetery; Neolithic ring-ditch
ritual/ceremonial evidence 35, 55, 62, 63
Rivenhall, mortuary enclosure 55
Roman period 1, 4, 25
  see also pottery
Rook Hall, prehistoric pottery 38
Rush Green, Clacton 53, 54, 59, 62

saltmarsh 4
Saxon period 1, 15
  see also pottery
scrapers, flint 1, 45, 46, *47*, 48, 49
sea levels 4
sickles, flint 25, 49, 63
Simons Ground (Dorset) 61
Slough House Farm 55, 59
South Lodge (Dorset) 61, 62
Spong Hill (Norfolk), Neolithic pottery 34
Springfield Cursus 55, 63
Springfield Lyons
  Neolithic causewayed enclosure 34, 55
  Neolithic pottery 34, 63
  Late Bronze Age pottery 35
  carbonised plant remains 53, 54
Steyning Round Hill (Sussex) 61
Stumble, The 26
  Neolithic pottery 34, 35
Sunningdale Station (Surrey) 59, 61
Swale's Tumulus (Suffolk) 45, 46, 55, 57

Tendring 59, *60*, 62
Thames valley, Neolithic pottery 34
Thorpe Hall, Thorpe-le-Soken 59, 62
Thorrington 1, 22, 62
topography 1, 4
Trinity Field
  enclosure 19, 22, 25, 48, 49, 62, 63
  Late Iron Age/Roman site 25
Tye Field, Lawford
  flints 44, 45, 46, 57
  prehistoric pottery 36

watching brief 1, 10, 63
  Grooved Ware from 1, 10, 22, 25, 35–6, *35*
weeds/grassland plant remains 52–4, 63
White Colne, Colchester
  cremation burials 59
  prehistoric pottery 38
Windmill Hill (Wilts), Neolithic pottery 35
Wix, prehistoric pottery 38
woodland 1, 4
Woodminton (Wilts) 59

East Anglian Archaeology

is a serial publication sponsored by ALGAO EE and English Heritage. It is the main vehicle for publishing final reports on archaeological excavations and surveys in the region. For information about titles in the series, visit **www.eaareports.org.uk**. Reports can be obtained from:

Phil McMichael, Essex County Council Archaeology Section
Fairfield Court, Fairfield Road, Braintree, Essex CM7 3YQ

or directly from the organisation publishing a particular volume.

Reports available so far:

