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The Fenland Project, Number 4: Norfolk Survey, The Wissey Embayment & Fen Causeway

East Anglian Archaeology

Norfolk Archaeological Unit, Norfolk Museums Service 1991

EAST ANGLIAN ARCHAEOLOGY

The Fenland Project Number 4: The Wissey Embayment and the Fen Causeway, Norfolk

by R.J. Silvester

with contributions from
David Gurney and Frances Healy

illustrations by
Margaret Mathews

photographs by
Derek A. Edwards

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Editor: Peter Wade-Martins
EAA Managing Editor: Susie West

Scole Editorial Sub-Committee:
David Buckley, County Archaeologist, Essex Planning Department
Peter Wade-Martins, County Field Archaeologist, Norfolk Museums Service
Stanley West, County Archaeological Officer, Suffolk Planning Department

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A sand island in Feltwell Fen (photo: Bob Silvester)

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Contributors

Derek A. Edwards, Dip. Archaeol., MIFA,
Aerial Photography Officer, Norfolk Archaeological Unit

David Gurney, B.A., MIFA,
Field Officer, Norfolk Archaeological Unit

Frances Healy, B.A. (Econ.), Ph.D., FSA, MIFA,
former Research Officer, Norfolk Archaeological Unit

Margaret Mathews, B.A., Dip. Archaeol., MAAIS,
former Assistant to the Fenland Field Officer, Norfolk Archaeological Unit

Bob Silvester, B.A., MIFA,
former Fenland Field Officer, Norfolk Archaeological Unit

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Joan Daniells typed part of the text and David Wicks undertook the photographic processing. Plates VI and XII are by Derek Edwards and permission for the reproduction of the remaining plates was kindly provided by the Cambridge University Committee for Aerial Photography (plates I, II, III, V, VII, VIII, X and XI), the Royal Commission on the Historical Monuments of England (plate IX) and the Department of the Environment (plate IV). Finally I must thank Margaret Mathews who has assumed many roles during the gestation of this work: finds processor, illustrator, typist, critic, proof reader and assistant without portfolio. It is largely due to her that, after my departure from Norfolk, the preparation of this volume followed a smooth and uneventful course to its publication.

Abbreviations

Parishes

DMW	:	Downham West
DVR	:	Denver
FWL	:	Feltwell
HCW	:	Hockwold
HLG	:	Hilgay
MTW	:	Methwold
NDH	:	Nordelph
NWD	:	Northwold
SRY	:	Southery
VPW	:	Upwell

Documentary Sources

Cal. Close Rolls	:	Calendar of Close Rolls
Cal. Inq. Misc.	:	Calendar of Inquisitions Miscellaneous
Cal. *Inq. Post Mort.*	:	Calendar of *Inquisitions Post Mortem*
Cal. Patent Rolls	:	Calendar of Patent Rolls
DOE 1985-7	:	Department of the Environment *List of Buildings of Special Architectural and Historic Interest*; Revision 1985-7

Organisations

BL	:	British Library
CAEM	:	Cambridge University Museum of Archaeology and Anthropology
CUL	:	Cambridge University Library
DOE	:	Department of the Environment
NAU	:	Norfolk Archaeological Unit
NRO	:	Norfolk Record Office
PRO	:	Public Record Office
RCHM(E)	:	Royal Commission on the Historical Monuments for England
SMR	:	Sites and Monuments Record
UEA	:	University of East Anglia

Summary

This, the second volume covering the Fenland Project's fieldwork programme in Norfolk, describes the survey of the Wissey Embayment and the Fen Causeway between 1983 and 1988.

The Wissey Embayment is a substantial tract of peat fen defined by three rivers, the Little Ouse, Great Ouse and Wissey. It incorporates the only island of any size in the Norfolk Fens, which carries the two villages of Hilgay and Southery. Along the upland edge, in the four chalkland parishes of Hockwold, Feltwell, Methwold and Northwold, the rapid shrinkage of peat from the 'skirtland' has revealed a densely-occupied zone that was settled from the Mesolithic through to the Bronze Age. Lithic sites proliferate and many of these have only recently been disturbed by the plough. Sandhills beside ancient river courses and small islands beyond the skirtland edge have also yielded a rich harvest of prehistoric material. The phases of occupation are assessed against the pattern of changing environmental conditions, the wooded floor of the Embayment gradually becoming waterlogged as marine conditions encroached from the west and ultimately deposited sediment (fen clay) which was subsequently blanketed by the extensive growth of peat.

Iron Age and Roman settlements have been recorded higher up on the fen edge and also on Hilgay and Southery, and in several places spreads of debris can be related to soilmarks of enclosure and field systems. Sparser traces of Saxon and medieval activity have been identified around Methwold Hythe and Methwold, but the general absence of such material marks the retreat away from the fen edge in historic times.

The Roman road known as the Fen Causeway runs across the fen from the Norfolk upland at Denver to Upwell on the Cambridgeshire border (and then on towards Peterborough). Two major phases of road have been identified as well as a canal which linked in with natural watercourses. The later road followed the levee of the canal; settlements emerged beside it and salt-making became a significant industry. Peat was cut in the fen on a massive scale to provide fuel for both domestic and industrial purposes. A major flood led to the silting of the canal, the natural watercourses and many of the turbaries, and a further phase of Roman settlement can be detected on top of the flood silt.

A Note on the Use of Radiocarbon Ages

The chronologies for Fenland region sites and sequences depend primarily on the results of natural radiocarbon measurements. A large number of new radiocarbon determinations has been made by Dr Roy Switsur, of Cambridge University, on behalf of the Fenland Project Committee. The details of the sites, samples and measurements together with the radiocarbon ages are presented in his paper in the Environmental volume of these reports, and reference for the definitive data should be made to this work.

The nomenclature and notation used in these reports is in accordance with that approved at the Trondheim International Radiocarbon Conference, 1986, and previous conferences. The Conventional Radiocarbon Age is denoted by the upper case letters BP and this may be calibrated to a date-range on the Christian calendar, denoted by Cal. BC (or Cal. AD) using the doubly checked high precision calibration curve. The tables in Dr Switsur's paper show the laboratory reference of the sample; the Conventional Radiocarbon Age; the Uncertainty associated with this ($\pm$) and two Calibrated Date-Ranges with probabilities of 68% and 95%. A similar table listing previously published radiocarbon ages is included for relevant Fenland sites. In the reports, normally only the 68% calibrated date-range will be given, for example: 4135 ± 70 BP (2875 to 2595 Cal.BC; Q2548).

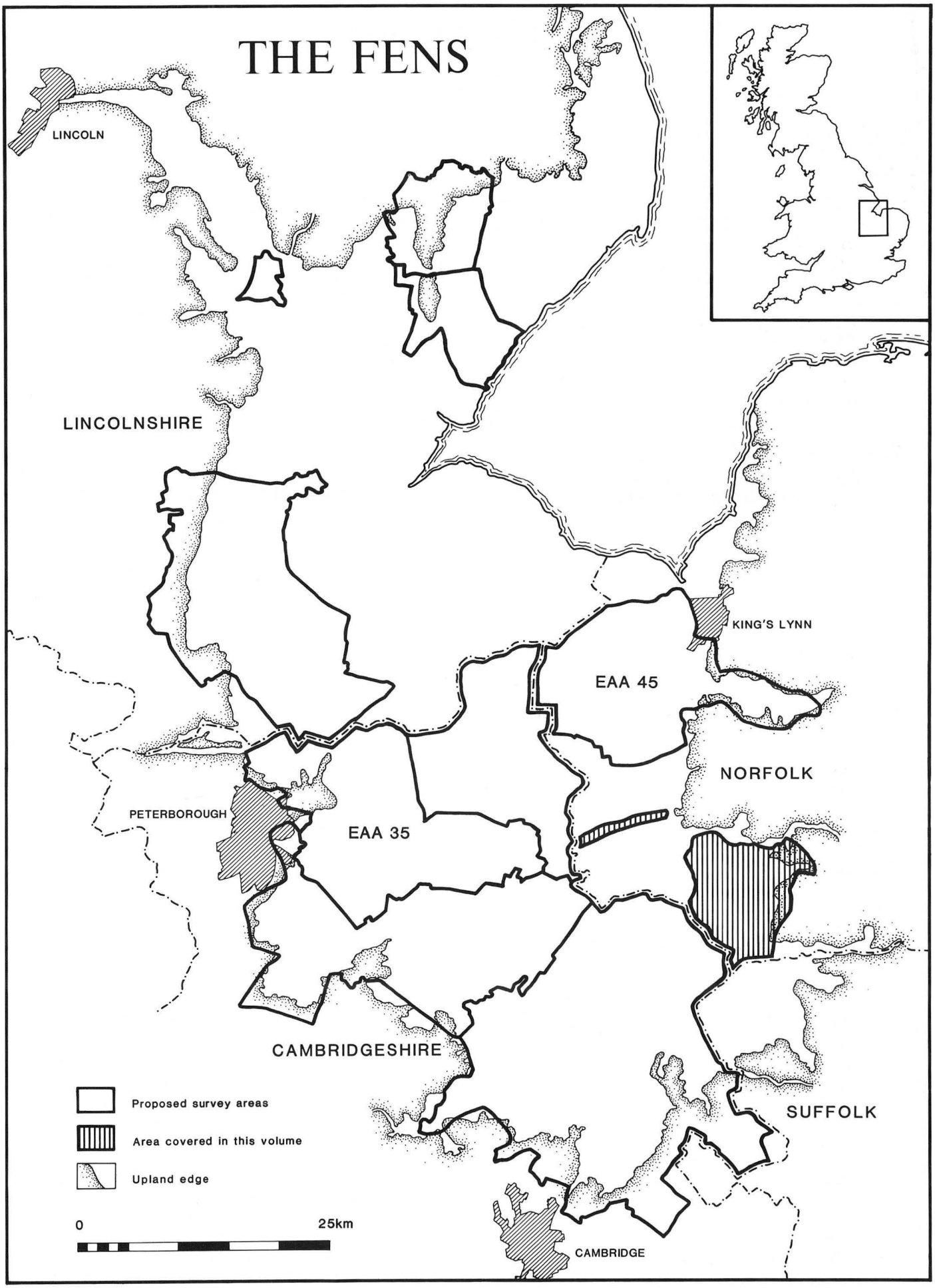

Figure 1 Location of the Wash Fenlands

1. Introduction

I. The Fens and the Fenland Project
(Figs 1, 2)

The well-preserved archaeological sites and landscapes of the fenland region in eastern England are of national importance. They represent a major resource that is being continually threatened and reduced by peat desiccation and cultivation. Earlier work in the region was sporadic with no overall strategy except perhaps for the efforts of the Fenland Research Committee before the Second World War (Godwin 1978) and the subsequent research on Roman settlement co-ordinated by C.W.Phillips (1970). A new initiative in 1981 led to the creation of the Fenland Project under the chairmanship of John Coles, the primary function of which was to survey a large part of the Fens through systematic fieldwork. The work, financed by the Historic Buildings and Monuments Commission as part of their major investment in the archaeology of the region, involved the official archaeological bodies in Cambridgeshire, Lincolnshire, Norfolk and Suffolk, as well as the Royal Commission on Historic Monuments (England) and the British Museum.

The concepts behind the present survey and its organisation have been fully documented elsewhere (Hall 1987, 1; Hall and Chippindale 1988) and need not be reiterated. The overall aim is to record and interpret the earlier environments, landscapes and human uses of the Wash Fenlands and provide a firm database for the preservation of selected sites and the detailed investigation of others.

The Fens of west Norfolk are considerably smaller than those in the neighbouring counties of Cambridgeshire and Lincolnshire (Fig. 1), yet they account for just over 10% of the county, about 535 km^2 excluding the coastal silts to the north of King's Lynn. For the fenland as a whole this is a relatively small area. Skertchly (1877, 1) assessed the extent of the Fens at just over 1300 square miles, so the Norfolk portion covers a little under 16% of the total. This lack of size is compensated for by considerable diversity (Fig. 2). Bordering the Wash are wide tracts of silt supporting a string of villages between King's Lynn and Wisbech (Cambridgeshire), which were studied in the first of the Norfolk fenland volumes (Silvester 1988a). Narrow tongues of silt run much further inland along the lines of old watercourses affected by tidal flows. In the south are the peat fens. The modern villages lie back from their rim, except for small secondary settlements of relatively recent origin such as Ten Mile Bank; the villages of Hilgay and Southery occupy an island separated from the upland only by a narrow channel of peat. Between the siltlands and the peat fens is a smaller zone of clay from which the peat cover has disappeared completely, revealing the marine deposits beneath. Eastwards are the valleys of the Little Ouse, Wissey, Nar and Gaywood River that feed into this part of the Fenland Basin, their floors coated with peat. The Norfolk Fens are in effect a microcosm of the fenland as a whole, with a balance of silt and peat that contrasts with the predominant silts in Lincolnshire and the peat of Cambridgeshire.

The Norfolk Fenland Project began in the autumn of 1982 and this volume is the second to present the results of six seasons of landscape survey. The report focuses on two areas: the expanse of peat fen in the extreme south-west of the county which is termed here the Wissey Embayment; and secondly, a narrow strip of silt which runs from Denver on the upland edge near Downham Market to Upwell on the Cambridgeshire boundary and forms a corridor for the Roman road known as the Fen Causeway.

Fieldwork started in the peat fens in the autumn of 1983 and continued seasonally for another four years. The Fen Causeway was partially examined in the winter of 1987/88 with further work in the following season. Both the nature of the archaeology and the survey response to it are very different in these two areas, even though they are no more than a few kilometres apart. The study of the Wissey Embayment has followed conventional Fenland Project methods involving a total survey of the area. On the Fen Causeway there is an absolute and interdependent association between the fenland soils and the archaeology. The approach here has been to focus only on the Roman landscape and this requires a departure from the normal presentation of Project results. For these reasons the two areas are treated as separate entities and the remainder of the Introduction considers the Wissey Embayment alone.

II. The Extent and Geography of the Wissey Embayment
(Figs 3, 4)

To call this expanse of peat fen the Wissey Embayment may seem misleading, for a glance at any geology map of the whole region (*e.g.* Skertchly 1877, pl.1) reveals that it is but part of a much larger concavity in the sweep of upland from Downham Market in the north to Soham in Cambridgeshire. Nevertheless, it is a convenient and not inappropriate term: a bird's eye view north-eastwards from the confluence of the Little Ouse and the Great Ouse at Brandon Creek would show this area as an embayment with the River Wissey entering the Fens at its apex.

The fact that the embayment is defined almost solely by rivers gives the area some coherence. On the south and south-west is the Little Ouse which also takes its turn here as the county boundary, on the west is the Great Ouse and on the north the Wissey. Only on the east side where the chalk upland rolls down to the fen is the boundary of the embayment less sharply defined.

Within this extensive area not a single complete parish is represented and, as the parish has been the unit of survey adopted by the Fenland Project (see Hall 1987, 12), some explanation is necessary. The demarcation of the survey area is in part a deliberate policy, in part a pragmatic decision. Much of the embayment is occupied by the fens of three villages: Hockwold, Feltwell and Methwold. These are what may be called fen-edge parishes for their focal settlements lie on the upland, a short distance from the peat levels. Each parish also

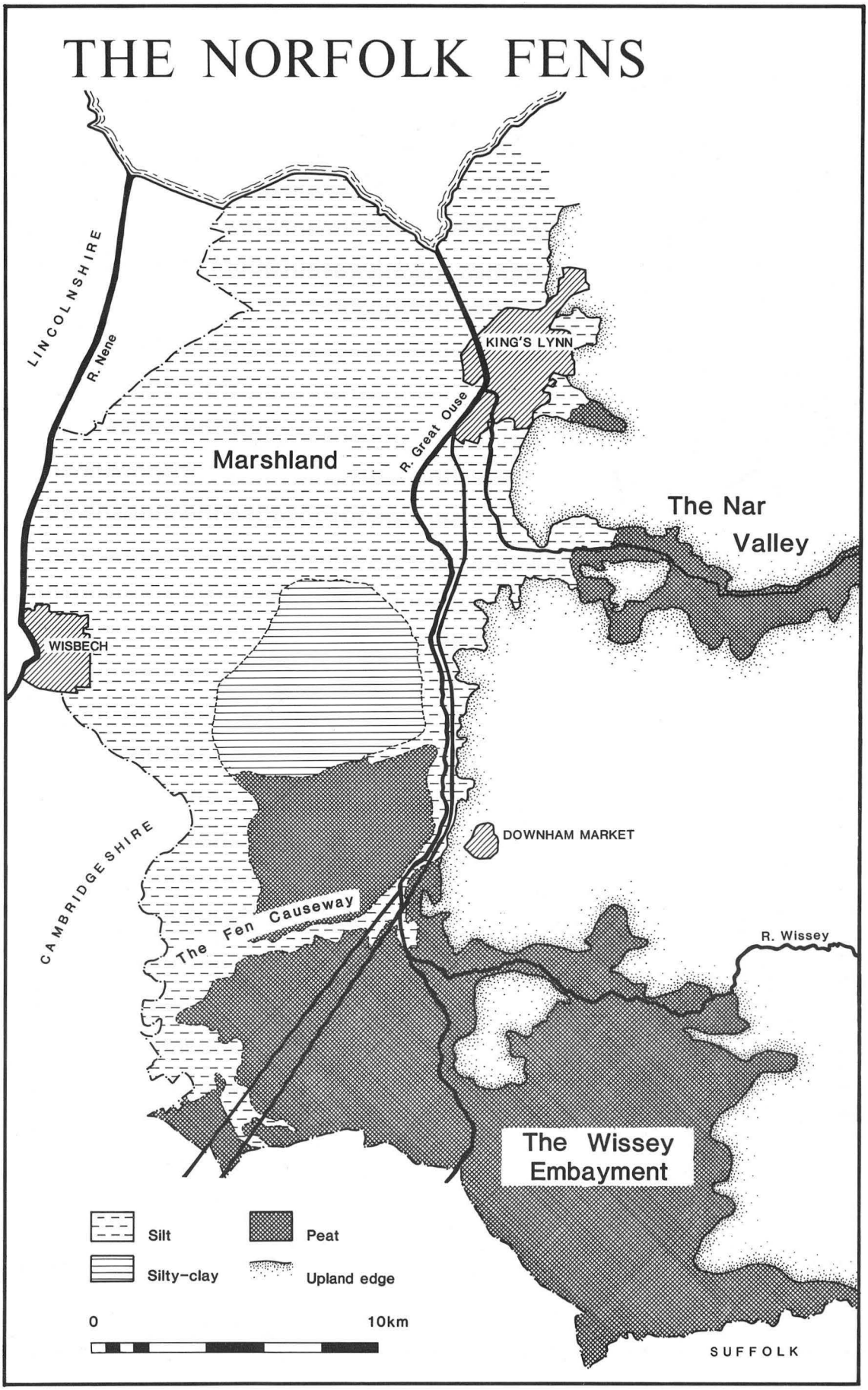

Figure 2 The Norfolk Fens. Scale 1:200,000

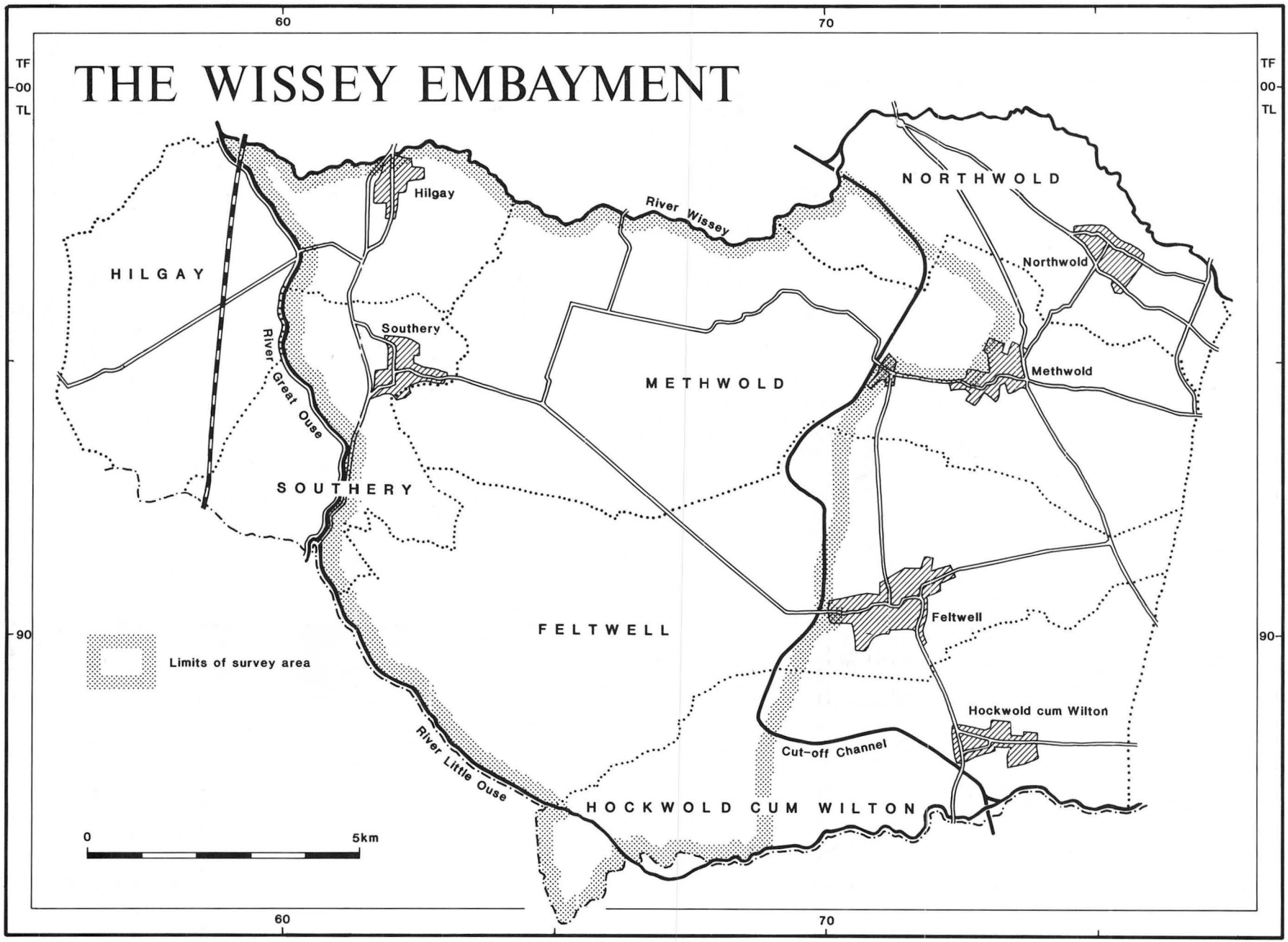

Figure 3 The Wissey Embayment: the modern landscape. Scale *c.*1:100,000

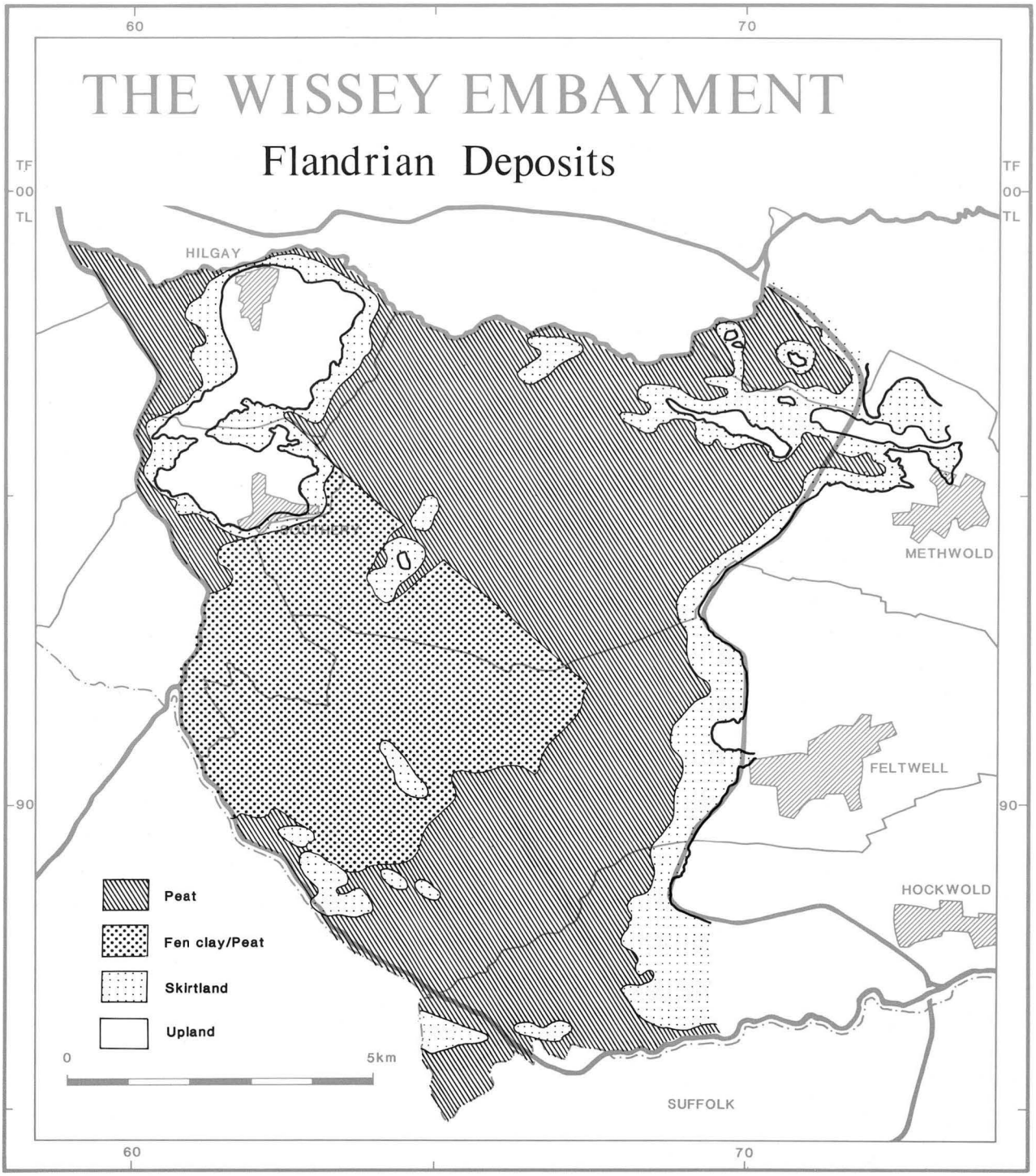

Figure 4 Flandrian deposits in the Wissey Embayment. Scale *c.*1:100,000

incorporates large expanses of sandy Breckland, the examination of which, though undoubtedly valid in understanding regional patterns of past activity, is outside the Fenland Project's terms of reference.

The situation is reversed for two parishes: Hilgay and Southery occupy the largest of the islands in the Norfolk Fens. It is the only island of any size, but unlike the better known Cambridgeshire fen islands of Thorney, March and Chatteris, it is no more than a few hundred metres from the upland. A peat-filled channel utilised by the River Wissey separates it from the higher ground around Downham Market. Originally it had been assumed that the Norfolk survey would assess the whole of the peat landscape, but after the first season (1983/84) the optimism buttressing this assumption became apparent. West of the Great Ouse, part of Southery Fen and a much larger area of Hilgay Fen had to be omitted (see Fig. 3). Archaeologically, the potential of these western parts is limited and the loss of information probably small, although the decision not to study them reduces the nominal significance of the parish-based survey.

A more regretable omission is the fen edge north of the Wissey. This is divided up between six parishes from Stoke Ferry in the east to Fordham in the west; it would have been interesting for comparative purposes to consider the fen-edge archaeology of the Gault, Carstone and Jurassic sands strata (see Gallois 1988, fig. 2) as a control for the chalk fen-edge.

We are left with a region that extends for a maximum distance of 12km from east to west and 13km from north

to south. Including a small strip of the adjacent chalk upland, it encompasses about 109km^2. It is a region of peat and skirtland, the latter being the strip of once waterlogged upland from which the peat cover has disappeared through desiccation[1]. The chalk follows a sinuous line with spurs and inlets (Fig. 4), the largest two of which are the valleys of the Little Ouse and the Wissey. In the west, the twin-lobed island of Hilgay and Southery rises to a maximum height of around 16m OD. This contrasts with large areas of the peat fen which are below sea-level, the ground falling to below −1.0m OD in Feltwell Fen.

Differential land use over the last few hundred years has left its mark on what would otherwise be an extensive tract of black land broken only by sporadic mineral soil exposures. The effects are particularly noticeable in Methwold where Sam's Cut, dug in 1631 (Darby 1983, fig. 36), reveals the dramatic effect of peat wastage. West of this drain, roddons of the underlying fen clay show through what is left of the peat but to the east, where the history of post-medieval land use is different, the peat is uninterrupted and the roddon system invisible (see Appendix 4; Hodge *et al.* 1984, pl. 7). Further west, in Hilgay Fen, Skertchly (1877, 156) noted that in a twenty-six year period in the mid-nineteenth century, peat disappeared at an average annual rate of 4.3cm (1.7in). Astbury (1970, 12) recorded that near the Wissey (perhaps in Methwold Severals or in the fens of West Dereham) the land surface 'sank' between 43–58cm (18–24in) between 1936 and 1947 and a further 29–43cm (12–18in) between 1947 and 1958.

III. Historical Background

Sir William Dugdale's *History of Imbanking and Drayning of Divers Fennes and Marshes* ... (1662) offers the first published historical study of the Fens. Essentially a compilation of documentary records from national archives, it is of more relevance to silt-fen studies than to the peat fen although it contains much of interest. To consider Dugdale at the beginning of this part of the discussion is to ignore an important element in the development of the peat fens: the great drainage movement in the second quarter of the seventeenth century. This movement spawned a series of surveys, written and drawn, which are of signal importance for this crucial period of metamorphosis of the black lands (Darby 1956; 1983; this volume, Appendix 4).

That which Dugdale attempted for the wetlands of this country, the Reverend Francis Blomefield and his continuator, the Reverend Charles Parkin, undertook for the parishes of Norfolk, in the eighteenth century[2]. Their essays emphasise the documentary record, with some genealogical and antiquarian information thrown in; they provide the first useful descriptions for the parishes of the Wissey Embayment.

The 1870s marked a watershed in fenland studies. The Geological Survey published Sydney Skertchly's memoir on the geology of the Fenland in 1877, a seminal discussion which laid the foundations for all future studies of fenland stratigraphy (Godwin 1978, 3). A year later in conjunction with Samuel Miller, Skertchly produced *The Fenland Past and Present* (1878), the first comprehensive examination of natural and human derived elements in the Fens. These can justifiably be claimed as the earliest books to consider the fenland region as an entity.

The Victorian period witnessed an expansion of interest in the past and the Fens received their share of attention (see Dring 1962). The Wissey Embayment, however, does not appear to have captured the antiquarian imagination, except for the Reverend Gedge of Methwold whose volume on the history of that parish (1893) must rank as one of the curiosities of local fiction. Some years later, Cyril Fox's masterly assessment, *The Archaeology of the Cambridge Region* (1923), took in a small part of the embayment, north of the Little Ouse.

The formation of the Fenland Research Committee in 1932 ushered in a new era. With the majority of its members based in or close to Cambridge, it was inevitable that the southern fens of Cambridgeshire would receive more attention than other parts, yet the Committee's results were of more than local significance. Initial forays in the prehistoric occupation levels on sand islands beside the Little Ouse roddon at Shippea Hill (Cambs.) yielded for the first time archaeological material stratified within the sequence of fenland deposits; Harry Godwin conducted pollen analyses on peat deposits containing human artefacts at places such as Queens Ground, Methwold (Godwin *et al.* 1934); and Gordon Fowler toured the southern levels, studying the natural topography and mapping the ancient watercourses of the Fens (Phillips 1951, 258; Godwin 1978, 79).

Dr H.C. Darby was working independently on the more recent history of the region and this led in 1940 to the publication of two highly acclaimed volumes on *The Medieval Fenland* and *The Draining of the Fens*. The 1930s also saw Edward Lynam's study of early fenland maps. His work (1934; 1936) has proved of inestimable value in the preparation of the Norfolk survey reports.

The Fenland Research Committee failed to re-form after the Second World War and the post-war years saw little research in the black fens. In 1958 A.K. Astbury published his useful book on the region and this remains the only full-length assessment of the peat lands to appear this century (Astbury 1970). A more specialised study of Roman settlement in the Fens appeared some years later, although its genesis had been in work undertaken before the war (Phillips 1970, iv).

The 1960s saw the solitary investigations of a local farmworker, Frank Curtis, on the fen edge in Hockwold and Feltwell. Curtis not only collected material from the artefact-rich skirtland fields, but also dug on a small scale at sites ranging from the Late Neolithic/Early Bronze Age (Bamford 1982) through to the Roman period. Much permanent pasture was ploughed up for the first time in the post-war period and Curtis was on hand to assemble an important collection of predominantly prehistoric artefacts. As a result of his fieldwork and that of his contemporaries (such as Mr R. Fletcher and Mr E. Secker) the Wissey Embayment features prominently on national distribution maps *e.g.* Green's arrowhead distributions (1980). A detailed analysis of these collections has now been completed by Frances Healy and appears later within the Fenland Project series (Healy forthcoming).

The most significant developments in recent years have been in the study of the natural landscape. Both the Soil Survey of England and Wales and the British Geological Survey have completed their mapping of the region around Ely which takes in a very large part of the Wissey Embayment (Seale 1975; Hodge *et al.* 1984;

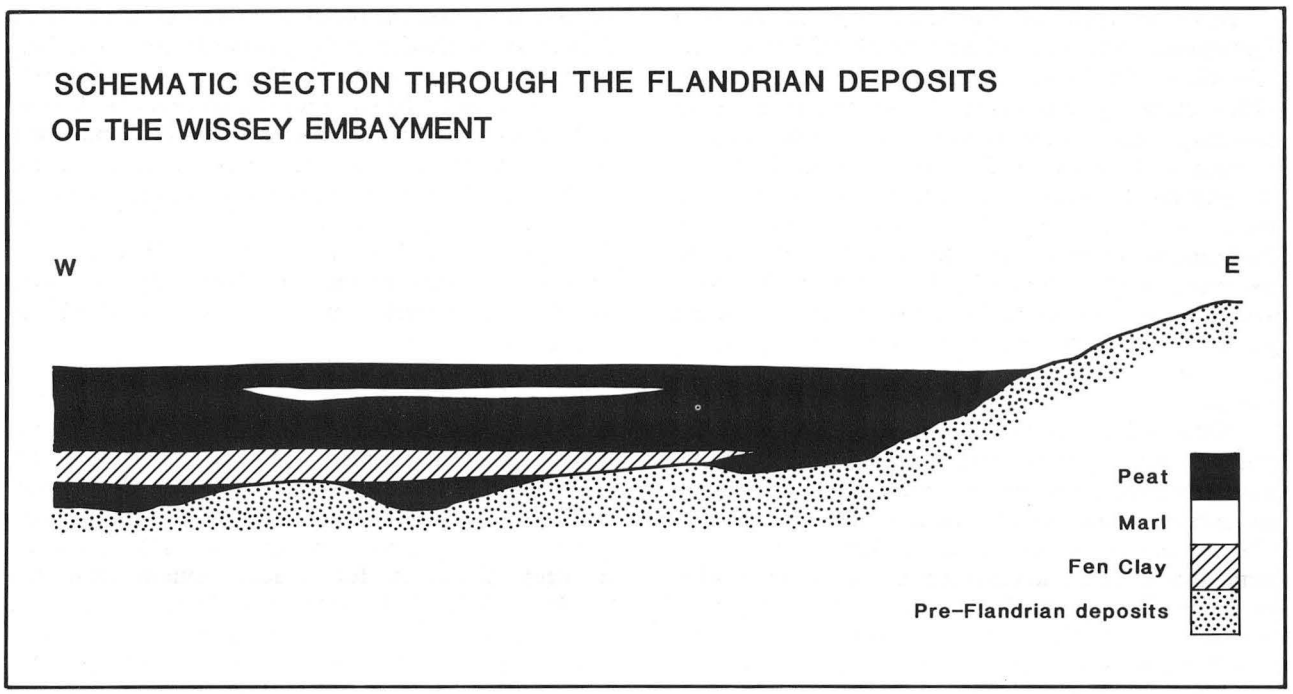

Figure 5 Schematic section through the Flandrian deposits of the Wissey Embayment

Gallois 1988). The natural background to the study of human activities in the embayment can be assessed with much more confidence, as a result.

Finally it is worthwhile reiterating the point that the Wissey Embayment is only part of the region's black fens. Much recent research has adopted a wider framework and has ignored inconvenient county boundaries that have no relevance prior to the Middle Ages. What is written here has to be viewed against the broader canvas of Suffolk and Cambridgeshire.

IV. The Flandrian Deposits

(Fig. 5)

History of the study

The modern study of Flandrian stratigraphy commenced more than a century ago and Skertchly's work remains the basis on which more recent studies have been founded. He was aware of the basic stratigraphy within the Fenland Basin and his regional map reveals the extent of the various surface deposits as they were in the later nineteenth century (Skertchly 1877, fig.16, pl.1).

The Fenland Research Committee brought a wide range of techniques to bear on fenland problems. The excavation of archaeological sites and the examination of *in situ* artefacts, coupled with the newly developed technique of pollen analysis, provided a rudimentary chronology for the marine and freshwater deposits in the southern fens. A quarter of a century later, the advent of radiocarbon dating allowed former members of the Research Committee to refine the chronological sequence. The whole story is related in a highly readable volume by Sir Harry Godwin (1978). Mapping by the Soil Survey more recently has yielded data invaluable to the present survey (Seale 1975; Burton and Robson 1985).

The palaeoenvironmental programme conducted by the Fenland Project has supplemented the earlier research with further environmental analyses and a major radiocarbon dating programme, to afford detailed assessments of specific areas in the Fens as well as a regional overview. These assessments are not yet in print, but Martyn Waller and Roy Switsur have kindly permitted the results relevant to the Wissey Embayment to be incorporated in this report.

An outline of the chronological development of the embayment is necessary here to clarify the sedimentary sequence discussed in the parish essays. Precise dating, using the recent radiocarbon determinations, is integrated in the later sections and a detailed discussion of the development of the natural landscape will be published shortly in the Fenland Project series (M.Waller in prep.).

The sedimentary sequence

The Fenland Basin had been formed by the end of the Pleistocene, with a series of soft rocks worn down by glacial activity: Chalk, Carstone and Gault, Sandringham and Woburn Sands and, in the extreme west, Kimmeridge Clay (Fig. 5; Gallois 1988, fig.2). Ridges and islands of various heights projected from the floor of the embayment: Shrubhill (Feltwell), Stubb's Hill (Methwold) and the island of Hilgay and Southery are the most obvious. Many of the islands and much of the basin floor were covered with glacial till, thin drift deposits and in the southern part of the region river-terrace sands and gravels (Seale 1975, 17).

The Fenland Basin for several thousand years offered a normal dry land habitat covered by forest. Peat formation was localised in damp areas adjacent to rivers and streams, and in natural hollows. Stratigraphic evidence of extensive 'lower peat' formation has not been recorded in the Norfolk Fens, other than in the main river channels (M.Waller: pers. comm.).

The gradual encroachment of the sea enveloped the forest and laid down the fen clay. Termed locally the 'buttery clay' and in the British Geological Survey nomenclature, the Barroway Drove Beds (Gallois 1988, 77), this clay extends over much of the embayment. There are indications in some parts of the Fens of a composite deposit reflecting two or more phases of marine sedimentation (Gallois 1979, 34), but in the study area there is no evidence of such complications.

As the sea regressed, exposed saltmarshes and intertidal mudflats were drained by networks of sinuous channels. Gradually, levees emerged beside these channels which ultimately silted up at a level higher than the surrounding marsh, a process which can be seen along the Norfolk coastline today. Together with the differential compaction of sediment within these early watercourses and the modern wastage of the peat, this process led to the formation of silt ridges, known as roddons, at a level above that of the surrounding land (Fowler 1932; Godwin 1938; Gallois 1988, 79). Roddons of the fen clay phase are widespread in the west of the Wissey Embayment and are now clearly visible as a result of peat desiccation.

Natural drainage was impeded by the marine transgression, and general waterlogging encouraged peat growth in front of the sea. Peat growth spread across the saltmarshes as the marine influence faded, laying down what is known as the upper peat (Gallois 1988, 77). Peat formation continued in historic times, gradually enveloping more of the small islands in the embayment as well as encroaching on the edge of the adjacent upland, a process that was only halted by the drainage schemes that commenced in the seventeenth century.

A further phase of marine flooding in Norfolk's northern fens left extensive silt deposits at the end of the Iron Age. The date and extent of these are discussed in the first Norfolk Fenland Project volume (Silvester 1988a, 151). The flooding had no direct effect on the Wissey Embayment except along the earlier course of the River Little Ouse, where the upper fill of the roddon reveals silt deposited during the Iron Age transgression and perhaps in the Roman period as well (Seale 1979, table 2).

Freshwater flooding in the peat fens created shallow meres which can be distinguished today through extensive patches of shell marl sandwiched within, or lying on top of, the peat (Seale 1975, 22). Some meres emerged through the impeded drainage that resulted from the Iron Age marine transgression (Waller in prep.). Many were probably short-lived pools, dependant on a single flood; others may have continued as open water for centuries.

V. The Modern Landscape

A portrayal of the Wissey Embayment as a uniform and uninterrupted landscape of black peat, with level field nudging level field to the horizon, is a little removed from the truth. Certainly there are places like this between the Feltwell to Southery road and the Little Ouse, but they are less common than might be expected. Almost everywhere, features that owe their origins to fen dwellers break up the landscape. The rivers which frame the region on the north and south have narrow washlands defined by high flood banks that can be seen from a distance. Farms and houses are sparse: in an age of fast transport those who work the land find it more convenient and less secluded to live on the nearby upland. Buildings that do survive are a memorial to earlier generations whose link with the land was more intimate than it is today and, since the war, the number of such structures has declined steadily. Trees, though lacking the attractiveness of natural woodland, are more frequent than might be anticipated; coverts for pheasants are not uncommon on the bigger estates in the south of the region, while lines of poplars and other trees act as wind-breaks to reduce peat erosion. Only near the banks of the Cut-off Channel are there small stands of naturally generated trees, particularly on and to the south of the Kettle Lane spur in Feltwell.

The Cut-off Channel provides an artificial division in the modern landscape that mirrors nature. Gentle chalk hills rise to the east, with the villages lying back at the heads of small valleys (Feltwell and Methwold) or on the side of a river valley (Hockwold). Isolated farms sit on the edge of the chalk overlooking the fen. The fields are large and frequently separated by thorn hedges with long straight access tracks, mementoes of the Breckland enclosures.

West of the Cut-off Channel the fen is a land marked by rectilinearity, the fields divided up into geometric boxes by straight ditches and concrete tracks. The natural watercourses that once meandered across the fen and were utilised by both those who established parish boundaries and those who initially drained the land, have now largely gone, to be replaced by straighter dykes that are easier to keep clean. A few traces remain near the Southery/Methwold boundary (see Appendix 4).

A handful of farms run cattle on small areas of pasture, but arable farming dominates the landscape. This comes as no surprise: the Land Classification maps produced by the Ministry of Agriculture, Fisheries and Food in 1971 show that almost all of the embayment is classed as Grade 1 or 2 land. Only parts of Hilgay and Southery island and land around Methwold Hythe, including the Catsholm Ridge, have the lower rating, Grade 3.

The island of Hilgay and Southery projects above the peat levels in the west of the region. The two lobes of this island present a remarkable contrast. Hilgay is not dissimilar from the upland; it is wooded with isolated paths and there is a mix of arable and pasture land. Southery has little in the way of cover and is almost entirely arable; it is bleak and constitutes a suitable upland partner to its fens. Hilgay and Southery, however, are similar in that their villages accommodate virtually all of the dwellings on the island.

Finally the small-scale extractive industries that once operated in the region have left scars which can still be detected, though frequently water-filled and surrounded by vegetation: old gravel pits at Shrubhill, Feltwell, and on the Catsholm ridge in Methwold; clay pits close to the Little Ouse in Feltwell and Hockwold; and small chalk quarries along the fen edge at Blackdyke, Hockwold, and near Methwold Hythe (Seale 1975, 3).

VI. Sources

The archaeological data derived from five seasons of fieldwork constitute the major resource on which this study is founded. Apart from providing the raw material for the artefact studies by Frances Healy and David Gurney (published here as Appendices 1-3), field examination has revealed the topographical context for each collection as well as more general insights into the landscape of the peat fens.

The inestimable value of written and cartographic records for the survey of the predominantly medieval landscape of Marshland was stressed in the first volume of the Norfolk survey (Silvester 1988a, 9). The national archives contain frequent and illuminating references to the Marshland vills in the Middle Ages. In contrast, in the black fens where the archaeological emphasis is on

pre-medieval settlement and land-use these sources are less crucial. Nevertheless, several sources are of significance, even if, as with aerial photographs, the use is indirect.

One set of vertical air photography, covering the whole of the Wissey Embayment, has been available to the writer. Taken in March and April 1982 by the Cambridge University Committee for Aerial Photography, these photographs reveal, at a scale of *c.*1:10,000, the fine detail of the skirtland ridges and hollows and, further out into the fen, the intricacies of the roddon network. Looking back over the five seasons, the writer believes that it would have been impossible to map the landscape and the archaeological sites in it without these photographs. The subtleties of the skirtland cannot be gauged satisfactorily from ground level, yet accuracy in this matter is fundamental to the correct location of the numerous prehistoric sites along the fen edge.

Archaeologically-oriented oblique photographs were available from two sources: the Norfolk Archaeological Unit's own archive and the Cambridge University Committee. These have been helpful in elucidating the Roman landscape where cropmarks and soilmarks trace the farmsteads and their fields. For earlier periods they are of less significance.

Another source of information is the Norfolk Sites and Monuments Record (SMR), initiated in 1974, but drawing heavily on earlier records held in the Archaeology Department of the Castle Museum, Norwich. It will become apparent in this report that the fen edge in Norfolk has been an artefact collector's paradise for many years and the SMR is full of reports on discoveries from the nineteenth century onwards. With the work of Frank Curtis and his contemporaries in the 1960s, the trickle of information into the SMR became a flood. Fortunately, Frances Healy had already begun an assessment of the Hockwold and Feltwell discoveries before the Fenland Project commenced. She was prepared, with minimal persuasion, to extend the geographical coverage of her research to the other parishes of the Wissey Embayment. This had the dual advantage of relieving the writer of the onerous task of examining the extensive SMR entries for the pre-Iron Age period and resolving the dilemma of how much of that information to incorporate in the present report. As almost all of the SMR entries were artefact-oriented and therefore not of direct value to the landscape project, it was considered reasonable to ignore this substantial archive of information which appears in a complementary volume in the Fenland Project series (Healy forthcoming).

Further sources of information are various maps, both printed and manuscript. Unfortunately almost all the available maps post-date the great changes in the peat fens resulting from the seventeenth-century drainage works, and where earlier maps do exist they tend to be on a small scale and contain little significant information (*e.g.* copies of Haiwarde's 1604 map of the Fens). Nevertheless, useful fragments of information have been gleaned from several maps including Faden's survey of Norfolk (1797) and the first edition of the Ordnance Survey map (1824). A full list of maps consulted is contained in Appendix 5.

Except for Skertchly's geological report (1877) and the more recent soil and geological assessments (Seale 1975; Gallois 1988), most of the written records consulted are secondary. This is not to devalue Dugdale's transcriptions of early state papers (1772), the study of the Roman fens edited by C.W. Phillips (1970) or Darby's researches on the Fens (1940, 1983). From all of these there is information that has been integrated into the general picture of the Wissey Embayment presented here.

VII. The Field Survey and its Methods

During the five seasons of fieldwork in the Wissey Embayment, virtually every field in the peat fens, on the islands and in a strip along the edge of the upland was examined; the upland fields acted as a control for discoveries on the skirtland. Fieldwork generally commenced at the beginning of October and finished towards the end of April.

David Hall has discussed the Project's research design and fieldwork strategy in some detail (Hall 1987, 14), and only the significant aspects will be summarised here. The parish was seen as the basic unit during fieldwork and in the subsequent publication. However, in the embayment not a single parish was examined in its entirety and, unlike the earlier work in Norfolk Marshland, the parish format is far from ideal in assessing the predominantly pre-medieval landscape of the peat fens. Nevertheless, some sub-division of the region was clearly required for descriptive purposes, such was the diversity and quantity of the data involved. The parish was adopted as the descriptive unit by the Fenland Project Committee in 1982 to provide standardisation throughout the Fenland Project reports. It has been retained for the Wissey Embayment, but the reader will notice that for the single-period study of a specific landscape, namely the Fen Causeway and its hinterland, it has been eschewed.

The survey of the embayment of necessity has been multi-period. Only the post-medieval landscape falls outside the ambit of the Fenland Project but, in order to enhance the county SMR, features connected with the drainage schemes of the last three hundred years and pillboxes from the last war, have been recorded. The most discernible fenland landscape, that of the sixteenth and seventeenth centuries, is considered in Appendix 4.

The Project's fieldwork focuses not only on the identifiable archaeological features, but also on the soils and natural features that form the relict landscapes of the Fens. Since the days of the Fenland Research Committee and more particularly from David Hall's early work (Hall 1981), it has become increasingly clear that the natural and the human-derived are inextricably linked. Aerial photography offers a valuable method of isolating features that need to be examined on the ground, but only in conjunction with fieldwork can a light patch on a photographic print be defined as fen clay, shell marl or mineral soil.

Every field was walked when soil and weather conditions were good, in as far as it was practicable (Hall 1987, 15). This task was made somewhat easier in the black fen because spring-sown crops predominated. Some farmers, however, tend to leave their peat land fallow until spring, then plough and drill quickly to reduce the effects of wind-blow; this limited the time available for fieldwork. The trend in mineral soil areas towards autumn-drilled cereals occasionally restricted access, particularly on Hilgay island where soils favour barley production.

Fieldwalking was regulated in transects 30m apart, an approach adopted by Hall on the Northamptonshire

uplands (1981, 53) and well suited to the upland slopes and the island of Hilgay and Southery. The approach was, however, less successful on the skirtland where ridges of mineral soil are separated by tracts of peat and where activity was intense in the prehistoric period. The most reliable approach in this zone was to walk only the mineral soil ridges and islands and this necessitated narrower transect intervals. A crucial point emerges from this: site recognition is enhanced when there are smaller intervals between transects, but also creates an imbalance in retrieval methods between this zone and the upland slopes behind it.

Standardisation in site definition across the three counties was important in the early days of the Project. A ploughsoil site was defined as one with a minimum of fifteen pieces of artefactual material recovered from an area of 10m by 10m in 10 minutes (Hall 1981, 53). A useful rule of thumb for the upland and on the main islands where artefact concentrations tend to be discrete (but see Silvester 1988a, 12), this was largely unworkable for the skirtland where the spread of material was virtually continuous: indeed, the writer has in the past referred to the Norfolk skirtland as a single site, nine kilometres long and one kilometre wide. It requires a combination of experience and intuition in this area and at the present level of survey to distinguish significant concentrations from the 'background noise' of scattered material (Silvester 1988c, 327).

There is little to be gained from walking 30m transects on the extensive tracts of peat fen and fen clay beyond the skirtland. Hall has pointed out that the wet environments which created these deposits deterred habitation (Hall 1987, 16). Experience has shown that the vast majority of these fields are devoid of artefacts and that a quick evaluation is generally sufficient. The great value of vertical aerial cover is that it can be used in conjunction with rapid survey techniques in the black fen to locate features for more detailed examination. A typical sites in the black fen may of course be missed. Hall recorded three windmill mounds with medieval pottery in Thorney (1987, 52) and, in Holme parish on the edge of Whittlesey Mere, two thirteenth-century fishery sites (Hall forthcoming). Such sites, however, are unusual.

The Fieldwork Intensity map for each parish offers a guide to the level of examination achieved for every field.

Group 1 fields were walked in optimum or good conditions, on a 30m transect basis, and within the limitations imposed by the survey, the writer is convinced that no sites were missed. On skirtland fields, the transect interval was normally reduced to 20m or occasionally less.

Group 2 fields were of several types: where peat or fen clay formed the sole surface layer and it was unnecessary to walk in 30m transects; in pasture fields where transect survey was inappropriate; and in arable fields where conditions were reasonable (but not good), a 30m transect method was employed and the writer was satisfied that no site had been overlooked.

Group 3 fields were those where conditions for fieldwalking were poor, either because the soil was insufficiently weathered or the crop was too far advanced. In these, site evidence may not have been detected.

Group 4 fields were those which, for a range of reasons, were not examined.

Artefacts recognised during fieldwalking were collected, except for obvious post-medieval debris, 'pot-boilers', slag, fired clay and other industrial waste, bone and shell. Where a field produced only the odd sherd of medieval pottery or flint flake, this was not recovered, although its presence was noted on the record maps. The major exception to this policy was on the skirtland. No attempt was made to retain every worked flint that was recognised in the background scatter of material. The time lost in collecting such material would be disproportionate to the additional information derived from its subsequent study.

The identification of a site necessitated a closer walking pattern to define its extent and recover a representative sample of material. This normally involved transects 2m to 5m apart. A strategy of total collection was rejected: it would have been highly time consuming on prolific sites such as those of Roman date and, in the post-survey stage, would have generated many problems in finds processing and study.

The definition of the term 'site' was discussed in the first report (Silvester 1988a, 12), and it seems advisable here to reiterate the range of circumstances for which this convenient term is adopted:

a) actual settlements, distinguished either by earthworks or by dense or discrete spreads of artefacts which are likely to be settlements.
b) concentrations of 'pot-boilers', briquetage, slag or other waste which may indicate industrial or other activity.
c) spreads of lithics, pottery or 'pot-boilers' which reveal where sub-surface deposits or features have been disturbed by deep ploughing or drainage operations.
d) miscellaneous discoveries such as field systems, peat cuttings and canals.

Sites, artefacts, soils and details of the modern landscape were recorded in the field using both dye-line copies of 1:10560 (6″) Ordnance Survey maps and more importantly the relevant vertical aerial photographs. The former tended to display signs of terminal disintegration during damp weather, the latter covered with sheets of acetate and protected in a plastic sleeve, afforded a much more useful resource than the equivalent map. Using visible controls such as trees and causeways across dykes, detail could be plotted directly on to the photographs.

Field information was transferred as soon as practicable on to sheets of plastic film at a scale of 1:10560, the aim being to create a permanent archive. Record sheets based on the Historic Building and Monuments Commission's AM107 form were completed for each site and scatter and this information was relayed to the Norfolk Sites and Monuments Record.

The finds were processed at regular intervals, but the study of the material, particularly the worked flint, was not undertaken until 1987-88. Some details of the lithic and ceramic analyses are published here in Appendices 1 and 2 and on microfiche. Full records can be found in the Project archive deposited with the Norfolk Museum Service.

VIII. The Organisation of the Report

(Fig. 6)

The report on the Wissey Embayment consists of a series of parish essays, followed by a discussion that provides an overview of the interaction of settlement and environment during the last seven thousand years.

Each parish essay is accompanied by a series of

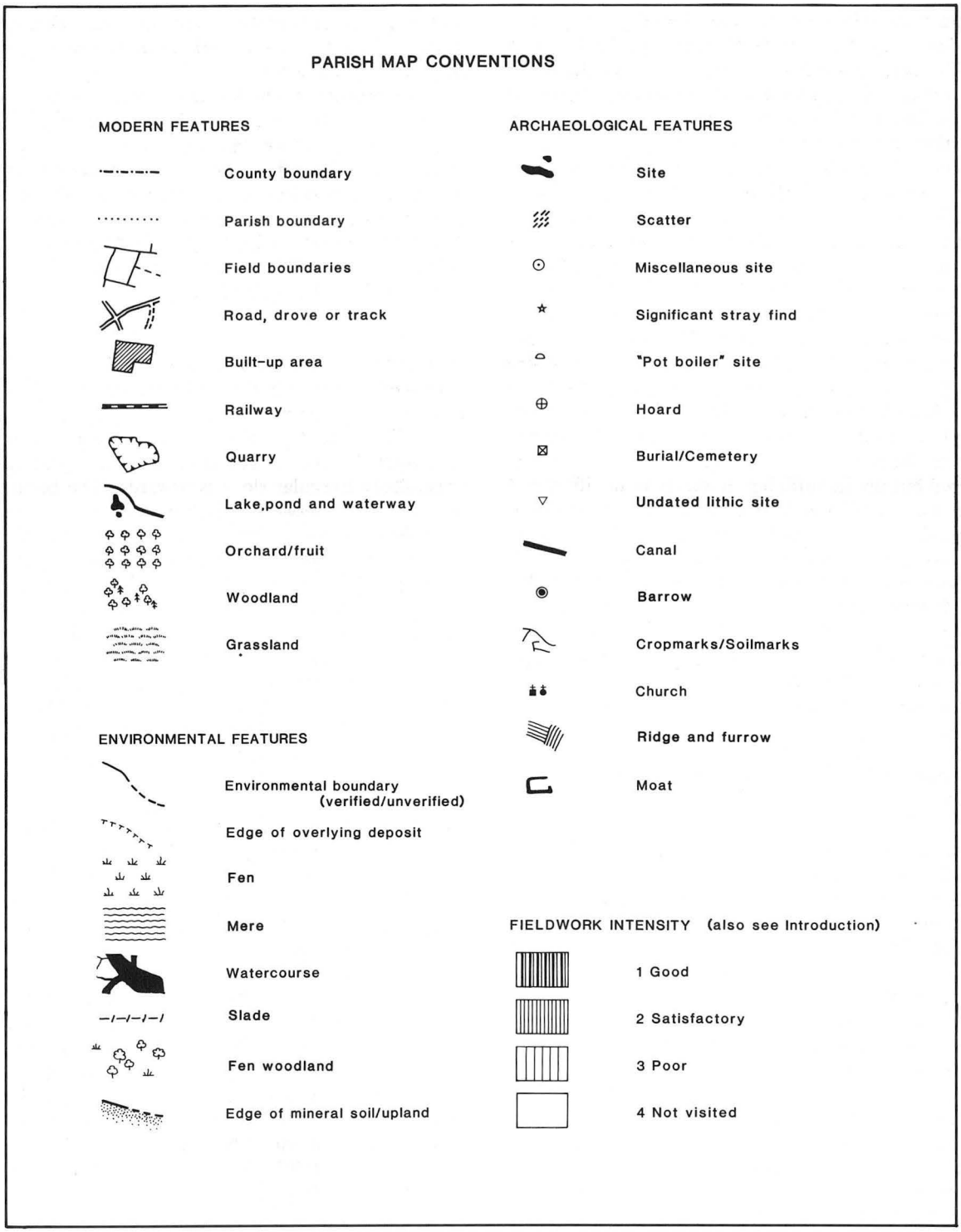

Figure 6 Symbols used on the parish and regional maps

interpretative maps at a scale of 1:40000; these conform to the pattern of earlier Fenland Project volumes (Fig. 6). Northwold is the only exception: it has its own essay but, because of the small area fieldwalked, is featured on the maps of Methwold. The maps attempt to depict the embayment parishes at various stages in their development through time. Nevertheless, a map illustrating, say, the Later Neolithic/Early Bronze Age cannot offer more than a generalised view of the landscape over several centuries. A similar caveat pertains to the regional maps accompanying the discussion section.

The period maps act as a guide to the gazetteer which is published in microfiche format but, because of the very large number of sites concentrated in the narrow zone along the fen edge, an extra set of maps has been prepared at the larger scale of 1:10000 (Figs 7-16). These strip maps depict all the sites recorded during the survey and are accompanied by a concordance giving the main details of each (Table 1).

Further detail is included in the microfiche gazetteer of sites which is ordered alphabetically by parish. Each entry embraces a series of classifications including grid reference, height above Ordnance Datum, and soil type, presented in tabulated form.

The sites shown on the maps and recorded in the gazetteer have been given discrete numbers and, to

facilitate cross-references between parishes, the parish code adopted by the Norfolk Museum Service has been used. These three-letter codes are printed in the list of abbreviations (p.ix). The discrete numbers, applied in sequence during fieldwork, have been retained for publication to avoid unnecessary complications. Subsequent research, in a few instances, has led to the removal of a site from the list; in these cases there is a gap in the sequence, both on the map and in the gazetteer.

The standard site numbers within each parish are supplemented by 'U' and 'A' numbers and are depicted on the parish maps with the relevant prefix. 'U' numbers cover sites where for one reason or another the evidence of previous work could not be verified during the present programme of fieldwork. Included within this category are excavated features, and sites now destroyed for which confirmation is supplied by earlier reports of a reliable standard, aerial photos and the like. 'U' numbers have also been used where significant material was recovered but not in sufficient quantity to justify applying a site code. 'A' numbers cover individual artefacts, coin hoards, chance finds of significant material and other features such as burials. Both of these categories include data known prior to the survey in addition to those found during fieldwork. Occasionally parish codes followed by two letters occur in the text and particularly in Appendix 1. These refer to non-site collections made during the present survey and further information on them can be found in the Project archive.

IX. Landscapes and Maps: a synthesis

(Figs. 7-16)

The parish and regional maps pull together information for specific periods, but there are restrictions on what can be achieved when mapping at this scale, in addition to the limitations of the fieldwork data on which the maps are based. The precision with which soil boundaries are portrayed on the maps is not necessarily matched by their definition in the field. While roddons can be plotted accurately from air photos, the elucidation of the fen edge for any period is not at all easy. The stain left by the peat at its maximum extent can frequently be detected as a 'tide mark' on the mineral soil. Definition of the peat level in, for instance, the Iron Age or the Saxon period depends largely on intuition (based on the intensity of staining) and guesswork, coupled with fortuitously located archaeological material. The degree of peat staining is relative and there is no well-defined tide mark for the Roman or any other period (*contra* Hall 1981, 54).

The large sandhill between the Little Ouse and Clouds Farm in Hockwold (Fig. 32) provides a good example of the uncertainties in determining the fen edge for earlier periods. This was examined at an early stage in the survey of the Wissey Embayment and it was estimated that in the Roman period only a small part would have been above the peat level and that during the Middle Ages it would have been completely enveloped. That this was not the case was demonstrated by the subsequent identification of several sherds of both Roman and medieval pottery amongst the material collected from land thought to have been waterlogged after the prehistoric era.

A second limitation is imposed by the highly fragmentary appearance of the skirtland ridges. It is not possible on the parish maps to show the innumerable complexities of the fen edge and consequently many sites appear to be in the fen. This is rectified on the more detailed strip maps (Figs 8-16).

The position of the fen edge cannot be ascertained for earlier periods. Peat growth was controlled by the height of the ground-watertable, and the fen edge at any point in time depended on this, in combination with the height of the pre-Flandrian ground surface. The fen edge through prehistory and into more recent time was a dynamic feature of the landscape: in earlier periods it was well to the west of the present skirtland, and it cannot be mapped on the basis of the present data.

Mesolithic (to 4300 CAL.BC)

No fen edge existed in the study area during this period and peat formation would have been highly localised. An assessment of the depth of the basin depends on data from only a few boreholes, but these indicate a gradual and presumably irregular slope westwards. The basin floor was levelled at between −2.29m OD and −2.87m OD along Cross Bank in Feltwell. Further west in Welney the ground drops to −7.31m OD (M.Waller: pers. comm.). If the floor of the basin had dived more sharply, widespread peat growth and even marine sedimentation would have been initiated during the Mesolithic. Whether there was a divide between the vegetation of the chalk slopes and the basin floor is open to question, but a marked change in arboreal types is unlikely. The chalky drift soils in Methwold and Feltwell probably supported the same species as the chalk hillside above.

The Earlier Neolithic (*c.*4300-2900 CAL.BC)

The natural environment is unlikely to have changed much from the preceding period. Peat formation was limited to watercourses, although open water and probably a zone of freshwater fen would have been considerably closer than in the preceding centuries. Peat growth was terminated in an area of Welney Washes around 5710 ± 100 BP, but marine conditions may not have directly affected the Wissey Embayment until the earlier third millennium BC; subtle alterations to the local vegetation would have occurred at a distance as a result of the gradual encroachment of the sea. A number of fieldwork collections cannot be attributed more closely than to a general Mesolithic/Earlier Neolithic range.

Both the Mesolithic and Neolithic periods are accommodated on single parish maps, although in the discussion section and in Appendix 1, attempts are made to distinguish the sites of the two periods. The relevant parish map represents the distribution of Mesolithic and Earlier Neolithic sites against the background of the wooded fen basin. The sites are shown in as far as they can be detected by fieldwork; others may be submerged beneath the later peat. All that can be included is the limit of the peat at present. It is possible that, like the later fen, the woodland of the basin floor acted as a constraint to settlement, but it is unlikely that we shall ever be able to talk in terms of a definable settlement 'boundary'. The extent of woodland clearance on the chalk slopes is unknown, but was perhaps limited. Vegetational differences between the slopes and the basin floor may have been minimal during these early periods and this is emphasised on the maps by the use of woodland symbols on the chalk slopes.

Later Neolithic (3000-2200 CAL.BC)
During this period peat growth affected the present skirtland zone, its formation occurring in advance of the marine transgression that deposited the fen clay. All the borehole data for this area indicate that the fen clay aggrades to a height of −1.0m OD. This is the first period in which we can perceive a fen edge, with contemporary occupation sites located close to it. It is convenient, too, that the transition from the Earlier to the Later Neolithic was marked by a transformation in lithic technology.

Early Bronze Age (*c.*2400-1450 CAL.BC)
After a period of several hundred years when the limits of the marine transgression remained fairly static, the sea regressed suddenly, leaving saltmarshes dissected by numerous creeks. These gradually silted to form the fen-clay roddons that are now familiar in the western part of the embayment. Peat formation quickly spread westwards, enveloping the marine sediments. The present height of the peat in the embayment is variable and depends to some extent on the surviving depth of organic material and on the nature of the underlying deposits. As a general rule the peat level has been estimated at *c.*0.6m OD, and the writer has assumed that the peat fen of the Early Bronze Age reached a similar height. However, this does not hold for other embayments in the fenlands and localised differences are only to be expected.

It is not always easy to distinguish between the lithic industries of the Later Neolithic and those of the Early Bronze Age; for this reason each fen-edge parish has a single map covering the whole period. There are also a substantial number of lithic sites that could not be attributed to a specific period: most, however, are assumed to belong to this general phase (see F.Healy in Appendix 1) and are depicted on these maps with a different symbol. Similar reasoning has led to the inclusion of the numerous 'pot-boiler' sites, although discussion of these has been left to the final section. In both instances the symbols are not numbered except for those that fall ouside the area of the detailed strip maps (Figs 8-16). Appendix 1 offers finer detail, as do the gazetteer and archive.

Middle and Late Bronze Age (*c.*1450-700 CAL.BC)
So little evidence for this phase has been discovered that no maps have been drawn. Further comment is reserved for the final section.

Iron Age (700 BC-AD 43)
Peat growth continued in the first millennium BC, and settlement becomes recognisable again around the fen edge. The major phase of marine silting that deposited the Late Iron Age silt (Terrington Beds) did not have direct repercussions on the embayment, except along the course of the Little Ouse. David Hall's deduction that the peat in the Thorney/Peterborough area of the Cambridgeshire Fens may have reached a height of 3.0m OD during this period cannot be reconciled with the Norfolk evidence: FWL 141 appears to be around 2.0m OD, as does FWL 54, suggesting that the contemporary fen edge was at a lower level. Embayments further inland may have witnessed greater peat growth, though the fact that the Cambridgeshire Iron Age sites lie above 3.0m OD cannot be taken as an indication that settlements lay precisely at the edge of the fen (*pace* Hall 1987, 11).

The Roman Period (AD 43-410)
On the basis of earlier research, Hall (1987, 11) argued for a lowering of the peat levels to about 2.0m OD, through drying out and wastage during this period. There does not seem, however, to be any positive evidence to justify this assertion (M.Waller: pers. comm.). Peat formation in the south of the embayment was interrupted by the formation of meres. The conventional view that these stretches of open water emerged as a result of the Late Iron Age marine transgression, or perhaps through climatic change with increased run-off from the uplands, still appears plausible (Waller forthcoming). Elsewhere peat growth continued unabated. A zone of settlement continued around the fen edge, in addition to occupation on the higher chalk slopes.

The Saxon and Medieval Periods (AD 410-1485)
Throughout the Saxon and medieval periods the fen continued to grow, probably intermittently; more skirtland was covered and in places freshwater meres remained as areas of open water. It is likely, too, that both watercourses (slades) running off the upland and skirtland hollows gradually filled up with marl (Burton and Hodgson 1987, 232), the same material that ultimately infilled the meres. The slades now show as linear features running out into the fen; they are more obvious from the air than on the ground and are generally undatable. Peat growth expanded until seventeenth-century drainage forced its retreat, leaving behind a stain to indicate its maximum height. This has been adopted for the medieval fen edge. Little reclamation of the fen is suggested by the records and the ground evidence; and apart from the occasional site, such as Methwold Hythe, the historic communities seem to have withdrawn from the fen edge in favour of higher ground.

End Notes

1. This term has a long history in the fenland region. A manuscript of 1604 refers to 'Sotherie skirts and Helgay skirts est to King's Dyke and not above 130 acres extending in length three miles verie narrow' (Bryant 1904, 144).

2. The second and most commonly available edition of Blomefield's Norfolk appeared between 1805 and 1810.

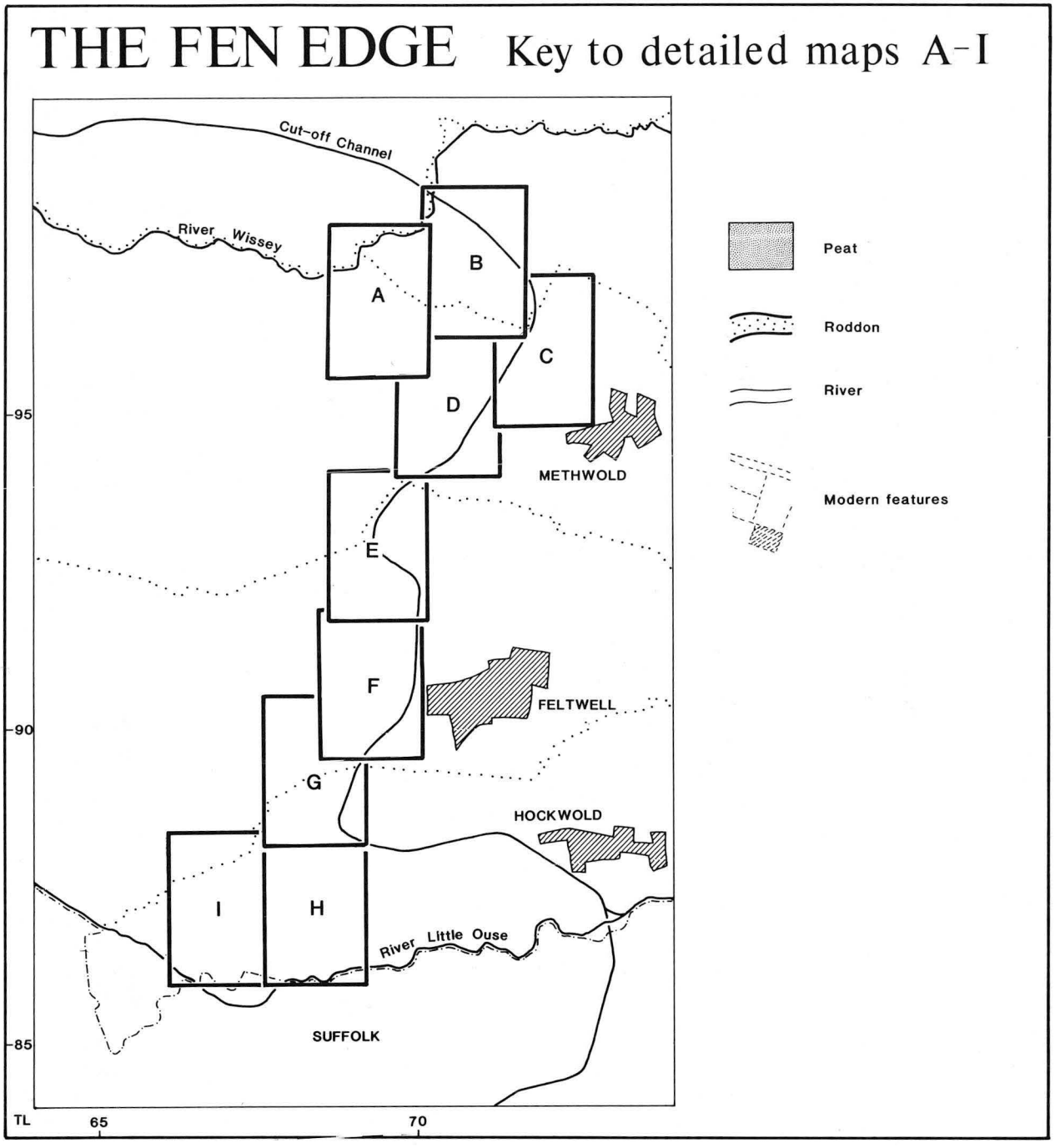

Figure 7 Key to detailed maps of the fen-edge (Figs 8-16)