No.1, 1975 Suffolk: various papers
No.2, 1976 Norfolk: various papers
No.3, 1977 Suffolk: various papers
No.4, 1976 Norfolk: Late Saxon town of Thetford
No.5, 1977 Norfolk: various papers on Roman sites
No.6, 1977 Norfolk: Spong Hill Anglo-Saxon cemetery, Part I
No.7, 1978 Norfolk: Bergh Apton Anglo-Saxon cemetery
No.8, 1978 Norfolk: various papers
No.9, 1980 Norfolk: North Elmham Park
No.10, 1980 Norfolk: village sites in Launditch Hundred
No.11, 1981 Norfolk: Spong Hill, Part II: Catalogue of Cremations
No.12, 1981 The barrows of East Anglia
No.13, 1981 Norwich: Eighteen centuries of pottery from Norwich
No.14, 1982 Norfolk: various papers
No.15, 1982 Norwich: Excavations in Norwich 1971–1978; Part I
No.16, 1982 Norfolk: Beaker domestic sites in the Fen-edge and East Anglia
No.17, 1983 Norfolk: Waterfront excavations and Thetford-type Ware production, Norwich
No.18, 1983 Norfolk: The archaeology of Witton
No.19, 1983 Norfolk: Two post-medieval earthenware pottery groups from Fulmodeston
No.20, 1983 Norfolk: Burgh Castle: excavation by Charles Green, 1958–61
No.21, 1984 Norfolk: Spong Hill, Part III: Catalogue of Inhumations
No.22, 1984 Norfolk: Excavations in Thetford, 1948–59 and 1973–80
No.23, 1985 Norfolk: Excavations at Brancaster 1974 and 1977
No.24, 1985 Suffolk: West Stow, the Anglo-Saxon village
No.25, 1985 Essex: Excavations by Mr H.P.Cooper on the Roman site at Hill Farm, Gestingthorpe, Essex
No.26, 1985 Norwich: Excavations in Norwich 1971–78; Part II
No.27, 1985 Cambridgeshire: The Fenland Project No.1: Archaeology and Environment in the Lower Welland Valley
No.28, 1985 Norfolk: Excavations within the north-east bailey of Norwich Castle, 1979
No.29, 1986 Norfolk: Barrow excavations in Norfolk, 1950–82
No.30, 1986 Norfolk: Excavations at Thornham, Warham, Wighton and Caistor St Edmund, Norfolk
No.31, 1986 Norfolk: Settlement, religion and industry on the Fen-edge; three Romano-British sites in Norfolk
No.32, 1987 Norfolk: Three Norman Churches in Norfolk
No.33, 1987 Essex: Excavation of a Cropmark Enclosure Complex at Woodham Walter, Essex, 1976 and An Assessment of Excavated Enclosures in Essex
No.34, 1987 Norfolk: Spong Hill, Part IV: Catalogue of Cremations
No.35, 1987 Cambridgeshire: The Fenland Project No.2: Fenland Landscapes and Settlement, Peterborough–March
No.36, 1987 Norfolk: The Anglo-Saxon Cemetery at Morningthorpe
No.37, 1987 Norfolk: Excavations at St Martin-at-Palace Plain, Norwich, 1981
No.38, 1987 Suffolk: The Anglo-Saxon Cemetery at Westgarth Gardens, Bury St Edmunds
No.39, 1988 Norfolk: Spong Hill, Part VI: Occupation during the 7th–2nd millennia BC
No.40, 1988 Suffolk: Burgh: The Iron Age and Roman Enclosure
No.41, 1988 Essex: Excavations at Great Dunmow, Essex: a Romano-British small town in the Trinovantian Civitas
No.42, 1988 Essex: Archaeology and Environment in South Essex, Rescue Archaeology along the Gray's By-pass 1979–80
No.43, 1988 Essex: Excavation at the North Ring, Mucking, Essex: A Late Bronze Age Enclosure
No.44, 1988 Norfolk: Six Deserted Villages in Norfolk
No.45, 1988 Norfolk: The Fenland Project No. 3: Marshland and the Nar Valley, Norfolk
No.46, 1989 Norfolk: The Deserted Medieval Village of Thuxton
No.47, 1989 Suffolk: West Stow: Early Anglo-Saxon Animal Husbandry
No.48, 1989 Suffolk: West Stow, Suffolk: The Prehistoric and Romano-British Occupations
No.49, 1990 Norfolk: The Evolution of Settlement in Three Parishes in South-East Norfolk
No.50, 1993 Proceedings of the Flatlands and Wetlands Conference
No.51, 1991 Norfolk: The Ruined and Disused Churches of Norfolk
No.52, 1991 Norfolk: The Fenland Project No. 4, The Wissey Embayment and Fen Causeway
No.53, 1992 Norfolk: Excavations in Thetford, 1980–82, Fison Way
No.54, 1992 Norfolk: The Iron Age Forts of Norfolk
No.55, 1992 Lincolnshire: The Fenland Project No.5: Lincolnshire Survey, The South-West Fens
No.56, 1992 Cambridgeshire: The Fenland Project No.6: The South-Western Cambridgeshire Fens
No.57, 1993 Norfolk and Lincolnshire: Excavations at Redgate Hill Hunstanton; and Tattershall Thorpe
No.58, 1993 Norwich: Households: The Medieval and Post-Medieval Finds from Norwich Survey Excavations 1971–1978
No.59, 1993 Fenland: The South-West Fen Dyke Survey Project 1982–86
No.60, 1993 Norfolk: Caister-on-Sea: Excavations by Charles Green, 1951–55
No.61, 1993 Fenland: The Fenland Project No.7: Excavations in Peterborough and the Lower Welland Valley 1960–1969
No.62, 1993 Norfolk: Excavations in Thetford by B.K. Davison, between 1964 and 1970
No.63, 1993 Norfolk: Illington: A Study of a Breckland Parish and its Anglo-Saxon Cemetery
No.64, 1994 Norfolk: The Late Saxon and Medieval Pottery Industry of Grimston: Excavations 1962–92
No.65, 1993 Suffolk: Settlements on Hill-tops: Seven Prehistoric Sites in Suffolk
No.66, 1993 Lincolnshire: The Fenland Project No.8: Lincolnshire Survey, the Northern Fen-Edge
No.67, 1994 Norfolk: Spong Hill, Part V: Catalogue of Cremations
No.68, 1994 Norfolk: Excavations at Fishergate, Norwich 1985
No.69, 1994 Norfolk: Spong Hill, Part VIII: The Cremations
No.70, 1994 Fenland: The Fenland Project No.9: Flandrian Environmental Change in Fenland
No.71, 1995 Essex: The Archaeology of the Essex Coast Vol.I: The Hullbridge Survey Project
No.72, 1995 Norfolk: Excavations at Redcastle Furze, Thetford, 1988–9
No.73, 1995 Norfolk: Spong Hill, Part VII: Iron Age, Roman and Early Saxon Settlement
No.74, 1995 Norfolk: A Late Neolithic, Saxon and Medieval Site at Middle Harling
No.75, 1995 Essex: North Shoebury: Settlement and Economy in South-east Essex 1500–AD1500
No.76, 1996 Nene Valley: Orton Hall Farm: A Roman and Early Anglo-Saxon Farmstead
No.77, 1996 Norfolk: Barrow Excavations in Norfolk, 1984–88
No.78, 1996 Norfolk:The Fenland Project No.11: The Wissey Embayment: Evidence for pre-Iron Age Occupation
No.79, 1996 Cambridgeshire: The Fenland Project No.10: Cambridgeshire Survey, the Isle of Ely and Wisbech
No.80, 1997 Norfolk: Barton Bendish and Caldecote: fieldwork in south-west Norfolk
No.81, 1997 Norfolk: Castle Rising Castle
No.82, 1998 Essex: Archaeology and the Landscape in the Lower Blackwater Valley
No.83, 1998 Essex: Excavations south of Chignall Roman Villa 1977–81
No.84, 1998 Suffolk: A Corpus of Anglo-Saxon Material
No.85, 1998 Suffolk: Towards a Landscape History of Walsham le Willows
No.86, 1998 Essex: Excavations at the Orsett 'Cock' Enclosure
No.87, 1999 Norfolk: Excavations in Thetford, North of the River, 1989–90
No.88, 1999 Essex: Excavations at Ivy Chimneys, Witham 1978–83
No.89, 1999 Lincolnshire: Salterns: Excavations at Helpringham, Holbeach St Johns and Bicker Haven
No.90, 1999 Essex:The Archaeology of Ardleigh, Excavations 1955–80
No.91, 2000 Norfolk: Excavations on the Norwich Southern Bypass, 1989–91 Part I Bixley, Caistor St Edmund, Trowse
No.92, 2000 Norfolk: Excavations on the Norwich Southern Bypass, 1989–91 Part II Harford Farm Anglo-Saxon Cemetery
No.93, 2001 Norfolk: Excavations on the Snettisham Bypass, 1989
No.94, 2001 Lincolnshire: Excavations at Billingborough, 1975–8