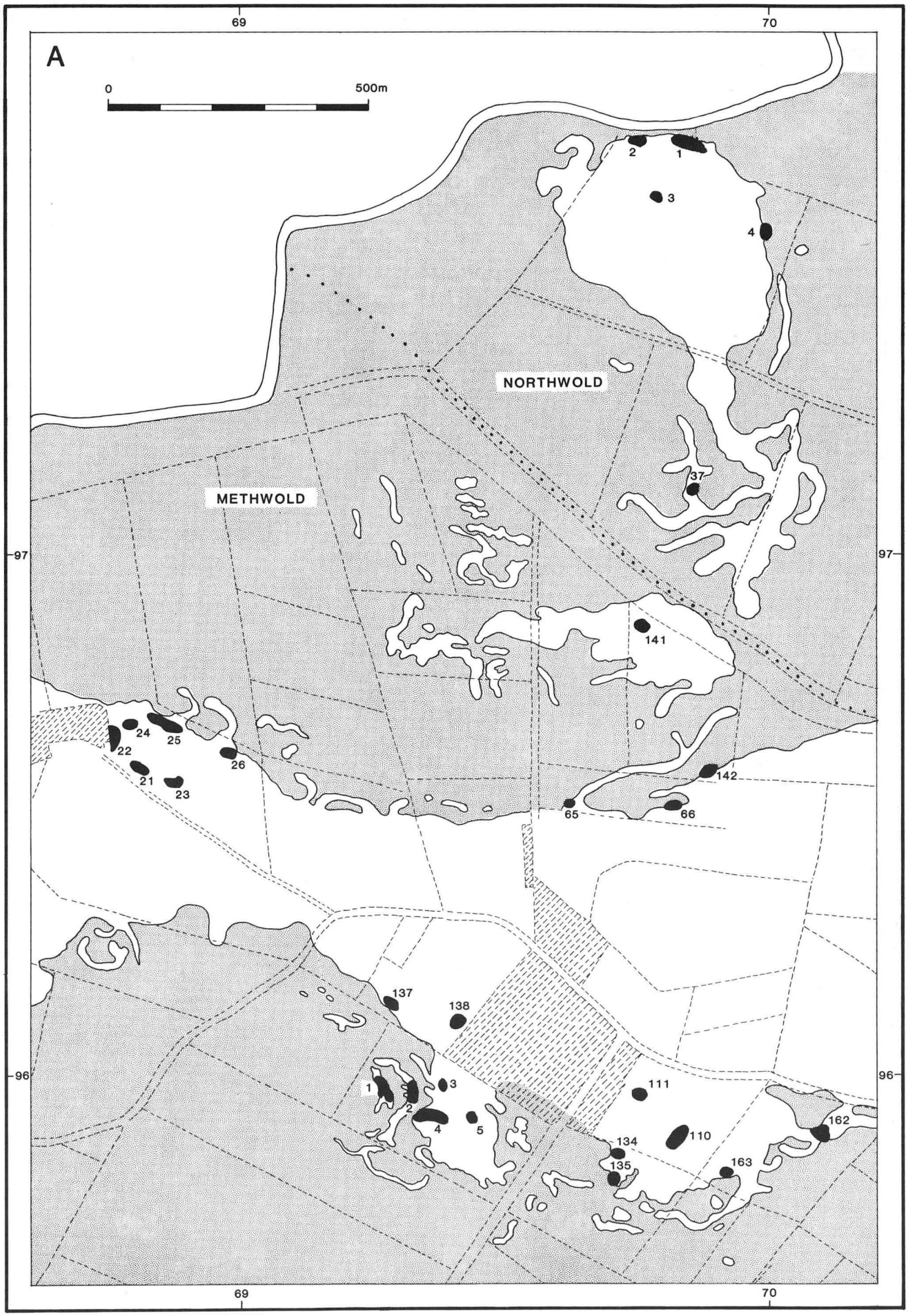

Figure 8 A: Northwold and Methwold. Scale 1:10,000

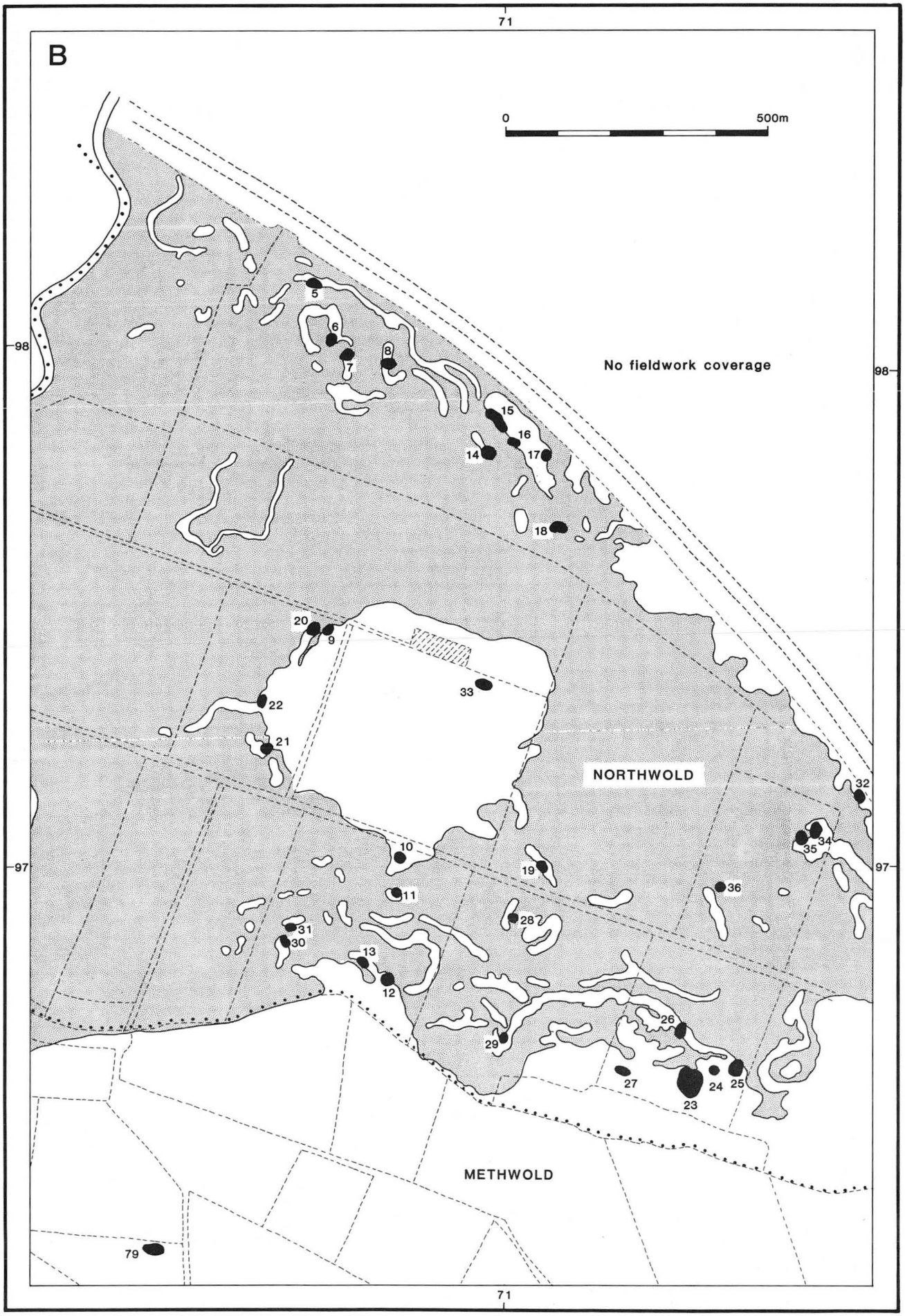

Figure 9 B: Northwold. Scale 1:10,000

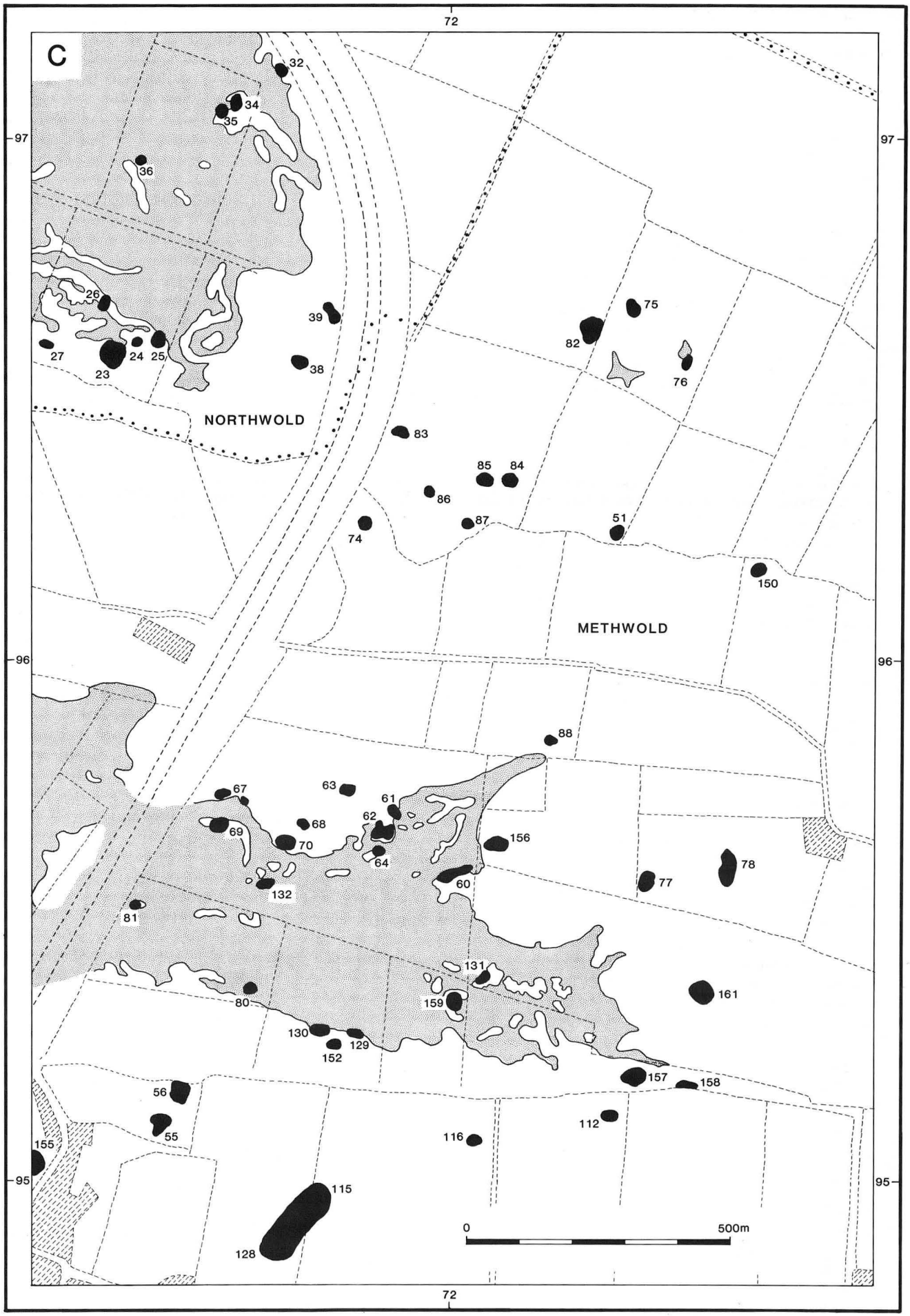

Figure 10 C: Northwold and Methwold. Scale 1:10,000

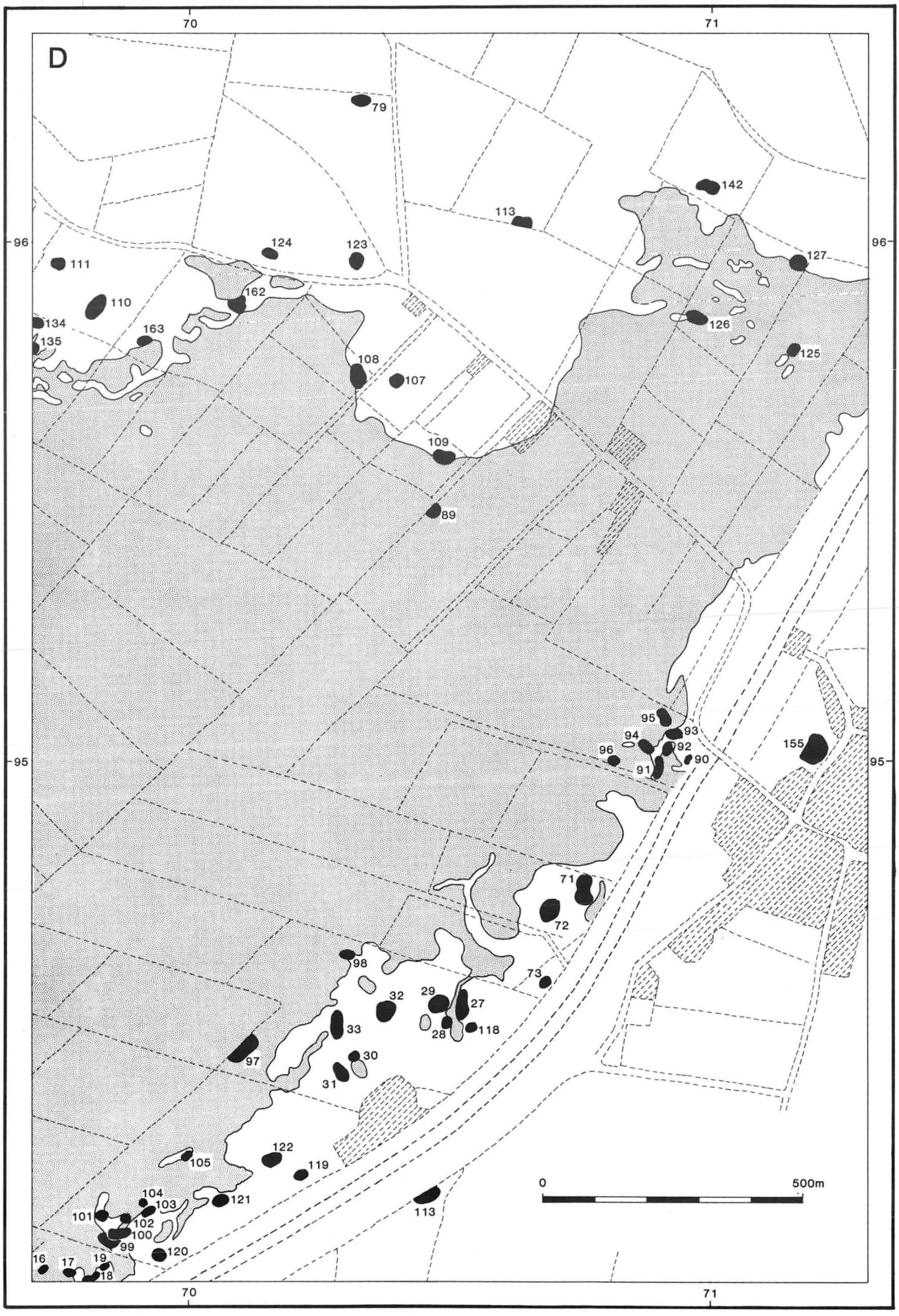

Figure 11 D: Methwold. Scale 1:10,000

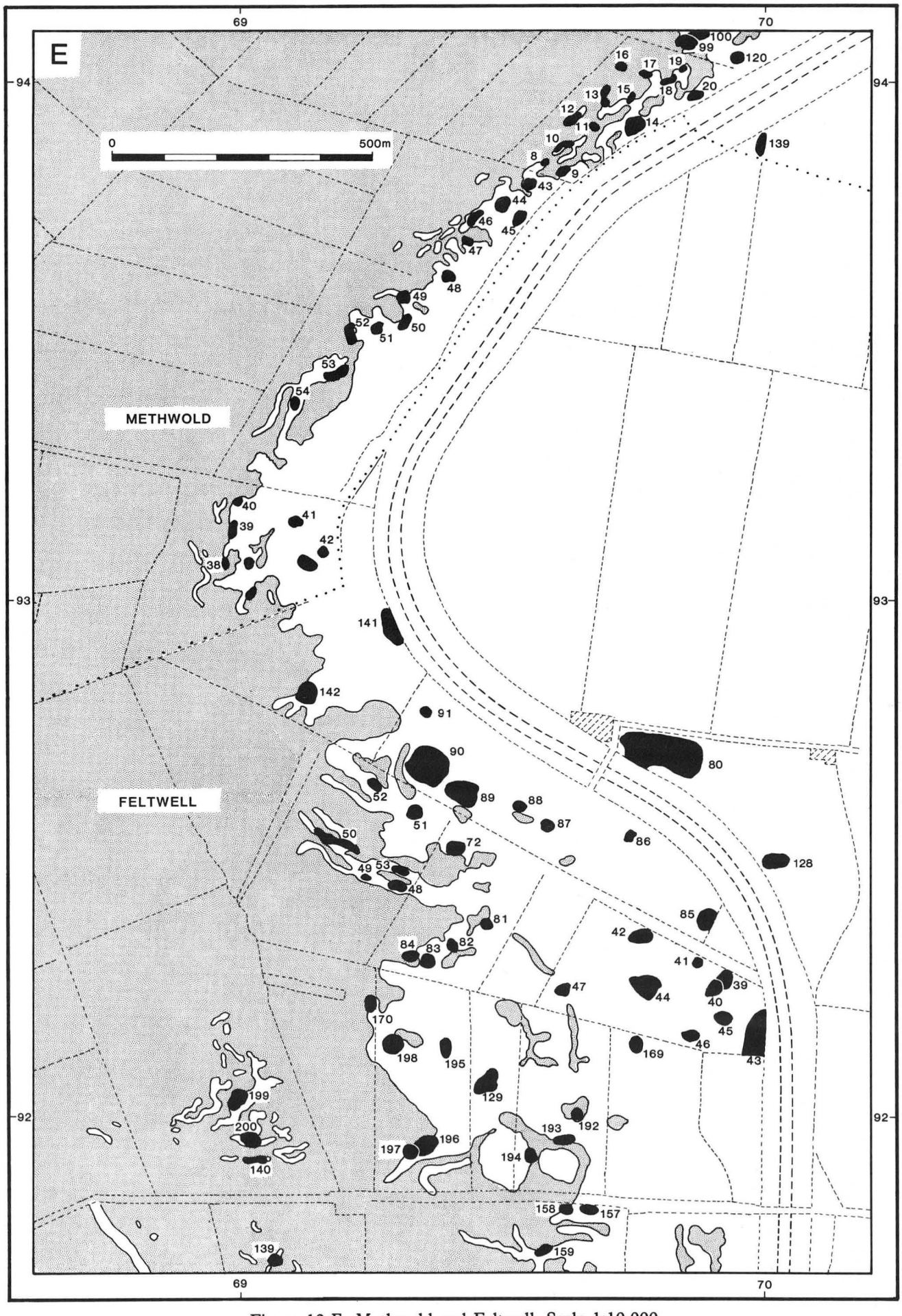

Figure 12 E: Methwold and Feltwell. Scale 1:10,000

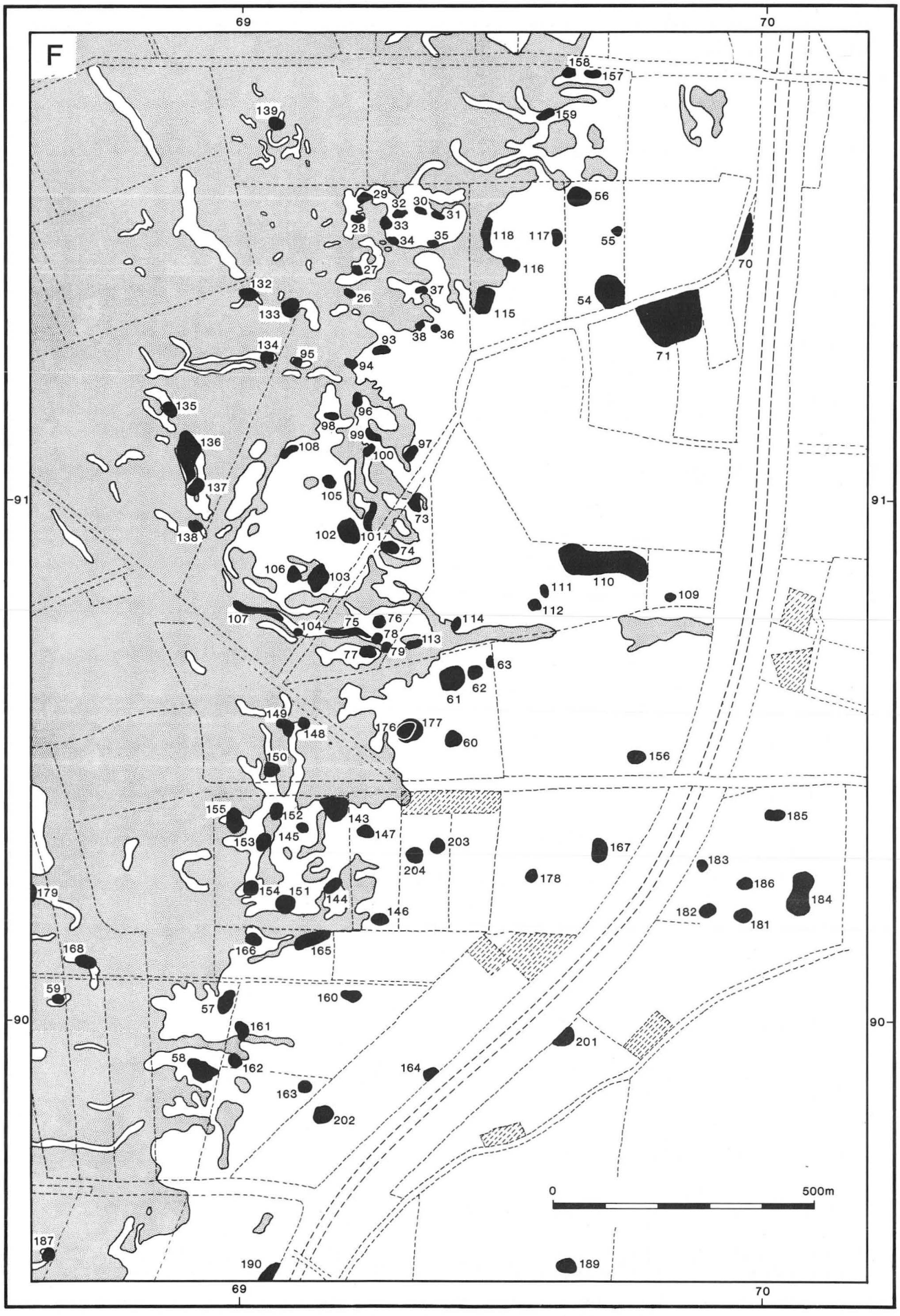

Figure 13 F: Feltwell. Scale 1:10,000

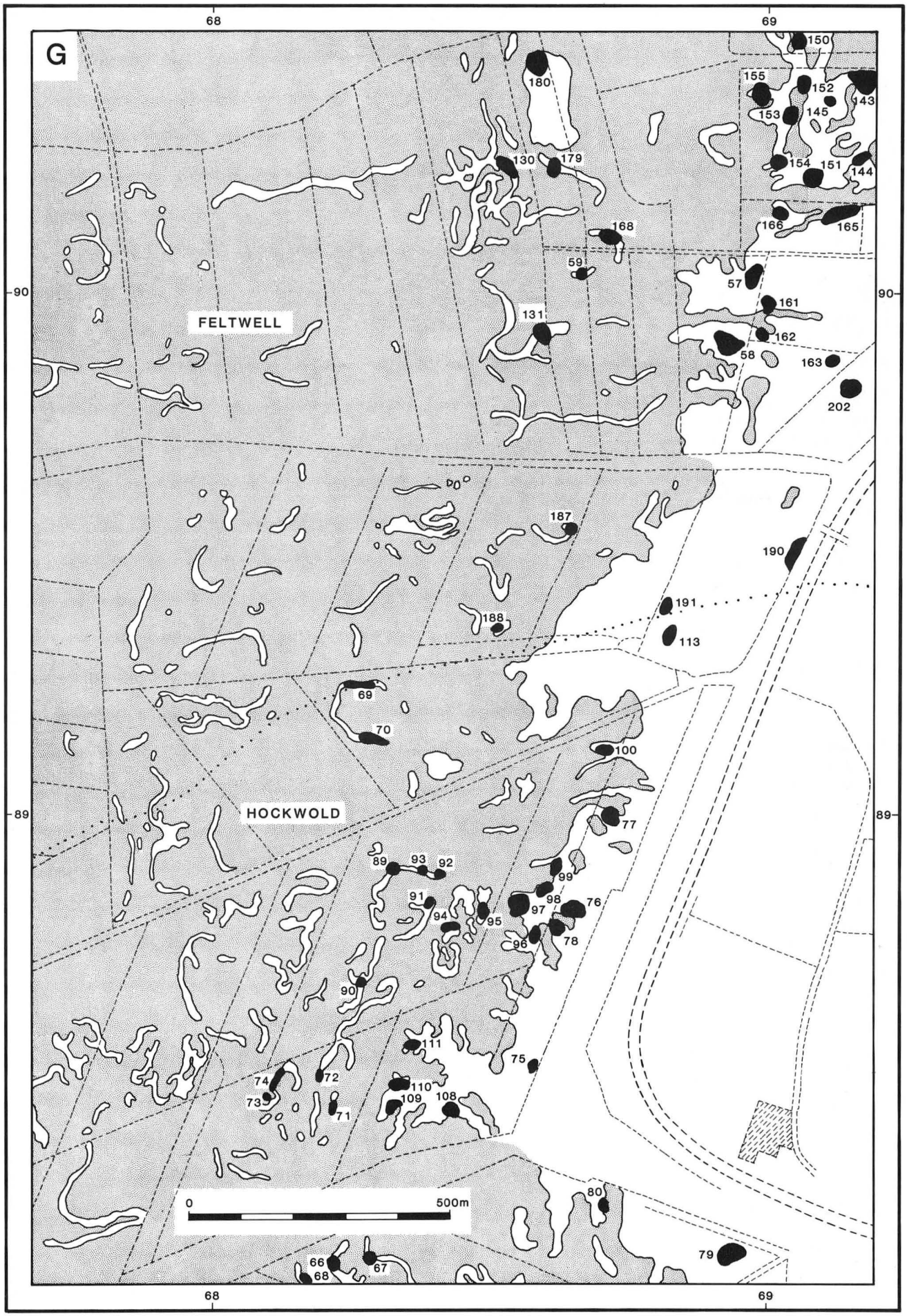

Figure 14 G: Feltwell and Hockwold. Scale 1:10,000

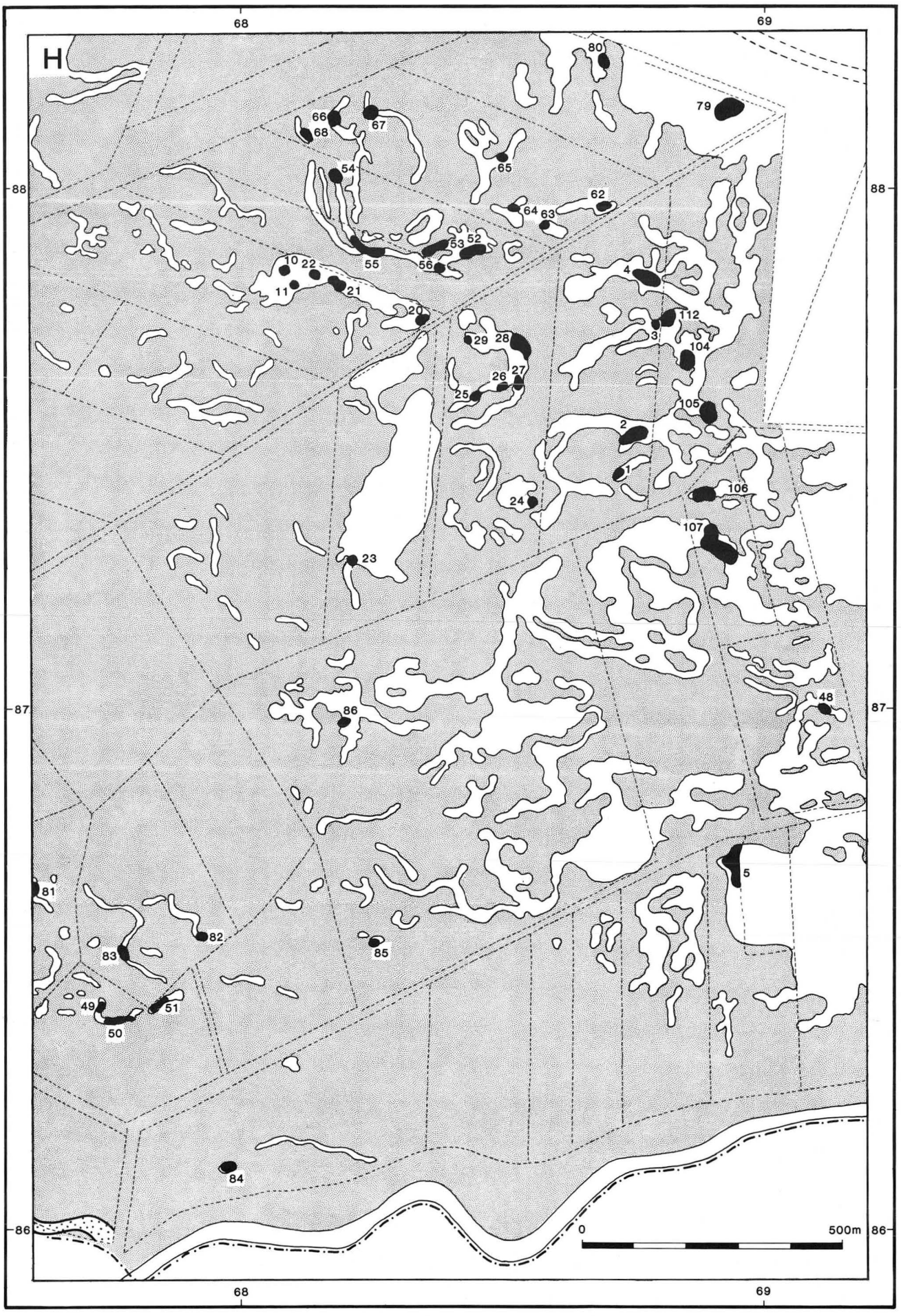

Figure 15 H: Hockwold. Scale 1:10,000

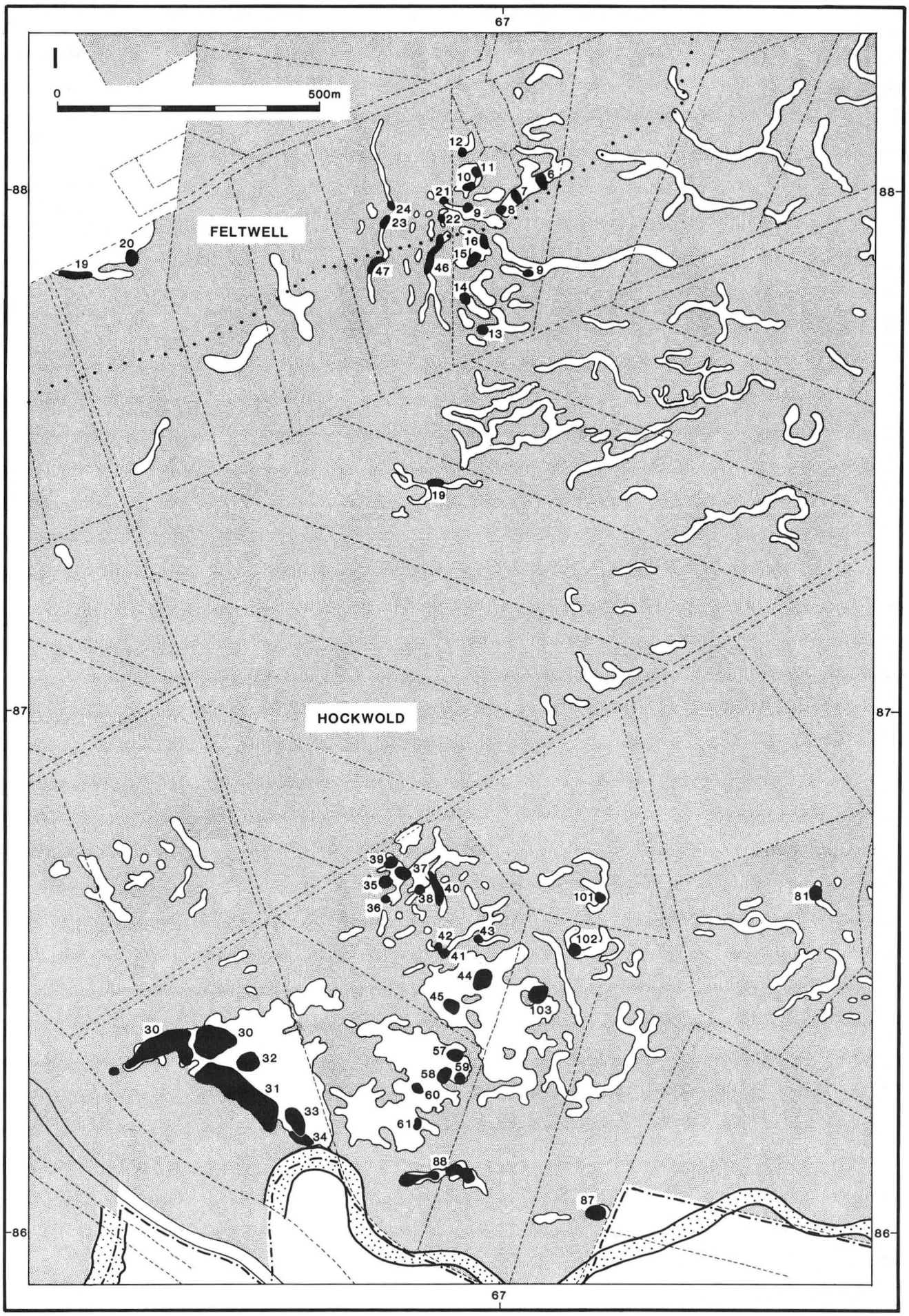

Figure 16 I: Feltwell and Hockwold. Scale 1:10,000

Table 1: Concordance of sites in the Wissey Embayment

Note: Periods shown in heavy type indicate where a date can be reasonably confidently attributed to a particular site.

Feltwell

1	6573 8823		"Pot-boilers"
2	6477 8802		"Pot-boilers"
3	6481 8798		"Pot-boilers"
4	6498 8787		"Pot-boilers"
5	6495 8772	**Mes/EN**	"Pot-boilers"/Flint
6	6707 8802		"Pot-boilers"
7	6703 8799		"Pot-boilers"
8	6701 8796		"Pot-boilers"
9	6693 8797		"Pot-boilers"
10	6693 8801		"Pot-boilers"
11	6694 8804		"Pot-boilers"
12	6692 8803		"Pot-boilers"
13	6250 8970	Mes;LNEBA	"Pot-boilers"/Flint
14	6538 8852		"Pot-boilers"
15	6530 8851		"Pot-boilers"
16	6531 8845		"Pot-boilers"
17	6438 8869	Preh	Flint
18	6447 8866	N	Flint
19	6619 8783		"Pot-boilers"
20	6629 8787		"Pot-boilers"
21	6689 8798		"Pot-boilers"
22	6688 8795		"Pot-boilers"
23	6678 8794		"Pot-boilers"
24	6679 8797		"Pot-boilers"
25	6397 8820		"Pot-boilers"
26	6920 9145	**EN**	Flint
27	6923 9144		"Pot-boilers"
28	6923 9154	**Mes/EN**	Flint
29	6924 9158	Mes;?LNEBA	Flint
30	6934 9155	**?EN**	"Pot-boilers"
31	6937 9154	**Mes/EN**	Flint
32	6930 9155	**Mes;LNEBA**	Flint
33	6927 9153	Mes/EN	
		LNEBA	Flint
34	6928 9150	Preh	Flint
35	6936 9145	Preh	Flint
36	6936 9133	**LN**	Flint
37	6934 9140		"Pot-boilers"
38	6933 9133	**LNEBA**	Flint
39	6992 9226	**LNEBA**	Flint
40	6990 9224	**LNEBA**	Flint
41	6987 9230	Preh	Flint
42	6976 9235	**LNEBA**	Flint
43	6997 9215	**RB**	Pottery
44	6977 9224	Mes;LNEBA	"Pot-boilers"/Flint
45	6991 9219	Preh	Flint
46	6986 9215		"Pot-boilers"
47	6961 9225	N	Flint
48	6930 9245		"Pot-boilers"
49	6924 9246	Preh	Flint
50	6914 9253	**EN**	Flint
51	6933 9259	Mes/EN	
		LNEBA	**Flint**
52	**6926 9264**	**Preh**	**Flint**
53	**6930 9247**	**Mes/EN**	Flint
54	6970 9140	**BA**	Flint
		IA	Pottery
55	6971 9151		"Pot-boilers"
56	6964 9158	**BA**	Flint
57	6897 9003	Preh	Flint
58	6892 8990	Preh	Flint
59	6865 9004	Mes/EN	
		LNEBA	Flint
60	6940 9054	EN	
		LNEBA	Flint
61	6940 9066	Mes/EN	
		LNEBA	Flint
62	6945 9067		"Pot-boilers"
63	6947 9068	Preh	Flint
64	6297 8901	Preh	Flint
65	6298 8904		"Pot-boilers"
66	6302 8906		"Pot-boilers"
67	6293 8917		"Pot-boilers"
68	6283 8930	Mes/EN	Flint
69	7010 9170	**RB**	Pottery
70	6996 9150	**IA**	Pottery
71	6984 9135	**IA**	Pottery
72	6943 9252	Mes/EN	
		LNEBA	Flint
73	6933 9099	Mes/EN	
		LNEBA	Flint
74	6927 9090	Preh	Flint
75	6920 9075	?Mes **LNEBA**	Flint
76	6926 9077	**?EN**	Flint
77	6924 9070	Mes/EN	
		LNEBA	Flint
78	6925 9074	Mes	
		LNEBA/BA	Flint
79	6927 9072	Preh	Flint
80	6980 9270	**RB**	Pottery
81	6946 9238	Preh	Flint
82	6940 9233	Mes **LNEBA**	Flint
83	6936 9233	**LNEBA**	Flint
84	6932 9231	**EN**	Flint
85	6989 9238		"Pot-boilers"
86	6975 9255		"Pot-boilers"
87	6958 9256	Preh	Flint
88	6953 9260	Preh	Flint
89	6943 9263	**LNEBA**	Flint
90	6936 9268	**?EN**	Flint
91	6936 9278		"Pot-boilers"
92	7045 9150	**IA**	Pottery
		RB;Med	Pottery
93	6927 9129	**EN**	Flint
		LNEBA	
94	6921 9127	**?LNEBA**	Flint
95	6910 9126	Preh	Flint
96	6922 9119		"Pot-boilers"
97	6932 9108		"Pot-boilers"
98	6917 9116		"Pot-boilers"
99	6924 9112		"Pot-boilers"
100	6924 9109		"Pot-boilers"
101	6924 9097		"Pot-boilers"
102	6920 9094		"Pot-boilers"
103	6915 9085		"Pot-boilers"
104	6910 9074		"Pot-boilers"
105	6917 9103	**LN**	Flint
106	6910 9086	Preh	Flint
107	6905 9077	EN;**LNEBA**	Flint
		EN;LNEBA	Pottery
108	6909 9108		"Pot-boilers"
109	6982 9082		"Pot-boilers"
110	6971 9088	**IA**	Pottery
111	6957 9083	Preh	Flint
112	6956 9080		"Pot-boilers"
113	6933 9072	**Mes/EN**	Flint
		?LNEBA	
114	6940 9076		"Pot-boilers"
115	6946 9139		"Pot-boilers"
116	6951 9145	Preh	"Pot-boilers"/Flint
117	6960 9150		"Pot-boilers"
118	6947 9150	**LNEBA**	Flint
119	6346 8875		"Pot-boilers"
120	6347 8869		"Pot-boilers"
121	6343 8867		"Pot-boilers"
122	6332 8865		"Pot-boilers"
123	6324 8864		"Pot-boilers"
124	6376 8848		"Pot-boilers"
128	7002 9250	**RB**	Pottery
129	6947 9207	**??LNEBA**	Flint
130	6850 9025		"Pot-boilers"
131	6857 8993		"Pot-boilers"
132	6901 9140	Preh	Flint
		LNEBA	Pottery
133	6909 9137		"Pot-boilers"
134	6903 9127	**EN**	Flint
135	6885 9116	**?EN**	Flint
136	6889 9109	Mes/**EN;**	
		LNEBA	Flint
		EN/Bkr	Pottery
137	6890 9102		"Pot-boilers"
138	6891 9094	Preh	Flint
139	6907 9172		"Pot-boilers"
140	6903 9191	**?EN**	Flint
141	6929 9293	**IA**	Pottery
142	6912 9281	Mes/EN	
		LNEBA	Flint
143	6918 9041	**LNEBA**	Flint
144	6919 9026	**?EN**	Flint
145	6910 9038	Mes/EN;**LN**	Flint
146	6926 9020	LN	Flint
147	6923 9037		"Pot-boilers"
148	6911 9057		"Pot-boilers"
149	6908 9056	Preh	"Pot-boilers"/Flint
150	6905 9048	**?EN**	Flint
151	6908 9022	Preh	Flint
152	6906 9040	Flint	
153	6904 9035		"Pot-boilers"
154	6902 9026		"Pot-boilers"
155	6898 9039		"Pot-boilers"
156	6975 9051		"Pot-boilers"
157	6967 9182	EN	"Pot-boilers"/Flint
158	6962 9182	Mes/EN	Flint
159	6958 9175		"Pot-boilers"
160	6920 9004		"Pot-boilers"
161	6900 8998		"Pot-boilers"
162	6899 8991		"Pot-boilers"
163	6911 8986		"Pot-boilers"
164	6935 8988		"Pot-boilers"
165	6912 9015		"Pot-boilers"
166	6901 9016		"Pot-boilers"
167	6968 9032		"Pot-boilers"
168	6870 9010		"Pot-boilers"
169	6975 9214		"Pot-boilers"
170	6924 9221		"Pot-boilers"
171	6325 8850		"Pot-boilers"
172	6348 8823		"Pot-boilers"
173	6334 8832		"Pot-boilers"
174	6341 8830		"Pot-boilers"
176	6930 9056		"Pot-boilers"
177	6930 9055	?LN/BA	Mound
178	6955 9028		"Pot-boilers"
179	6859 9024		"Pot-boilers"
180	6856 9043	Mes/EN	Flint
		?LNEBA	
181	6996 9020		"Pot-boilers"
182	6989 9021		"Pot-boilers"
183	6988 9030		"Pot-boilers"
184	7007 9025	**IA**	Pottery
185	7002 9040		"Pot-boilers"
186	6996 9026		"Pot-boilers"
187	6862 8955		"Pot-boilers"
188	6849 8935		"Pot-boilers"
189	6961 8952	**LNEBA**	Flint
190	6904 8950	**RB**	Pottery
191	6880 8940	Preh	Flint
192	6964 9100	**LN**	Flint
193	6962 9195	**LNEBA**	Flint
194	6956 9192		"Pot-boilers"
195	6939 9213	Preh	Flint
196	6935 9194	**LNEBA**	Flint
197	6932 9193		"Pot-boilers"
198	6929 9214	**LNEBA**	Flint
199	6900 9203		"Pot-boilers"
200	6901 9196		"Pot-boilers"
201	6961 8997	**IA**	Pottery
202	6915 8981		"Pot-boilers"
203	6937 9034		"Pot-boilers"
204	6932 9032	**LNEBA**	Flint
205	7015 9040	**RB**	Pottery
U1	6999 9207	**RB**	Villa
U2	7005 9210	**RB**	Bath-house
U3	6989 9077	IA	Pottery
U4	7132 9095	**RB**	Bath-house
U5	6956 9092	**RB**	Building masonry
U6	7060 9053	**Med**	Moat
U7	7023 9361	?LN/BA	Ring ditches
	7033 9352	?LN/BA	
	7008 9305	?LN/BA	
A1	6441 8864	N	Axe
A2	7015 9076	**ES**	Cruciform brooch

Hilgay

1	6250 9863	**Med**	Moat/Earthworks
2	6293 9842		"Pot-boilers"
3	6400 9808	**RB**	Settlement earthworks
4	6291 9850		"Pot-boilers"
5	6279 9847		"Pot-boilers"
6	6186 9848	**Med**	Pottery
7	6188 9858	**Med**	Pottery
8	6246 9651	**Preh**	Pottery
9	6251 9641	**Preh**	Pottery
10	6223 9664	**LNEBA**	Pottery
		IA	Pottery
11	6218 9659		"Pot-boilers"
12	6158 9714		"Pot-boilers"
13	6145 9638	**RB**	Pottery
14	6138 9518	**RB**	Pottery
15	6110 9636		"Pot-boilers"
16	6103 9656		"Pot-boilers"
17	6120 9661		"Pot-boilers"
18	6330 9757	**RB**	Pottery
19	6353 9706		"Pot-boilers"
20	6341 9692		"Pot-boilers"
21	6191 9786	**IA**	Pottery
		RB	Pottery
U1	6082 9620	**Med**	Priory
U2	6325 9718	Preh	Flint
U3	6369 9696	Preh	Flint
U4	6111 9674	Preh	Flint
U5	6257 9800	**?Med**	Mill Mound
U6	6269 9824/c	RB	Pottery
U7	6024 9740	**?Med**	Canal
to	6142 9860		
A1	6096 9792	Preh	?Quern
A2	6221 9810/c	**E Sax**	Burial
A3	6258 9802	**E Sax**	Brooch

Hockwold

1	6873 8746	**LNEBA**	Flint
2	6875 8752	**BA**	"Pot-boilers"/Flint
3	6879 8774	Preh	Flint
4	6877 8774	Preh	Flint
5	6894 8669	**LNEBA**	"Pot-boilers"/Flint
9	6705 8784		"Pot-boilers"
10	6809 8785	**LNEBA**	Flint
		Mes/EN	
11	6810 8781		"Pot-boilers"
12	6489 8632		"Pot-boilers"
13	6696 8773		"Pot-boilers"
14	6692 8780		"Pot-boilers"
15	6694 8787		"Pot-boilers"
16	6696 8790		"Pot-boilers"

17	6496	8651		"Pot-boilers"
18	6580	8555	**Mes;LNEBA**	Flint
19	6687	8744		"Pot-boilers"
20	6834	8775		"Pot-boilers"
21	6819	8781	**EN**	Flint
22	6814	8783	**EN**	Flint
23	6821	8729		"Pot-boilers"
24	6855	8739	**EN**	Flint
25	6844	8760		"Pot-boilers"
26	6850	8762		"Pot-boilers"
27	6852	8762		"Pot-boilers"
28	6853	8770	**BA**	"Pot-boilers"
29	6843	8770		"Pot-boilers"
30	6645	8637	**Mes**/EN	Flint
31	6650	8626	**Mes**;LNEBA	Flint
32	6651	8633	**Mes**	Flint
33	6661	8621	**Mes;LNEBA**	Flint
34	6662	8617	**EBA**	Flint
35	6677	8667		"Pot-boilers"
36	6677	8664		"Pot-boilers"
37	6681	8669		"Pot-boilers"
38	6684	8666	**LNEBA**	Flint
39	6679	8670	**?LNEBA**	Flint
40	6687	8665		"Pot-boilers"
41	6689	8653		"Pot-boilers"
42	6688	8654		"Pot-boilers"
43	6696	8657		"Pot-boilers"
44	6697	8649		"Pot-boilers"
45	6690	8643		"Pot-boilers"
46	6686	8787		"Pot-boilers"
47	6676	8786		"Pot-boilers"
48	6911	8699	Preh	Flint
49	6773	8643		"Pot-boilers"
50	6775	8640		"Pot-boilers"
51	6783	8643		"Pot-boilers"
52	6844	8787	Preh	Flint
53	6838	8788		"Pot-boilers"
54	6819	8803	Preh	Flint
55	6823	8788	**?LNEBA**	Flint
56	6837	8785		"Pot-boilers"
57	6691	8633	?Mes/EN	
			LNEBA	Flint
58	6689	8630	?Mes;LNEBA	Flint
59	6692	8629		"Pot-boilers"
60	6684	8628		"Pot-boilers"
61	6684	8620		"Pot-boilers"
62	6870	8797		"Pot-boilers"
63	6858	8793		"Pot-boilers"
64	6852	8796		"Pot-boilers"
65	6850	8806		"Pot-boilers"
66	6818	8814		"Pot-boilers"
67	6825	8815		"Pot-boilers"
68	6812	8810		"Pot-boilers"
69	6823	8925		"Pot-boilers"
70	6824	8914		"Pot-boilers"
71	6818	8844		"Pot-boilers"
72	6815	8850		"Pot-boilers"
73	6805	8845		"Pot-boilers"
74	6807	8849		"Pot-boilers"
75	6855	8851		"Pot-boilers"
76	6863	8881		"Pot-boilers"
77	6870	8900		"Pot-boilers"
78	6860	8877		"Pot-boilers"
79	6892	8815		"Pot-boilers"
80	6869	8824	**LNEBA**	Flint
81	6760	8665		"Pot-boilers"
82	6791	8656		"Pot-boilers"
83	6777	8652		"Pot-boilers"
84	6796	8611	**Mes**	Flint
85	6824	8654		"Pot-boilers"
86	6819	8697		"Pot-boilers"
87	6719	8602	**LNEBA**	Flint
88	6681	8610	Mes;**LNEBA**	Flint
89	6828	8889		"Pot-boilers"
90	6822	8867		"Pot-boilers"
91	6836	8882		"Pot-boilers"
92	6838	8888		"Pot-boilers"
93	6834	8889		"Pot-boilers"
94	6840	8878		"Pot-boilers"
95	6846	8880		"Pot-boilers"
96	6856	8876	LNEBA	Flint
97	6851	8881	Mes/EN	
			LNEBA	Flint
98	6858	8885	**Mes/EN**	Flint
99	6860	8889	**EN**	Flint
100	6869	8911	Mes/EN;	
			LNEBA	Flint
101	6719	8664		"Pot-boilers"
102	6714	8654		"Pot-boilers"
103	6707	8645		"Pot-boilers"
104	6885	8767	Preh	Flint
105	6889	8756		"Pot-boilers"
106	6888	8740	**LNEBA**	Flint
107	6889	8733	EN;**LNEBA**	Flint
108	6840	8842		"Pot-boilers"
109	6829	8843		"Pot-boilers"
110	6830	8847		"Pot-boilers"
111	6832	8855		"Pot-boilers"
112	6882	8776		"Pot-boilers"
113	6880	8935	**LNEBA**	Flint
U1	6875	8885	**RB**	?Temple
A1	6870	8832	**RB**	Silver hoard

Methwold

1	6926	9597	Preh	Flint
2	6932	9596	?Mes;**LN**	Flint
3	6937	9597	**LNEBA**	Flint
4	6936	9591		"Pot-boilers"
5	6943	9591	**LNEBA**	Flint
6	6507	9657	**EN**;LN	Flint/Pottery
7	6503	9668	EN;Bkr	Pottery/Flint
8	6958	9385	Preh	Flint
9	6961	9383	Preh	Flint
10	6963	9387	**Mes/EN**	Flint
11	6967	9392		"Pot-boilers"
12	6963	9393	Preh	Flint
13	6970	9397	Preh	Flint
14	6974	9392	**?EN**	Flint
15	6975	9397	Preh	Flint
16	6973	9403		"Pot-boilers"
17	6977	9402	Preh	Flint
18	6981	9400		"Pot-boilers"
19	6984	9403	Preh	Flint
20	6987	9397	**?LNEBA**	Flint
21	6880	9659	**Mes**	Flint
22	6876	9664	Preh	Flint
23	6887	9656		"Pot-boilers"
24	6878	9667	Preh	Flint
25	6885	9667	**Mes**	Flint
26	6898	9662	**Mes**	Flint
27	7052	9454		"Pot-boilers"
28	7049	9450		"Pot-boilers"
29	7047	9453	Mes;**LN**	Flint
30	7032	9444	**?LNEBA**	Flint
31	7029	9440	**?LNEBA**	Flint
32	7037	9451	Mes;LNEBA	Flint
33	7027	9450		"Pot-boilers"
34	6559	9627		"Pot-boilers"
35	6495	9454	**Mes/EN**	Flint
36	6425	9417	**EN**	Flint
37	6407	9412	**Mes/EN**	Flint
38	6897	9307	EN;LN	Flint
39	6898	9314	**LNEBA**	Flint
40	6895	9319		"Pot-boilers"
41	6910	9316		"Pot-boilers"
42	6916	9309		"Pot-boilers"
43	6955	9380	**LNEBA**	Flint
44	6950	9377	**LNEBA**	Flint
45	6953	9374		"Pot-boilers"
46	6945	9374	?LNEBA	Flint
47	6943	9369	Preh	Flint
48	6940	9363	**LN**	Flint
49	6931	9359		"Pot-boilers"
50	6931	9354		"Pot-boilers"
51	6926	9353	**?EN**	Flint
52	6921	9352	**LNEBA**	**Flint**
53	**6918**	**9344**		**"Pot-boilers"**
54	**6910**	**9338**		**"Pot-boilers"**
55	**7148**	**9516**	**IA;RB**	Pottery
56	7144	9511	**Med**	Pottery
57	6913	9307	Mes	Flint
58	6902	9307	Preh	Flint
			LNEBA	Pottery
59	6902	9301	Preh	Flint
60	7200	9558		"Pot-boilers"
61	7189	9570	Preh	Flint
62	7187	9566		"Pot-boilers"
63	7180	9575		"Pot-boilers"
64	7186	9563		"Pot-boilers"
65	6962	9651		"Pot-boilers"
66	6981	9651		"Pot-boilers"
67	7158	9572	Preh	Flint
68	7171	9568		"Pot-boilers"
69	7155	9567	EN;LNEBA	Flint
70	7168	9564	**LNEBA**	Flint
71	7076	9474		"Pot-boilers"
72	7069	9470	?EN	Flint
73	7068	9458		"Pot-boilers"
74	7183	9626	Preh	Flint
75	7233	9667		"Pot-boilers"
76	7244	9657		"Pot-boilers"
77	7236	9557		"Pot-boilers"
78	7251	9560	Preh	Flint
79	7033	9627		"Pot-boilers"
80	7161	9537	Preh	Flint
81	7140	9552		"Pot-boilers"
82	7226	9662		"Pot-boilers"
83	7190	9643	Preh	Flint
84	7211	9635		"Pot-boilers"
85	7206	9636	Preh	Flint
86	7196	9632		"Pot-boilers"
87	7203	9627		"Pot-boilers"
88	7220	9584		"Pot-boilers"
89	7047	9548		"Pot-boilers"
90	7096	9500	Preh	Flint
91	7089	9498	**?LNEBA**	Flint
92	7091	9502		"Pot-boilers"
93	7092	9505	Preh	Flint
94	7087	9502	Preh	Flint
95	7090	9507		"Pot-boilers"
96	7080	9500		"Pot-boilers"
97	7010	9443		"Pot-boilers"
98	7030	9463	Preh	Flint
99	6984	9408		"Pot-boilers"
100	6986	9409	Preh	Flint
101	6983	9413	**?EN**	Flint
102	6987	9412		"Pot-boilers"
103	6991	9413		"Pot-boilers"
104	6990	9415	Preh	Flint
105	6999	9423		"Pot-boilers"
106	6648	9688		"Pot-boilers"
107	7040	9572	Preh	Flint
108	7032	9573		"Pot-boilers"
109	7049	9559		"Pot-boilers"
110	6981	9586	**LNEBA**	Flint
111	6975	9596		"Pot-boilers"
112	7230	9512	**IA**	Pottery
113	7045	9417	**IA**	Pottery
114	7176	9473	**RB**	Pottery
115	7173	9494	**RB**	Pottery
116	7204	9512		"Pot-boilers"
117	6430	9724		"Pot-boilers"
118	9053	9448	Preh	Flint
119	7021	9420		"Pot-boilers"
120	6994	9405	Preh	Flint
121	7005	9416		"Pot-boilers"
122	7016	9423	**?LN**	Flint
123	7032	9596	**Med**	Priory
124	7016	9597		"Pot-boilers"
125	7115	9578		"Pot-boilers"
126	7096	9585		"Pot-boilers"
127	7116	9595		"Pot-boilers"
129	7181	9528	**Mes**	Flint
130	7174	9528	Preh	Flint
131	7206	9539		"Pot-boilers"
132	7164	9556		"Pot-boilers"
133	7064	9603		"Pot-boilers"
134	6970	9584		"Pot-boilers"
135	6970	9579		"Pot-boilers"
136	6839	9666	Mes	Flint
137	6928	9613		"Pot-boilers"
138	6941	9609		"Pot-boilers"
139	6998	9388	**RB**	Pottery
140	6451	9768		"Pot-boilers"
141	6976	9686	Preh	Flint
142	6988	9658		"Pot-boilers"
143	7100	9610		"Pot-boilers"
144	7314	9580	**RB**	Pottery
145	7303	9610	**LNEBA**	Flint
			1A	Pottery
146	7311	9576		"Pot-boilers"
147	7301	9578	**?LNEBA**	Flint
148	7324	9600	**RB**	Pottery
149	7330	9538	**RB**	Pottery
150	7258	9617		"Pot-boilers"
151	7231	9624		"Pot-boilers"
152	7177	9526		"Pot-boilers"
153	6394	9362	**?LNEBA**	Flint
154	7013	9392	**RB**	Pottery
155	7120	9501	**Med**	Pottery
156	7209	9564	LNEBA	Flint
157	7234	9520	N	Flint
158	7244	9518	**IA**	Pottery
159	7201	9534		"Pot-boilers"
160	6659	9751		"Pot-boilers"
161	7248	9536	**IA**	Pottery
162	7010	9588		"Pot-boilers"
163	6991	9581		"Pot-boilers"
U1	7046	9528	**Mes**	Flint
U2	7147	9540	Mes	Flint
U3	6572	9647	Mes/EN	Flint
U4	7170	9477	IA	Pottery
U5	7170	9477	IA	Pottery
U6	7026	9406	IA	Pottery
U7	7068	9435	U	Cropmark
U8	6977	9591	Preh	?Barrow
U9	721	961	**MS**	Pottery
U10	7154	9513	**Med**	Church

Northwold

1	6984	9779		"Pot-boilers"
2	6975	9779		"Pot-boilers"
3	6979	9768	?Mes/EN	Flint
4	6999	9762	?LNEBA	Barrow
5	7063	9812		"Pot-boilers"
6	7067	9800		"Pot-boilers"
7	7069	9798		"Pot-boilers"
9	7066	9745		"Pot-boilers"
10	7079	9701		"Pot-boilers"
11	7078	9695		"Pot-boilers"
12	7077	9678		"Pot-boilers"
13	7072	9681		"Pot-boilers"
14	7097	9779		"Pot-boilers"
15	7099	9786		"Pot-boilers"
16	7102	9781		"Pot-boilers"
17	7108	9778		"Pot-boilers"
18	7110	9765		"Pot-boilers"
19	7108	9700		"Pot-boilers"
20	7063	9746		"Pot-boilers"
21	7054	9723		"Pot-boilers"
22	7053	9732		"Pot-boilers"
23	7137	9657		"Pot-boilers"
24	7140	9661		"Pot-boilers"
25	7144	9661		"Pot-boilers"
26	7133	9668		"Pot-boilers"
27	7123	9661	LNEBA	Flint

28	7102 9690		"Pot-boilers"
29	7100 9667		"Pot-boilers"
30	7057 9685		"Pot-boilers"
31	7059 9688		"Pot-boilers"
32	7167 9713		"Pot-boilers"
33	7096 9735		"Pot-boilers"
34	7159 9706		"Pot-boilers"
35	7156 9706		"Pot-boilers"
36	7141 9696		"Pot-boilers"
37	6985 9712		"Pot-boilers"
38	7170 9657		"Pot-boilers"
39	7176 9666		"Pot-boilers"
U1	7167 9688c	**LNEBA**	Flint
U2	7191 9708	**RB**	Pottery
A1	7170 9723	**RB**	Pewter hoard

Southery

1	6070 9564		"Pot-boilers"
2	6080 9570		"Pot-boilers"
3	6105 9583		"Pot-boilers"
4	6106 9569		"Pot-boilers"
5	6130 9568		"Pot-boilers"
6	6152 9450	**RB**	Pottery
7	6166 9445		"Pot-boilers"
8	6170 9452	**IA;**RB	Pottery
9	6123 9527	**RB**	Pottery
10	6140 9580	**RB**	Pottery
11	6252 9572		"Pot-boilers"
12	6263 9520		"Pot-boilers"
13	6279 9587		"Pot-boilers"
14	6302 9525		"Pot-boilers"
15	6302 9520		"Pot-boilers"
16	6101 9550	**IA**	Pottery
17	6062 9510	**RB**	Pottery
18	6060 9508		"Pot-boilers"
19	6121 9469	RB	"Pot-boilers"/Pottery
20	6108 9491		"Pot-boilers"
21	6096 9497		"Pot-boilers"
U1	6110 9388	Preh	Pottery
U2	6135 9564/c	**RB**	Ditch/Finds
U3	606 951	**?RB**	Enclosure
U4	6070 9527/c	**E Sax**	Pottery
U5	6220 9468	**RB;**Sax;Med	Pottery
U6	6215 9458	RB;Sax;**Med**	Pottery
U7	6067 9429	**?Med**	Canal to 6146 9434
U8	6184 9480	**IA**	Coins

The Parish Essays:
The Wissey Embayment

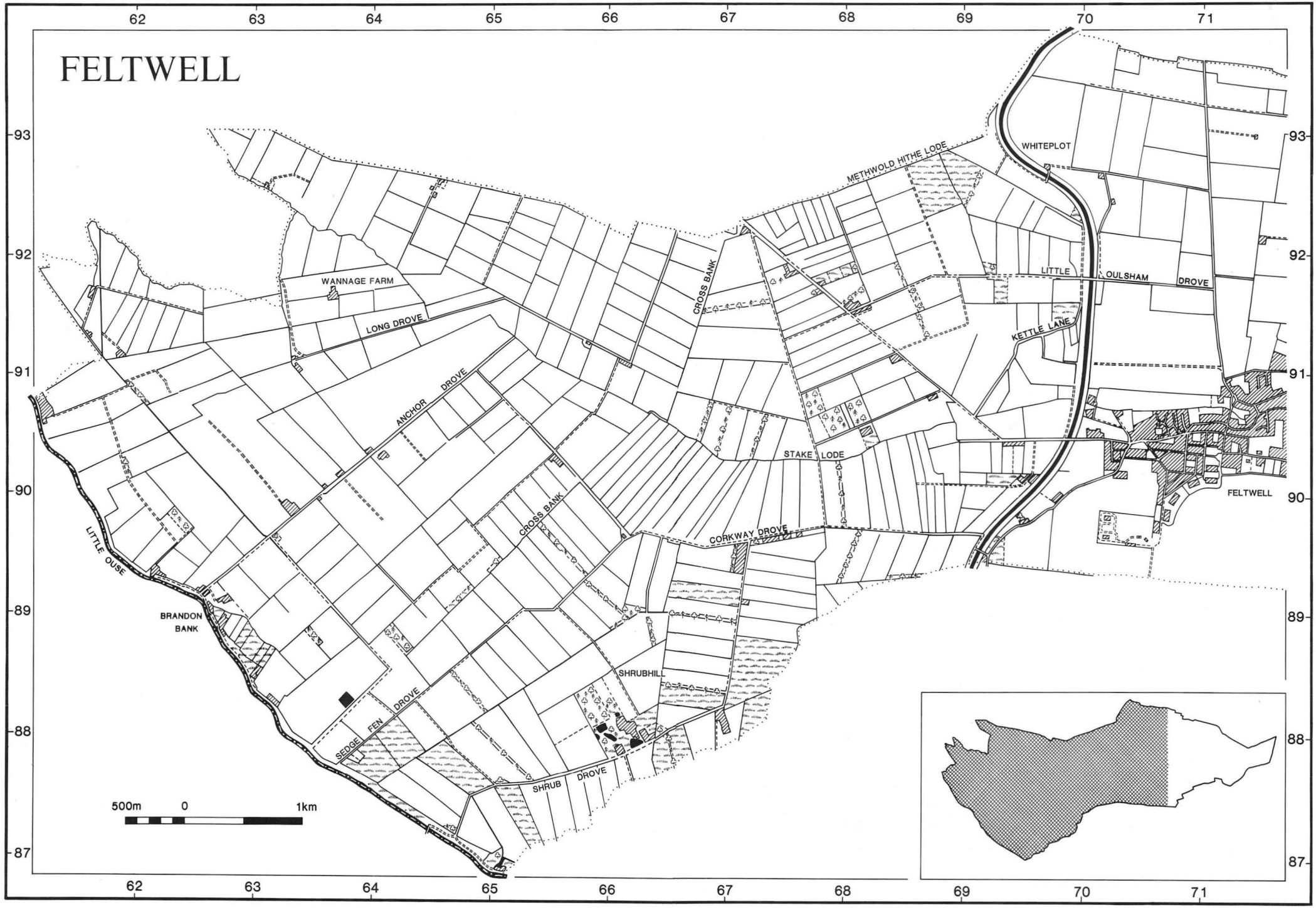

Figure 17 Feltwell: The modern landscape. Scale 1:40,000

2. Feltwell

I. Introduction
(Figs 17, 18)

Feltwell, with an area of 5376ha, is second only in size to Methwold of the parishes considered in this report. Nearly 65% of the land can be classified as fen, the remainder being Breckland. The parish stretches for a distance of about 15km from the Fossditch in the east to the River Little Ouse in the west; from north to south, however, the maximum is little more than 5km.

Feltwell village lies about one kilometre back from the fen edge at the head of a small valley and straggles along a secondary road with an RAF camp on its southern fringe. In the fen, a small subsidiary settlement has grown up beside the Little Ouse. Originally known as Feltwell Anchor, it now goes by the name of Brandon Bank and is linked by a road bridge to the Cambridgeshire hamlet of Little Ouse on the opposite side of the river. Scattered across the fen are farms, some of which are now little more than collections of barns and outbuildings. The group of dwellings on Shrubhill, however, is representative of a number of small communities locally, housing part of the workforce for one of the largest agricultural concerns in the region.

The boundaries of Feltwell reveal a pattern typical of the breck/fen parishes in the region. Straight lines mark the parish bounds on the upland and represent boundaries pre-dating the enclosure of the Breckland (PRO map of 1607). Much of the northern edge in the fen follows drainage dykes of post-medieval date, notably Methwold Hythe Lode. Where Feltwell adjoins Southery, old stream courses are utilised as far as the Little Ouse; and when the boundary diverges from the river it picks up the line of a natural watercourse, once known as Brown's Lode, and follows its course almost to the upland.

Land use in Feltwell is predominantly arable except in parts of the Breckland, and much of the fen is parcelled up between large farming concerns. Shrubhill, Brandon Bank and Little Oulsham Drove all have pasture but, following a rotational pattern, many of these fields are returned to cultivation after a few years. Only one field on Kettle Lane (at TL 699 917), appears to have been left under permanent grass for many years. Scattered around the fenland parts of the parish are a few coverts and tree belts, maintained largely for pheasants. Close to the Cut-off Channel and particularly in the vicinity of Kettle Lane there is some regeneration of deciduous species.

Almost all of fenland Feltwell was surveyed, but restrictions on access limited the amount of fieldwork undertaken along the valley leading to Feltwell village.

II. The Natural Landscape
(Pl. I)

The upland of Feltwell is composed of the Lower Chalk (Gallois 1988, 57), the ground rolling down from the Breckland plateau to the fen, never steep but with moderate slopes that sometimes lie back quite a distance from the fen edge. Rounded spurs of chalk project fenwards in several places, notably at Whiteplot and close to Kettle Lane, creating a sinuous edge to the peat levels. The Kettle Lane spur acts also as the northern slope to the valley running inland to Feltwell village.

The Chalk continues beneath the Fenland Basin, where it gives way to Gault and Carstone, and in turn to the Sandringham Sands and Kimmeridge Clay. These earlier rock formations are completely obscured by Flandrian deposits, except for the Gault which outcrops at Shrubhill (Gallois 1988, 53, fig.2).

River terrace gravels of more recent date form a number of the small islands in the Feltwell fens and coat the basin floor over large areas of this and adjacent parishes (Gallois 1988, 71, fig.25). Shrubhill carries terrace gravels in addition to the Gault exposure. One of the more obvious islands in the Feltwell fens, it is concealed by modern dwellings, woodland and old quarries and its contours are difficult to detect. A whole series of mineral soil exposures further west probably represents the more prominent points of a wide ridge which is bisected by the Little Ouse. Some of these islands are now pronounced (see cover illustration), others are little higher than the present peat surface. Overlying many of them are thin superficial deposits of sand and loam (Seale 1975, 19; Gallois 1988, 72). These are particularly evident along the skirtland where a zone of hummocks and hollows varies from 200m to nearly 700m in width, a reflection of the now shallow organic deposits (Pl. I).

Peat soils of the Adventurers' Series (Seale 1975, 181) cover much of the Feltwell fens. Though some deeper pockets survive (Burton and Hodgson 1987, fig. 7), there is generally less than two metres of peat remaining, and wastage is now so far advanced in the western fens that the roddon patterns of the underlying fen clay are visible. The edge of the marine sediments has been determined by the Soil Survey (Seale 1975, map in end pocket).

Wastage is also revealing the shell or chara marl that accumulated in small meres, probably in historic times. Surface traces are intermittent, particularly in the vicinity of Stake Lode and Corkway Drove and around some of the islands in the west. However, with borehole data from the Soil Survey (see Seale 1975, map in end pocket) it is possible to offer a realistic estimate of their extent. Marl is also apparent as small pockets in hollows of the skirtland, but the deposits are often difficult to detect and impossible to map satisfactorily.

III. The Mesolithic Period
(Fig. 19)

The Fenland Project's brief has been to interpret the Flandrian landscapes of the region and human adaptation to them, but no assessment of Feltwell can disregard the important evidence of Palaeolithic activity: the gravel pits at Shrubhill produced well over 200 handaxes in the nineteenth century, indicative of a rich Acheulian site (Roe 1968, 231; Wymer 1985, 79). Sadly no contemporary traces were found in the present survey.

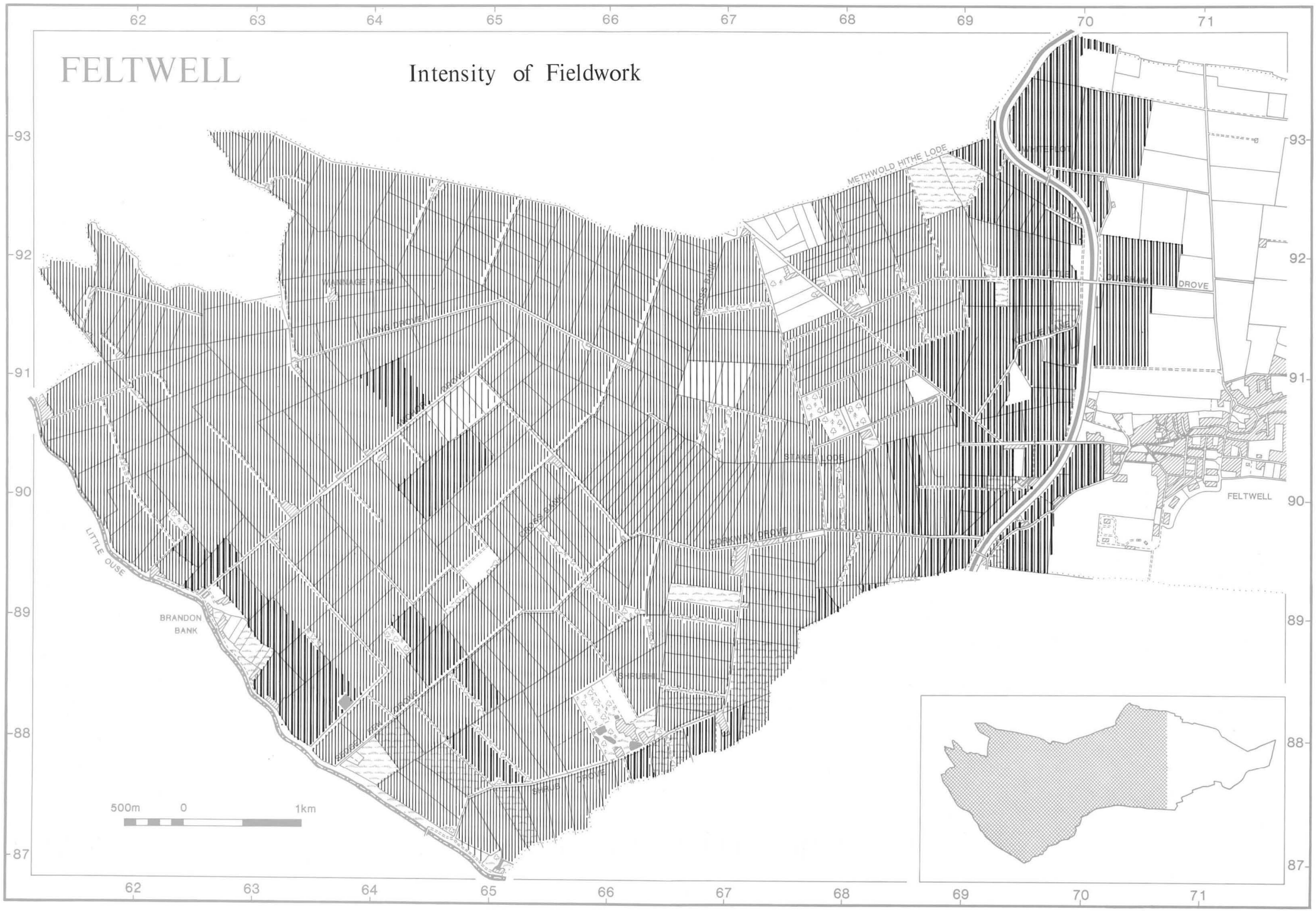

Figure 18 Feltwell: Fieldwork intensity

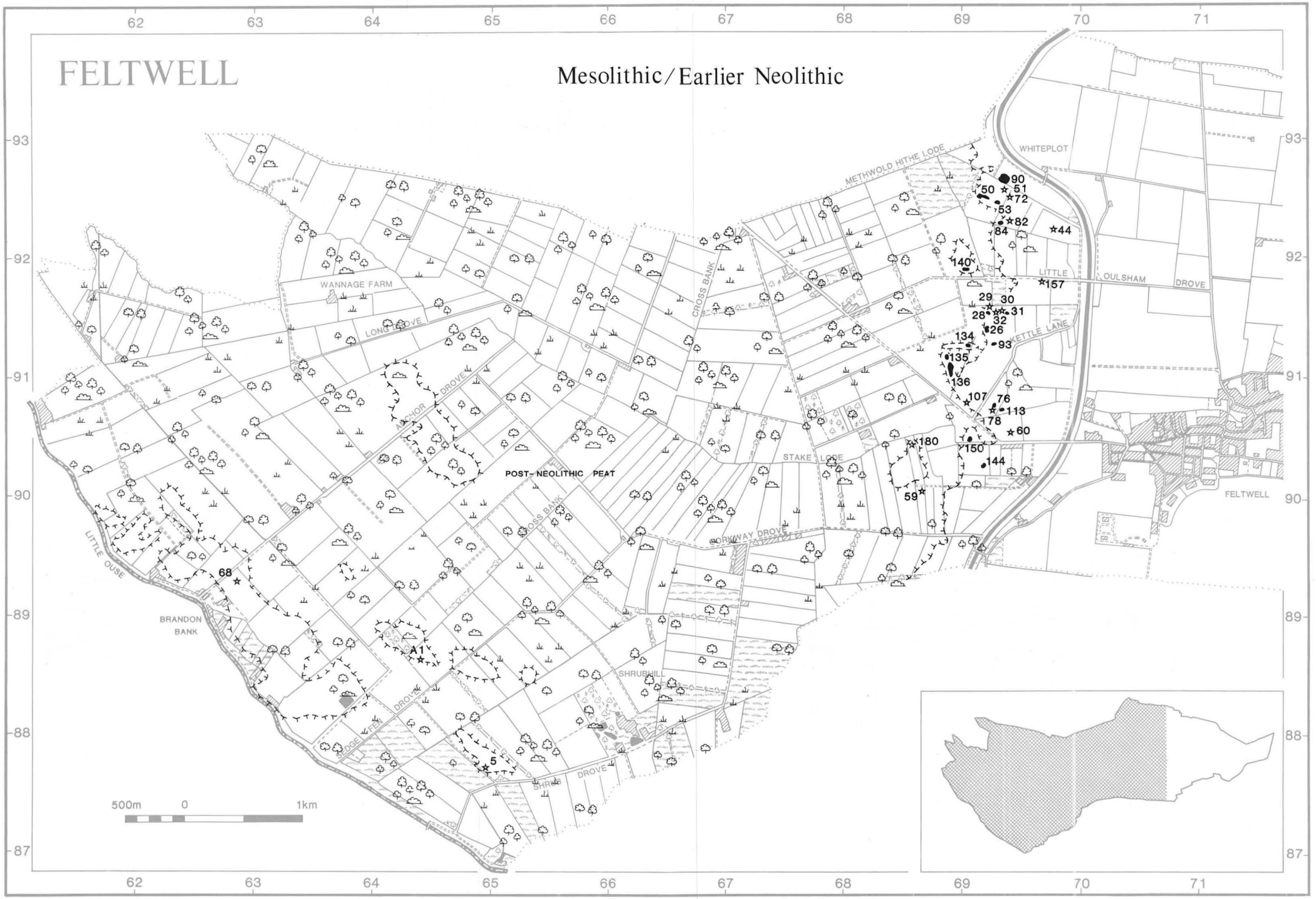

Figure 19 Feltwell: The Mesolithic and Earlier Neolithic landscape

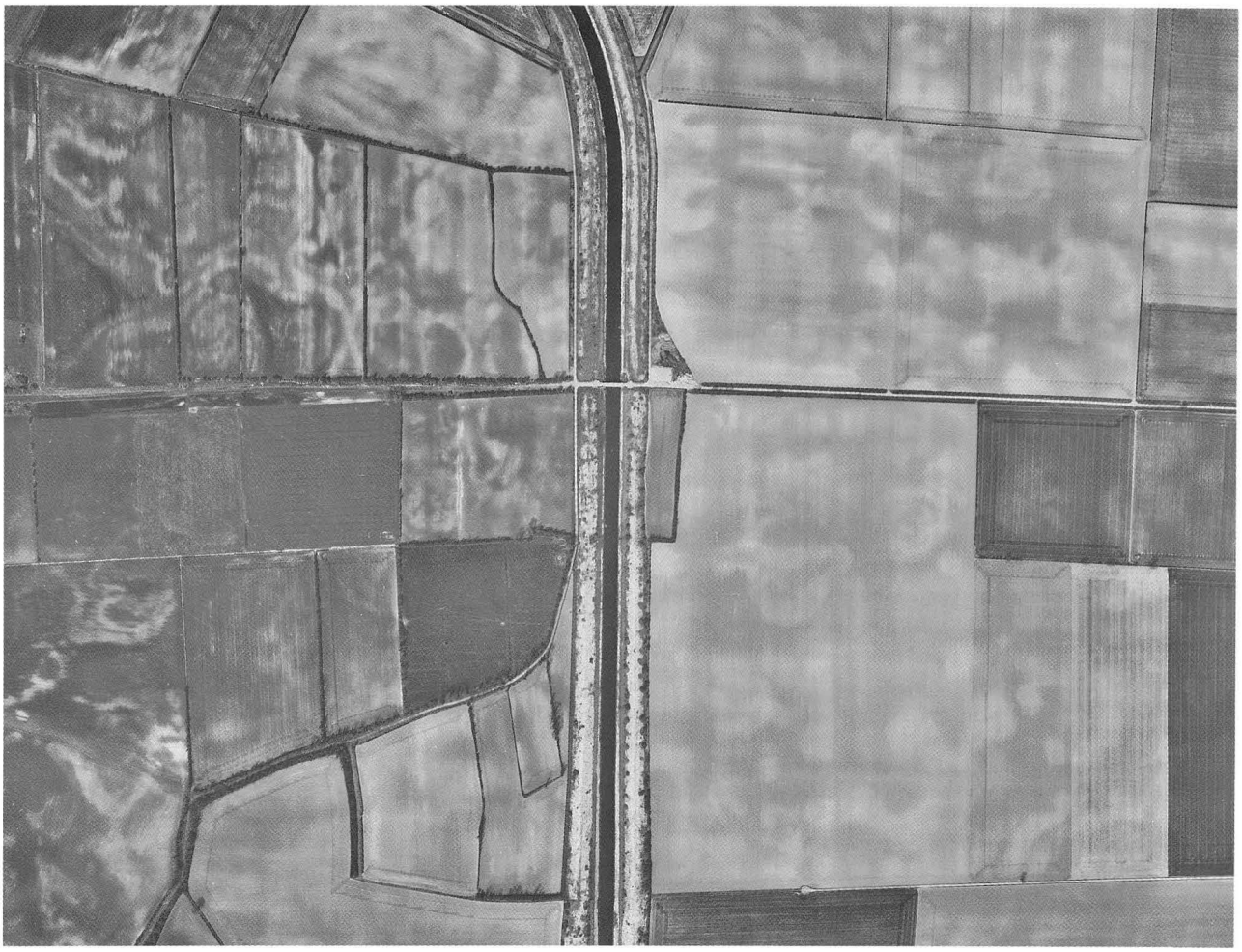

Plate I Feltwell: skirtland around Little Oulsham Drove, the mineral soil exposures showing as lighter marks against the darker peat. (RC8 EH150 *Cambridge University Collection: copyright reserved*)

During the Mesolithic and into the succeeding Earlier Neolithic the natural vegetation of the Fenland Basin remained relatively unchanged.Recent pollen analyses from a dyke beside the Cross Bank (TL 6683 9173) indicate that, prior to the development of peat, lime (*Tilia*) predominated, with hazel (*Corylus*), alder (*Alnus*) and oak (*Quercus*) also present, the last two becoming more significant as the watertable rose (Waller forthcoming). Streams meandered through the wooded landscape. Almost certainly, one flowed down the Feltwell valley and across the basin towards the Little Ouse, although its course, submerged beneath peat and fen clay, cannot be detected. Islands such as Shrubhill may just have shown as gentle rises in the forest canopy.

Against this background the limited traces of Mesolithic activity can be rapidly assessed. There are no well-defined lithic sites comparable to those in Methwold (see below, p.62). Instead, occasional diagnostic types and probably contemporary debitage occur in predominantly later collections such as FWL 27, FWL 32 and FWL 136. All of these sites are on skirtland ridges, except for one small scatter mixed with a 'pot-boiler' concentration (FWL 13) on an island near Brandon Bank.

Nevertheless, it would be misleading to maintain that these finds represent the sum total of Mesolithic activity, for there are a number of lithic concentrations that on technological criteria cannot be attributed more closely than to the Mesolithic or Earlier Neolithic periods. Five of these are what can be termed main-date concentrations (where a high proportion of the flintwork belongs to the period(s) in question); five others are secondary-date concentrations (where relevant, dateable material forms a minor component of the whole).

A certain patterning emerges when the distribution of these groups is examined. West of Whiteplot, FWL 53 together with two smaller spreads FWL 51 and FWL 72 suggests one focus of activity. Further south, on the northern lip of the Kettle Lane spur, two major concentrations (FWL 28 and FWL 31) are located on the same group of sandhills as FWL 29 and FWL 32 where material, specifically Mesolithic in origin, was recovered. Finally, at the mouth of the Feltwell valley FWL 113 occupies a ridge that also has two small Mesolithic scatters, FWL 78 and perhaps FWL 75. Only further examination can determine whether some or all of these are Mesolithic or later.

IV. The Earlier Neolithic

(Fig. 19)

Seven certain and seven probable main-date concentrations from Feltwell are attributable to the Earlier Neolithic, with only one secondary-date spread. When plotted, these tend to emphasise the existing foci. West of Whiteplot FWL 50, FWL 84 and FWL 90 enhance the impression of an area of Earlier Neolithic activity, with FWL 50 on the same sandy ridge as FWL 53; the

skirtland of the Kettle Lane spur shows evidence of at least four Earlier Neolithic sites (FWL 26, FWL 93, FWL 134 and FWL 136) in an arc spreading out from the earlier focus; and on the northern lip of the Feltwell valley, FWL 60 and FWL 76 reinforce the existing pattern. Other sites possibly of this period such as FWL 140, FWL 144 and FWL 150 show up in previously unoccupied areas of skirtland, and the distribution pattern of Early Neolithic activity implies a gradual expansion along the whole length of the upland edge.

Many of the more remarkable concentrations noted during the survey belong to this period. FWL 50 is a typical example, with two parallel ridges just showing through the peat. Both have spreads of flint and pottery and this material may well continue across the intervening hollow beneath the present layer of peat. FWL 136 is similar: parallel sandhills are covered with debris including Neolithic Bowl pottery (Fig. 69: P2, P3, P8 and P10) and material shows in the intervening peat hollow. It is unclear whether the latter derives from plough spreading or has been turned up from beneath the peat by the plough. Where the sand gives way to chalky loam on this ridge system, the amount of debris drops off dramatically. These two sites are representative of many such spreads on the ridges on the western side of the visible skirtland. Protected by peat until recently, the artefacts appear concentrated and friable pottery survives. Sites higher up on the skirtland have seen longer exposure and the material from them tends to be more dispersed. FWL 90, in this respect, is unusual: a flat 'plateau' of loam is covered with flint sufficiently dense over *c.*0.5ha to be readily definable.

There is virtually no trace of activity further to the west on the islands near the present Little Ouse. A 'pot-boiler' site (FWL 5) on a narrow sandy ridge yielded a group of flakes and blades which hint at a Mesolithic or Earlier Neolithic origin, but on this sort of evidence the scale of activity appears slight.

V. The Later Neolithic/Early Bronze Age
(Fig. 20)

The environment of this part of the Fenland Basin was altered by the continued gradual encroachment of the sea during later centuries. Peat growth was interrupted and the western part of the parish was submerged, leading to the deposition of fen clay. On Cross Bank (TL 6683 9173), close to the limit of the sedimentary deposits, the overlying and underlying peats were sampled for radiocarbon assay by Martyn Waller, the Fenland Project's palaeoenvironmentalist.

The transition between the basal peat and the fen clay was dated to 4135±70 BP [Q2548] (2875-2595 CAL.BC), that is in the earlier part of the Later Neolithic. The resumption of peat formation coincided, in very broad terms, with the conventional beginning of the Bronze Age, at 3815±70 BP [Q2551] (2420-2140 CAL.BC). Saltmarshes lay within two kilometres of the present fen edge and chalk uplands for a period of perhaps several hundred years, with open water only a little further away (Fig. 48). A zone of sedge fen and fen carr fringed the uplands and probably only in the Shrubhill area would peat formation have been more widespread. Further to the south-west, the islands in the vicinity of Brandon Bank must have been surrounded by saltmarsh and intertidal mudflats.

A cursory examination of the distribution map reveals that settlement and other activity during this period was widespread along the fen edge and fairly evenly distributed. There are gaps: around Little Oulsham Drove the recognised sites are 400m apart, while in the vicinity of Corkway Drove there is a dearth of settlement evidence over 600m of typical skirtland. Elsewhere, however, rarely more than one third of that distance separates identifiable foci of Late Neolithic/Early Bronze Age date.

The majority of some thirty-seven, main-date concentrations can be placed no more closely than the Late Neolithic or Early Bronze Age. There are also a number of subsidiary-date spreads of which four were defined primarily as 'pot-boiler' sites (FWL 13, FWL 37, FWL 44 and FWL 97).

Five concentrations (FWL 36, FWL 105, FWL 145, FWL 146 and FWL 192) may be Later Neolithic on the basis of oblique or chisel arrowheads (Fig. 63, L10-L11 from FWL 36) and the overall character of their technology, though one (FWL 146) was recorded in the field as a 'pot-boiler' spread and the amount of lithic material was meagre.

Several sites have a Beaker-period component indicated by either diagnostic worked flint (*e.g.* FWL 40, FWL 60 and FWL 72) or pottery (*e.g.* FWL 83 (Fig 69, P9) and FWL 142). Finally, Bronze Age activity proper is represented by lithic material on FWL 54 (which in the field was primarily identified as of Iron Age origin) and FWL 56.

Superficially there is not a great deal to distinguish many of these sites one from another, except in the quantity and density of material covering the surface. In some cases, as with FWL 32 and FWL 33 where only 20m divorces two discrete spreads of similarly dated material, rubbish spreads from a single settlement or activity area provide a plausible explanation. Whether the same is true of FWL 51, FWL 72 and FWL 89, all within 100m of each other, is more debatable.

One skirtland ridge of gravelly sand with occasional patches of clayey loam and about 300m long, epitomises a problem typical of the fen edge, namely the delimitation of discrete concentrations which are here termed sites. A lithic spread at the eastern end (FWL 79: Fig. 13) produced no closely datable material. Ten to fifteen metres of barren clay loam separated this from FWL 78, a Late Neolithic/Early Bronze Age site with worked flint and sparser 'pot-boilers'. A little beyond, FWL 75 covered about 80m with a fairly even spread of worked and fire-cracked flint, except for three very distinctive concentrations of 'pot-boilers', each about 10m in diameter. A modern drove separates FWL 75 from FWL 104, the 'pot-boilers' of which were intermixed with pockets of charcoal, freshly turned up by the plough. Next came FWL 107 which may well have been a composite site. Ninety metres long, it had pottery and flint at its eastern end and 'pot-boilers' in abundance at its western terminal. FWL 75, FWL 78 and FWL 107 are all main-date Late Neolithic/Early Bronze Age sites and it seems likely that they represent spreads of debris from a single settlement spread out along a favoured sand ridge. Fieldwork has identified these areas but only excavation can hope to demonstrate their nature.

Finally, FWL 189 deserves mention as the only site to be found on the gentle chalk slopes back from the fen. This was set in a slightly soily hollow and produced flints that were distinctive through their heavy cortication.

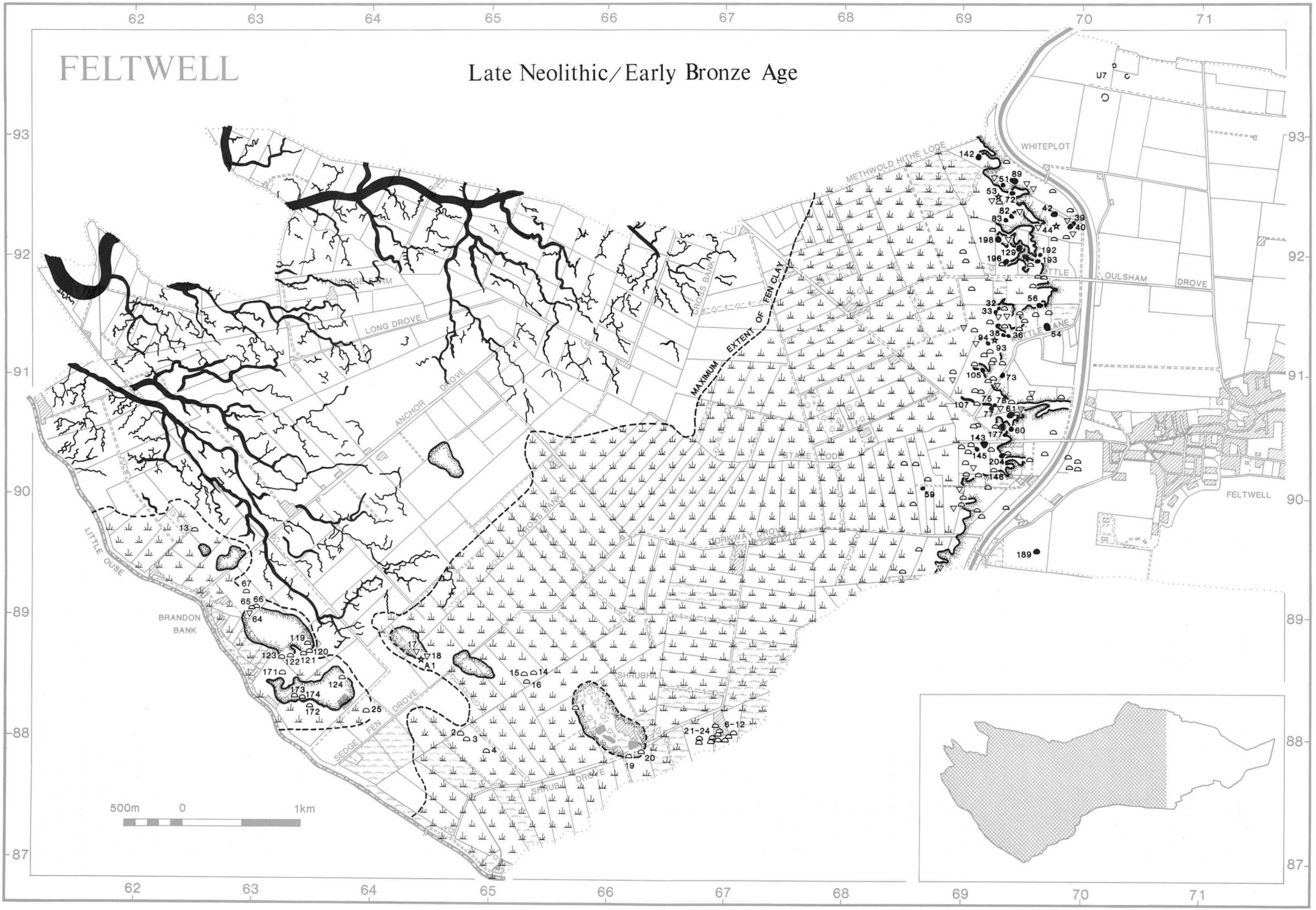

Figure 20 Feltwell: The Later Neolithic and Early Bronze Age landscape

There is a remarkable dearth of lithic scatters away from the fen edge. Shrubhill and the low ridges to the west produced only three 'pot-boiler' sites and the islands around Brandon Bank revealed a similar picture: some thirty 'pot-boiler' scatters were recognised and, apart from the occasional flints of Mesolithic or Earlier Neolithic date, FWL 13 alone had a small Later Neolithic/Early Bronze Age component. Flint concentrations came to light only on the island bisected by Cross Bank (see cover illustration). FWL 18, however, could not be attributed more closely than the Neolithic, and no date could be given to FWL 17. Further lithic material was recognised on the north side of the island at TL 6412 8894 and a complete stone axe, perhaps a Group VI product, was also recovered during the survey (FWL A1: Fig. 64, L20). There can be no doubt that many of these islands were visible in the third and second millennia BC, but perhaps this type of location, surrounded by water and mudflats, was more attractive for hunting forays than for longer term settlement.

The 'pot-boiler' sites discovered in Feltwell and the other embayment parishes are generally undatable; it has to be assumed that the few worked flints found mixed in with the numerous fragments of grey, fire-crazed flint are part of the general background scatter of lithic material on the skirtland, unless there is convincing evidence to the contrary.

Feltwell produced 110 'pot-boiler' sites, and not included in this figure is a conglomeration of very small scatters across the eastern slopes of the clay-loam island at the bottom of Sedgefen Drove. FWL 124 subsumes fourteen small spreads altogether, ranging in size from 0.01 to 0.04ha. Others, because of their size, may have been overlooked during transect walking.

Seventy percent of the 110 sites were between 0.01 and 0.06ha in area. Many were isolated spreads, but in some instances, several were closely grouped. East of Shrubhill, for instance, at least eighteen patches were recognised on ridges just showing through the peat. (As the Feltwell/Hockwold boundary bisects this field some of these sites are recorded in the Hockwold gazetteer). A preference for the sandier ridges could be detected. FWL 11 lay on a patch of sand sandwiched between chalk loam, while HCW 15 and HCW 16 in this complex were separated by less than 10m of barren loam. Only in a couple of cases did a spread of 'pot boilers' run over onto chalky loam soil.

In spite of this large number of sites, only four 'pot-boiler' mounds were recognised. FWL 171 is a classic site with a low mound no more than 0.2m high protruding above a plateau of peat-covered sandy soil, but with such a density of cracked flint fragments that as a feature it was visible from 50m away. The other three mounds (FWL 131, FWL 133 and FWL 139) all showed up as obvious swellings on ridges at the western extremes of the skirtland.

A group of three ring ditches on the upland slopes close to the Methwold boundary (FWL U6) adds an extra dimension to the record. These are presumably the remnants of Bronze Age barrows and it is probably no coincidence that they lie on, or close to, a gently sloping chalk spur overlooking the fen. On the skirtland, a single low mound of chalky loam (FWL 177) is sufficiently regular in shape with a distinctive peat-filled 'ditch' to be claimed as a barrow. A dense spread of 'pot-boilers' (FWL 176) smothers its western side.

VI. The Iron Age

(Fig. 21)

Our concept of the location and nature of human settlement in the Iron Age and in succeeding periods has to take account of the proximity and ubiquity of the wetlands. During the second half of the first millennium BC the pattern of settlement becomes discernible through a series of sites along the fen edge. Excavations were conducted on two sites prior to the commencement of the survey. A putative Iron Age ditch was found beneath the Roman bath-house, north of Little Oulsham Drove in 1962 (Gurney 1986, 9; FWL U2), and Iron Age pottery was encountered in trial pits beneath the adjacent villa (FWL U1) in 1964. No attempt, however, was made to determine whether features of Iron Age date lay beneath the villa (Gurney 1986, 4). Reinforced by occasional sherds from fields to the north found during the present survey, the argument for Iron Age occupation in the vicinity is, nevertheless, a strong one. Gurney has tentatively attributed the pottery to the third and second centuries BC (1986, 28).

The construction of the Cut-off Channel between 1960 and 1964 destroyed part of the Little Oulsham bath-house and may well have removed traces of other Iron Age and Roman sites or sealed them permanently beneath flood banks. FWL 201 is represented by a few sherds of pottery of both periods on a low, natural ridge of chalk adjacent to the east bank of the Cut-off Channel, and a track beside the west bank of the channel must cover part of FWL 141.

The second site to be excavated was FWL 110. Frank Curtis collected considerable quantities of pottery from here after permanent pasture was ploughed up in 1961, and in the following year he excavated a house site. Another was examined briefly by a Norfolk Research Committee team sent out by Rainbird Clarke. These excavations were never published, but a recent undergraduate dissertation offers a study of the artefactual material and what little structural evidence was detected (Shand 1985). The only trace of a house structure seems, in fact, to have been a chalk floor that had been disturbed by the plough. Fieldwork and excavation yielded a weaving comb, a decorated bone handle and several spindle whorls, in addition to copious pottery. Shand (1985) has dated this material to the fifth to third centuries BC.

The present field survey of FWL 110 showed at least three areas of darker soil where pottery was particularly dense, together with some flint lumps and burnt pebbles. This material spread across a large area on the southern slopes of the Kettle Lane spur, overlooking the entry of the Feltwell valley into the fen. A scatter of Iron Age pottery (FWL U3) was found adjacent to the course of the stream in the valley, but this location does not favour the presence of a permanent settlement.

Three spreads of pottery (FWL 54, FWL 70 and FWL 71) on the north side of the Kettle Lane spur imply extensive activity in the Iron Age. On none of these was material noticeably dense, but of all the Iron Age sites along the Norfolk fen edge, these have the most potential. They all abut a field under permanent pasture (at TL 698 915) where the possibility of undisturbed Iron Age deposits must be high.

Several hundred metres away from the fen, on the upper slopes below the chalk plateau, Iron Age and Roman material (FWL 92) was spread sparsely over a

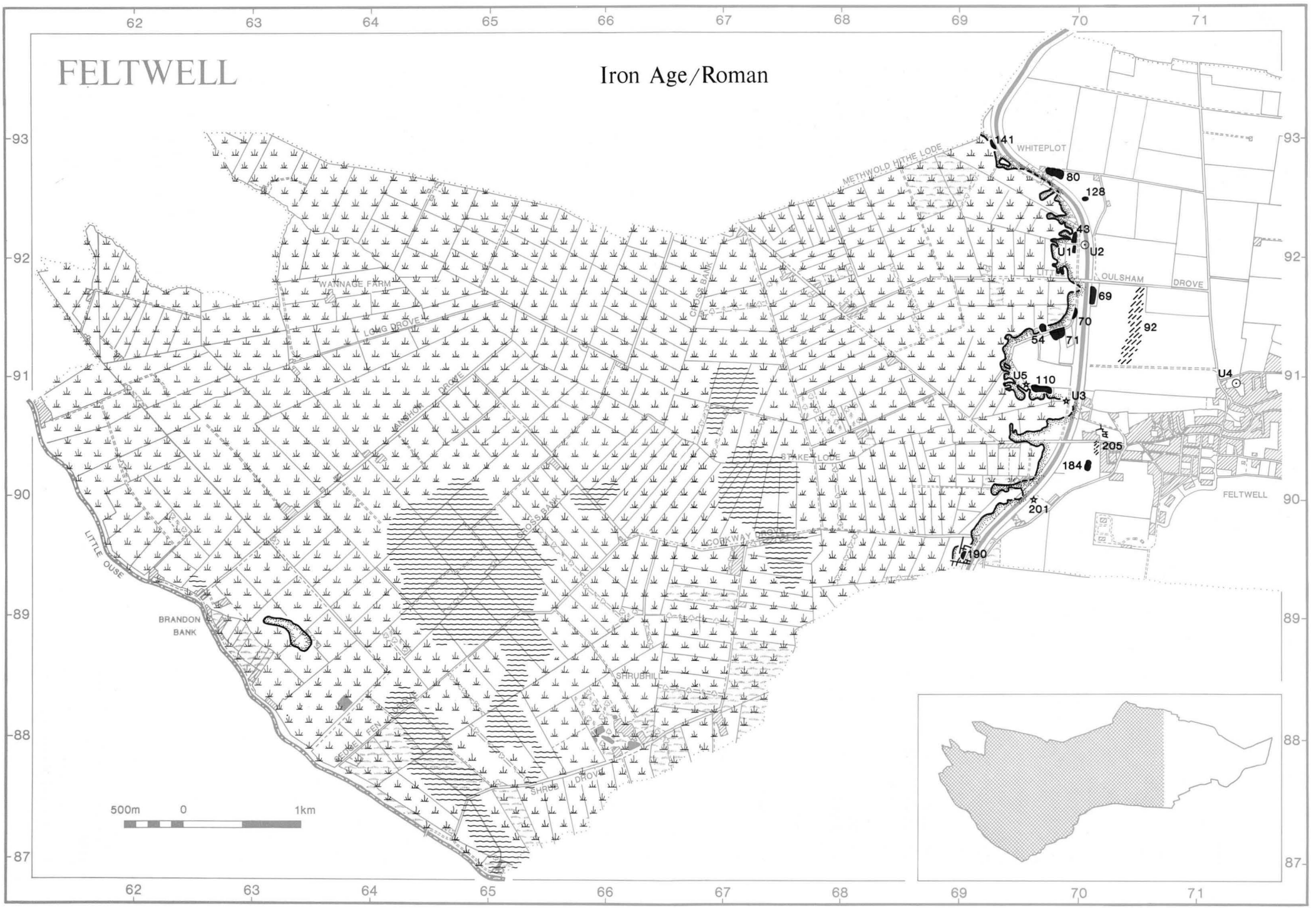

Figure 21 Feltwell: The Iron Age and Roman landscape

distance of some 600m. The field higher up the slope was not searched so the full extent of the spread cannot be determined, but it did appear to tail out towards the lower ground. Possibly an Iron Age site here has been so damaged by the plough that the normal methods of survey adopted by the Fenland Project were unable to detect it. Alternatively the focus of activity may have been higher up the slope.

A second site lying further back from the fen edge is not affected by such problems. FWL 184 is about 400m from the contemporary fen. Two patches of dark soil yielded reasonable quantities of Iron Age pottery, the area between producing fewer sherds. These lay on a very gentle slope in the centre of a modern field and there can be little doubt that here was a small farmstead in its entirety.

The distribution of Feltwell's Iron Age sites reveals a reasonably regular spacing along the fen edge, with some indication from FWL 184 and FWL 92 that further, as yet unidentified, settlements lie higher up the chalk hillside. A fully utilised landscape edging the Fens is suggested. Of most interest is the Kettle Lane spur. This upland ridge projecting into the fen was clearly a favoured location with substantial activity on both the northern and southern slopes; but the absence of material on the top of the spur reinforces the impression that proximity to the contemporary fen edge was a particularly important factor in the location of settlement.

VII. The Roman Period

(Fig. 21; Pls II, III)

The framework of the Roman settlement pattern along the Feltwell fen edge was well-established before the Fenland Project was initiated. Frank Curtis's role in assembling material of prehistoric date has already been referred to above (p.5); his activity on Roman sites in the locality was no less considerable. Such was the scale of Curtis's work in Feltwell, that it is possible to combine his results with the findings of the survey in an integrated assessment. Metal detector finds in recent years have also added to the overall picture, although their relevance to the general settlement pattern is less significant.

Curtis claimed to have found Roman pottery in an ill-defined area near the Methwold boundary, several hundred metres north-west of Whiteplot (SMR no. 5207). The present writer was unable to confirm this discovery, but it should not be dismissed altogether. No more than 300m away, on the opposite side of the Cut-off Channel, the Iron Age site (FWL 141) produced several Roman sherds and a couple more came from further out into the fen. Possibly the intensity of search on FWL 141 yielded a disproportionate number of later sherds from a manuring scatter associated with the Whiteplot settlement (FWL 80), but it is perhaps more likely that all traces of some local Roman activity, admittedly on a small scale, have been masked or obliterated by the Cut-off Channel.

Ernest Greenfield in 1962 noted fourth-century pottery and lava quern fragments (SMR no. 5206), some 300m to the east of Whiteplot Farm. Two concentrations of material can now be defined in this field: FWL 80, attributable to the third to fourth centuries, and FWL 128, covering the second and third centuries. Tile fragments on the former imply a masonry building, and sherds in the field beyond the Cut-off Channel indicate the general spread of material down towards the fen.

Four hundred metres separates FWL 128 from the villa (FWL U1) excavated by Greenfield in 1964. The Little Oulsham villa (though strictly speaking in the area known as Great Oulsham) is visible both from the air as a soilmark and on the ground as a perceptible platform. It was of simple corridor type with a range of five rooms (Gurney 1986, fig. 6). Material from it no doubt spreads into the surrounding field, though this was not examined during the survey, and there is a very obvious concentration of debris to the north (FWL 43). The associated bath-house was also excavated by Greenfield (in 1962) and part of it was destroyed in the construction of the Cut-off Channel (FWL U2; Gurney 1986, fig.10).

Another tiled building lay 400m to the south and this, too, must have suffered during the digging of the Channel. Excavations by Curtis in 1958 and by the curator of King's Lynn museum in 1960 yielded pottery, tile, part of a tiled floor, a pewter bowl and animal bone. Assuming that the recorded grid references are correct, the excavation took place on ground later covered by the Cut-off Channel bank. Fieldwork in the adjacent strip of land produced fourth-century pottery (FWL 69), and there is a record of Roman pottery coming from a trial hole dug by Curtis in the pasture field beyond the Channel.

A scatter of Roman sherds mixed in with the Iron Age pottery of FWL 92 reveals activity upslope. These fragments, perhaps from manuring, may indicate the arable fields of the FWL 69 settlement; alternatively they could derive from another Roman villa at Glebe Farm on the northern edge of Feltwell village (FWL U4). Traces of buildings and occupation there have been recorded over a distance of some 300m (Gregory 1982, 369) and include another bath-house examined by Curtis in 1964.

A Roman building was recorded on the south side of the Kettle Lane spur in 1960/61, only a short distance from the Iron Age site, FWL 110. Two local archaeologists independently reported finds that included masonry, tiles, pottery and metalwork (FWL U5). Curiously, though Roman pottery was scattered sparsely on the top of the spur, the writer found no traces of this site, and further work is required to confirm its existence.

Higher up and on the south side of the Feltwell valley, there was a thin scatter of pottery (FWL 205) in the vicinity of a rectangular building of flint on chalk foundations excavated by Curtis in 1964. Two years previously, on the opposite side of the Feltwell/Southery road, a system of rectilinear, ditched enclosures had been noted and Curtis's trial digging produced Roman pottery and coins. These enclosures can still be detected as cropmarks from the air (Fig. 52c). Other cropmarks on the south side of the road are more enigmatic and some are certainly no earlier than the medieval period.

Occasional sherds of Roman pottery were recovered in a scatter of Iron Age material (FWL 201), but the next well-defined Roman settlement consists of another network of rectilinear but irregular enclosures, partially truncated by the Cut-off Channel (FWL 190: Fig.52b; Pls II and III). These still showed as earthworks when Curtis excavated Roman pottery and bone in 1960 and 1961, and a year later Colonel Kelly of the United States Air Force investigated one of the enclosures, finding pits and more speculatively a wattle and daub structure within one of the enclosures. Pottery of the earlier second century was located but most of the material was of third and fourth-century date. The remaining earthworks have since

Plate II Feltwell: the earthworks of a Romano-British field system (FWL 190) disturbed by trial excavations for the Cut-off Channel. (ADT 64 *Cambridge University Collection: copyright reserved*)

Plate III Feltwell: the Romano-British field system (FWL 190) after the construction of the Cut-off Channel and after the remaining pasture had been turned over to arable. (AHO 95 *Cambridge University Collection: copyright reserved*)

been levelled, but a spread of Roman material covers the eastern side of the field that edges the Cut-off Channel.

An overall pattern emerges of regularly spaced buildings along the fen edge. Other than where the Kettle Lane spur projects into the fen, there is normally an interval of 500-600m between sites, though of course there can be no certainty that all of the settlements were in contemporary use.

VIII. The Saxon Period

(Fig. 22)

There are tantalising glimpses of Early Saxon activity along the Feltwell fen edge, but sadly nothing to provide a firm base. A Germanic sword of earlier fifth-century date was found in the hypocaust beneath the tepidarium of the Little Oulsham bath-house (FWL U2; Gurney 1986, 32). Several Early Saxon finds have been claimed over the years along the northern edge of the Feltwell valley, but the only artefact of unequivocal relevance is a bronze cruciform brooch associated with Iron Age or Early Saxon sherds (FWL A2). Uncertainty surrounds the dating of a loomweight which has in the past been attributed to this period (SMR no. 5216), and a shield with iron boss (SMR no. 5179). Other objects such as a spindle whorl fashioned from a sherd of Roman pottery (SMR no. 5272) and a fragment of a bone comb (SMR no. 5197/c6) could be as equally at home in a Roman context as in an Early Saxon one.

Nothing is known of Middle and Late Saxon Feltwell and we must assume that the present village holds the key. The name first occurs as *Feltewelle* in an Ely charter of *c.* 1030 (Hart 1966, 82) and probably combines a plant name with Old English *wella* meaning spring (Ekwall 1960, 177), a suitable term for the village at the head of the valley.

IX. The Medieval Period

(Fig. 22)

The Saxon and medieval periods witness a complete change in fen utilisation from that of earlier periods. Previously, farmsteads or larger settlement units had developed within a very short distance of the contemporary fen edge; by the Late Saxon era this had changed and the resources of the fen were exploited from a distance.

The present survey did not extend over the upland to incorporate the environs of the built-up area and the picture of medieval Feltwell is dependent on standing buildings, earthworks and written records. The village boasts two parish churches: St Nicholas's, at the west end, which was vested in the Redundant Churches Fund in 1976; and St Mary's, in the centre of the village. A moated enclosure (FWL U6), also at the west end, is now completely surrounded by housing. Dug into in the 1960s, it produced pottery of the thirteenth to fourteenth centuries and traces of foundations. Aerial photography has revealed the earthworks of what may be fishponds about 300m to the east (SMR no. 24981).

Ely and the de Warenne family held manors in the village in the post-Conquest period (Blomefield 1805, ii,

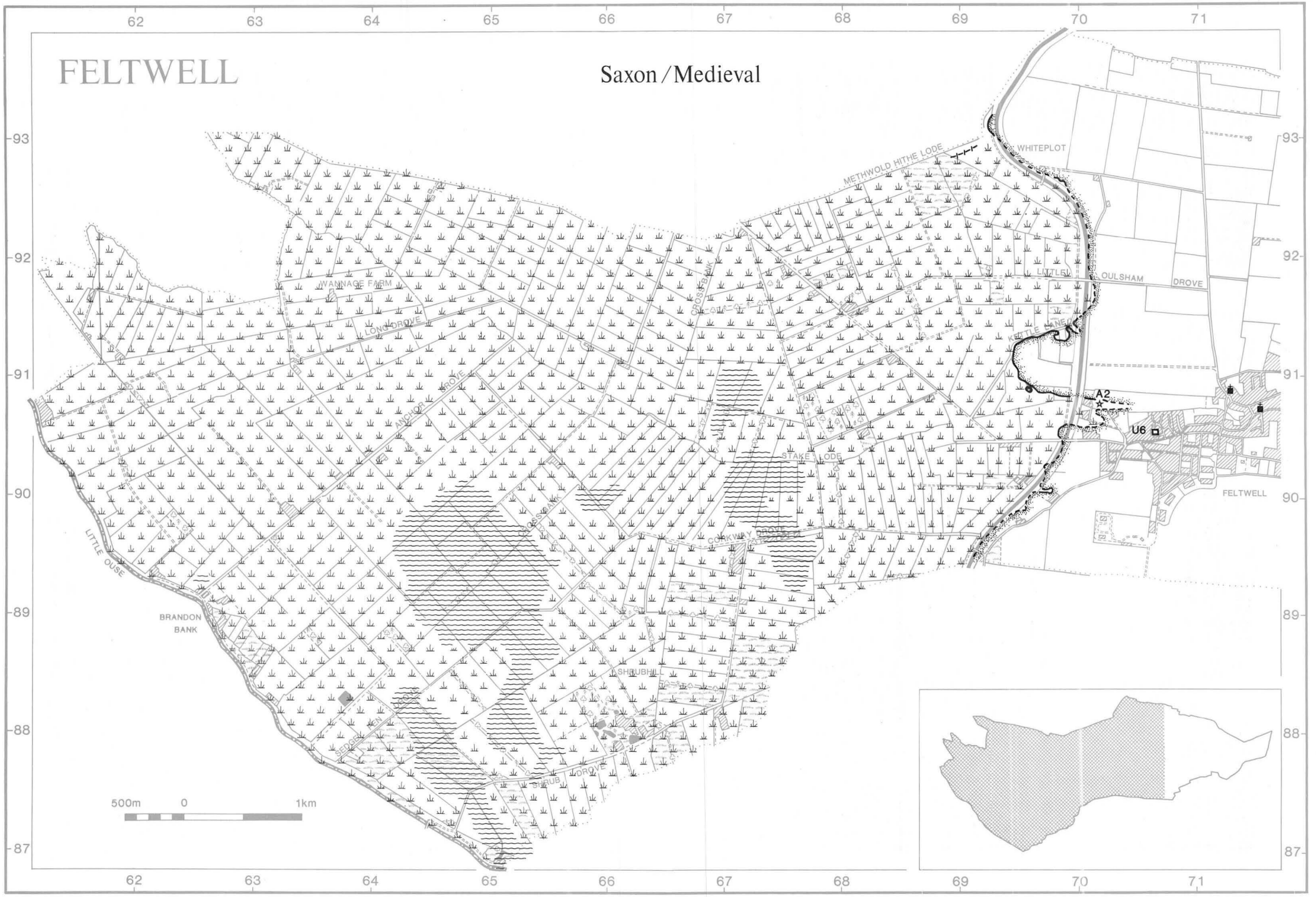

Figure 22 Feltwell: The Saxon and medieval landscape

187). This bland statement, however, disguises a complicated manorial history which must have had some effect on the fen and its utilisation. There is no direct evidence of medieval fen reclamation, but by the time of the Ordnance Survey mapping in the early nineteenth century, areas to the north and west of the Kettle Lane spur had been reclaimed under the names of Great and Little Oulsham. It is difficult to assess how far these go back, but in the skirtland fields on either side of the spur the occasional medieval sherd signifies some limited activity.

Further westwards, the fen changed little in the medieval period. Darby (1983, fig. 10, following Neilsen 1920) indicates that all the villages on the fen edge had intercommoning rights in this area. An extent of the Bishop of Ely's manor in 1277 (Blomefield 1805, ii, 188) offers a little more detail. A marsh called South Fen (see Fig. 75) was common to all the lords of Feltwell for feeding (*i.e.* grazing) and digging (for peat), but inhabitants of Hockwold and Wilton could only intercommon within certain bounds.

Another marsh called Northfen offered pasture and turf for Feltwell, but only pasture for Methwold. In the seventeenth century, North Fen lay between South Fen and the Methwold parish boundary (Fig. 75), but in the later thirteenth century, the statement that these conditions did not apply to an area between Slevesholm (see p.00) and *Totesholm* which is otherwise unknown, seems to imply that Northfen ran into what is now Methwold. Confirmation comes from a statement in the extent of 1277 that Earl John de Warenne had prevented turf digging between *Redlake* and *Wysenhe*. The former must be associated with Redmere in Suffolk, south of the Little Ouse; in 1347 it was described as a marsh belonging to Methwold and passed from the de Warenne family to the Duchy of Lancaster (Pugh 1953, 99). The latter is the River Wissey (Ekwall 1960, 526), which forms the northern boundary of Methwold and is several kilometres from Redmere. Together these references portray a large tract of fen which, though nominally divided between several parishes, was controlled by a single, powerful lord.

A further, admittedly post-medieval, reference to an otherwise unknown West Fen (White 1845, 393) confuses the picture, but does stress the marginal nature of much of this land. At the enclosure of 1815 the fuel allotment for the poor in West Fen was 360 acres, but this was under water throughout the winter and yielded little other than sedge.

3. Hilgay

I. Introduction
(Figs 23, 24)

There are numerous islands in the Norfolk Fens but only one of any size; this carries the two villages of Hilgay and Southery. The island portion of Hilgay, some 597ha, represents only a fraction of the whole parish which covers about 2759ha (HMSO 1982), and over 1700ha of Hilgay Fen stretch westwards from the River Great Ouse, as far as the Washes separating the Bedford Rivers. These peat levels have not been investigated during the present survey, but aerial photographs reveal that mineral soil exposes are rare and, consequently, it is considered that the return on fieldwork would be low.

The population of Hilgay is small. The 1981 census records 1123, most of whom live in the village itself. A subsidiary settlement has grown up at Ten Mile Bank around the sole bridge that spans the Great Ouse between Denver Sluice and Littleport (Cambs.), and there are isolated farms in Hilgay Fen. Hilgay village has developed on the north-west slope of the island, where the fen that divorces the island from the adjacent upland is at its narrowest. The houses cluster around the old A10 linking King's Lynn with Cambridge, but this road has been superseded by a new bypass which fringes the west side of the island.

South-east of the village, All Saints' church occupies the highest point in the parish and, some 800m beyond, Wood Hall sits in splendid isolation overlooking the southern part of the island. An E-shaped brick structure dating to 1579 (DOE 1985-87), it is the only secular building of merit in the area. In passing, however, we may note three farms, Rose Hill, Thistle Hill and Ash Hill on the east edge of the island, none of them now occupied but all probably reflecting a mid-nineteenth century movement to farm the fen edge.

A sharp contrast exists between the upland and fenland of the parish. The black lands are intensively cultivated on both sides of the Great Ouse and, beyond the eastern fringe of the island, rough pasture and plantations on the Wood Hall estate have been systematically cleared for arable over the last few years. Only the narrow strip of peat between the island's northern edge and the Wissey is now under grass. This area, shown on modern Ordnance Survey maps as Hilgay Fen, but known to H. Wandby (MS map of 1827) as Border Fen and earlier perhaps as Puttock Fen (see Appendix 4), consists of a multitude of small fields, some charity lands, others tenanted by local farmers, which are covered in coarse grass and scrub and are grazed by cattle and horses.

Land use on the island is mixed. Much of the steep western slope lies under grass, primarily because of potential drainage difficulties: the cultivation of one field was attempted a few years ago (B.Dent: pers. comm.), but this has now reverted to pasture. That Hilgay's medieval farmers were able to circumvent the drainage problem

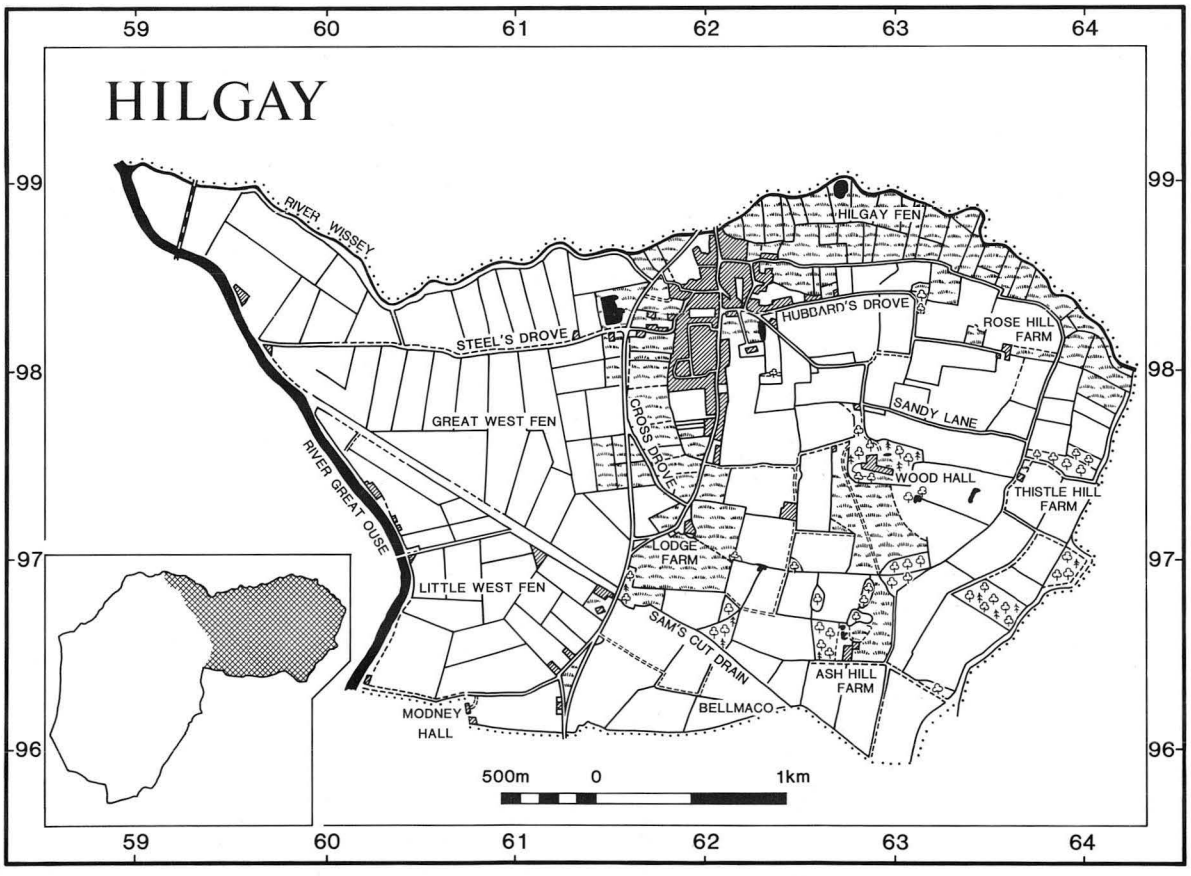

Figure 23 Hilgay: The modern landscape. Scale 1:40,000

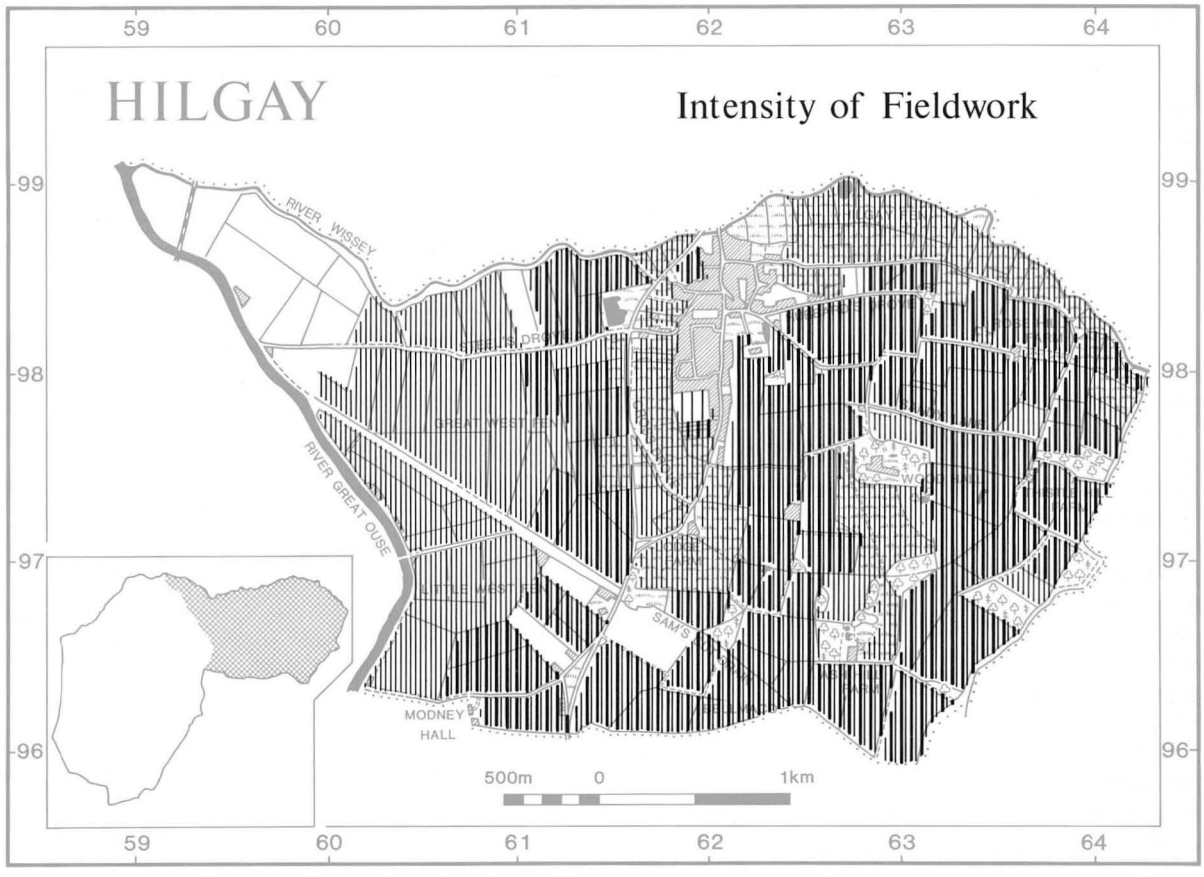

Figure 24 Hilgay: Fieldwork intensity

is clear from the well-preserved ridge and furrow on the hillside (see below). Pasture land also fronts Wood Hall, and the small woods and plantations on this part of the island highlight a purposely designed landscape whose history stretches back at least to the beginning of the nineteenth century (*cf.* H. Wandby's MS map of 1827).