No.95, 2001 Suffolk: Snape Anglo-Saxon Cemetery: Excavations and Surveys
No.96, 2001 Norfolk: Two Medieval Churches in Norfolk
No.97, 2001 Cambridgeshire: Monument 97, Orton Longueville
No.98, 2002 Essex: Excavations at Little Oakley, 1951–78
No.99, 2002 Norfolk: Excavations at Melford Meadows, Brettenham, 1994
No.100, 2002 Norwich: Excavations in Norwich 1971–78, Part III
No.101, 2002 Norfolk: Medieval Armorial Horse Furniture in Norfolk
No.102, 2002 Norfolk: Baconsthorpe Castle, Excavations and Finds, 1951–1972
No.103, 2003 Cambridgeshire: Excavations at the Wardy Hill Ringwork, Coveney, Ely
No.104, 2003 Norfolk: Earthworks of Norfolk
No.105 2003 Essex: Excavations at Great Holts Farm, 1992–4
No.106 2004 Suffolk: Romano-British Settlement at Hacheston
No.107 2004 Essex: Excavations at Stansted Airport, 1986–91
No.108, 2004 Norfolk: Excavations at Mill Lane, Thetford, 1995
No.109, 2005 Fenland: Archaeology and Environment of the Etton Landscape
No.110, 2005 Cambridgeshire: Saxon and Medieval Settlement at West Fen Road, Ely
No.111, 2005 Essex: Early Anglo-Saxon Cemetery and Later Saxon Settlement at Springfield Lyons
No.112, 2005 Norfolk: Dragon Hall, King Street, Norwich
No.113, 2006 Norfolk: Excavations at Kilverstone
No.114, 2006 Cambridgeshire:Waterfront Archaeology in Ely
No.115, 2006 Essex:Medieval Moated Manor by the Thames Estuary: Excavations at Southchurch Hall, Southend
No.116, 2006 Norfolk: Norwich Cathedral Refectory
No.117, 2007 Essex: Excavations at Lodge Farm, St Osyth
No.118, 2007 Essex: Late Iron Age Warrior Burial from Kelvedon
No.119, 2007 Norfolk: Aspects of Anglo-Saxon Inhumation Burial
No.120, 2007 Norfolk: Norwich Greyfriars: Pre-Conquest Town and Medieval Friary
No.121, 2007 Cambridgeshire: A Line Across Land: Fieldwork on the Isleham–Ely Pipeline 1993–4
No.122, 2008 Cambridgeshire: Ely Wares
No.123, 2008 Cambridgeshire: Farming on the Edge: Archaeological Evidence from the Clay Uplands west of Cambridge
No.124, 2008 *Wheare most Inclosures be*, East Anglian Fields: History, Morphology and Management
No.125, 2008 Bedfordshire: Life in the Loop: a Prehistoric and Romano-British Landscape at Biddenham
No.126, 2008 Essex: Early Neolithic Ring-ditch and Bronze Age Cemetery at Brightlingsea, Essex