In this rural setting, Hilgay's only non-agricultural industry, a haulage business, is tucked away out of sight on the edge of the village.

II. The Natural Landscape

Hilgay covers the northern portion of an island detached from the adjacent upland by a peat-filled channel 500m wide, now occupied by the River Wissey and the Cut-off Channel. Together with Ely, Littleport and Chatteris, the island is part of a discontinuous Kimmeridge Clay outcrop in the southern Fens (Chatwin 1961, 15). The Jurassic strata at its northern end are covered by the Lower Greensand of the Cretaceous System (Gallois 1979, fig.2); and overlying these rocks are glaciofluvial deposits, the outwash from ice sheets, which consist of a mixture of sand and siliceous stones, mainly flints (Soil Survey 1983; Hodge *et al.* 1984, 16). These give rise to deep well-drained sandy soils of the Newport 2 Association over much of Hilgay (Hodge *et al.* 1984, 272), but around the island fringes the mixture of peat and sand is classed either as the Isleham 2 Association or, where the peat is mixed with clayey and fine loamy soil, as the Peacock Association (Hodge *et al.* 1984, 231, 290).

The island has a flat-topped appearance, the crest of the ridge reaching about 16m OD at the western end where it is surmounted by the church, with Wood Hall at the opposite end just a little lower. The ground slopes gently southwards and at its south-western angle a narrow tongue of land, with Modney Hall on its edge, projects to link Hilgay with the Southery portion of the island. Early maps suggest that in the medieval period (and later) Hilgay and Southery were two separate islands and sometimes the Modney isthmus is shown as a further island. There is however no field evidence to prove that the island as a whole was once split up by waterlogged fen.

There are distinctive slopes down to the peat feature on all sides of the island. The eastern and western slopes are pronounced and below them the mineral soil shelves so gently beneath the peat that extensive tracts of skirtland are now becoming visible, particularly beyond the new bypass. Here the skirtland is noticeably flat, but on the other side of the island adjacent to Methwold, a pattern of hummocks and hollows, characteristic of the fen edge around the Wissey Embayment, is emerging. Where there is still a reasonable depth of peat, as along Steel's Drove in Great West Fen, the general height of the ground surface appears to be as low as −0.1m OD.

The Flandrian deposits in the eastern half of the parish consist almost entirely of peat, but small patches of marl are becoming visible near Ash Hill Farm, though there is no evidence to suggest that an extensive mere ever formed here. In more recent times, deposits of coarse, sandy sediment have collected along the edge of the Great Ouse as a result of periodic flooding.

III. The Prehistoric Period
(Fig. 25)

Hilgay's contribution to prehistoric fenland studies is modest when compared with the eastern fen edge of the embayment. The island should, in one sense, be seen as an extension of the nearby upland: from the time when an early valley of the Wissey, several miles to the north, was blocked with glacial debris (Gallois 1979, 28) until at least the later third millennium BC, the river flowed south of the island. As there appears to be no substantive evidence of an earlier river utilising the narrow strait between the island and the upland, a relatively easy passage from the west Norfolk hills, in the Mesolithic and early Neolithic, may be envisaged.

The island has, however, yielded few significant traces of early settlements. Most fields above the peat levels have provided a handful of worked flints, but the only discrete group of Late Neolithic or Early Bronze Age date (HLG 10) came from a sandy knoll overlooking a large inlet on the eastern side of the island. Other groups of lithic material, smaller and undatable, were recorded elsewhere on the island (*e.g.* HLG U2 and HLG U3) implying a degree of prehistoric activity that is difficult to define at this level of field survey.

'Pot-boiler' sites are relatively common, the raw material being provided by flint in the glaciofluvial drift. As with so many similar sites, these are undatable from fieldwork alone. Twelve concentrations were recorded around the island edge, but none from the central areas. Less dense spreads were apparent in several places, particularly on the slopes above the southern inlet and on hummocks of mineral soil emerging from the peat level on both sides of the boundary with Methwold. In two instances, HLG 12 and HLG 20, 'pot-boiler' concentrations were recorded on skirtland that was probably waterlogged by the Bronze Age.

Chance finds reveal a somewhat different picture. These are listed and discussed by Healy (forthcoming, a), but one feature that has a bearing on the prehistoric utilisation of the landscape is worth considering. Apart from a Beaker found in the mid-nineteenth century near Wood Hall, almost all of the Neolithic and Early Bronze Age artefacts that can be provenanced have come from the skirtland in Great and Little West Fens. One farmer has collected a pebble hammer, four or five flint axes and a copper alloy flat axe from three fields over the years. There is no reason to assume that this number of discoveries denotes a peculiarly fruitful patch of the skirtland, even though one of the three fields did produce a possible quern fragment (HLG A1) during the field survey; rather it points to an observant landholder. What is important is that on this evidence the skirtland area witnessed a fair amount of activity and perhaps some as yet undiscerned settlement, prior to the onset of waterlogging.

Figure 25 is a composite, showing sites derived from several periods of prehistoric activity. The fen edge is depicted as it might have been in the second millennium BC.

IV. The Iron Age
(Fig. 26)

The settlements of subsequent periods have to be recognised by their ceramic component and, for the later Bronze and Iron Ages, Hilgay has not proved particularly fruitful. There can be no doubt that the island was

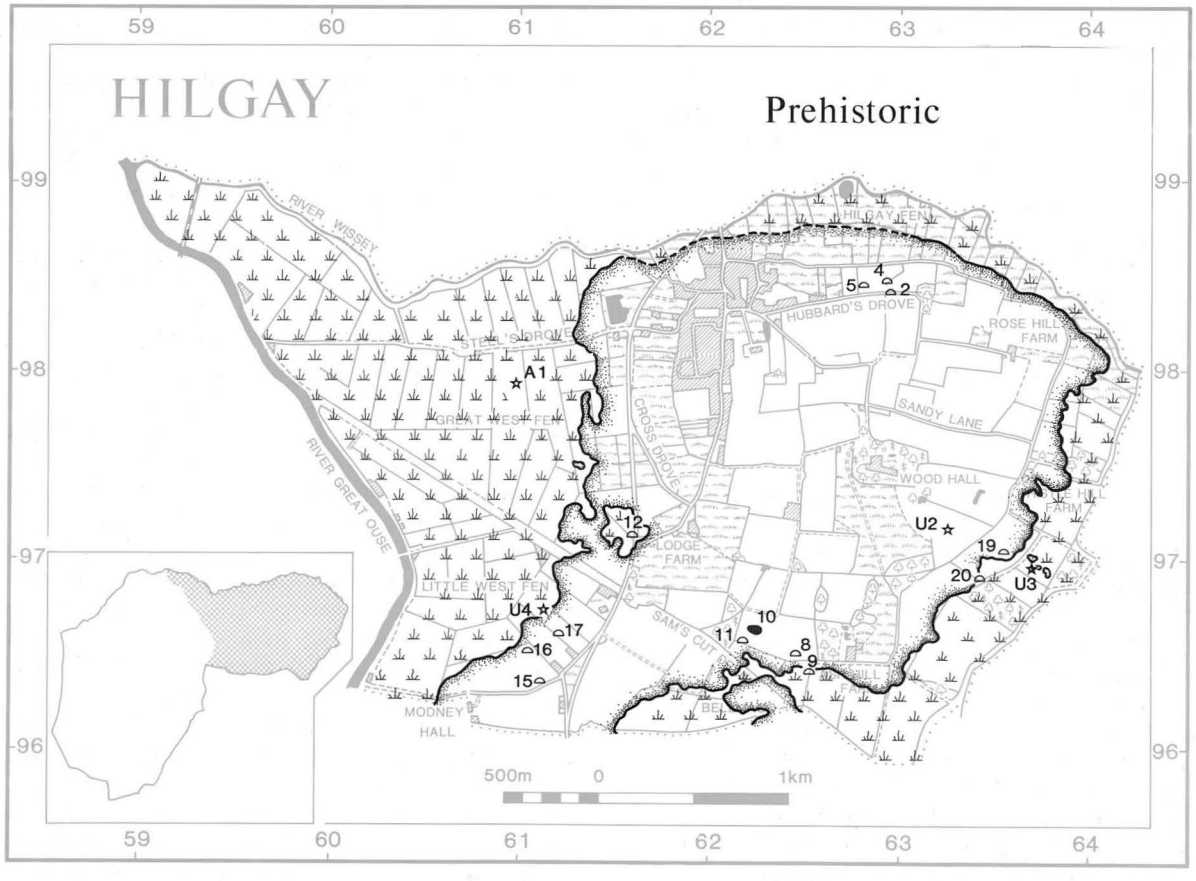

Figure 25 Hilgay: The prehistoric landscape

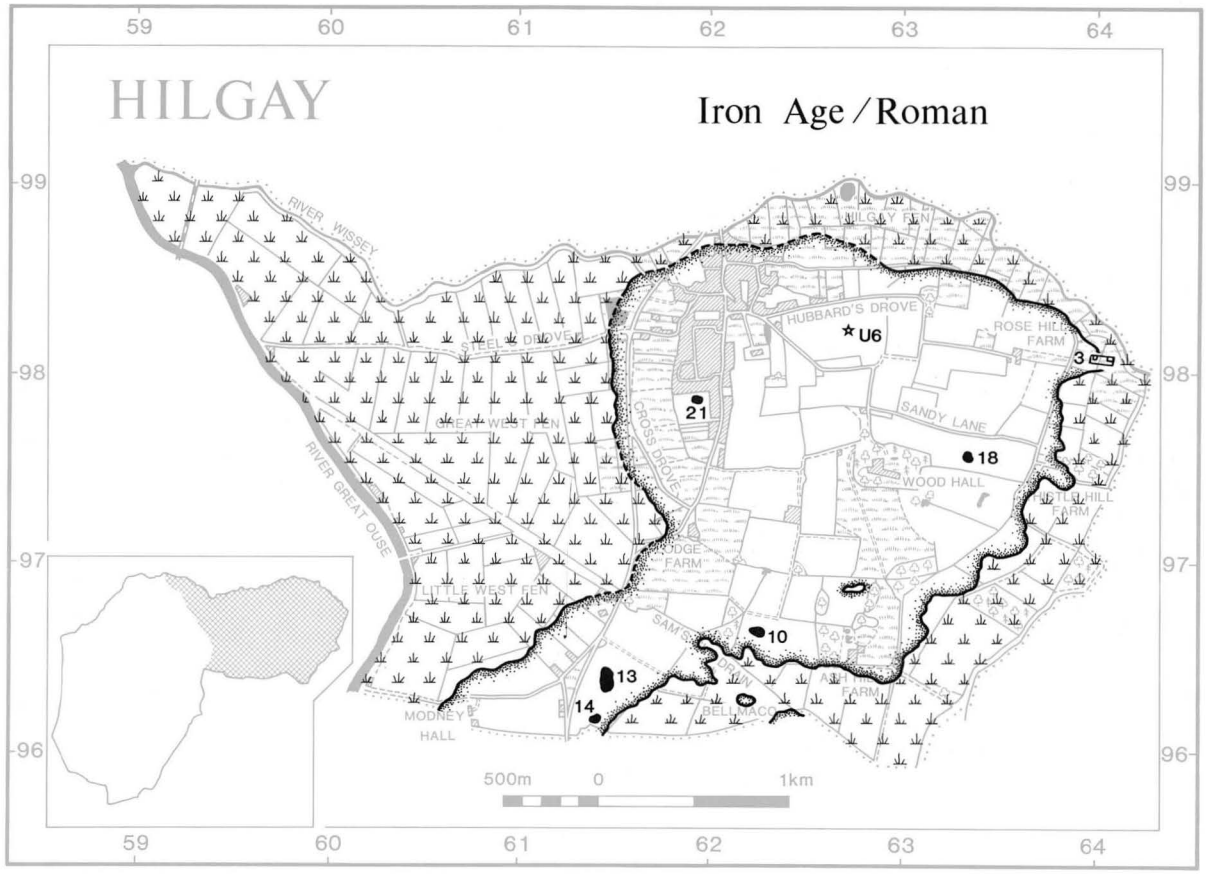

Figure 26 Hilgay: The Iron Age and Roman landscape

occupied in the first millennium BC, but the number of settlements appears to have been small. A sandy knoll, in addition to its Late Neolithic/Early Bronze Age flint scatter already referred to, produced a useful quantity of heavily-gritted pottery which should be Iron Age or perhaps Late Bronze Age in origin (HLG 10). Lithic and ceramic material were intermixed and it was no more than a subjective impression that the pottery was spread more widely than the earlier flint. A second Iron Age site (HLG 21) existed on the west side of the island overlooking the fen: the size of the pottery spread remains uncertain for fieldwalking conditions were poor.

V. The Roman Period

(Fig. 26)

The Roman era in Hilgay, as in neighbouring Southery, witnessed an expansion in the number of settlements on the island. The most important is HLG 3, not because of its original status but because of its present degree of preservation. Beyond the eastern slope of the island, the earthworks of a small farming settlement are preserved in poor pasture (Silvester, 1986b). These consist of two raised platforms (which presumably supported structures) set in enclosures, rectangular and square respectively (Fig. 52a). Attached to them are further paddocks or enclosures, all defined by shallow gullies, and to the east is a small detached enclosure, half of which is also raised.

Two small sub-circular ring-ditches are clearly associated with the farmstead. It has been argued elsewhere (Silvester, 1988b, 198) that these were stack-stands for drying hay and that as such they are a remarkably rare three-dimensional survival of the ring-ditches which are a familiar sight from the air as soilmarks in certain parts of the Fens (Wilson 1978; this volume, p.112). Mole activity over the site is intermittent, and apart from a single undiagnostic sherd from the detached enclosure, the putative building platforms produced no dating evidence. But 30m to the south on a slightly raised area, over thirty sherds dating to the later third/fourth centuries AD suggest that this might be a midden associated with the farmstead.

The location of the settlement, close to the fen and yet presumably sufficiently dry at the time of construction, implies a desire to exploit different environmental zones: the pastures and scrub of the skirtland in the east, the hillsides with their light soils for cultivation to the west. With the River Wissey on the north side, this spot would probably have been ideal initially, though in time it may have suffered from increasing waterlogging.

Two other Roman sites have been recognised. HLG 18 was a curiously indistinct spread of material, there was no obvious soil-staining and the material was diffuse rather than concentrated. It is possible that the site was rather larger than depicted on Fig. 26, for further sherds were found at a distance from the main spread. Much more obvious was HLG 13, an extensive spread of Roman pottery just below the crest of a sandy ridge, with HLG 14 sufficiently close to imply that the two were part of the same complex. The latter, though considerably smaller, appeared to have more tile fragments.

Mixed in with the Iron Age material of HLG 21 were several fragments of Roman pottery, while other sherds were found to the east of Hilgay village (HLG U6). Some sort of Roman settlement beneath the modern village

seems likely from this evidence, and is reinforced by the results from metal detecting in fields to the south of the church. These finds suggest two Romano-British farms sited close to the upland or, less likely, a single sizeable community beneath modern Hilgay.

The location of material in every case suggests that settlement developed on the slopes overlooking the fen. There were no traces of activity in the centre of the island and it seems evident that a position close to the fen was important economically. Whether there was a regular spacing of farmsteads (and therefore that a number still await discovery in presently inaccessible locations) is open to debate: on the Southery evidence it seems unlikely.

The Roman road known as Akeman Street (Norfolk SMR no. 24675) reputedly ran north-eastwards from Littleport (Cambs.) through the western part of Hilgay parish to the Norfolk uplands. Astbury (1970, 84) believed that the last section of solid metalling in Hilgay Fen was destroyed about 1947 in the vicinity of Cold Harbour Farm. There is no further evidence for the road and the fens west of the Great Ouse did not fall within the survey area. Nevertheless, if its presence could be demonstrated beyond reasonable doubt, the proximity of a major road could have had some influence on the location of settlement on the island.

VI. The Saxon Period

(Fig. 27)

Hilgay in the Saxon period remains a mystery. An undecorated vessel of Early Saxon type, together with an iron pin and an iron spearhead that had part of the wooden haft surviving, were disinterred in Hilgay churchyard in the last century (HLG A2). It is generally assumed that these objects accompanied an inhumation burial (Meaney 1964, 175). More recently in 1981 and 1983, metal-detector users recovered fragments of two small-long brooches from a field about 400m to the east of the church (HLG A3). Here the possibility of a cemetery seems strong, although no evidence of an Early Saxon presence was found during the field survey.

Later Saxon settlement can be postulated but not proved. The only substantive evidence is the place-name itself, incorporating the suffix *eg*, the Old English for 'island'. This appears first as *Hillingeiae* in the foundation charter of Ramsey Abbey supposedly dated to 974 (Ekwall 1960, 239). Unfortunately the charter is now considered to be largely spurious (Hart 1966, 79), and it is only a century later that *Domesday Book* provides categorically authentic forms. Nevertheless, a Saxon origin for the settlement seems assured.

VII. The Medieval Period

(Fig. 27; Pls IV, V)

Heavily restored in Victorian times, the fourteenth and fifteenth-century church of All Saints provides the focus, if not the centrepiece, of Hilgay village. The primary manor here in the Middle Ages belonged to Ramsey Abbey, and at the time of *Domesday* was credited with two carucates of land. Other monastic establishments including Ely and Bury St Edmunds, as well as William de Warenne, also held land in Hilgay. Altogether, *Domesday Book* has seven entries for the vill (Brown 1984). At some time Ramsey's manor became associated with the name Wood Hall. While the link between Snorehill —

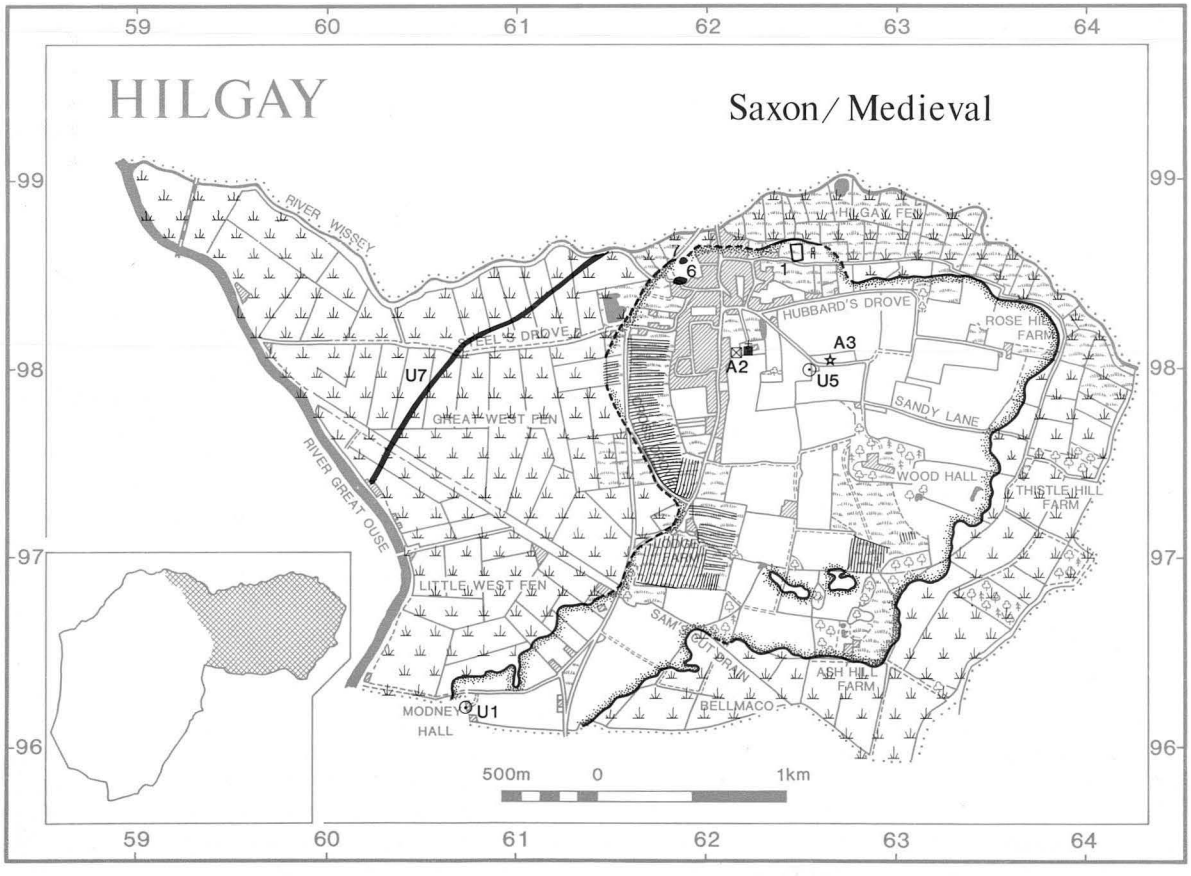

Figure 27 Hilgay: The Saxon and medieval landscape

Plate IV Hilgay: the moat and ancilliary features, east of the village, after flooding in 1959. (58/2676 F21 0233, taken 21.1.59. *Department of the Environment: copyright reserved*)

Snowre Hall, Fordham on the opposite side of the River Wissey — and Hilgay is well attested in the Middle Ages (see Raftis 1957, 83), Wood Hall does not figure in authoritative accounts of Ramsey Abbey and its estates (*e.g.* Hart and Lyons 1884-1894; Raftis 1957). We might assume from this that the association between Wood Hall and Ramsey emerged only after the abbey had ceased to control the manor.

There are particulars for a grant of the manor of Woodhawe in Hilgay to James and Henry Hawe dated to 1546/47 (Bryant 1904, 145), and Wood Hall itself appears on a map dated by the Public Record Office to *c.*1566 (see Appendix 5). This shows Southery and Hilgay, Modney Priory, and the Great Ouse and the Wissey. Hilgay is clearly the focal point of the map, Southery is relegated to one edge, and Hilgay church and Wood Hall are depicted as elaborate structures. Wood Hall sits in the centre of the map and is clearly named, indicating its existence in the third quarter of the sixteenth century. Almost certainly the house was built within the confiscated monastic estate, but the present Wood Hall is a Tudor structure said to have been built in 1579 so there is an inconsistency in the dating evidence. The earlier history of the site is lost to the fieldwalker because of the surrounding woodland and pasture; with its fine southerly aspect, however, there is a strong possibility that the site had seen earlier occupation.

Closer to the village and on the edge of the fen is an earthwork complex consisting of a large well-preserved moat, two smaller moats and several fish-ponds (HLG 1: Pl. IV). These presumably reflect the presence of a former manorial centre, but it would be rash to link this complex with Ramsey or any other manorial holding.

Most of the medieval dwellings of Hilgay must lie under the present village. One exception is HLG 6 where copious pottery fragments set in grey-stained soil lie next to a lane. The material includes Thetford Ware and may indicate an origin for the site in the Late Saxon period, continuing into the thirteenth century. Another spread of medieval pottery (HLG 7) in the same field is less easy to explain in settlement terms, for it must have been perilously close to the contemporary fen edge. Possibly this was rubbish dumped in the fen in the late twelfth and thirteenth centuries.

If there is little detectable of the medieval settlement, the fields associated with it are more in evidence. Hilgay has more extant ridge-and-furrow than any other parish in Norfolk, except for Stradsett near Downham Market (Silvester 1989). Along the steep western slope of the island, the sweep of the ridges is almost unbroken,

although in a few places modern cultivation has erased them. The ridges are less obvious in the vicinity of Lodge Farm (TL 6190 9717), but there are signs of headlands and of furlongs set at right angles to each other (Pl. V). Ridge and furrow is also evident in pasture south of Wood Hall, but here it is sporadic as a result of landscape changes associated with the hall.

Elsewhere, traces of medieval cultivation have disappeared except for plough headlands. Such banks are still visible as substantial ridges in the modern arable near the church and, while the presence of headlands does not necessarily confirm ridge-and-furrow formation, they are suggestive in this locality. It appears that much of Hilgay island was under open-field cultivation in the Middle Ages, but some of the land, may have been enclosed at a relatively early date, perhaps by Ramsey. The 1566 manuscript map shows four named enclosures or 'closes', and this contrasts with the depiction of unenclosed Southery.

Another feature of Hilgay's agricultural landscape, preserved in an angle between hedgebanks, is a mill-mound (HLG U5) beside the road from the village to Wood Hall. The Ordnance Survey noted this as a mound 25m by 15m in size and over 2m high with a loading ramp to the east. On modern maps it is still termed Mill Hill.

Fisheries were important too, in the Great Ouse and Wissey. An undated record notes that a fishery called *Poltsere*, yielding at least 1000 eels per year, was given by Alice de Cailli to Castleacre Priory, and the same religious house received 2000 eels per year from Ralph de Baliol (Blomefield 1807 vii, 370). Darby (1974, 30) has drawn attention to records of fisher-tenants of Ramsey, mentioning in particular Alfgar of Hilgay. The importance of fishing could be emphasised many times over and, in the more accessible documentary sources for Hilgay, fisheries are mentioned to the exclusion of virtually everything else.

Plate V Hilgay: ridge and furrow around the village, and medieval canals visible to the north and south of the River Wissey. (RC8 EB260 *Cambridge University Collection: copyright reserved*)

Modney Priory (HLG U1) lay in the extreme south of the parish on the boundary with Southery. Its position is marked by the modern Modney Hall, but no trace of the conventual buildings survive and fieldwork in the vicinity produced nothing of any relevance[1]; even medieval pottery was sparse. Historically very little is known of the Priory which was a Benedictine cell of Ramsey, founded sometime before 1291 (Cox 1906, 349). Nevertheless, its local importance should not be underestimated. An Inquisition of 1529 lists the people responsible for maintaining a drain between Upwell and Welney, possibly on or close to the line of the Old Croft River. Included on the list was the Prior of Modney (Wells 1830 ii, 11), thus implying that the cell had control of land some five miles away across the fen. It was also sufficiently important to justify mention in presentments to the 1549 Commission of Sewers who were then listing the liabilities of landholdings attached to former religious houses in the Fens (Darby 1956, 8).

Running for a distance of about 1.7km across Great and Little West Fens is a ridge of silt (HLG U7). One end abuts the bank of the Great Ouse and was for many years surmounted by the delightfully titled Egg Shell Hall, now a more prosaically-named farm. The silt at this point achieves a height of about 1.1m. The ridge becomes less obvious as it runs westwards, and in its central section is visible only as a faint soilmark from the air (Pl. V). As it nears the Wissey the ridge again shows clearly, running up to and presumably underneath the Wissey's flood bank. Its coarse yellow sediment is best explained as flood silt, and the fact that the ridge is most obvious at its terminals indicates that it was open to both rivers and effectively formed a link between them.

There can be little doubt that this was a canal offering a short cut for traffic plying between the two rivers. The only problem is its date. There are two other features of much the same appearance in this area; on the opposite side of the Wissey, a similar canal shows as a light band on aerial photographs, breaking off from the river and heading in the general direction of Fordham on the upland edge. *Fordhamhithe* is referred to in the Close Rolls of 1425 (Henry VI, Vol. I (1933), 202). Another canal is detectable in Southery parish (see p.78). In none of these cases is there intrinsic evidence for a date, but overall these waterways would seem to fit best within a medieval context.

End note

1. There are unsubstantiated observations in the Norfolk SMR concerning the religious house at Modney (no. 4459). Rainbird Clarke believed there might have been a moat on the south side of the modern buildings and a plinth on the north and west sides of the hall, with foundations to the north. The Ordnance Survey field investigators were unable to detect the plinth , but thought that there might be fifteenth-century work within the Hall. The 1566 map in the PRO shows a large and impressive but stylised building on the spot.

4. Hockwold cum Wilton

I. Introduction
(Figs 28, 29)

The contiguous villages of Hockwold and Wilton lie on the northern flank of the Little Ouse River, in the eastern sector of the parish bearing their name. The parish of 3104ha (HMSO 1982) ranges across three very different landscapes: the river valley in the south, the fens in the west and the chalk uplands to the north. The parish is bounded on the east by the Fossditch and the northern edge follows what are probably medieval land divisions across the Breckland (PRO map of 1607). Once into the fen, the course of Brown's Lode, a natural stream that has long since disappeared, forms the boundary as far west as the Little Ouse. Parish and county boundaries coincide along the course of the river, but near Clouds Farm (another feature now removed from the landscape) the boundary follows not the present Little Ouse but the roddon of its prehistoric predecessor, towards Shippea Hill (Cambs.), returning to the present Little Ouse to create a salient of less than two hundred hectares. This line is a modern adaptation. The county boundary did not pick up the present Little Ouse until the nineteenth century, but followed a parallel natural stream some 500 – 1000m to the south-west of the river (see Appendix 4). The salient already referred to adds a further complication for it was part of the ecclesiastical parish of Lakenheath (Suffolk) in the mid-nineteenth century.

The original aim of the survey was to examine the skirtland along the Little Ouse eastwards as far as the edge of Hockwold cum Wilton village, henceforward referred to simply as Hockwold. Several years previously, however, Tony Gregory, then a field officer with the Norfolk Archaeological Unit, had instigated a more detailed, gridded survey of the valley bottom and the slopes above. The completion of the earlier survey seemed imminent at the time that the writer was working in Hockwold and there was nothing to be gained from duplicating Gregory's work. For that reason the present survey focused on the area west of where the valley opened into the fen (*i.e.* at O.S easting TL 691). Unfortunately, there now appears to be little likelihood that Gregory's findings will be prepared for publication in the forseeable future. This report, then, covers only the peat fen and a few of the adjacent upland fields between Whitedyke and Blackdyke Farms, the only occupied farmhouses in the survey area.

Almost all of the land is arable. There are some pasture fields associated with the farms at Whitedyke and Shrubhill (Feltwell), but with few exceptions this grassland is laid down on a rotational basis. Tree belts and coverts are maintained primarily for pheasants.

II. The Natural Landscape

Gault and Lower Chalk underlie the Flandrian deposits beneath this part of the Fenland Basin. The chalk rises in the east to form the upland plateau at *c.*15m – 20m OD: Hockwold village sits on the lower slopes. The Gault outcrops only once, on a narrow island shared with Littleport (Cambs.), in the salient south of the present Little Ouse (Gallois 1988, fig.2). The soils there were placed within the Peacock Series by Seale (1975, 146).

The ground drops gently from the chalk plateau to the skirtland beyond Blackdyke and Whitedyke Farms. Consisting of numerous ridges of sand and loam protruding through the peat, the skirtland is typical of the late-Pleistocene 'hummock and hollow' landscape of the district (Gallois 1988, 72). The vertical height from hollow to ridge top can be quite dramatic through peat wastage, in places over 1.5m, although cultivation tends to smooth out the more pronounced slopes. This zone is visible for more than 1800m into the fen along Blackdyke Drove, and a little to the south it coalesces with sandy deposits where the Little Ouse valley enters the Fenland Basin.

Eastwards along the valley, similar hummocky ground incorporates residual peat, the sand being continuous with the chalk-sand drift of the Breckland (Seale 1975, 18). The peat soils are classed within the Adventurers' Series (Seale 1975, 181). Occasionally they still achieve a depth of over one metre, particularly close to the river itself, but more often the depth is considerably less (Burton and Hodgson 1987, fig. 7).

Peat is virtually continuous in the western part of the parish, though other features intrude. The most obvious of these is the earlier course of the River Little Ouse, now showing as a ridge well over a metre high. In its lower stages this feature has frequently been cited as a classic example of the roddon phenomenon (Astbury 1970, pls 36-38; Seale 1975, pl. 1). The formation and development of this watercourse is of some complexity (Seale 1979) and need not concern us here, except to note that fen clay deposits have been detected as far upstream as the Cloud Drove/Cowles Drove junction (Seale 1975, map in end pocket).

On the Suffolk side of the roddon is Redmere, in its time one of the largest lakes in England and now visible as an expanse of shell marl (Fowler 1947), while on the northern side are a series of sandhills and ridges, part of an early river-terrace system (Seale 1975, 19). Some of these ridges are small and only just emerging through the peat. Others are considerably larger: the sandhill south-west of Clouds Drove, for example, covers about 5ha and is well over a metre above the surrounding peat.

III. The Mesolithic Period
(Fig. 30; Pl. VI)

Peat growth in the early Flandrian was restricted to the channels of streams and rivers such as the River Little Ouse, which ran westwards to link into the river system that ultimately drained into the Wash through what is now termed the Wisbech outfall. The sandhills beside this river attracted Mesolithic groups.

The potential significance of the Shippea Hill sandhill in Littleport was recognised more than half a century ago by the nascent Fenland Research Committee. Excavations of Mesolithic and Neolithic levels there did

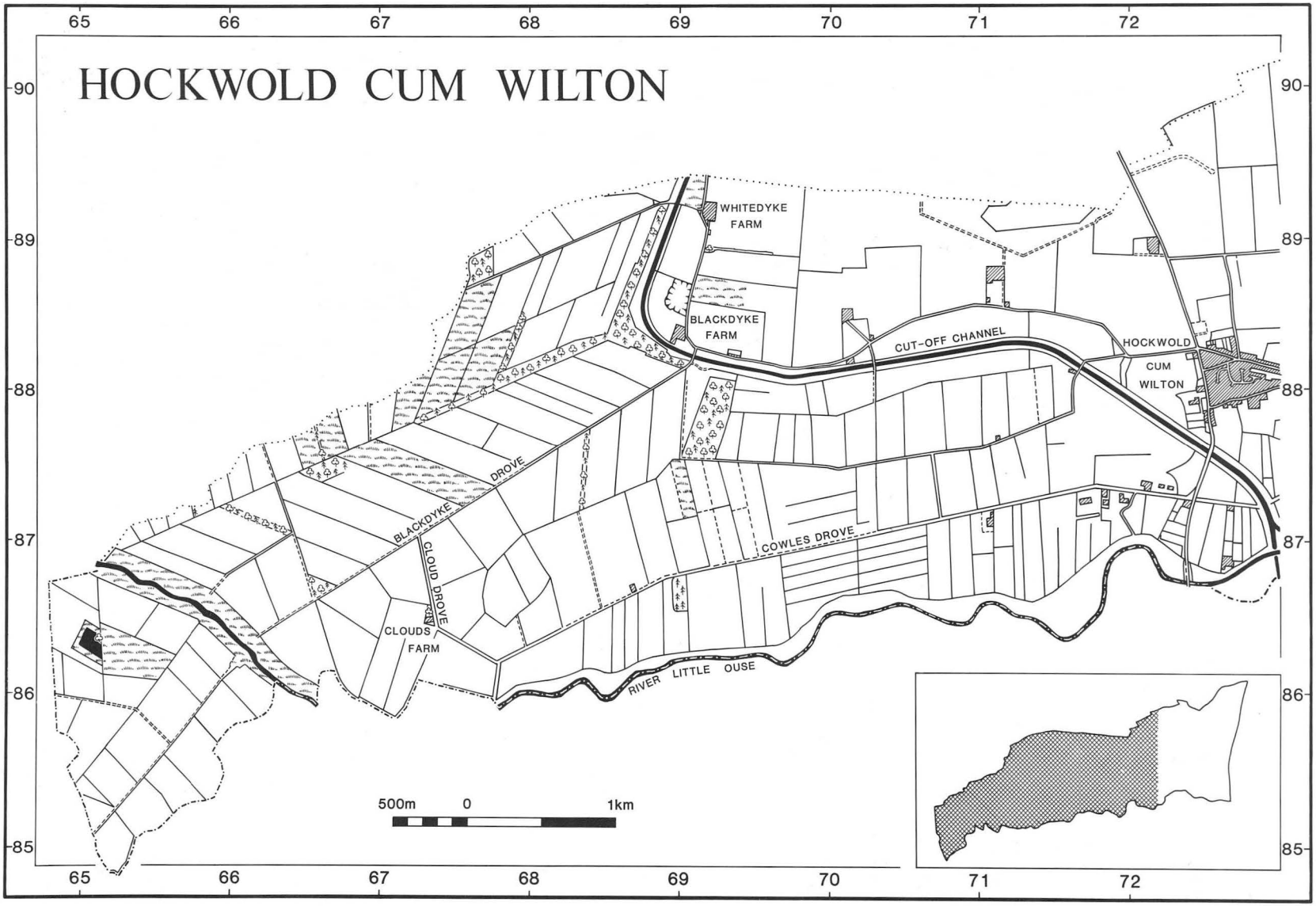

Figure 28 Hockwold: The modern landscape. Scale 1:40,000

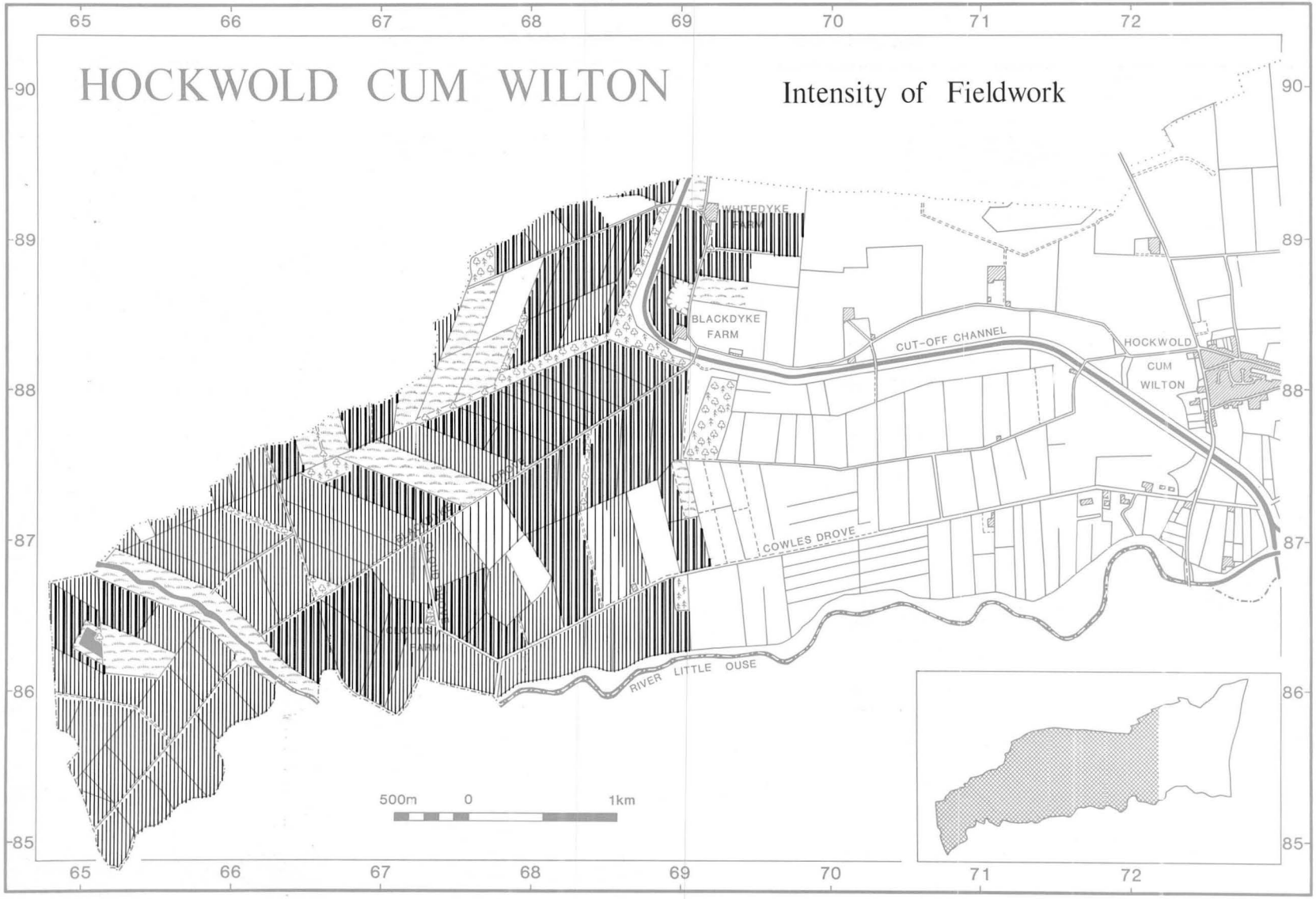

Figure 29 Hockwold: Fieldwork intensity

much to further understanding of fenland stratigraphy. It is not clear from the published reports (Clark 1933; Clark *et al.* 1935; Clark and Godwin 1962) whether the Committee was aware of similar features further eastwards — it is perhaps unlikely. Yet a whole series do exist on the Norfolk side of the river and virtually every one was frequented during the Mesolithic era.

The most thoroughly studied is a linear ridge termed here the Decoy Farm sandhill (HCW 18) which runs at an angle to the ancient course of the river. After an initial investigation in 1984, all the material on its surface was systematically recorded using a five-metre grid in 1985. The results were published in *Fenland Research* 3, and are reprinted here in amended form (Appendix 2). The detailed survey revealed a spread of Mesolithic material along the length of the ridge and, as there is aerial photographic evidence to demonstrate that the ridge continues as a peat-covered feature into the next field, the full extent of contemporary activity may not yet have come to light.

The most impressive of the Norfolk sandhills lies one kilometre to the north-east and shows as a wide expanse of clean sand, with the edge closest to the river sloping down steeply into the peat (Pl. VI). Over its five hectares there is a spread of lithic debris derived from several periods of activity, and in 1984 only a cursory identification of the main concentrations was attempted. A more intensive survey is required to delimit the significant areas of activity in any particular period.

Mesolithic material appears to cover in excess of one hectare on the basis of the preliminary fieldwork: HCW 30 (Fig. 63, L1-L4), which is divided into two parts by a peat-filled depression, HCW 31, HCW 32 and HCW 33 (which also contains a strong Later Neolithic/Early Bronze Age component) can all be assigned to the Mesolithic and there is a strong suspicion that this distribution pattern may represent little more than localised diminutions in the overall spread of Mesolithic material.

An isolated and much smaller sandhill to the east has a minor spread of Mesolithic debris on its western lobe (HCW 88); and close to the junction of Cloud Drove and Cowles Drove, a low sandy ridge, barely showing through the peat, also has surface material of this date (HCW 84). The identification of this spread is particularly significant for it suggests that more early occupation sites may appear as peat wastage continues.

None of these sites is more than 300m from the ancient course of the Little Ouse and it is obvious that the river offered considerable resources for transient Mesolithic groups. At present, the absence of Mesolithic sites on the skirtland emphasises the connection.

Plate VI Hockwold: the largest of the Little Ouse sandhills lies left of centre; the modern river in the foreground succeeded an earlier course which shows as a sinuous roddon adjacent to the sandhill. (TL 6686/C/AWJ18, taken 26.4.84. *Norfolk Archaeological Unit, copyright reserved*)

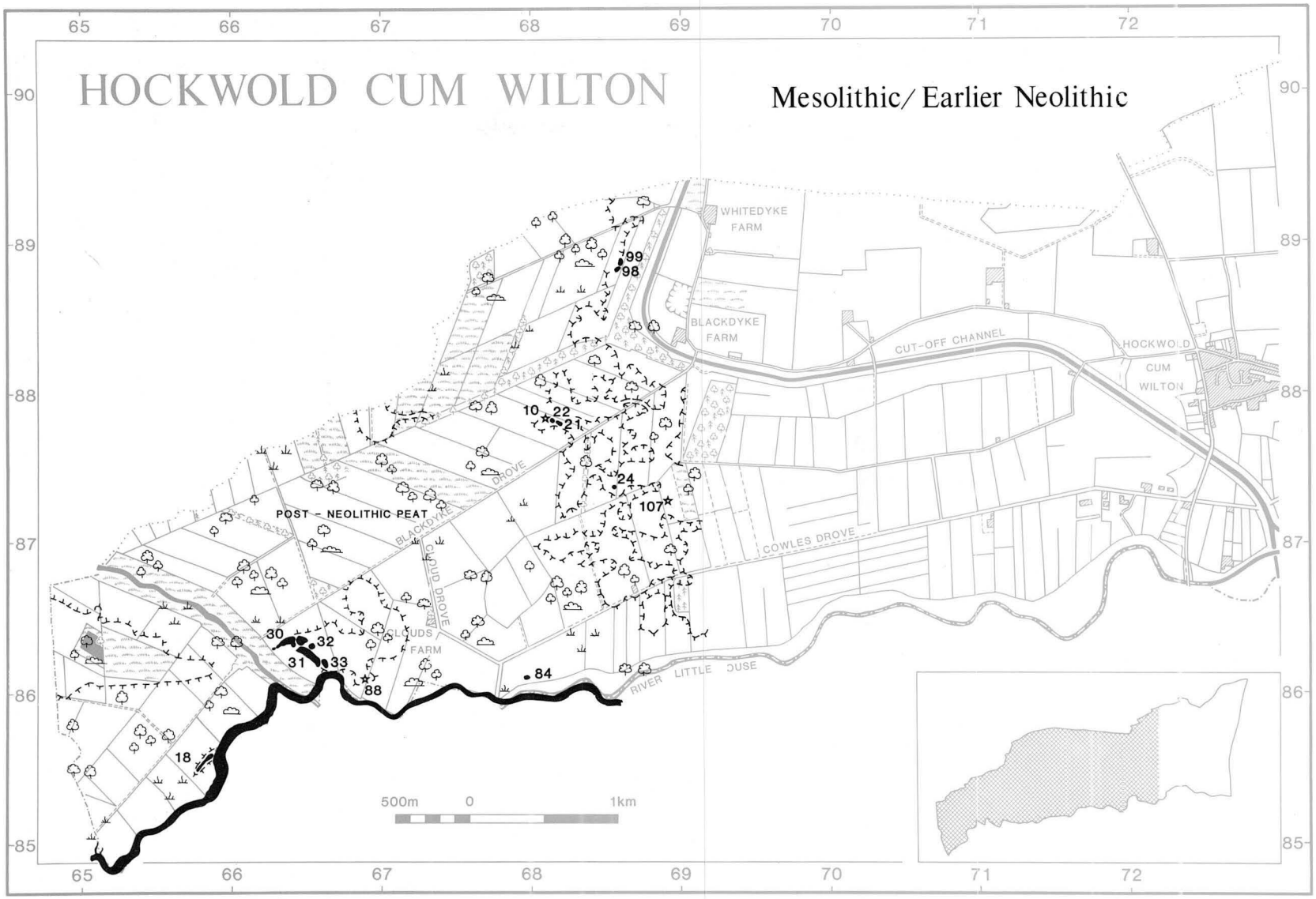

Figure 30 Hockwold: The Mesolithic and Earlier Neolithic landscape

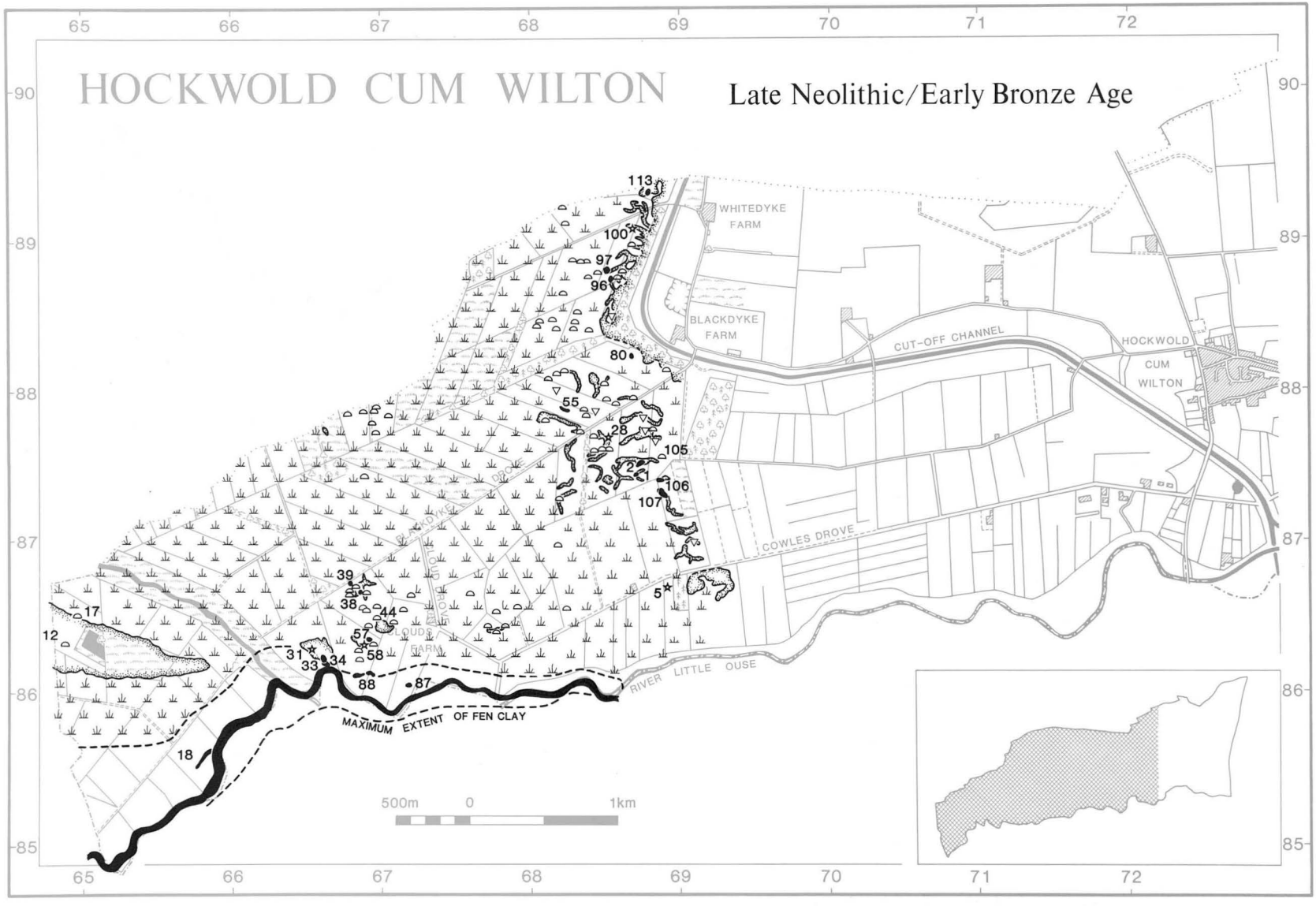

Figure 31 Hockwold: The Later Neolithic and Early Bronze Age landscape

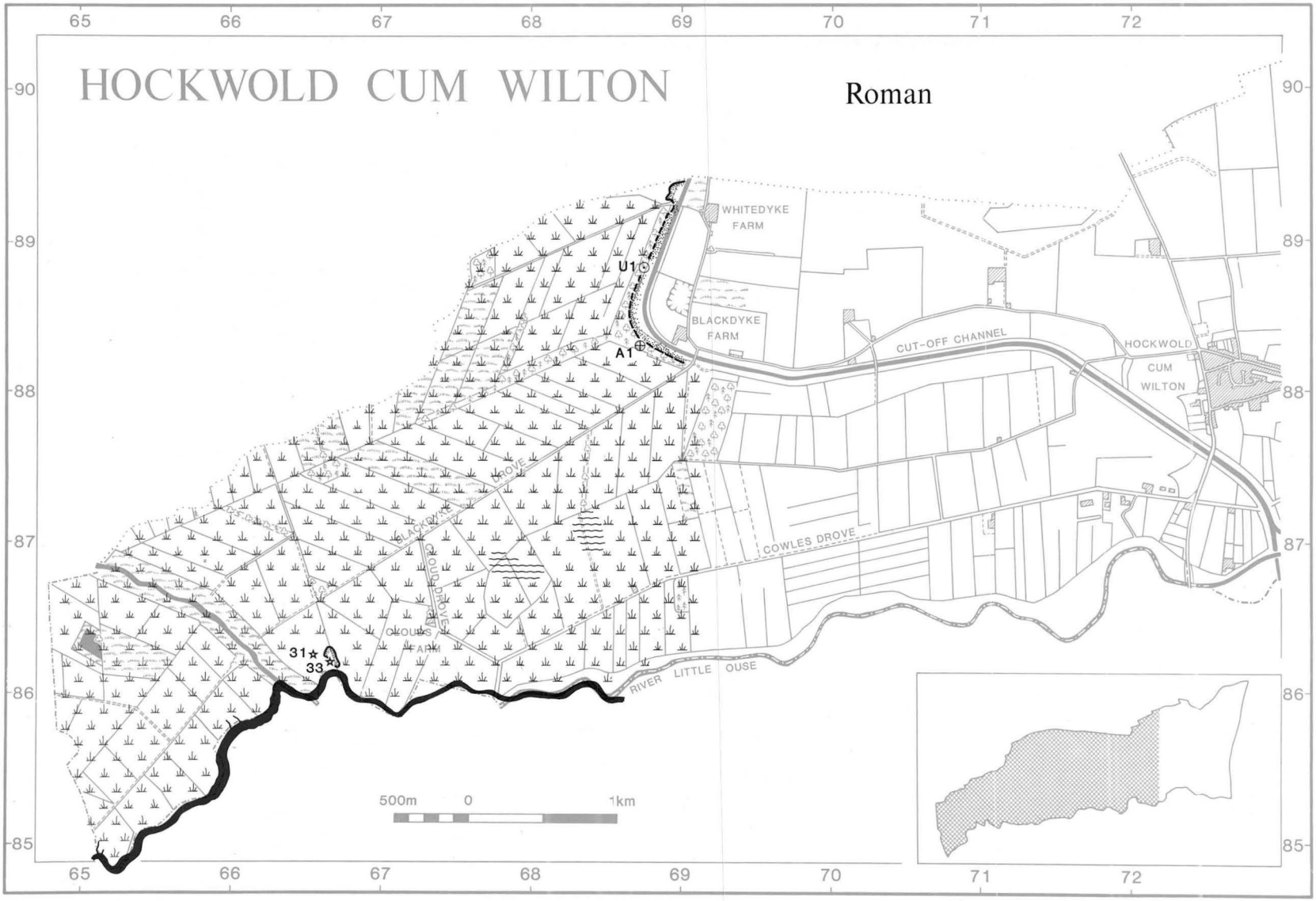

Figure 32 Hockwold: The Iron Age and Roman landscape

IV. The Earlier Neolithic Period
(Fig. 30)

The attraction of the Little Ouse seems to have faded with the transition from hunter-gathering to farming. There is some evidence for limited activity in the eastern segment of HCW 30 on the main Clouds Farm sandhill and perhaps on the closely-studied HCW 18 sand ridge (Appendix 2). Elsewhere diagnostic material of Earlier Neolithic origin is absent.

A move onto the basin floor was initiated during this period, and the ridges occupied were amongst the most distant from the upland. HCW 21 and HCW 22 (Fig. 63, L5-L8) are adjacent spreads which, together with HCW 10 — perhaps a minor Mesolithic site but on the basis of the spatial association more likely to be Earlier Neolithic — reveal discrete areas of activity over a 150m length of sandhill. Further north, HCW 99 and HCW 98 (again only attributable to a general Mesolithic/Earlier Neolithic time span) lie in close proximity, the ridges westwards revealing nothing more than 'pot-boiler' spreads.

V. The Later Neolithic/Early Bronze Age
(Fig. 31)

The marine transgression that led to the deposition of the fen clay did not have an obvious impact on this part of the embayment, and fen clay only backed up the channel of the the Little Ouse. For some of the time, though, the Decoy Farm sandhill (HCW 18) and also the sandhill with HCW 87 would have been, in effect, islands surrounded by water. Nevertheless,the ingress and the subsequent retreat of the sea led to changes in environmental conditions which provided the backdrop for the Later Neolithic and Early Bronze Age communities in Hockwold.

There is virtually no part of the Hockwold fenland, where mineral soil shows through the peat, that has not yielded lithic material of Late Neolithic or Early Bronze Age origin. A conspicuous exception is the maze of sinuous ridges just to the east of Shrubhill. Not only along the upland edge but also on the sandhills beside the Little Ouse, there was an expansion of settlement in the third millennium and earlier second millennium that contrasts with the sparse activity of the previous period.

One sandhill (HCW 18) produced relevant flint and pottery, including Food Vessel-like fabrics, mainly but not exclusively at the higher, north-eastern end; on HCW 33 and 34 which are probably twin parts of a larger spread, Food Vessel and other diagnostic material points to an Early Bronze Age date. Later Neolithic/Early Bronze Age material (HCW 88), some of it of Beaker affinity, spreads along almost the whole length of an isolated sandhill to the east, while broadly contemporary debris (HCW 87) covers another isolated hillock. The ridges behind these sand patches also reveal a few sites interspersed amongst the more frequent 'pot-boiler' spreads. HCW 38, HCW 39 and HCW 57 all belong to this period.

The continuous spread of sites on the skirtland bordering the upland edge only serves to emphasise what was apparent from Frank Curtis's explorations in the vicinity of Blackdyke: activity, particularly in the Beaker period, was ubiquitous (Bamford 1982, 8). Broadly contemporary sites show up on adjacent ridges, for example HCW 96 and HCW 97, and HCW 106 and HCW 107. The last of these sites was particularly rich in material, including a flint axe, a flint dagger and a barbed and tanged arrowhead (Fig. 64, L19, L18 and L15 respectively).

Seventy-four 'pot-boiler' spreads were recognised in Hockwold, but only two took the form of artifical mounds (HCW 44 and HCW 105). The appearance of several distinctive groups implies that there were specific ridge systems which acted as foci for the activities that created the dumps of burnt flint. The density of 'pot-boiler' spreads east of Shrubhill has already been mentioned in the Feltwell essay (above, p.35), and the same phenomenon is apparent on the low ridges east and west of Clouds Farm and on the skirtland edge beyond Whitedyke.

Perhaps the most significant element is the general correlation between 'pot-boiler' sites and lithic concentrations of Late Neolithic/Early Bronze Age date. There are numerous concentrations of 'pot-boilers' on either side of Blackdyke Drove, where the lithic sites tend to fall within this date range. Much the same is true of the ridges west of Clouds Farm. The evidence may be circumstantial, but it does seem to indicate that in some localities flint and 'pot-boiler' spreads are broadly contemporary.

VI. The Bronze Age

There are few identifiable traces of human activity during the middle and later centuries of the Bronze Age. Flaking techniques on some worked flints from HCW 2 and HCW 28 point to a Bronze Age date but how late in the period cannot be ascertained. The detailed examination of the Decoy Farm sandhill (HCW 18) yielded a possible Middle Bronze Age sherd and some coarse, worked flints, perhaps as late as the end of the second millennium BC. These imply minimal activity at the very least, and may suggest that elsewhere much more detailed survey is required to identify the sparser traces left by later communities.

The Post-Bronze Age Period
(Fig. 32)

Virtually no trace of Iron Age settlement was recorded, except for a handful of sherds, possibly of this date, that were found in the field adjacent to Blackdyke Farm (at TL 6884 8856). The scarcity of material is not surprising: the length of fen edge actually surveyed does not exceed 1500m and much of the skirtland potentially habitable in the Iron Age is covered by woodland and by the watercourse and banks of the Cut-off Channel. In view of the number of sites in neighbouring Feltwell, at least one contemporary settlement might be expected here.

There is a little more evidence for the following centuries. Frank Curtis excavated ditches and traces of structures in Sawbench Wood, north-west of Blackdyke Farm in 1962. The remains have been interpreted as a Roman temple set in its own enclosure (HCW U1), which was in use in the late third/early fourth centuries AD (Gregory 1982, 371), although finds covering almost the whole of the Roman period have been claimed. A hoard of silver drinking cups of early Roman date was discovered in the peat near Blackdyke (HCW A1); it is of Early Roman date

and may well be a votive deposit signifying a sacred spot with a long history (Johns 1986). The fact that this is where the river opened out into the fen may be of significance.

Curtis noted Roman pottery in several places in the vicinity of Blackdyke and this is born out by the present survey. Each upland field between Whitedyke and Blackdyke produced sherds, and the diffuse spread of those from the quarry field in which Blackdyke Farm sits is suggestive of material dispersed through manuring. Whether a settlement akin to those in Feltwell awaits discovery in the plantation west of Blackdyke Farm is an intriguing question given the proximity of the temple. Alternatively, there is an extensive settlement at Grange Farm, Hockwold, on the northern slopes of the Little Ouse valley less than two kilometres to the east (Salway 1967). The main concentration of crop and soilmark features occurs in the vicinity of Grange Farm (TL 701 885), but there are traces of droves and enclosures associated with this complex only a few hundred metres to the south-east of Blackdyke Farm. The farming of the adjacent chalk slopes would have been an obvious development.

A few sherds of Roman pottery from the main sandhill behind Clouds Farm (in HCW 31 and HCW 33) point to casual visits in the Roman centuries.

The Saxon and medieval use of the fen has left little in the landscape record. No sites have been discovered. Four sherds of medieval date, again on the largest of the sandhills beside the Little Ouse, suggest the presence of visitors, perhaps from boats plying the river.

5. Methwold

I. Introduction
(Figs 33, 34)

Methwold is the third of the large Wissey Embayment parishes, stretching from the high heathland in the east across the fens to the edge of Hilgay and Southery and covering an area of about 5582ha (HMSO 1982). The distance along this axis is about 16km, but even at its widest it is less than 6km from north to south.

The boundary of the parish is interesting as it follows a variety of artificial and natural features. In the south the boundary adopts a series of straight lines across fen and heath, but skirting around the island of Hilgay and Southery it follows first a natural stream and later the King's Dyke, mentioned as early as 1604 (Bryant 1904, 144) and possibly constructed as a flood barrier not many years previously. Two watercourses on the north, the River Wissey and a smaller stream known alternatively as Methwold Lode and the String Drain represent the boundary, except to the north of Methwold village where a salient incorporating the hamlet of Brookville (formerly the Methwold Fruit Farm Colony as shown on an Ordnance Survey map of 1905) reflects a twentieth-century adjustment. On the heathland the eastern edge of the parish abuts the Devil's Dyke, presumed to be a construction of early post-Roman times (Wade-Martins 1974, 35).

Methwold village lies on the Breckland plateau some 2-3km back from the fen edge, but at the head of a broad peat-filled inlet. This settlement was *Medelwalde* in the middle of the eleventh century (Ekwall 1960, 323), the 'middle wold' situated between Northwold and Hockwold. Today, the church of St George with its impressive octagon and spire, and the Old Vicarage, a fine fifteenth and sixteenth-century Grade I-listed building (DOE 1985-87), create a focal point in an otherwise unexceptional village. Its story was recounted in a memorably distorted way by a local 'historian', the Reverend Denny Gedge in 1893.

Methwold Hythe, situated at the junction of the inlet with the fen, forms a secondary nucleus in the parish. Together with Brookville these communities account for a very large part of Methwold's population of 1423 (HMSO 1982).

On the heathlands, Methwold Warren was once renowned for the abundance and excellence of its rabbits (White 1845, 395), but is now largely submerged by the Forestry Commission's conifer plantations. Arable land comes into prominence closer to the village. Inevitably the fenland part of the parish is also intensively cultivated, and some of the landholdings are substantial. Several small coverts and plantations remain adjacent to Hilgay, most of them belonging to that island's Wood Hall estate. North and west of Methwold Hythe some land is down to pasture. Much of this is farmed from Catsholme, one of the first Demonstration Farms to be established by the Countryside Commission in the mid-1970s to show how conservation interests could be compatible with commercial farming.

Wherever one is in this area it is impossible to ignore the Wissington Beet Factory, a landmark for miles around, which was constructed adjacent to the River Wissey in 1925 (Darsley 1984, 17).

This report is concerned only with the fenland part of Methwold parish, the Catsholm peninsula and a narrow strip of the upland. Little of the immediate environs of the village has been examined, and virtually none of the Breckland sands.

II. The Natural Landscape
(Pl. VII)

Methwold offers exceptional diversity in its topography, even though the landscape falls under the two broad headings of upland and fen. The eastern part of the parish spreads across the chalk plateau covered by Breckland sands of glacial origin (Duffey 1976, 62). The upland achieves a height of little more than 18m OD in the vicinity of Methwold Hythe, yet the slopes down to the fen and to the inlet between Methwold Hythe and Methwold village (henceforward termed the Hythe valley) are pronounced in places. At the base of the escarpment, particularly in and to the south of the Hythe valley, the skirtland around much of the fen edge includes chalky-drift ridges and hollows similiar to the zone in Hockwold and Feltwell.

The Hythe valley itself consists of an inlet 1.2km long and about 300m wide, fed originally by two small streams, neither of which now appears to be active. Seven hundred metres to the north, in that part of Northwold transferred to Methwold this century, another low-lying area still displays traces of its former fen cover. Pure peat is restricted to one or two hollows, but the slightly undulating surface, set below a moderately steep chalk slope and edged by the natural stream termed the String Drain, reveals land that must have been waterlogged and unworkable for many centuries.

A peninsula of mineral soil projects into the fen for over 3km between this area and the Hythe valley. For convenience, this has been named the Catsholm peninsula after the farm at its western tip, which in turn recalls one of the several 'holms' that were to be found along the peninsula several centuries ago. The Old Norse term was generally appropriated in later times for islands, inland promontories and raised ground in marsh (Gelling 1984, 50), and either of the last two would adequately describe the Catsholm peninsula. The local tithe apportionment of 1839 records Holmes, Little Holmes and Great Holmes; an extent of 1277 refers to Totesholm (Blomefield 1805, ii, 189); and as well as Catsholm, modern maps show Slevesholm a little distance to the east.

The ground level rises to between 3m and 4m OD over much of the peninsula. An unpublished draft report on the Catsholme Demonstration Farm identifies the soils there as predominantly of the Peacock Series (for which see Hodge *et al.* 1984, 290), defined as humose clayey and fine loamy soils. A surface quarry, now showing as a 250m-long depression, some 600m east of Catsholme Farm, exploited sub-surface gravelly sand deposits that also appear in localised patches elsewhere on the peninsula.

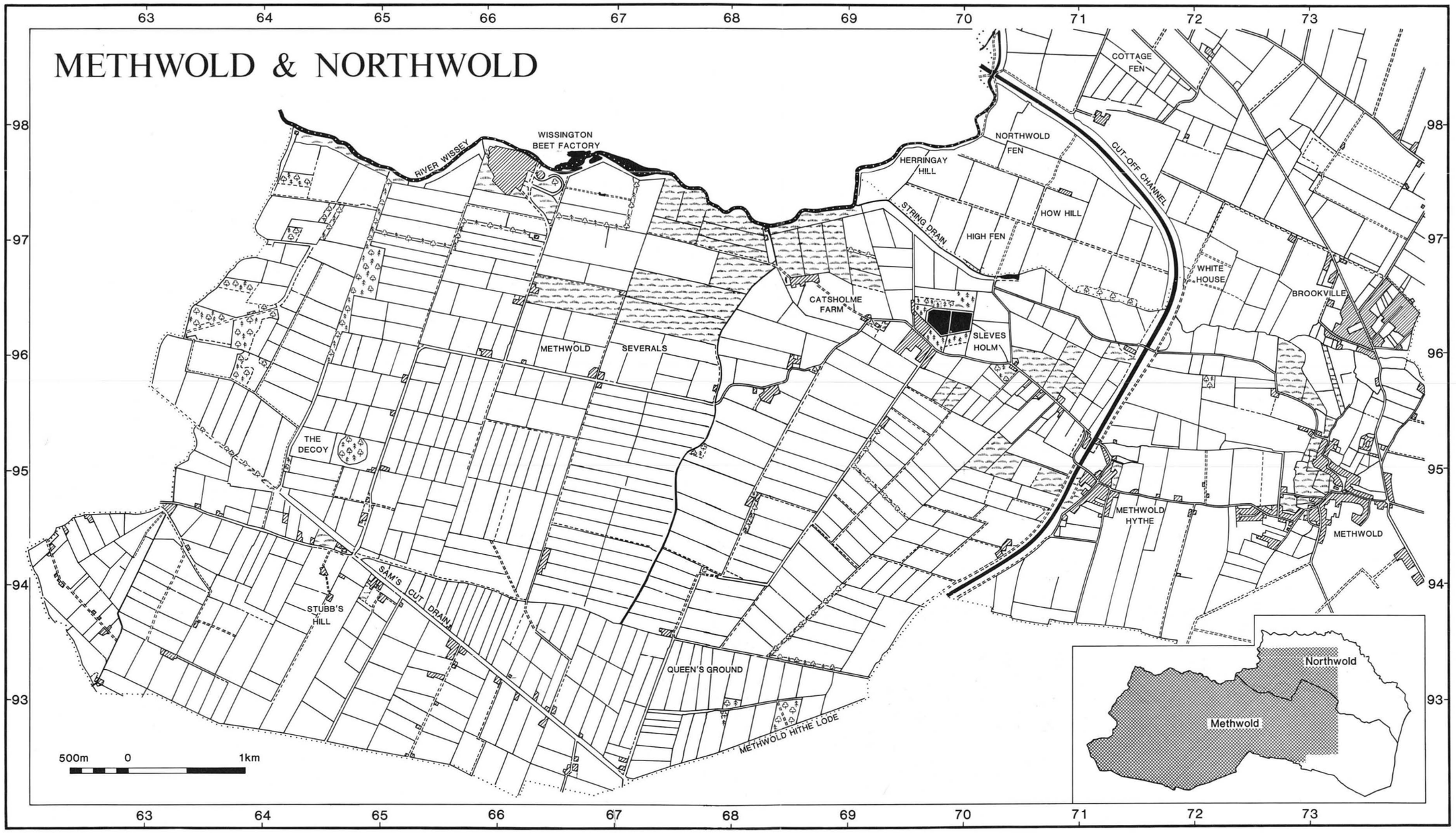

Figure 33 Methwold and Northwold: The modern landscape. Scale 1:40,000

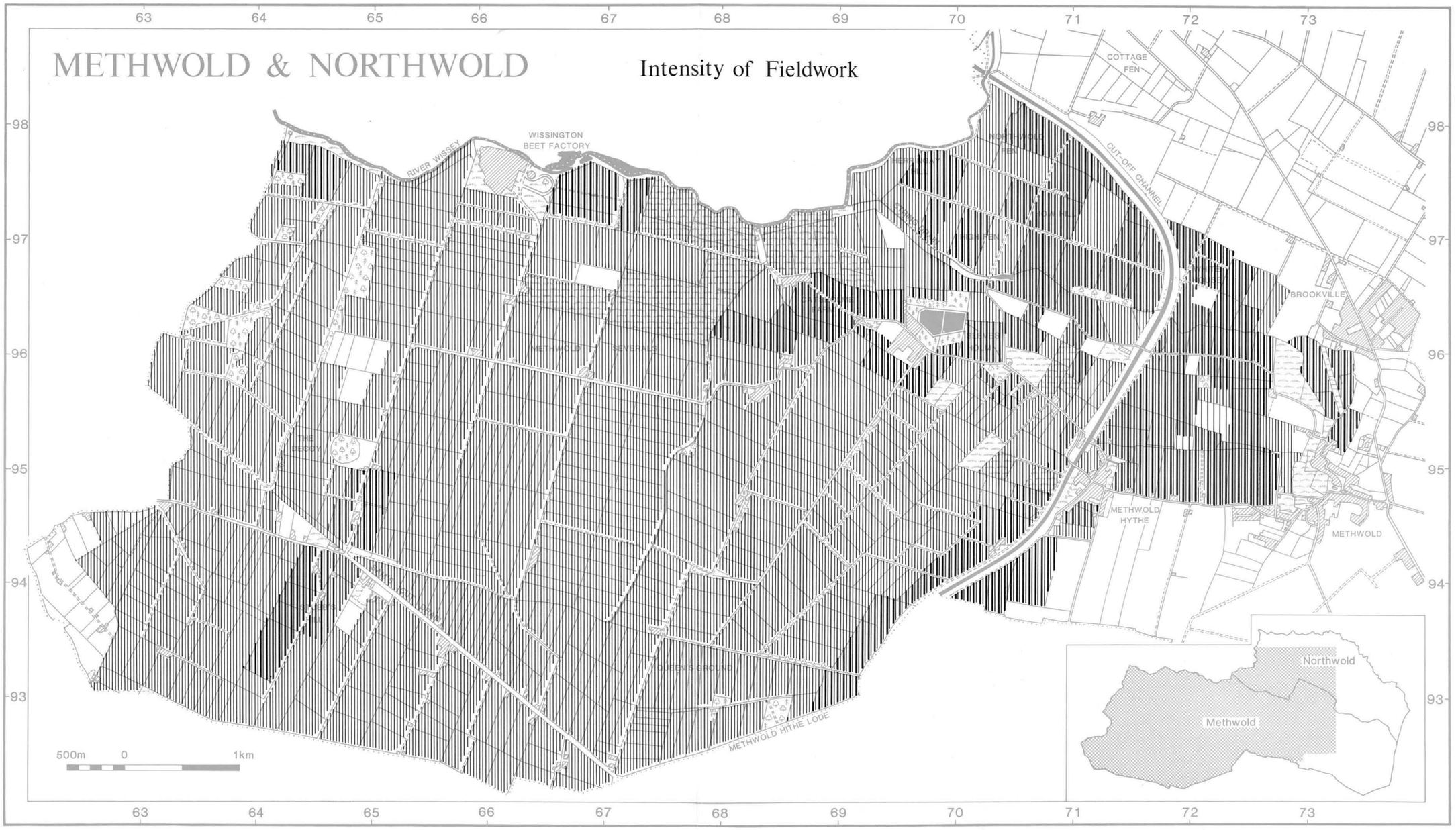

Figure 34 Methwold and Northwold: Fieldwork intensity

Plate VII Methwold: fen clay roddons appear to the south of the seventeenth-century drain known as Sam's Cut but, because of differential land use during later years, the roddons to the north are still enveloped by peat. RC8 EB85 (*Cambridge University Collection: copyright reserved*)

Further west and closer to Southery than to Methwold, Stubb's Hill rises out of the fen to a height of little more than 3m OD. It is separated from an even less conspicuous island, termed here Decoy Hill after an adjacent landmark, by a narrow gulf of peat. The soils of Stubb's Hill are classified as humose clayey and loamy deposits of the Peacock and associated Clayhithe Series (Seale 1975, map in end pocket). Localised patches of sand, too small to be recorded by the Soil Survey, around the edge of the island should be equated with the deep sandy soils of the Isleham Series recorded for Decoy Hill (Seale 1975, 143). Gault and Carstone outcrop beneath these superficial deposits (Geological Survey 1980).

Other patches of skirtland showing through the fen are even less prominent. Small sandy hummocks in the extreme west of Methwold, reveal the undulating margin of Hilgay island, while adjacent to the Wissington Beet Factory a substantial area of loamy soil is gradually emerging from beneath its peat cover.

Peat of the Adventurers' Series covers the remainder of the parish, in places to a depth of over two metres (Seale 1975, 181). Indeed, the land north and east of the modern road from Feltwell to Southery retains the most extensive area of deep peat in the eastern fens (Burton and Hodgson 1987, fig. 7). The road follows the line of Sam's Cut, a drainage ditch constructed by Vermuyden in 1631, and the variability in ground level between the fen on either side of this feature reflects a major difference in land use during the last three hundred years.

North and east of the drain, the land was not taken into cultivation until the Second World War (see Appendix 4), and spot heights on the road south of the Wissington beet factory reveal that the general level of the peat is about 0.6m OD. Cultivation from the seventeenth century onwards has resulted in much greater peat wastage to the south of Sam's Cut. In this, the most southerly part of Methwold, fen clay roddons are visible everywhere and the depth of peat is now insignificant (Pl. VII). Spot heights on the road into Southery suggest that the present ground level is below −0.5m OD in places.

Two tongues of fen clay run northwards beneath the deeper peat beyond Sam's Cut (Seale 1975, map in end pocket). The more westerly of these extends northwards, as far as the present course of the River Wissey (R. Burton: pers. comm.): there can be no doubt that it masks an earlier course of that river which ran to the south of Southery island. While this invisible tongue of fen clay can be detected only through boreholes, several adjacent sandhills have emerged from the peat in recent years and may indicate relict river terraces beside the early channel, similar to the much better known ones beside the Little Ouse in Hockwold and Littleport (Cambs.).

Earlier essays have already noted that some meres and watercourses in the Wissey Embayment silted up with shell marl. Extensive spreads are not much in evidence in Methwold, but natural streams (slades) filled with marl occur quite commonly around Catsholm and several more can be seen running off the fen edge near the Methwold/Feltwell boundary. Their date remains uncertain: it is generally assumed that they are not earlier than the Roman era, but a prehistoric origin cannot be ruled out.

III. The Mesolithic Period
(Fig. 35)

The fen basin, for the Mesolithic communities that frequented Methwold, must have appeared as a heavily forested landscape broken only by the Catsholm ridge, the early course of the Wissey and, further off, the gentle rise of Stubb's Hill. There is no evidence that during these millennia, peat growth was widespread in this part of the embayment. There may have been places in the Wissey channel and in other watercourses where peat formed, but borehole data point to very little lower peat and we can assume that woodland covered the fen basin as well as the upland. Only beneath the fen clay in the deep channel interpreted as an early course of the Wissey is there continuous lower peat, mainly about 50cm in thickness, but in one borehole just to the west of Catsholm, over three times that depth (R.Burton: pers. comm.). Throughout the Mesolithic the upland waters followed this course, draining south of Southery island and attracting hunter-gatherer communities. However, it is only in the vicinity of the beet factory that its course can be readily discerned and near Stubb's Hill the fen clay embayment widens and masks the early river.

Traces of Mesolithic communities have been detected in several places. The most significant grouping is at the western tip of the Catsholm ridge; three sites (MTW 21, MTW 25 and MTW 26), within 150m of each other, may really represent conspicuous concentrations within a general spread of contemporary lithic material. Four hundred metres to the west a further concentration (MTW 136) lies on gently sloping ground just above the present peat level. Together these point to extensive Mesolithic activity on the ridge and, with the River Wissey only 500–600m away, the attraction is obvious.

A second area of activity (MTW 129 and MTW U2) focuses on the southern edge of the Hythe valley. Sizeable inlets are not common along the Norfolk fen edge and the presence of the valley implies a major watercourse in the distant past. Whether this was still active in the Mesolithic period cannot be ascertained, but it is significant that a tongue of later fen clay reaches towards this inlet as though streams were still draining through here in the Late Neolithic. Such streams would certainly have attracted Mesolithic groups.

The perimeter of the later fen basin cannot have been precisely identifiable to early groups, but the discovery of Mesolithic material within larger, multi-period scatters does reveal the presence of hunter-gatherers. MTW 29 and MTW 32 both have Mesolithic components, reinforced by chance finds such as a tranchet axe (Healy forthcoming, a; SMR 20998) from the same general area around Banham's Farm at the southern end of the parish (TL 704 943).

More important are the flints (MTW U1) recovered from a buried mineral soil ridge some 500m beyond the upland edge. Collected by a local farmer when a dyke was recut in 1959, the long blades hint at a Late Palaeolithic or Early Mesolithic origin. Part of the ridge is now becoming visible in an adjacent field, but near the dyke it is still buried by peat. Here then is a particularly early site, well protected and possibly close to a contemporary watercourse that ran westwards from the Hythe valley.

IV. The Earlier Neolithic Period
(Fig. 35)

Stubb's Hill has over the years yielded a rich harvest of flint and stone axes conventionally attributed to this period (Healy forthcoming, a). Even the limited time spent on the island during the Project produced one axe fragment and a flake off another ground implement. Lithic concentrations on the sandy soils of the western edge of the island (MTW 36 and MTW 37) can be attributed to the Earlier Neolithic; an earlier presence is implied by a microlith from MTW 37 and Mesolithic flints including a microlith from the general lithic scatter across the north side of the island. MTW 35 on Decoy Hill to the north may be of Mesolithic or Earlier Neolithic date. The Wissey passed within a few hundred metres of these islands.

Earlier Neolithic communities also occupied several low sandy ridges further north and even closer to the river: on the west side of the river, much nearer to the Hilgay upland than to Methwold, there are spreads of debris (MTW 6 and MTW 7) that include Neolithic Bowl pottery. Across the river, on the surface of a sandy ridge just rising through the peat, enough lithic material (MTW U3) was recovered to confirm an Earlier Neolithic date. Again there are hints of a Mesolithic component within the sample collected.

Activity appears to be restricted largely to the Mesolithic and Earlier Neolithic on all of these mineral soil exposures close to the river. Despite the Peterborough Ware from MTW 6 and Beaker sherds from MTW 7, utilisation of these sandhills from the Later Neolithic onwards was sporadic, on the basis of the more abundant lithic material. Even on the larger Stubb's and Decoy islands, there are only one or two recognisable concentrations of later material (*e.g.* MTW 153).

Earlier Neolithic material is absent on the Catsholm ridge and on the south side of the Hythe valley, both places frequented by Mesolithic communities. Instead it is the north side of the valley which witnessed some activity. Three sites (MTW 61, MTW 67 and MTW 69) all include pottery or worked flint attributable to this period, though not in abundance. Further south, several spreads of debris (MTW 10, MTW 14, MTW 38, MTW 51, MTW 72 and MTW 101), on the drift ridges at the base of the chalk slope, appear to date to the Earlier Neolithic.

V. The Later Neolithic/Early Bronze Age Period
(Fig. 36)

A side effect of the marine transgression that deposited the fen clay may have been the blocking of the Wissey channel. The roddon now revealed in the fen clay to the

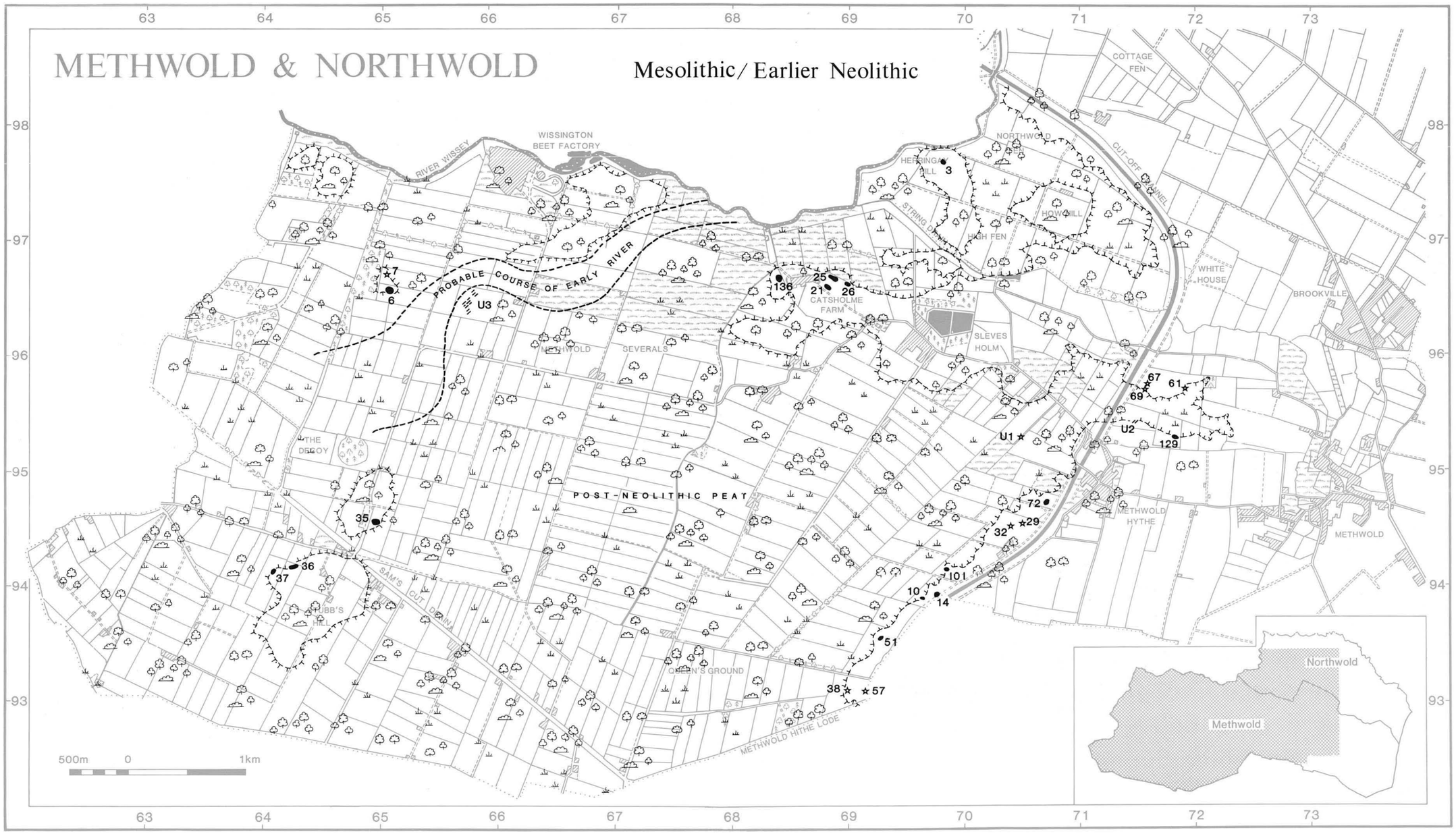

Figure 35 Methwold and Northwold: The Mesolithic and Earlier Neolithic landscape

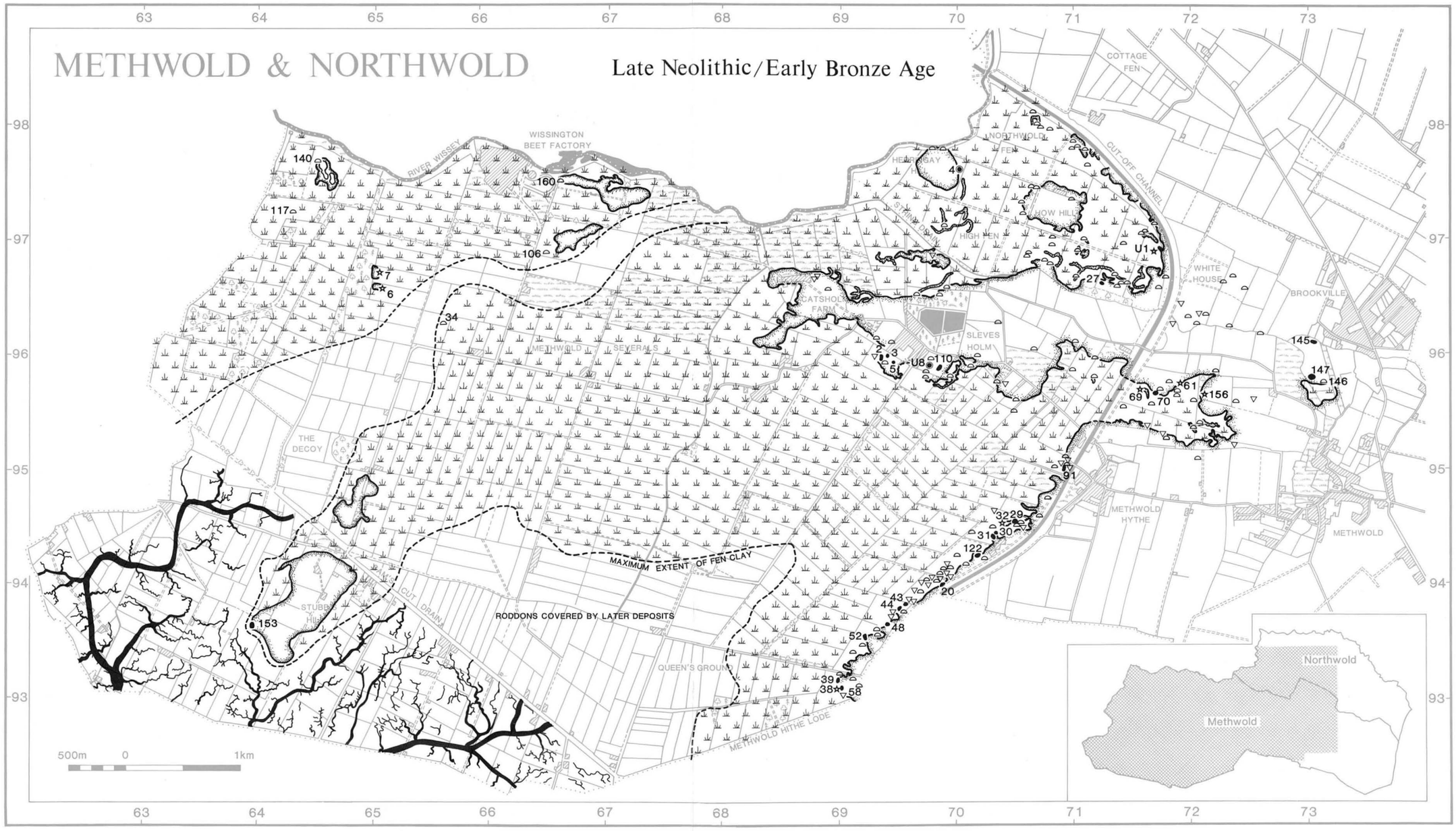

Figure 36 Methwold and Northwold: The Later Neolithic and Early Bronze Age landscape

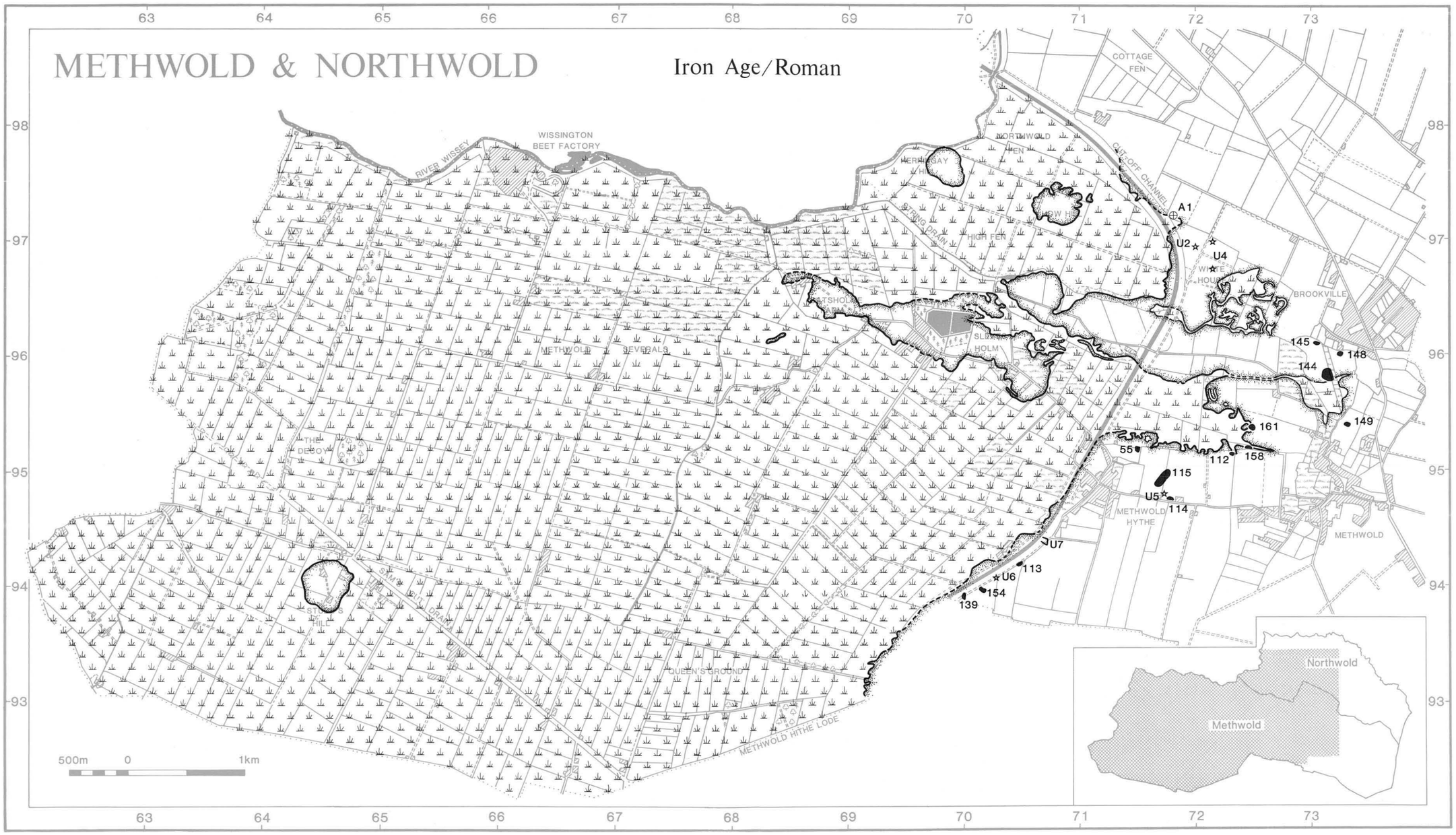

Figure 37 Methwold and Northwold: The Iron Age and Roman landscape

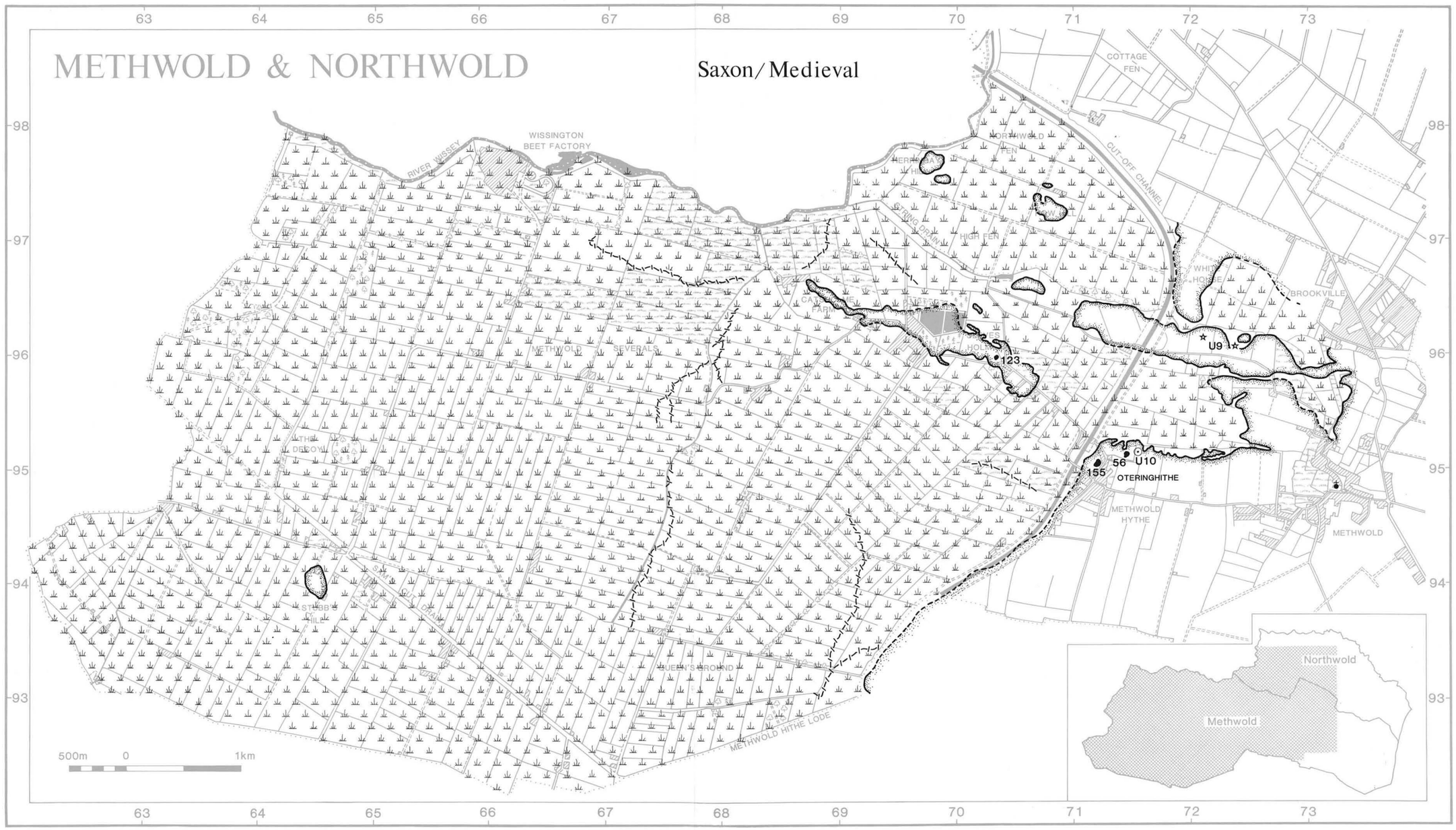

Figure 38 Methwold and Northwold: The Saxon and medieval landscape

south-west of Sam's Cut is hardly of a size commensurate with a major upland river and implies that the Wissey had been forced to adopt a new line westwards, sometime previously. Most probably this was a precursor of the present river flowing due westwards through the Hilgay/Fordham gap. A possible alternative is that the waterlogged zone next to the upland forced the river to break down into a network of transient channels through the peat that have left little trace.

The Late Neolithic/Early Bronze Age (LNEBA) period is distinguished by very mixed groups of material recovered from fieldwork. It is possible in some instances to be fairly precise in attribution: several Later Neolithic sites can be recognised on the basis of the lithic material and there are a few possible Beaker concentrations as well. More frequently only a general LNEBA attribution is possible. It is likely, too, that many other lithic spreads lacking diagnostic material, as well as the majority of the 'pot-boiler' sites, belong to this phase.

The level of activity on outlying islands declines during this phase. On Stubb's Hill, MTW 153 appears to date to this period, and contemporary pottery forms minor components of the sandhill concentrations (MTW 6 and MTW 7), west of the old Wissey. Generally the silting up of this old channel and the increasingly waterlogged state of the surrounding land must have deterred activity.

The settlement emphasis swings strongly to the fen edge. The chalk drift hummocks fringing Catsholm's southern flank support several LNEBA spreads (MTW 3, MTW 5 and MTW 110) and these lie close to a site with definite Later Neolithic flintwork (MTW 2), and a mineral soil mound which looks very much like a barrow (MTW U8).

A group of LNEBA sites has been recognised along the fen edge to the south of the Hythe valley, some demonstrably Later Neolithic in date (*e.g.* MTW 29 and MTW 122). A number of these sites pair up on adjacent ridges implying perhaps either a slight shift of settlement through time or larger settlements strung out around damp hollows. Examples include MTW 30 and MTW 31, MTW 43 and MTW 44, and MTW 39 and MTW 58.

There are also sporadic traces along the Hythe valley itself, particularly on the north side and, more interestingly, a couple of sites lying further back, close to Methwold village. MTW 147 occupies the same sandy ridge as the Thornham Roman villa (see below), while another (MTW 145), with Beaker affinities, covers flattish ground close to the natural stream called the String Drain, a location which found favour many centuries later in the Iron Age.

Many of the 'pot-boiler' sites must have originated during this period; it is impossible to assign dates to such sites, although their spatial relationship to lithic concentrations and the fen edge provide a general guide to their age. It is noticeable in Methwold that few 'pot-boiler' sites are found on the outlying islands such as Stubb's Hill where earlier settlement is more prevalent. Seventy-five 'pot-boiler' sites were located in the parish, yet only two of these (MTW 95 and MTW 97) can be distinguished as burnt flint mounds. A wide size range was encountered: from 0.01-0.16ha, but nearly 65% covered 0.05ha or less.

VI. The Bronze Age

The sea had receded westwards by the middle of the second millennium BC, allowing further peat growth. Settlement at this time is not clearly discernible along the fen edge. A couple of Food Vessel sherds mixed with the 'pot-boilers' of MTW 49 could be contemporary with many of the LNEBA sites, while the thick, step-flaked scrapers that appear on MTW 39 and in several field scatters can only be given a general Bronze Age tag.

VII. The Iron Age

(Fig. 37)

Activity in Methwold at the end of the prehistoric era resolves itself into a group of sites referable to the Iron Age (or perhaps late in the Bronze Age), but not more precisely datable: the geographical dimension provided by fieldwork cannot as yet be complemented by a detailed chronological sequence.

Three sites at the head of the Hythe valley are located within 300m of each other: MTW 112 and MTW 158 close to the stream that entered the south-east corner of the inlet, MTW 161 beside a large natural hollow on the chalk slope. A further concentration (MTW 55) lay towards the western end of the inlet and, near the top of the slope above, odd sherds of Iron Age ceramic (MTW U5) point to another area of activity. South of Methwold Hythe, MTW 113, with a further scatter (MTW U6) 200m away, indicates another settlement, partially obscured by a trackway and perhaps the Cut-off Channel beyond. North-east of the Hythe valley, MTW 145 lies back from the waterlogged flats around the String Drain, while further west on the higher slopes above the flats, fragments of distinctive Iron Age pottery (MTW U4) spread into Northwold and point to settlement in the vicinity.

There seems to be a fairly even spacing to these settlements even though it is not possible to argue that they were in contemporary occupation. Two locational preferences, however, seem to be evident: those adjacent to streams or the fen edge and those much closer to the chalk plateau summit, where water supplies might have been less accessible. Only excavation can ascertain whether these reflect different facets of a unified settlement type.

VIII. The Roman period

(Fig. 37)

There is little difference in the location of Roman settlements to those of the preceding period, and an even more marked regularity in the distribution pattern. Two small scatters of Roman pottery near the Feltwell boundary (MTW 139 and 154) probably reveal a farmstead partly lost beneath the Cut-off Channel: sherds found in 1966 on the fen side of the Channel (SMR no. 5231) must relate to this occupation. Eight hundred metres to the north-east, the cropmark of a rectilinear enclosure (MTW U7) could have originated at this time. A number of third-century sherds were recovered in the general scatter from the field to the south, but much of the enclosure itself lies under the bank of the Cut-off Channel.

Another area of Roman activity is to be found one kilometre north-eastwards, stretching across the southern slopes of the Hythe valley. One major concentration of debris covering about a hectare (MTW 115), is accompanied by a smaller spread higher up the slope (MTW

114) and perhaps another patch (MTW 55), some 300m away down by the stream. The date range of the material covers the second to fourth centuries AD. Metal detecting in recent years has turned up coins (SMR no. 22053) from the area, but the general trappings associated with a Romanised farm, notably roof-tiles, are lacking.

This is in complete contrast to MTW 144, 1.8km to the north-east. The presence of a villa has been assumed since the Reverend J.Denny Gedge 'excavated' part of a bath-house here in the late nineteenth century (Gedge 1882), revealing the stone foundations of several rooms with a hypocaust and tiled floors and roofs. Pottery collected from the site as part of the present survey confirms a fourth-century date. But the most interesting aspect is the villa's location. Gedge dug in just the one field, but it is evident from fieldwork that the site spreads over into the next arable field to the east and, by implication, runs through an intervening strip of pasture. The buildings are set on a prominent sandy ridge, the ground dropping gently to flat ground on the north and more abruptly on the south to a large peat-filled depresssion which links in with a stream debouching into the Hythe valley. It is difficult to avoid the conclusion that the villa was sited to take advantage of this water supply. Two other concentrations of Roman pottery, MTW 148 and MTW 149 lie 200m to the north and 400m south respectively, the latter on a natural ridge rising above the general ground level.

This complex of sites lies about 1.6km from the next traces of fen-edge settlement in Northwold parish (see below).

While the location of sites points to a relatively regular distribution of discrete farms around the fen edge, it is possible that at least some of the intervening land was cultivated. This is particularly noticeable at the head of the Hythe valley where fields on the slopes below the modern village have produced a thin scatter of Roman sherds. This may indicate an undetected site in the vicinity, but it is equally likely that these are signs of contemporary manuring practices.

IX. The Saxon and Medieval Periods
(Fig. 38)

Continued waterlogging during the historic era allowed peat growth to encroach on the upland edge, and the Catsholm ridge became completely separated from Thornham and the upland by shallow peat, a process that had probably commenced during the earlier first millennium AD.

Fieldwork around the village core might throw some light on the origins of Methwold. Did settlement occur there as early as the Middle Saxon era or was it closer to the fen? The recognition of several sherds of Ipswich-type Ware (MTW U9) amongst the general scatter from two fields at the extreme eastern end of the Catsholm ridge must signal Middle Saxon activity here: the complete absence of similar pottery anywhere else along the fen edge is evidence enough. Further work will be required, however, to define the nature and extent of the activity.

Methwold first appears in the literature in the confirmation of Ely Abbey's possessions by Edward the Confessor around 1050 (Hart 1966, 84), and it is reasonable to assume that the manor of that time lay within or close to an existing settlement. The village cannot concern us here for it lies outside the survey area, even though putative fish ponds associated with a medieval hall, and other earthworks suggestive of abandoned medieval holdings (SMR no. 24980) lie in pasture adjacent to surveyed fields. The hall itself (SMR no. 4935) was finally levelled in the last century, but the name survives in the nearby Hall Farm (at TL 72769480) which is chiefly remarkable for its unusual eighteenth and nineteenth-century outbuildings.

Methwold Hythe, the subsidiary settlement two kilometres to the west, is of more importance in this study. At the time of *Domesday* this was called *Otringheia*, and was termed *Oteringhithe* in 1316, although an earlier Ely document of 1277 was already referring to *Methelwoldehythe* (Ekwall 1960, 324). *Oteringhithe*, however, was still current at the time of the Dissolution (Blomefield 1805, ii, 203). Methwold Hythe had its own church, St Helen's, in the Middle Ages: a slight platform below the valley slope is now the only indication of its position (MTW U10). Within a few hundred metres, two sites (MTW 56 and MTW 155) reflect habitations of the thirteenth-fourteenth centuries, and others are no doubt disguised beneath the modern hamlet. The Tithe Apportionment (1839) records the name 'Moles Green' for the small field just to the south of MTW 55.

The main problem is the nature of this fen-side settlement. The suffix 'hithe' means landing place or inland port, and the hamlet is quoted as such by Gelling (1984, 77). How did it function? The River Wissey is some distance away on the other side of the Catsholm ridge, as is the stream, known as the String Drain, which debouches into Northwold Fen. There is no obvious channel or lode in the vicinity of the settlement, the Methwold Hythe Lode shown on the first Ordnance Survey map of 1824 along the side of the upland represents a relatively modern drain. In the absence of a channel linking in with the river system, it is difficult to see how Methwold Hythe operated, unless there was an artificial channel in the Middle Ages which had disappeared completely by the time of the late eighteenth-century map compilations.

Beyond Methwold Hythe and the upland was the common of Methwold termed Broad Fen (Fig. 75), and further west was fen owned by the Duchy of Lancaster since 1348 (Appendix 4). Known simply as the King's Severalls in the seventeenth century, these may be the *Segges Marsh* whose sedges were worth L10 yearly in an inquisition dating from the middle of fourteenth century (Cal. *Inq. Post Mort.* IX (1917), 46).

Slevesholm (or Slusham in the nineteenth century) lay east of Catsholm and was the site of a monastic cell (MTW 123), dependent on Castleacre Priory. Blomefield states that in the middle of the twelfth century, William de Warenne gave to Castleacre 'a certain island in the moor or fen of Melewode, called Slevesholm' (1805, ii, 209). This cell is unlikely to have achieved any size and, at a visitation in 1390, consisted of one prior and one monk (Cox 1906, 359). Machine-cut trenches across the site in 1976 failed to produce any evidence of buildings but did yield medieval pottery, more of which, dated to the fourteenth to fifteenth centuries, was found during the present survey.

The field boundaries around the priory cell delineate an elliptical enclosure, the southern side of which is represented by the modern road. Conceivably this could be the precinct of the cell, fossilised in the modern

landscape, but some caution is necessary. A rather similar enclosure known as Thornham's Close in 1853 (NRO. MC 62/26, P153), lay just to the north-east and represents a late medieval or early post-medieval agricultural intake. As Gedge remarked, there were in the nineteenth century a whole series of 'holm' names from Methwold along the ridge to Catsholm (1893, 22). As noted above, the term 'holm', frequently referring to an island of firm ground in a marsh (Gelling 1984, 50), would be appropriate here, and the medieval enclosure of the holms would not be unexpected.

6. Northwold

I. Introduction
(Figs 33, 34)

Northwold lies to the north of Methwold and ranges across several small tracts of fen and a more extensive area of Breckland. The Wissey forms its northern boundary and Northwold village overlooks the river but lies well away from the fenland embayment. The subsidiary settlement of Whitington probably developed at quite a late date, on a spur overlooking the fen.

This report considers only a very small part of the parish: a patch of peat fen and skirtland in the extreme south-west, which is in effect an inlet between two chalk ridges that protrude westwards. The Wissey on the west and the String Drain on the south form natural boundaries to the study area, but on the north and east the limits are defined by the Cut-off Channel created in 1961. The reason for restricting the survey was largely pragmatic. The importance of the skirtland has been stressed in the Introduction to this volume and, as the Wissey forms a natural divide, the original aim was to survey the fen edge, including Cottage Fen below Whitington, as far as the river. Permission to work in Northwold and High Fens, a single modern landholding in the area south of the Cut-off Channel, was readily given, but inordinate difficulties were encountered when negotiating access to Cottage Fen and the plan was abandoned. This means that coverage of Northwold was restricted to about 300ha of fen, less than one-sixth of the whole parish which covers 1970ha (HMSO 1982). For convenience, data on this small area have been incorporated on the relevant maps of Methwold (Figs 33-38).

II. The Natural Landscape
(Pl. VIII)

Chalk forms the solid geology of Northwold parish, although just to the west this gives way to Carstone and Gault (Gallois 1988, fig.2). Similar to adjacent parts of Methwold, the study area is distinguished by ridges of chalky loam extending into the peat. It is a mixture of

Plate VIII Northwold: Herringay Hill, with a barrow (NWD 4) emerging from the peat on its eastern side, and How Hill in Northwold Fen. (RC8 EB6 *Cambridge University Collection: copyright reserved*)

skirtland and black land delimited by the String Drain, running along the edge of the Catsholm peninsula, and the Cut-off Channel clinging to the side of the ridge separating Northwold Fen from Cottage Fen.

The Wissey here follows a natural course through the fen, though slight modifications in its line may have occurred when it was embanked. Its course, however, must have been governed by the narrow strait, now peat filled, which links Cottage Fen with Northwold Fen. The eastern section of String Drain looks natural too, but opposite How Hill its course becomes straighter: here it has possibly been canalised.

Northwold Fen is broken by two islands, rising to a height of perhaps 7.0m OD (Pl. VIII). Herringay Hill is covered by chalky and sandy loam, drift deposits that have been classified within the Reach Association (Soil Survey 1983). An intermittent series of ridges suggest that in years to come this island will develop into an extension of the Catsholm peninsula. Further east, How Hill is covered by chalky and sandy loam, although near the summit, chalk with flints appears. Curiously, this island does not appear as a separate entity on the Soil Survey classification maps.

Between and around Herringay and How Hills peat has accumulated; the depth does not appear to be great — generally less than one metre — but some deeper deposits may exist (Burton and Hodgson 1987, fig. 7).

III. The Prehistoric Period

(Figs 35, 36)

The archaeological discoveries in Northwold are individually of little interest and it is only when they are seen together with those of the other Wissey Embayment parishes, that their significance can be recognised.

Limited evidence from the summit of Herringay Hill indicates a Mesolithic or Earlier Neolithic presence, particularly on NWD 3. Mesolithic activity comes as no surprise in view of the proximity of the river, although diagnostic material was limited to one or two pieces from the general scatter across the island. There may also be an Earlier Neolithic element in artefact scatters derived from the low ridges emerging from the peat between Herringay and the Catsholm ridge, but further work is required to confirm this.

There are signs of activity in the Later Neolithic/ Early Bronze Age period at the eastern end of the fen. Some material from NWD 27 belongs to this phase, as do a few flints from the chalky ridges just inside the Cut-off Channel (NWD U1).

Outnumbering flint concentrations in a ratio of 18:1 are'pot-boiler' sites. Nearly 70% are relatively small, between 0.02-0.05 ha in extent and several (NWD 5, NWD 6, NWD 30 and NWD 36) are only just showing through the peat cover. Significantly, two (NWD 12 and NWD 21) appear to consist of fragments of burnt, rounded pebbles rather than the normal angular flints, reflecting the local change in the underlying geology.

One of the few barrows to be recognised along the Norfolk fen edge lies on the north-eastern fringe of Herringay Hill (NWD 4). It shows as an obvious swelling on the ground, about 35m in diameter, with a vertical height of nearly 1m, and as a distinctive circular mark on vertical aerial photographs (Pl. VIII).

IV. Iron Age and Roman periods

(Fig. 37)

Sporadic evidence indicates that by the later first millennium BC, activity had shifted to the upland edge beyond the skirtland. A few sherds of Iron Age pottery on the Methwold/Northwold boundary (MTW U4) point to a settlement on the lower slopes of the chalk, but outside the survey area.

A similar picture can be assumed for the Roman period. Sparse sherds of pottery and a tile fragment (NWD U2) tell us little about the location and nature of the settlement, but interestingly two separate hoards of pewter plate (NWD A1) were turned up by the plough in 1959-60 less than 200m away.

V. The Medieval period

(Fig. 38)

The subsequent history of Northwold and High Fens has left little trace in the landscape record. The fen was no doubt exploited by the parish in the Middle Ages, but it was not until the seventeenth or even the eighteenth century that the area was reclaimed.

A manorial extent of Methwold from 1278-79 refers to both South Fen and North Fen (Blomefield 1805 ii, 211). The former is of relevance to this discussion. It consisted of 1000 acres in which the whole soke of the town could pasture their stock and dig turves, while the soke of Methwold could also run their animals on it. In the fen, an area of forty acres known as Thornham had been appropriated by William de Warenne. This should probably be identified as part of thc low-lying ground north of the String Drain which was transferred to Methwold from Northwold during boundary changes earlier in this century. The same extent refers to John de la How as holding one of the Bishop of Ely's fisheries. This strongly suggests that there was at least one dwelling on How Hill in the later thirteenth century, though no relevant artefacts were found during the survey.

7. Southery

I. Introduction
(Figs 39, 40)

Southery village occupies the southern half of Norfolk's largest fenland island, a location reflected in the name itself which in its Old English form meant simply southern island (Ekwall 1960, 432). The parish covers an irregular area of 1559ha, over a third of which (564ha) is former peat fen beyond the Great Ouse that has not been examined during the present survey. East of the river, the parish divides between upland and fen: visible mineral soil including skirtland accounts for just over 400ha, the rest is black land.

The population of Southery, like that of neighbouring Hilgay, is small. Most of the 1096 people recorded at the last census (HMSO 1982) live in the village, with a few on or close to the main A10 that runs to Littleport and Cambridge. Beyond the Great Ouse, there is only the occasional farmstead. Brandon Creek, in the extreme south of the parish, marks the confluence of the Little Ouse with the Great Ouse. To devotees of William Barrett's tales (1963, 1964), Brandon Creek will be a

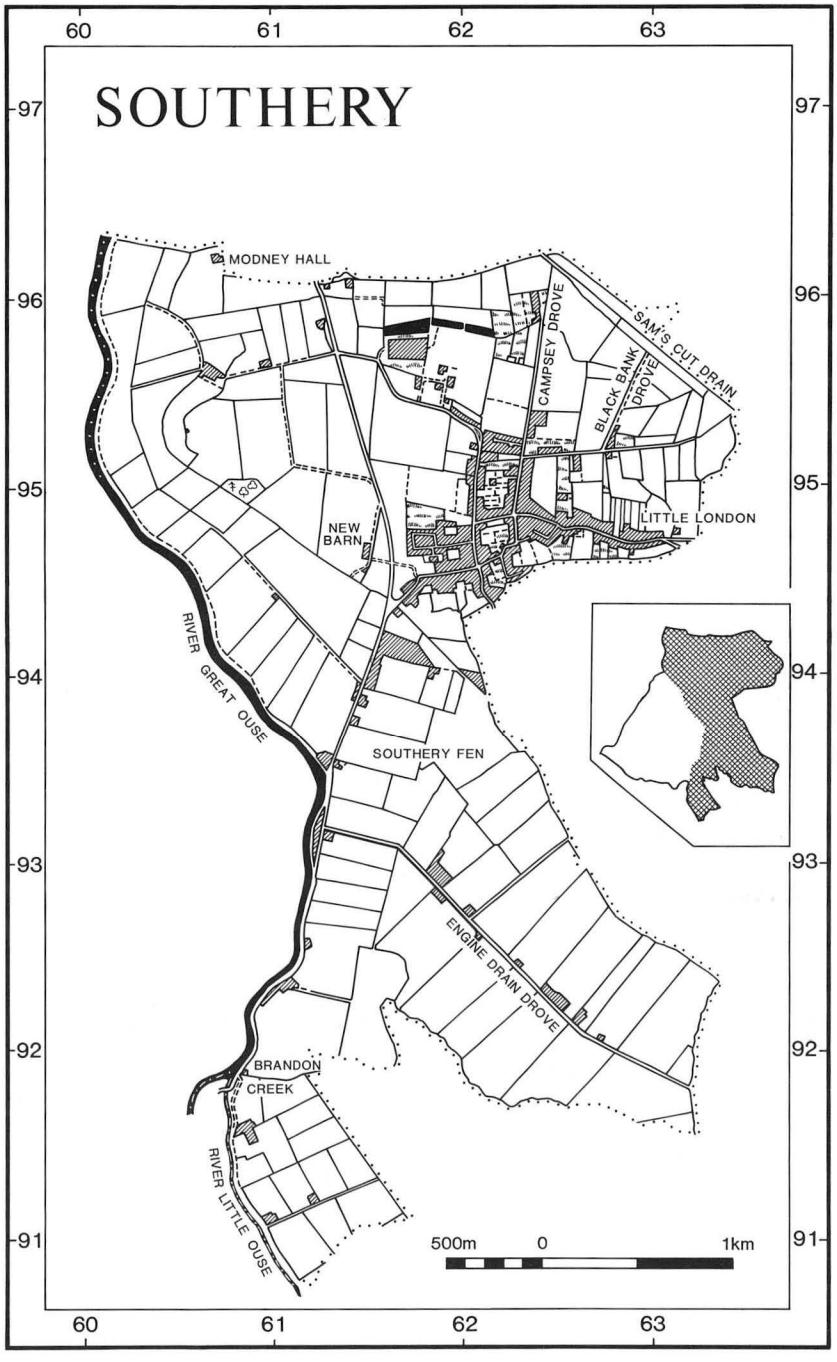

Figure 39 Southery: The modern landscape. Scale 1:40,000

familiar name, but now it consists of little more than The Ship Inn on the Cambridgeshire bank of the Little Ouse. At the other end of the parish Modney Hall, which is the site of the earlier Modney Priory, is shared with Hilgay parish (see p.48).

The boundary of Southery is erratic by the standards normal in peat-fen parishes. It follows old natural stream courses for much of its course through the fen; lengths of these are still preserved in the modern field pattern, but in places they have been infilled and replaced by a more regular network of dykes. The effect is particularly noticeable west of the Great Ouse where the line of the Creek Lode separating Southery from Hilgay shows only as an irregular boundary on the Ordnance Survey map. Methwold reaches right up to the edge of the island on the east side of the parish and includes what today is termed Southery Common. The boundary picks up the line of an old reclamation bank, perhaps an extension of the King's Dyke, on the north-east and then follows field divisions that bisect the major inlet on the east side of the island, neatly separating the twin lobes of the island.

Southery in contrast to its northern neighbour displays a monotonous regularity of land use. There is no grassland apart from a few small areas of pasture beside Campsey Drove, and the only patch of woodland is a covert known as Tuck's Holt on the western fringe of the island. The village itself hosts some light industry, predominantly in the agricultural support sector. Compared with Hilgay it appears more alive and more functional, yet for all that it is not so attractive.

Previous archaeological work in the parish has provided useful data which have been incorporated in this report: a Roman site (SRY 10) has been metal-detected regularly in recent years and large quantities of pottery

Figure 40 Southery: Fieldwork intensity

have also been collected from it; the construction of the A10 Southery bypass led to the recognition of Roman features nearby, as well as later material in the vicinity of the built-up area; and invaluable fieldwork within the village by Mr S. Ashley has helped to fill in several gaps in the picture of earlier settlement.

II. The Natural Landscape

An outcrop of Kimmeridge Clay is responsible for the projection of Southery island above the general level of the Fen Basin (Chatwin 1961, pl. 1), although recent publications reveal a rather more complicated geology, with other Jurassic rocks including Sandringham sands also present (Seale 1975, 15; Geological Survey 1980). Capping these are deposits of glaciofluvial drift and chalky till (Seale 1975, 17; Soil Survey 1983).

The soils also form an intricate pattern. Much of the skirtland falls within the Peacock Association of clayey and fine loamy soils (Hodge *et al.* 1984, 290); in the western and central parts of the island fine loamy soils of the Ashley Association, sometimes seasonally waterlogged, overly chalky till (Hodge *et al.* 1984, 96); while to the south and east, permeable sandy and coarse loamy soils of the Blackwood Association cover glaciofluvial drift (Hodge *et al.* 1984, 127). Several variations in the peat soils of the fens have also been distinguished (Seale 1975).

Southery nowhere achieves the height of Hilgay on the northern lobe of the island. The southern portion rises gradually from the narrow peninsula it shares with Hilgay to a plateau which appears almost level. The village lies on its southern edge where the ground rises to a maximum

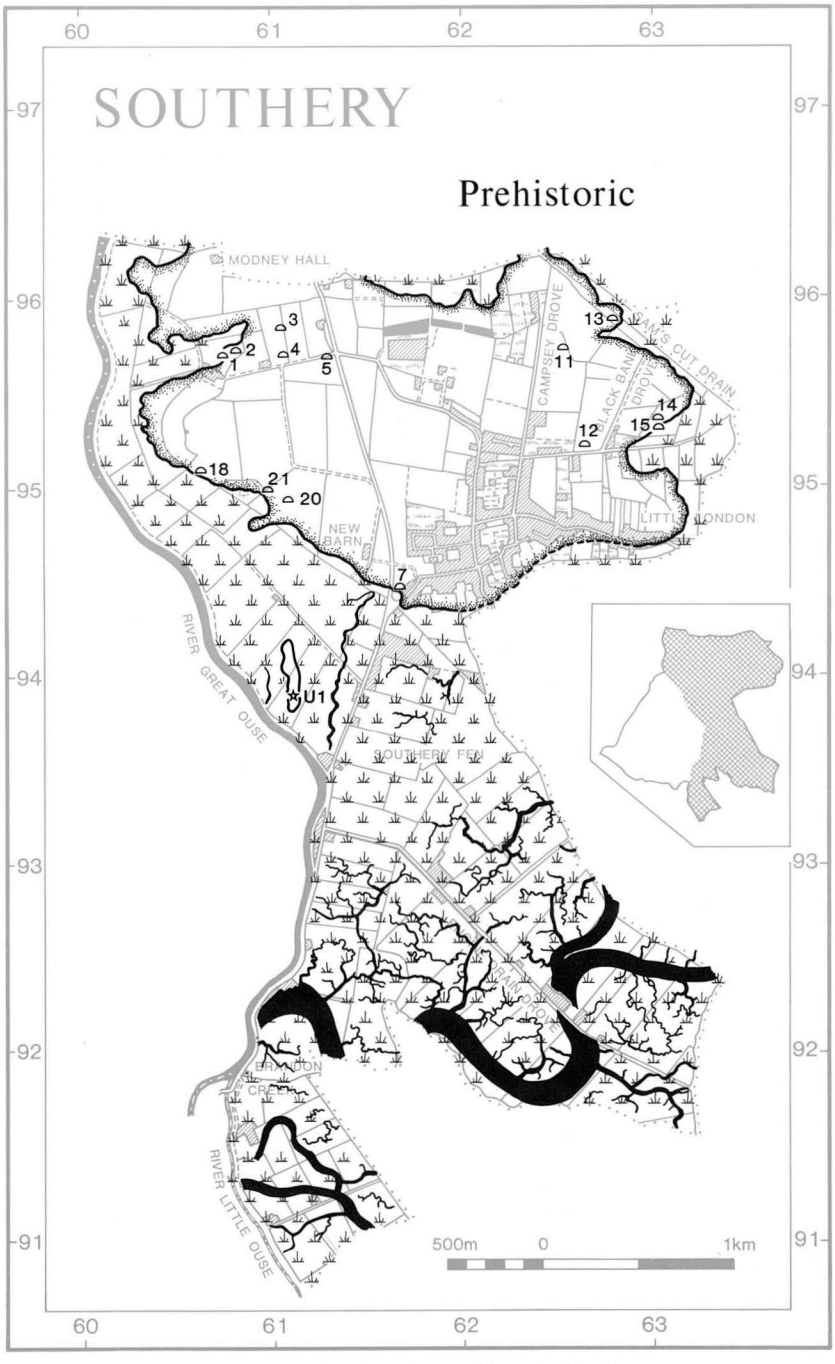

Figure 41 Southery: The prehistoric landscape

of *c.*11.0m OD. The island slopes quickly down to the fen on the south and east sides, but to the west the slope lies further back from the present fen edge and the mineral soil shelves gently beneath the peat, giving a much broader span of skirtland.

The peat deposits are now of little depth and in several places between the island and the Great Ouse shallow spreads of shell marl are visible. South of the village, Southery Fen extends to the Little Ouse and the peat in this area is interrupted by intricate patterns of fen clay roddons, a further indication that little organic material remains.

III. The Prehistoric Period

(Fig. 41)

Fen clay laid down by the marine transgression in the Later Neolithic extends over much of the southern part of the parish and runs close against the island's eastern edge, but does not appear to have covered the shelving mineral soil on the western fringes (Seale 1975). The pre-fen clay course of the Wissey ought to be visible passing to the south of the island, but the 150m wide roddon that is visible in Southery Fen does not run up the tongue of fen clay projecting into Methwold. It seems likely that by the time the watercourses had filled up with sediment the Wissey was flowing through a different channel. Peat would have blanketed the marine deposits very quickly after the regression of the sea. Figure 41 depicts the freshwater swamp by the inclusion of fen symbols between the watercourses and is thus a composite map.

Against this backcloth, contemporary human activities have left only limited traces in the landscape. Chance finds noted over the years imply a degree of

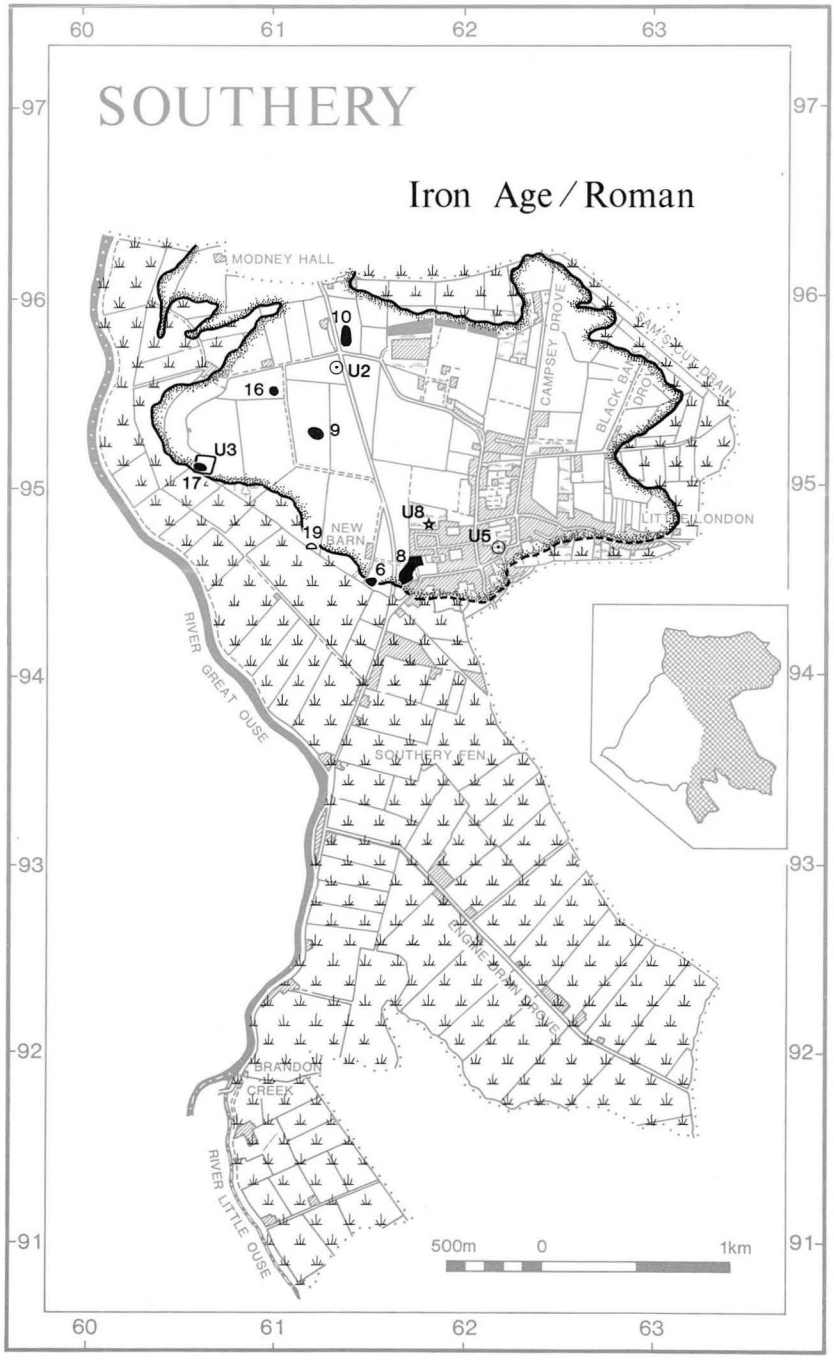

Figure 42 Southery: The Iron Age and Roman landscape

activity that is not apparent in the survey record: axes of stone and copper alloy, the occasional weapon and even the famous skeleton of 'Nancy' that brought delight to the Fenland Research Committee in the 1930s (Godwin 1978, 65), indicate clearance and presumably settlement[1].

Field evidence consists only of 'pot-boiler' sites. These proliferate around the edge of the island and there is some suggestion of grouping (*e.g.* SRY 1-5; SRY 18, SRY 20 and SRY 21). Where sites appear away from the fen edge they are normally adjacent to hollows, too small to depict on the map, which still show traces of their former peat fill (*e.g.* SRY 5 and SRY 12). No 'pot-boiler' spreads have been recorded in the centre of the island. The date of most of the Southery examples remains unknown, in common with the vast majority of such sites elsewhere in the embayment, and it is little more than a reasoned guess that many pre-date the Iron Age. There are, however, at least two in Southery where a later date is preferable and it would be unwise to assume uncritically that all those depicted on Fig. 41 are of prehistoric date. In view of the probable date of SRY 19 (see below), the proximity of SRY 18 to a Roman site could be more than a coincidence.

Lithic material turns up only in dispersed scatters and no sites have been recognised. Nevertheless, as most fields produce a few worked flints, the definition of prehistoric activity areas and settlements perhaps requires a more detailed method of survey. Furthermore, earlier prehistoric activity may yet be revealed by peat wastage. A single sherd of flint-and-sand-gritted pottery (SRY U1) was recorded on a patch of loamy mineral soil, just appearing through the peat some 700m south-west of the island. Careful search of the immediate vicinity failed to produce any comparable material, despite ideal field conditions. However the single fragment is interpreted, it does appear to show that in this part of the Wissey Embayment, ground partially or wholly covered by peat may yet yield traces of prehistoric activity.

IV. Iron Age period
(Fig. 42)

Settlements of Iron Age date prove easier to recognise than those of earlier phases, although chance discoveries of diagnostic artefacts from this period are unknown, apart from two Late Iron Age coins (SRY U8). A large spread of pottery (SRY 8) on the southern edge of the island covers the steep slope down to the fen and the plateau edge above; the full extent cannot be determined because it runs under gardens in the north and east. Mixed in with the predominantly angular-quartz gritted pottery are numerous 'pot-boiler' fragments, the distribution of which is so similar to that of the extensive pottery spread as to imply a common origin. Coupled with the typical fabric of the sherds, the presence of so many fire-cracked flints may hint at an earlier first millennium BC date for this site. Two other contiguous 'pot-boiler' spreads, one on the southern edge (SRY 7), the other (at TL 6166 9462) a much more diffuse spread beyond the modern track to the north-west of SRY 8, did not reveal any evidence to suggest that they too might be of first millennium date.

A second Iron Age site (SRY 16) lies on flattish ground overlooking the western fringes of the island, but the amount of material recovered was small and the site was not easy to distinguish, even though the ground surface was reasonably weathered. Together with a few Iron Age sherds noted from a Roman site (SRY 9), there is thus some evidence of settlement on the western side of the island. Nothing similar has been found elsewhere on Southery.

Hilgay reveals a marked distributional bias with less activity obvious in the Iron Age and Roman periods on the island's eastern side. Southery is similar, although in both parishes sufficient ground remained unexamined to produce a potential distortion in the record. Nevertheless, it appears that settlement during these times did favour the western and southern slopes of the island.

V. The Roman period
(Fig. 42)

It is unlikely that the succeeding period witnessed any dramatic change in the twin environments represented by upland soils and lowland peat fen. Related problems relevant to this discussion are the courses of the Great and Little Ouse Rivers in the Roman era. The topic has been debated over the years and, as it is pertinent to several other parishes considered in this report, a fuller assessment has been left until the final section. It is sufficient to state here that though there are several reports of Roman material being dredged from the bed of the Great Ouse in Southery (Phillips 1970, 240), the case for the rivers originating in the Roman period is far from convincing.

The southern lobe of the island witnessed considerable activity in the earlier first millennium AD. Most impressive is a site (SRY 10) lying just above the inlet that almost severs Southery from Hilgay. Slightly mounded, with an obvious spread of grey soil, it is regularly worked with metal detectors and the quantity of pottery recovered from it is substantial: the SMR records that about two thousand sherds came from an hour's fieldwalking in 1979. Together with a small amount of tile and fired clay, possibly brick, found during the present fieldwork, the amount of material argues for a farmstead of some substance.

Salvage work on the Southery bypass in 1978/79, just to the south, revealed three pits and a ditch as well as stray finds, all of Roman date (SRY U2). Carbonised grain in the ditch was identified as wheat, mainly of the spelt variety (information in SMR from P. Murphy, Centre for East Anglian Studies, UEA); and the inclusion of seeds of stinking mayweed (*Anthemis cotula*), a weed characteristic of arable and waste ground on poorly drained clay soil, may indicate that the western slopes of the island with their heavy soils were under cultivation in the Roman period.

An unsubstantiated report of linear cropmarks, perhaps a ditch system (SMR no.14691), some 250m south-east of SRY 10, and Roman coins and the base of a small bronze jug, metal-detected in a field 200m east of the cropmarks (SMR no. 15492), subscribe to the picture of extensive Roman activity on this part of the island.

While SRY 10 probably represents the hub of the farmstead, chance discoveries seem to suggest that its associated fields stretch for some distance beyond. However, it has to be considered whether SRY 9, about 500m to the south, is part of the same complex or a separate farm. Pottery was much less common than on

SRY 10 and no darkened soil was visible. Given that this site lies on a flattish plateau, soil build-up is unlikely to have submerged a substantial Roman site, and this would favour an ancilliary function. But such a conclusion has to be treated cautiously. Not far away, on the western side of the island, another small area of Roman pottery was recognised (SRY 17), close to the contemporary fen edge. Its appearance was not very different from SRY 9, but the site and its status have to be assessed in the light of a rectilinear cropmark, identified on an Ordnance Survey air photograph (SRY U3). It is tempting to infer a separate Roman farming establishment here.

If there are at least two Roman farms on the west side of the island, the same may be true on the south. Roman pottery (SRY 6) spread across the relatively steep slope dropping down to the fen becomes denser as the slope evens out. It is difficult to comprehend the conditions under which a building might have been erected on this slope, but a solution may lie in the discovery of Roman pottery mixed with the earlier, Iron Age fragments of SRY 8, some 300m to the east.

Most of the Roman material was collected from the top of the slope, on the edge of the plateau that is now submerged beneath modern housing. Earlier work within the village suggests that an extensive Roman site exists in the vicinity (SRY U5). SRY 6 might thus fall into place as an ancilliary or industrial area, or perhaps even a rubbish dump. Nor should we overlook SRY 19, a normal, if somewhat sparse, spread of 'pot-boilers', except that amongst the fire-cracked fragments were a few pieces of Roman pottery. Fieldwork failed to locate further pottery in the surrounding area and it seems that this is a genuine Roman 'pot-boiler' site.

The discovery, in very poor fieldwork conditions, of

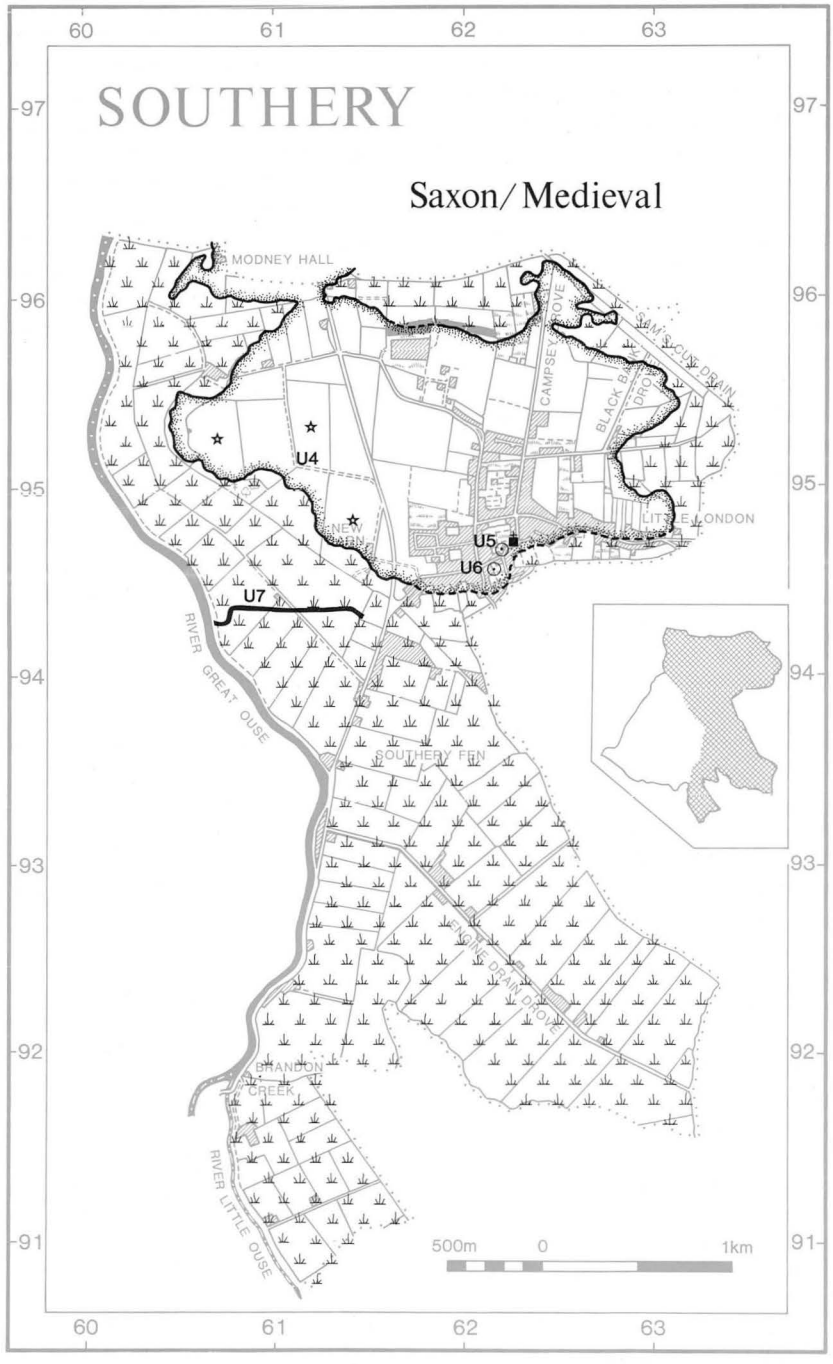

Figure 43 Southery: The Saxon and medieval landscape

a samian sherd much further east (at TL 6246 9490), raises the possibility that on the southern slope of the island, much favoured for settlement in later times, another Roman settlement existed. Further proof may be difficult to obtain.

VI. The Saxon period

(Fig. 43)

No Early Saxon sites were recognised during fieldwork but, in the subsequent classification of the material, one decorated sherd was attributed to the period and another five plain sherds were tentatively identified (SRY U4; located on Fig.43 in the field which produced the decorated sherd). All came from the western side of the island but were dispersed widely over three fields. No focus can be recognised; the presence of at least one Iron Age site (SRY 16) in the vicinity complicates the attribution of the undecorated sherds.

A Middle Saxon precursor of Southery village is assured, not from the present survey which failed to locate any relevant material, but from previous collections made by S. Ashley in the centre of the built-up area. Most significant here is material from garden plots (SRY U5), just to the west of Southery's ruined church (see below). A Middle Saxon nucleus on the slopes above the fen can be inferred from the nine sherds of Ipswich-type Ware, and the view is reinforced by further sherds from 100m lower down the slope (SRY U6).

Late Saxon settlement, distinguished by Thetford and St Neots Wares, is also demonstrated by the village collections, but the documentary record is more instructive for this period. Southery features in the earliest surviving charters for the county. King Edmund granted a substantial area in Southery to Theodred, bishop of London in 942 (Hart 1966, 96), and some years later in his will, Theodred left part of the land, together with the fishing rights that belonged to it, to the community at St Paul's church, London. The remainder seems to have passed to the Abbey of Bury St Edmunds.

VII. The Medieval Period

(Fig. 43)

The present size of Southery is such that traces of the earlier, medieval settlement are likely to be detected only in private gardens and on small infill developments, neither of which were normally subjected to examination during the field survey. A further inhibiting factor is the apparent tendency for the village to cling to the southern slope of the island with only a limited spread on to the flat plateau behind, a tendency that, from the previous evidence, may have a long history.

Southery was probably much the same as Hilgay in its degree of affluence. In the Lay Subsidy lists of 1334 Hilgay was taxed at £8.0s.0d., Southery at only £5.0s.0d. (Glasscock 1975, 203), but this is balanced by the taxation on ecclesiastical property. The taxation of Pope Nicholas (1291) rated Southery at £12.13s.4d, and Hilgay at £9.6s.8d (Hudson 1910, 120). Interestingly, whilst Ramsey Abbey is mentioned under Hilgay, the Abbey of Bury St Edmunds does not appear under Southery, suggesting that it did not have a dominant position in the vill.

The centre of the medieval community was the old church of St Mary, now a ruin. Though mainly of the fifteenth century with a few earlier features, the building includes reused masonry and architectural fragments of Norman or Transitional date (SMR no. 2590). It was replaced in 1858 by the new parish church of St Mary, 150m to the south-west.

No manorial site is recognisable. The Manor House, a Georgian building that was demolished a few years ago, lay on the west side of the village, but there is no evidence that its history extended back to the medieval period.

Medieval pottery was common in the upland fields around the village. Unlike Hilgay no ridge-and-furrow has survived, but several plough headlands are still visible, one running for about 900m across the north-east quadrant of the upland, and it is tempting to infer from these low banks that ridge-and-furrow was once widespread.

Finally, another canal (SRY U7), about 900m in length and running from the Great Ouse towards the southern tip of Southery island, can be recognised on the ground. It bends round sharply near the confluence with the river, and its course is lost one field away from the upland. This must be an artificial waterway, probably linking a medieval hithe below Southery village to the main river.

End Note

1. These are listed fully in Frances Healy's volume which is companion to this report (Healy forthcoming, a).

8. Synthesis and Discussion

I. Methods and Results

(Figs 2, 44)

When the programme for the Fenland Project was formulated in 1982, the guidelines reflected increasing concern over the perceived destruction of waterlogged remains as former wetlands were drained and cultivated (Coles and Hall 1983). The aims are pertinent to the inner fens of Cambridgeshire and Norfolk where peat forms the major and often the sole post-glacial deposit. Closer to the Wash, however, the siltlands have a much longer history of drainage and farming, stretching back to Saxon times (Silvester 1988a, 158). Because of the nature of marine flooding in these coastal districts, the submergence of settlements would have occurred more rapidly but much less frequently than those inland sites threatened by the gradual encroachment of peat. Taking these factors together, it can be assumed that the number of affected sites will have been much greater in the inland parts of the Fenland Basin and that their preservation through waterlogging offers much more potential than around the Wash.

The fieldwork emphasis in Marshland centred on the recognition of ploughsoil sites and their relationship to Roman and later landscapes. Only where post-Roman silt had submerged earlier levels was there much chance of settlements being protected from ploughing, and even then the likelihood of waterlogging was slight. The black fens, in contrast, had a much higher potential with their variable depth of peat cover (Burton and Hodgson 1987, fig. 7).

Representing little more than half the Norfolk peatlands, the Wissey Embayment, as far west as the Great Ouse, was selected in preference to the tract of peat fen that runs from the Old Podike edging Marshland to the southern limits of the Hilgay and Southery Fens where they abut the Cambridgeshire border (Fig. 2). Soil maps and the available aerial photograph cover indicate that the latter is a region of extensive peat, fen clay with roddons and shell marl, but with very few islands and tracts of skirtland. The decision was made in the early years of the Norfolk Project to abandon this area, where field survey would have focused on elements of the natural landscape, in favour of the archaeologically-rich fen edge which required close and careful examination.

Despite the very large numbers of sites identified on the skirtland ridges, there is no substantive evidence of good organic survival in any of them. Our fieldwork strategy was not geared to the types of discovery that might be recognised through dyke survey (Pryor 1985); and it is only by chance that buried sites were picked up during routine fieldwalking. Furthermore, it can only be conjecture that recently exposed skirtland sites like FWL 136, beyond the Kettle Lane spur, and MTW 36, on the edge of Stubb's Hill, might have generated sufficient organic debris, when occupied, to justify future examination of the peat-filled hollows beside them.

While the potential for organic preservation can only be assessed in general terms, the remarkable archaeological legacy of the fen-edge zone is abundantly clear. Prehistoric artefacts were being recovered in the last century at such a rate that they were even parodied in the local oral tradition: Barrett's story of the rat dag (or vermin catcher) identified as an Iron Age fish trident is a fine example (1963, 7). Following the Second World War vast numbers of objects were collected from fields newly turned over to cultivation (Healy forthcoming, a). Surprisingly, no systematic fieldwork was undertaken,

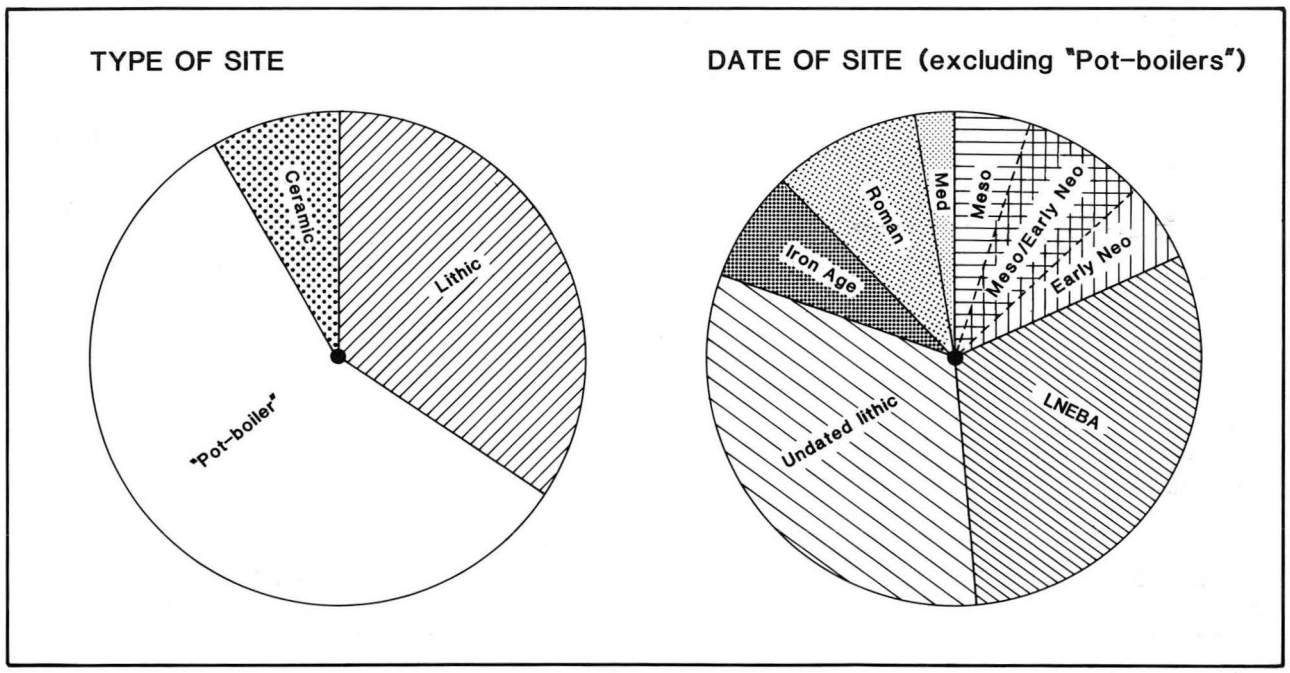

Figure 44 Site types and site dates as proportions of the total number of sites located during the survey

other than Frank Curtis's delvings in the 1960s, and the archaeological context remained clouded. Now this has been partially rectified, although much has certainly been obliterated by the plough.

The present survey has generated a vast amount of data. Well over 500 sites have been recorded, a large proportion being 'pot-boiler' spreads (Fig. 44). The chronological emphasis rests very strongly on the centuries preceding the Iron Age, and the general sparsity of later occupation sites reflects the lack of survey work on the adjacent upland.

The methods of field survey, in retrospect, were not entirely appropriate to the specific problems of the skirtland. Successful on the silts and also on Hilgay and Southery, where sites appear as discrete entities, the fast survey methods adopted by the Project were less than ideal for discerning artefact concentrations where there was a ubiquitous scatter of 'background' material. Healy's comparisons between some of Curtis's prime sites and the results from the present survey (p.136) highlight the limitations of the methods. The retrieval of lithic material through close-set gridding techniques would allow a significant advance in comprehending patterns of prehistoric activity on the skirtland zone: but clearly such a time-consuming approach could not be justified for the initial survey. The conscious decision to collect only a sample of artefacts from each site also creates limitations in the record and is mirrored perhaps in the number of unattributed lithic spreads. In response, expediency has to be invoked.

It is important to recognise that the present perception of the fen edge and the skirtland covers a relatively short period of time, in effect the five years of the survey. The appearance of the skirtland will have changed in another twenty years time: peat wastage will have exposed previously unknown sites on newly emerging ridges of mineral soil, and existing sites will have become more plough-dispersed. When Frank Curtis was working in the 1960s artefacts and sites of the Late Neolithic/Early Bronze Age predominated. Now many of the more prolific sites have a strong Earlier Neolithic component. These too may be obliterated in years to come, or at least may merge into the general background spread. Just as the growth of the fen from the prehistoric centuries onwards was a dynamic feature of the region, so is the retreat of the fen today: the only difference is the length of time involved.

II. The Archaeology of the Embayment

The archaeology revealed by the survey has been laid out in the preceding essays. Inevitably, this has resulted in some duplication of detail, for the topography of the fen edge parishes is reasonably consistent, as no doubt was the reaction of the various prehistoric and historic communities to the landscape in which they were active. In an attempt to highlight some of the main themes, the section that follows provides an overview of the Wissey Embayment as it appears from the fieldwork of the Project.

The Mesolithic Period

(Fig. 45)

A clear pattern is evident in the Mesolithic, with two rivers, the Wissey and the Little Ouse, acting as foci. The identification of several Mesolithic concentrations at the western extremity of the Catsholm peninsula, where lithic spreads are generally sparse, may betoken denser spots in a single spread on the high ground closest to the Wissey. Mesolithic activity along the Hythe valley, including the buried site, MTW U1, which could be several thousand years earlier than the other sites discussed here, may also be riverine if the argument hinging on the spread of fen clay is accepted (p.61).

The prevalence of Mesolithic sites further south on the Little Ouse sandhills emphasises a connection that had already emerged in the work of the Fenland Research Committee at Shippea Hill, and it also reinforces the apparent significance of this river valley in the early post-glacial period. Upstream, where the Little Ouse cuts through the Breckland, there is a high incidence of Mesolithic material beside or close to the river (J.J. Wymer: pers. comm.), including the prolific site at Two Mile Bottom, Thetford (Jacobi 1984, 53) which is less than 20km from the Hockwold sandhills. The attraction of the Little Ouse valley for Mesolithic communities is conspicuous, though the field evidence cannot distinguish whether different types of settlement existed, or if some sites were occupied only on a seasonal basis.

The Fenland Basin to the north and west seems to present an entirely different impression, although it is conceivable that traces of early settlement are still masked by peat. The absence of Mesolithic activity on Hilgay and Southery, and on the island of Ely and Littleport (D. Hall: pers. comm.) implies that hunter-gatherer groups penetrated the basin only rarely. Mesolithic sites have come to light on March island, close to the contemporary course of the combined Nene and Ouse (Hall 1987, 39) and at Manea (Hall 1981, 59), well away from any obvious watercourse. A handful of Mesolithic artefacts have also been recovered from smaller islands in the Wissey Embayment (Fig. 45), but evidence of intensive activity is absent.

Excepting the rivers, the basin forest held limited attractions for foraging groups. Set against the riparian sites, there is a sparsity of material along the skirtland. Some activity can be inferred from the Mesolithic artefacts recovered from this zone (Fig. 70), though at a lower intensity than beside the rivers. While the vegetation of the upland edge and the basin floor may not have been markedly different in this early period, the present skirtland at the base of the chalk slope would nevertheless have been an obvious topographical divide and as such it might have been used as a corridor for hunter-gatherer groups moving from one valley system to another.

The Earlier Neolithic

(Fig. 46)

Marine and fen environments shifted eastwards during the later part of the Mesolithic and throughout the Earlier Neolithic, under the influence of a rising sea level. But the process was very gradual. Boreholes in Welney Washes (at TL 5364 9315), between the village of that name and the Suspension Bridge over the New Bedford River, provided a radiocarbon determination which places the onset of the earliest marine incursion at 6170 ± 110 BP [Q-2824], that is towards the end of the Mesolithic (Waller forthcoming). It took well over a thousand years for the fen edge to shift to the area of Feltwell Common, a distance of some 13km. A radiocarbon date of 4490 ± 75 BP [Q-2550] (3345-3035 Cal BC) from there fixes the onset of peat growth towards the end of the Earlier Neolithic.

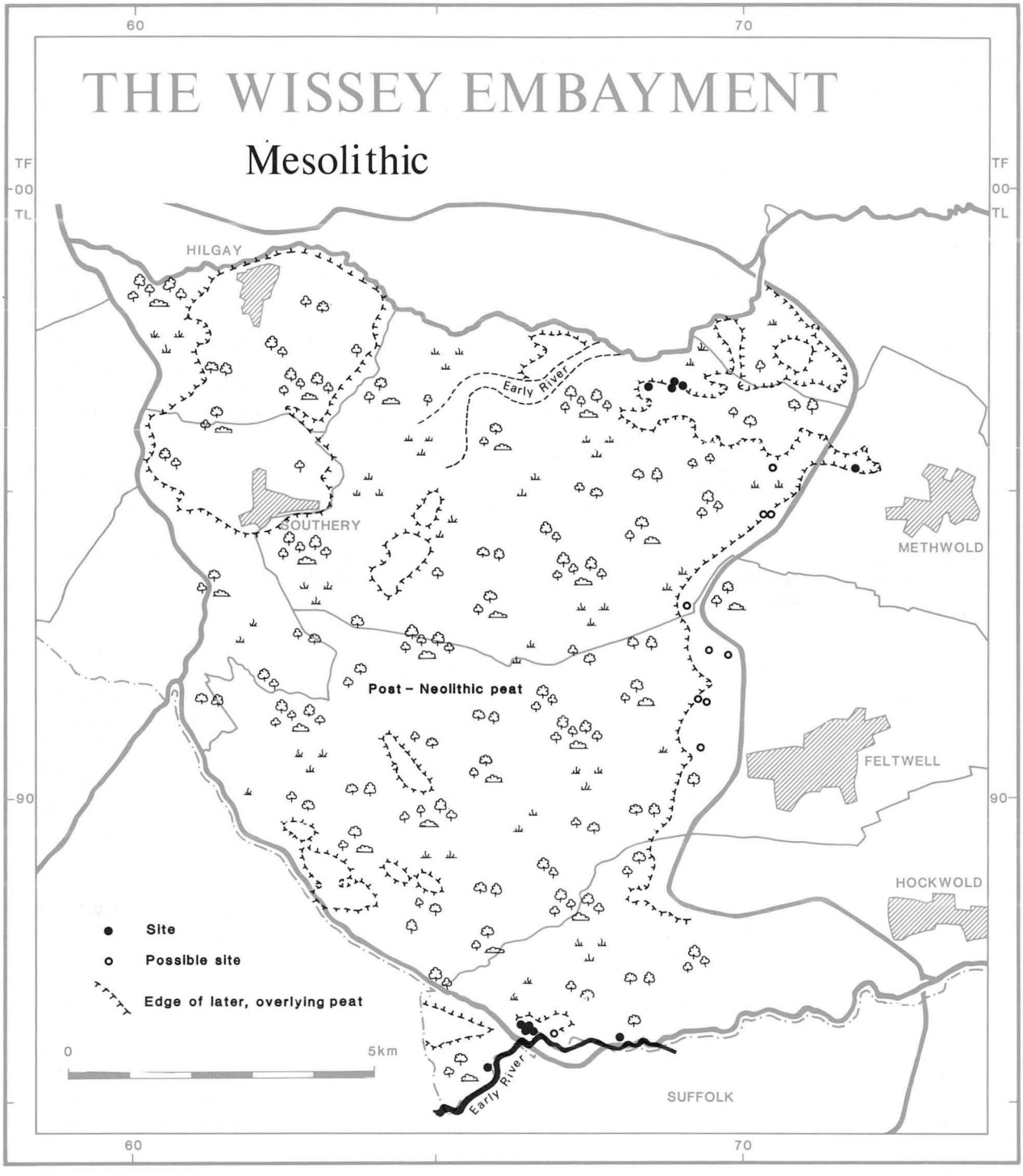

Figure 45 The Mesolithic landscape. Scale *c.*1:100,000

The Earlier Neolithic settlements located during the survey were little different, in numerical terms, from their Mesolithic counterparts, although a number of lithic concentrations could not be satisfactorily differentiated between the two periods. There was, however, a fundamental change in the location of settlement and associated activities. No longer were riverine locations frequented: leaf-shaped arrowheads are the sole artefacts of the period from the Little Ouse sandhills (Fig. 71). Instead the present skirtland became an important focus, with a group of sites along the Feltwell edge where previously only limited Mesolithic activity had occurred. On the slopes of the Hythe valley and on skirtland where the Little Ouse valley opens into the fen, further sites emphasise this move towards the fen edge as it appears today. Future work should confirm the pattern; there is no reason to believe that all the sites of Earlier Neolithic date have yet been revealed by peat wastage, and the low sandy ridge system covered by pottery and flint of FWL 50 is an excellent example of the effects of recent peat wastage.

A rather broader zone of Earlier Neolithic occupation than is presently apparent probably stretched westwards towards the contemporary fen, the range of natural resources expanding in that direction. The occupation of several islands should be a sign of such wide-ranging activity, with Earlier Neolithic material on sandy patches on both Stubb's Hill and Decoy Hill, Methwold (MTW 36 and MTW 35 respectively), and on

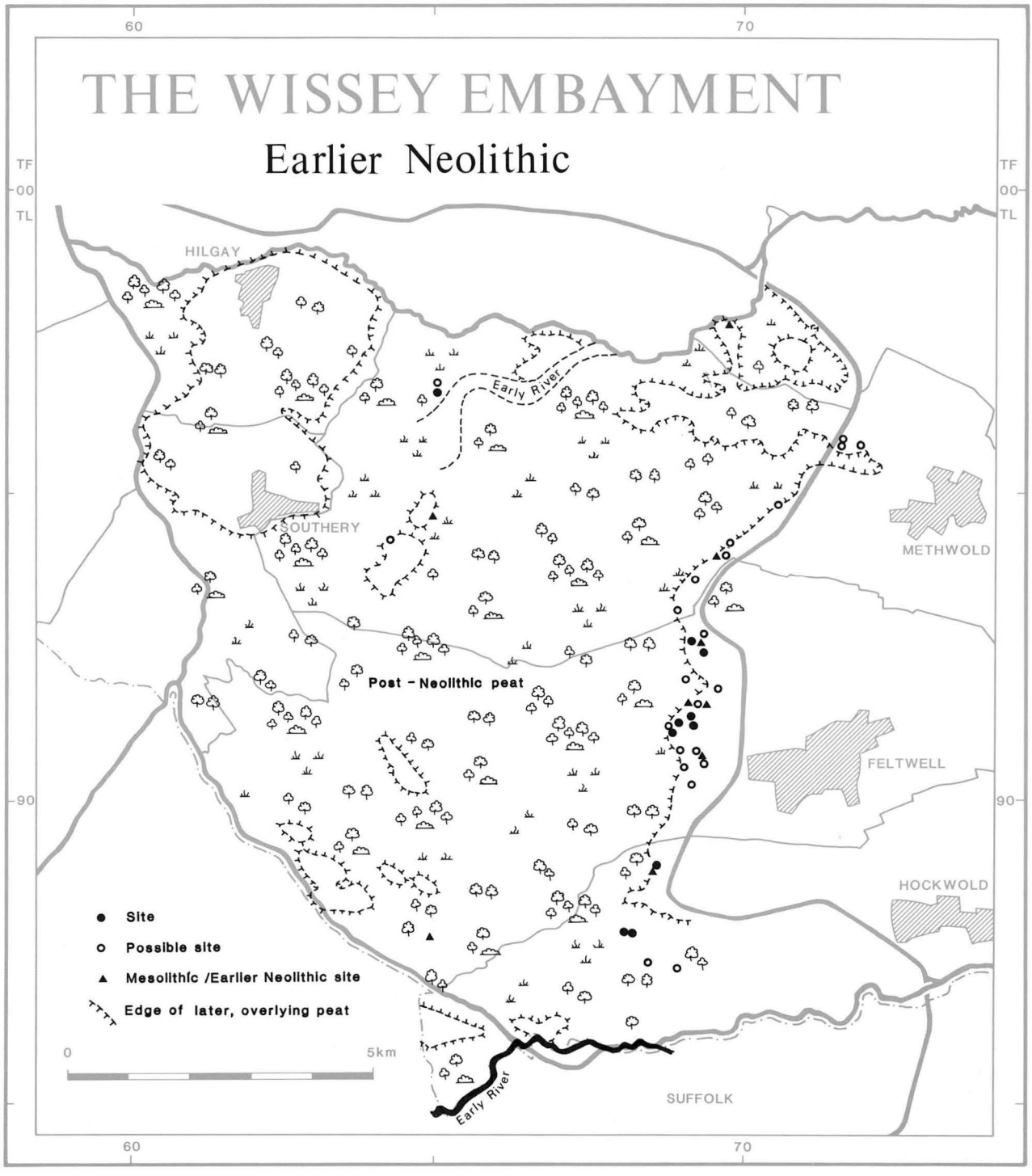

Figure 46 The Earlier Neolithic landscape. Scale *c.*1:100,000

the smaller sandhills beside the early course of the Wissey further north (MTW 6). These mineral soil exposures also seem to reveal the careful selection of areas for occupation, perhaps through the recognition of the vegetation carried by the lighter soils.

The Later Neolithic/Early Bronze Age
(Figs 47, 48, 49)
The sea continued its gradual spread across the basin during the Later Neolithic, the incursion reaching its maximal extent little more than a kilometre from the edge of the Methwold upland, but rather further out in the southern part of the embayment. Tongues of fen clay were deposited in the main river valleys, and the outlets of other prehistoric watercourses may be revealed in the lobate pattern apparent in the fen clay edge; a stream issuing from the Hythe Valley is the most obvious and a protrusion opposite the Feltwell valley may disclose another early brook. At what point the Wissey abandoned its old course, east and south of Southery island, is unclear. It was active during the early stages of fen clay deposition, but by the time of the Iron Age marine transgression two thousand years later the river was flowing due westwards through the Hilgay gap. Marine floods backing up its channel and depositing fen clay offers the most logical explanation for its displacement.

Radiocarbon dates for the upper and lower fen clay contacts at Cross Bank, Feltwell, only a short distance

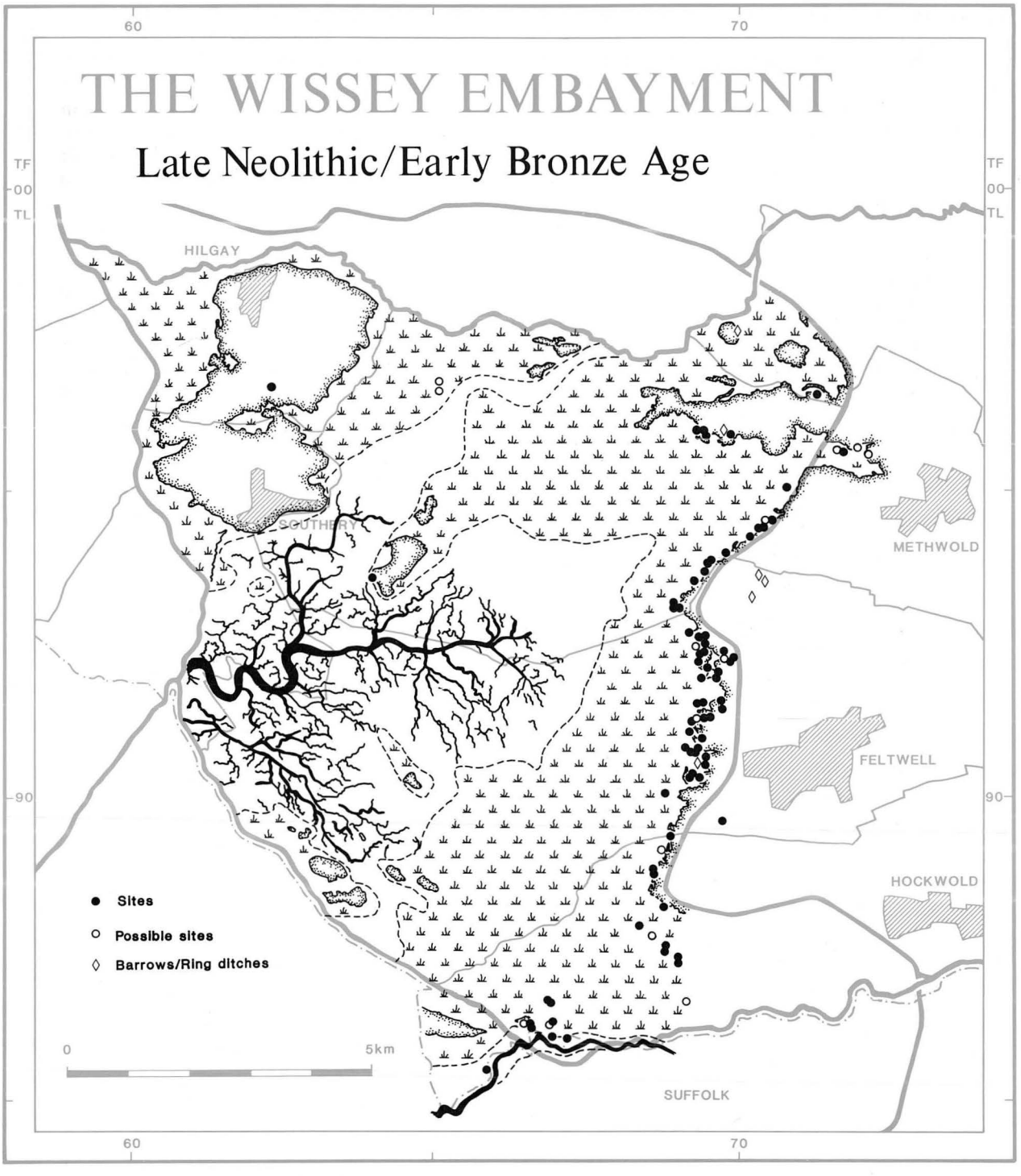

Figure 47 The Later Neolithic and Early Bronze Age landscape. Scale *c.*1:100,000

from the maximum extent of the deposits, suggest a possible three hundred years of virtual stasis before marine conditions began to wane (Waller forthcoming). A stylised depiction of this period is presented in Fig. 48 and reflects the variety of environments that would have been accessible at the time.

The termination of marine conditions is dated to 3810 ± 50 BP ([Q-2821] 2370-2145 CAL. BC) for the fen clay/upper peat contact at the Welney Washes sample site and is little different from that at Cross Bank, Feltwell, well to the east where a sample dated to 3815 ± 70 BP [Q-2551] 2420-2140 CAL. BC, was obtained. Samples from similar contacts elsewhere in the south-eastern fens (*e.g.* at Redmere, Suffolk, on the south side of the Little Ouse) have yielded comparable dates, confirming that the sea receded rapidly around the time of the Later Neolithic/Early Bronze Age transition, towards the end of the third millennium CAL. BC. The effect of the regression and the extension of freshwater conditions throughout the embayment would have reduced the range of environments available for exploitation. Long before the end of the earlier Bronze Age, peat growth would have choked the embayment.

What effect then did this have on the communities inhabiting the fen edge? The archaeological data for the period are much more substantial than for previous phases. Figure 47 includes all the indeterminate LNEBA spreads of lithics, as well as those more precisely

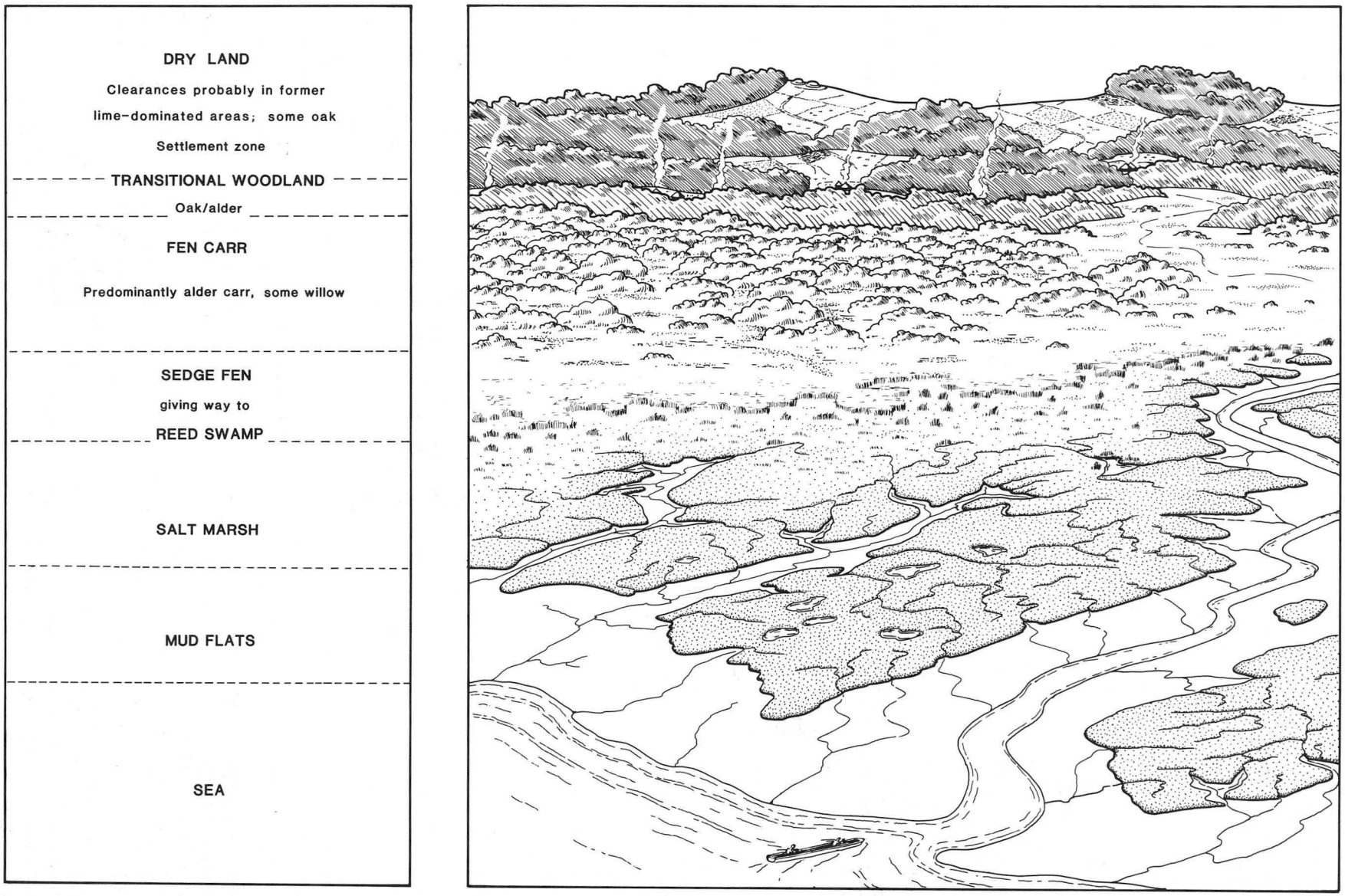

Figure 48 Reconstruction of fen-edge environments

attributable (see also Figs 72 and 73). There are, in addition, a large number of sites for which no date can be advanced, although most are likely to relate to this period (Appendix 1, section II). Most obvious is the wide range of locations utilised: a high density of sites along the fen edge; some re-use of the sandhills bordering the Little Ouse; further occupation sites appear on the Catsholm peninsula, on Stubb's Hill and for the first time on Hilgay.

A closer assessment reveals changing patterns of activity through this period. Artefacts and sites specifically referable to the Later Neolithic (Fig. 72) are not all that common, a comparison with the Earlier Neolithic map (Fig. 71) indicating a wider spread geographically but little if any increase in overall density. More intensive activity is signalled by the greater density of Beaker and Early Bronze Age material (Fig. 73) which, in broad terms, correlates with the end of the period of stability in marine conditions and the rapid retreat of the sea. Occupation, whether temporary, seasonal or permanent, appears on the evidence of lithic scatters to have been confined to a relatively narrow zone of land equivalent to the skirtland as we perceive it at present. The range of environments would have been at a maximum as would the resources available for exploitation.

Natural resources became restricted to those derived from freshwater fen, as peat growth expanded over former saltmarshes and mud flats. Although not well evidenced in the present fieldwork record, activity appears to have continued throughout the Early Bronze Age on a considerable scale. Curtis's explorations of the Hockwold fen edge, a quarter of a century ago, turned up substantial quantities of pottery, mainly Biconical Urn (Tomalin 1983; Healy forthcoming, a). Further south, the excavated settlement of West Row, Mildenhall, with a series of radiocarbon dates centred around the middle of the second millennium CAL. BC, falls within the period (Martin and Murphy 1988).

Livestock were undoubtedly an important element in the local economy, but this phase probably witnessed an increase in agriculture along the upland fringe. Arable cultivation in the vicinity of a Beaker site at Hockwold was evidenced by grain impressions on pottery (Bamford 1982, 19), but it is only later that more widespread evidence, albeit indirect, becomes available. Carbonised cereal occurred at West Row, but not necessarily in a form indicative of cultivation locally (Murphy 1983, 50). Pollen of cereals and weeds from cultivation was present, though not in sizeable quantities, at Redmere, just over the Little Ouse boundary, from the later second millennium CAL. BC onwards (M. Waller forthcoming). Perhaps more significantly several early pollen diagrams from the region (Godwin 1940) all show a marked decline in *Tilia* (lime) values in the upper peat: this is usually taken as a indicator of woodland clearance by human agency. Martyn Waller (pers. comm.) would place this activity around the middle of the second millennium CAL. BC.

While the skirtland is richer in settlement traces than many other areas edging the Fens, the sparsity of burial mounds, both individually and grouped, is a feature highlighted by the survey. Extensive barrow cemeteries have been recorded by Hall at Over, Borough Fen and elsewhere along the Cambridgeshire fen edge (Hall 1987, 26) and similar groups have been detected in the Lincolnshire Fens (Hayes and Lane forthcoming). The Wissey Embayment in contrast can boast only one certain (NWD 4) and two probable barrows (MTW U8 and FWL 177), in addition to the group of three ring ditches (FWL U7) on a spur overlooking the fen.

Edward Martin has used the scarcity of burial mounds on the Suffolk fen edge to postulate the seasonal use of this zone, pointing out that the Breckland to the east has a large number of such monuments (Martin 1977, 12). The Breckland behind the Wissey Embayment is similar in this respect (Lawson *et al.* 1981, fig. 5). Yet it would be unwise to exaggerate the significance of the apparent dichotomy in the distribution pattern.

The hummock and hollow landscape of the eastern fen edge provides natural barrows: indeed some doubt remains as to whether MTW U8 and FWL 177 are largely natural features. There is evidence from the Chippenham area of Cambridgeshire that natural mounds on the chalk plateau were utilised for burial in the Early Bronze Age (Martin 1977, 13); while Fox (1923, 37) argued that a low broad *tumulus* that produced a Collared Urn and a minature vessel at Mepal in the same county was a natural hillock in the fen.

Feltwell witnessed comparable burial practices. Frank Curtis disinterred the remains of thirty inviduals from a typical natural hillock in Lower Hill Close on the skirtland edge (TL 6966 9080). Associated material was largely of Early Bronze Age date (Healy forthcoming, a). Human remains have been recognised from other locations along the Norfolk fen edge and particularly out in the fen (Healy forthcoming, a).

It must be stressed that burials are much better documented from the peat, yet this is really what might be expected: drainage and dyking are likely to throw up human remains more immediately recognisable than bones disturbed through ploughing. The fen edge has yielded sufficient traces to suggest that the adaption of natural features for burial should not be overlooked.

A further aspect to consider is the 'pot-boiler' or burnt flint phenomenon. 'Pot-boilers' are created when heated flint lumps are immersed in water, the sudden cooling turns the flint to a distinctive grey or white colour, crazing the surfaces and breaking up the lumps into smaller fragments. The prevalence of this type of material is immediately apparent from the identification of over three hundred sites in the embayment (Fig. 49); as such they are more common than concentrations of worked flint (see Fig. 44). Even this figure does not offer an accurate reflection of the sheer quantity of this unassuming material in the region, for many of the lithic sites have 'pot-boilers' intermixed. Typical is MTW 69, which was recorded as a lithic site, but 'pot-boiler' fragments were abundant at both ends of the worked flint spread. They are frequently an integral part of the general background scatter on the skirtland and many diffuse scatters were not recorded as sites during the survey. Overall, 'pot-boilers' are truely ubiquitous along the fen edge from the Little Ouse to the Wissey.

Many of the recorded concentrations are small. 63.5% are less than 0.06ha in area, equivalent to a circle 28m in diameter. At the other end of the scale only two are more than 0.2ha in extent, equivalent to a circle of about 50m diameter. Only eight of the three hundred and more sites can be classed as burnt flint mounds of the type traditionally found in other parts of the British Isles (see O' Drisceoil 1988). Some mounds may have been ploughed down or may not yet have emerged fully from the peat; and, against a background of natural hummocks and hollows, some have probably gone unrecognised.

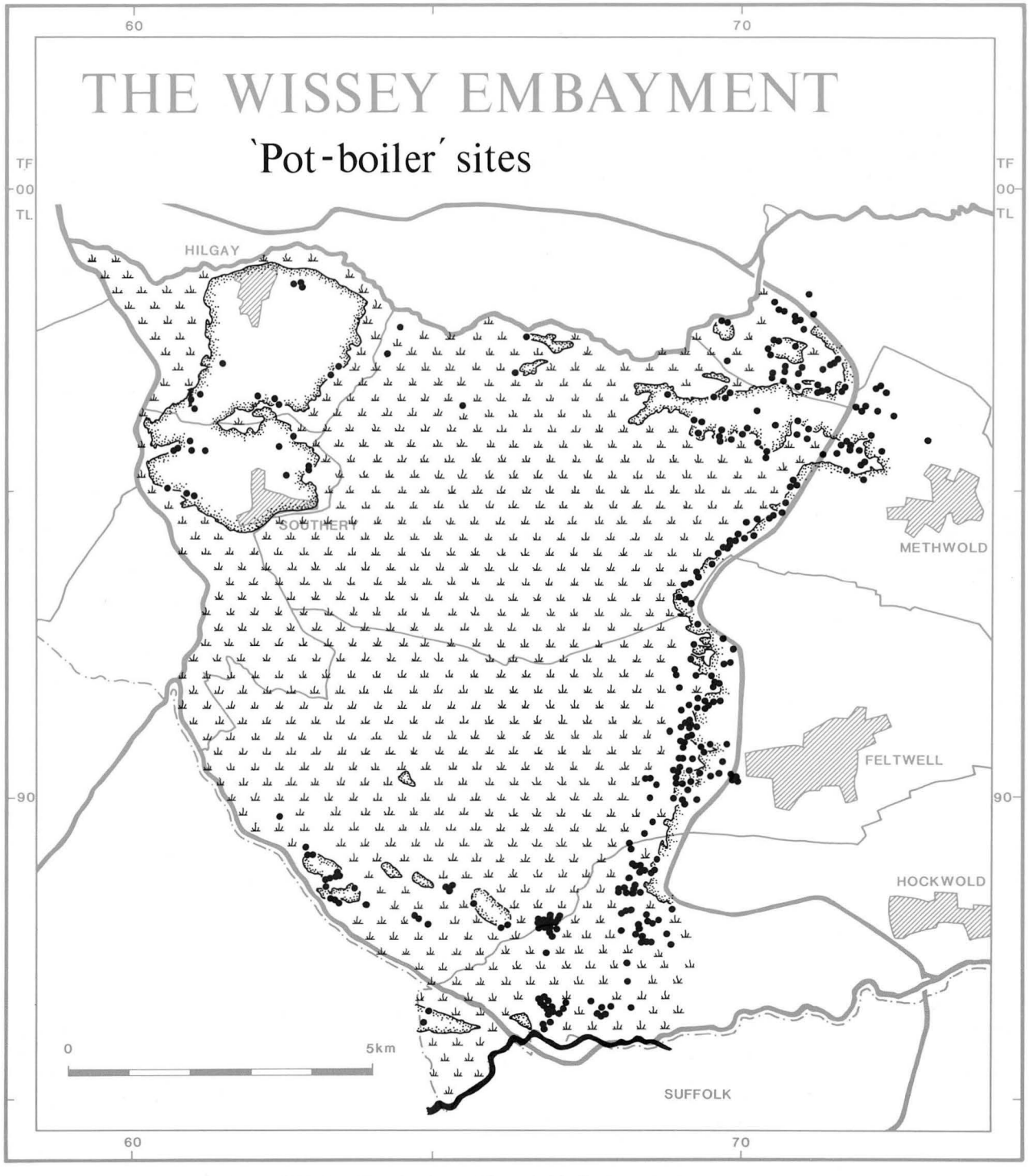

Figure 49 The distribution of 'pot-boiler' sites. Scale *c.*1:100,000

Nevertheless, even allowing for such uncertainties, the total of mounds is unlikely to be very much greater. Thus, for every recognised mound there are between thirty and forty spreads of 'pot-boilers' that do not achieve any height. The implications for those parts of the British Isles where burnt flint mounds have been identified in grassland areas could be significant, though the hummock and hollow landscape of the fen skirtland does, of course, offer peculiar conditions not readily paralleled elsewhere.

'Pot-boiler' spreads are not intrinsically datable. There are exceptions: the occurrence of Roman pottery with burnt flint fragments on one or two sites in the Wissey Embayment (*e.g.* SRY 19) is too coincidental to be dismissed, and is a phenomenon also recognised in the Nar Valley (Silvester 1988a, 128). Most sites are much less easy to date: given the density of flint debris across almost every available ridge on the skirtland, it is normally impossible to determine whether the worked flint on a specific 'pot-boiler' site is contemporary debitage or part of the background scatter. However, a combination of factors, both direct and circumstantial, implies that the majority are second or early third millennium BC in date.

Firstly, many are just emerging from the peat or are in locations that by the Iron Age would certainly have been too waterlogged for any sort of domestic or industrial activity. Some such as HCW 49-51 were classed as sites solely because small scatters of burnt flint lie on sandhills barely showing through the peat cover, and it is assumed

that these spreads will become more tangible as peat wastage and plough disturbance continues. Conditions during the Late Neolithic/Early Bronze Age would have facilitated activities that generated 'pot-boilers', the rising ground watertable and waterlogging providing natural water hollows.

Secondly, the distribution patterns of 'pot-boiler' and lithic concentrations are comparable, though there are locations such as the ridges east of Shrubhill in Feltwell which are devoid of everything but 'pot-boiler' sites. However, on the southern slopes of the Catsholm peninsula in Methwold, on the skirtland around Northwold Fen and on the ridges due west of Clouds Drove, Hockwold, the prevalence of both 'pot boiler' sites and Late Neolithic/Early Bronze Age lithic concentrations (but the absence of scatters of other periods) is suggestive.

Thirdly, further along the fen edge, charcoal associated with burnt flint at two places in Mildenhall, Suffolk produced radiocarbon dates of 3720 ± 70 BP [HAR 1876] (2210-2035 CAL. BC) and 3650 ± 100 BP [HAR 2690] (2145-1890 CAL. BC) (Murphy 1984, 25), and a third spread at Lackford Bridge, Suffolk was dated to 3940 ± 70 BP [HAR 2484] (2510-2370 CAL. BC; P. Murphy: pers. comm.). Burnt flints and a pit excavated at Swales Fen (Martin 1988, 358), also in Suffolk, have also been attributed to the Bronze Age and a radiocarbon date of 3760 ± 60 BP [HAR-9271] (2290-2100 CAL. BC) has recently been obtained (E. Martin: pers. comm.). Looking beyond the fen region, a significant number of comparable sites in Ireland and elsewhere fall within the same broad time span (O'Drisceoil 1988, 671).

The function of burnt mounds and, by implication, 'pot-boilers' in general, has recently resurfaced as a result of the excavation of two such mounds in Birmingham (Barfield and Hodder 1987). The excavators' argument, invoking prehistoric saunas as a source of many burnt mounds, has been answered by O'Drisceoil (1988) who supports the traditional intepretation that they were cooking places. Both sides have produced ethnographic and documentary evidence in support of their arguments. Other possible functions should not be overlooked. Petersen and Healy (1986, 101) considered that the burnt flint beneath a barrow mound at Weasenham in central Norfolk was a raw material source for filler in Beaker pottery, and their origin in other industrial processes such as leather-working has also been proposed (see Barfield and Hodder 1987, 371 with references).

We should probably reject a monocausal interpretation. Fire-heated flints immersed in water produce both boiling water and steam; both or either of these might have been required in different domestic or industrial (or even ritual) activities. Different functions could have been served by the same site, as O'Drisceoil acknowledged (1988, 679). The importance of the fen-edge discoveries is that, as with the lithic concentrations, activity involving 'pot-boilers' is restricted to a relatively narrow land zone.

Within this zone, 'pot-boiler' sites are found both away from, and in close proximity to, settlement sites, although there can be no certainty from fieldwork alone that where 'pot-boilers' and spreads of worked flint are contiguous they are also contemporary. The sheer density of material, however, suggests ubiquitous activity over a long period of time and not solely in specific locations resorted to regularly. On this evidence, cooking practices undoubtedly produced much of the burnt flint now detectable along the fen edge.

The uncertainties about burial practices, the apparent rarity of cereal cultivation and the plausible link between 'pot-boilers' and wet hollows, bring into focus the question of seasonal use of the fen. Several writers have recently tackled this question. Environmental indicators confirm occupation of the Bronze Age settlement at West Row, Mildenhall (Suffolk) in the spring, summer and autumn, but the demonstration of winter use is invariably more difficult (Martin and Murphy 1988, 357). Pryor (1984, 206) has argued that the regular system of ditched enclosures on the fen edge at Fengate, Peterborough on the opposite side of the Fenland Basin, was laid out to control winter grazing, the fen itself being used during the summer. Healy (1984, 117) has also proposed seasonal usage of the Norfolk fen edge, on the assumption that the ridges in the present skirtland zone would have been accessible and habitable in the summer but wet and unattractive in the winter.

Fieldwork, regardless of its intensity, was never likely to contribute significantly new evidence to confirm or refute theories of seasonal use. Nevertheless, the density of the activity coupled with the general trend towards permanent Iron Age and Roman farms lying close to the interface of environmental zones (see below and also Gregory 1982, 372), raises the question as to whether it is necessary to invoke seasonal movements. It may be closer to the truth to envisage communities using the fen for summer pasturage and moving their livestock to the dry and sheltered upland edge over the winter months, but whether this necessitated the movement of the communities themselves is no doubt a question that will continue to provoke debate.

The Middle and Late Bronze Age

The earlier part of the Later Bronze Age poses a problem in as much that a hiatus is apparent in settlement along the eastern fen edge. Ceramics of Deverel-Rimbury and post-Deverel-Rimbury type are almost totally absent, although some 12km to the east there are extensive traces of Middle Bronze Age occupation at Grimes Graves (Longworth *et al.* 1988, 25). It might be assumed that the environment of the fen edge was no longer attractive, due in part perhaps to a deteriorating climate (Turner 1981, 261). However, an alternative and attractive theory expressed here by Healy (Appendix 1, p.139) implies that it is due to the inability of field survey to recognise the material traces of this phase, rather than their physical absence. Bronze Age pottery in friable fabrics is likely to crumble into unrecognisable fragments through continued ploughing and surface exposure, while contemporary worked flints, which are unusually difficult to recognise even in optimum conditions, may well have become amalgamated in the background scatter of lithics.

It was confidently asserted some years ago (Lawson 1980, 281) that the chalk fen edge between the Wissey and the Little Ouse, as well as the drier fen islands such as Catsholm, would have witnessed a form of land management akin to that at Fengate on the west side of the Fens where a system of rectilinear ditched enclosures parcelled up winter grazing land. Neither aerial photography nor the field survey supports this contention, yet there can be no doubt about the factor underpinning the argument, namely the very high incidence of Middle and Late Bronze Age metal finds and hoards from the fen edge (Lawson 1980, fig. 8). The significance of these remains elusive; ritual deposition is one view that has been

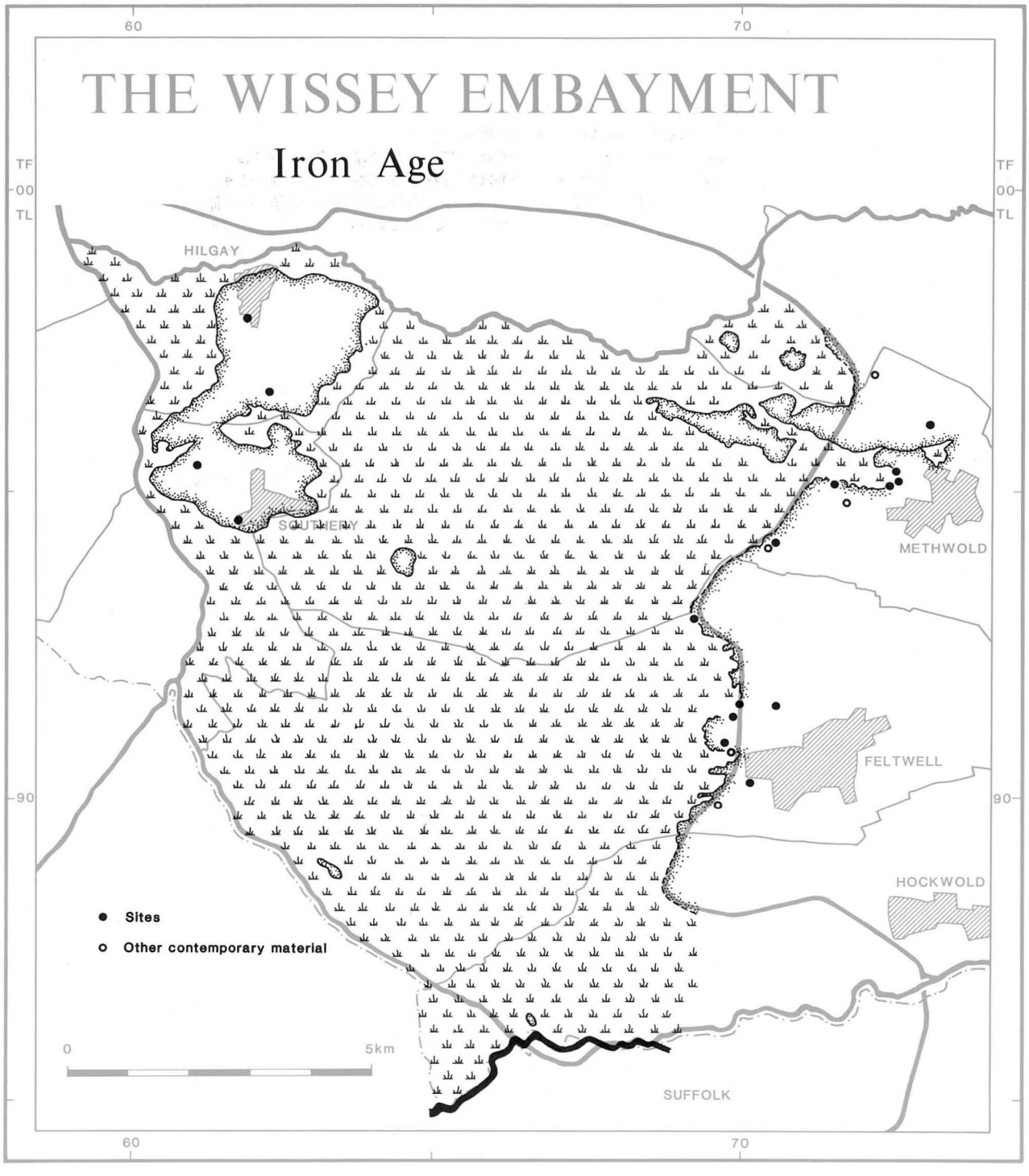

Figure 50 The Iron Age landscape. Scale *c.*1:100,000

canvassed (Lawson 1984, 157), but if Healy is correct, at least some of these metal objects may have been lost in the fen in more mundane circumstances.

The Iron Age

(Fig. 50)

The occupation of the fen edge becomes visible again in the Iron Age, spreads of pottery sherds and fire-reddened pebbles replacing the lithic material of earlier centuries. It is probable that some of the anonymous angular quartz-tempered pottery recovered from local sites should be pushed back into the Late Bronze Age, and occasional fragments such as a cable-rim sherd from FWL 110 strengthen this contention. Coarse pottery, generally similar in form but containing flint rather than angular-quartz temper was used in Suffolk and Essex in the Late Bronze Age and continued into the Early Iron Age (E. Martin: pers. comm; Brown 1988, 264). Nevertheless, it seems likely that the majority of the settlements identified during the survey fall within the second half of the first millennium BC.

It cannot, of course, be assumed that all of the settlements were occupied at the same time, yet the pattern of distribution is a fairly regular one. Most were close to the contemporary fen and therefore were presumably dependant to some degree on the resources that the fen offered. Within the limits imposed by the survey, there appears to a subtle shift in the overall location of

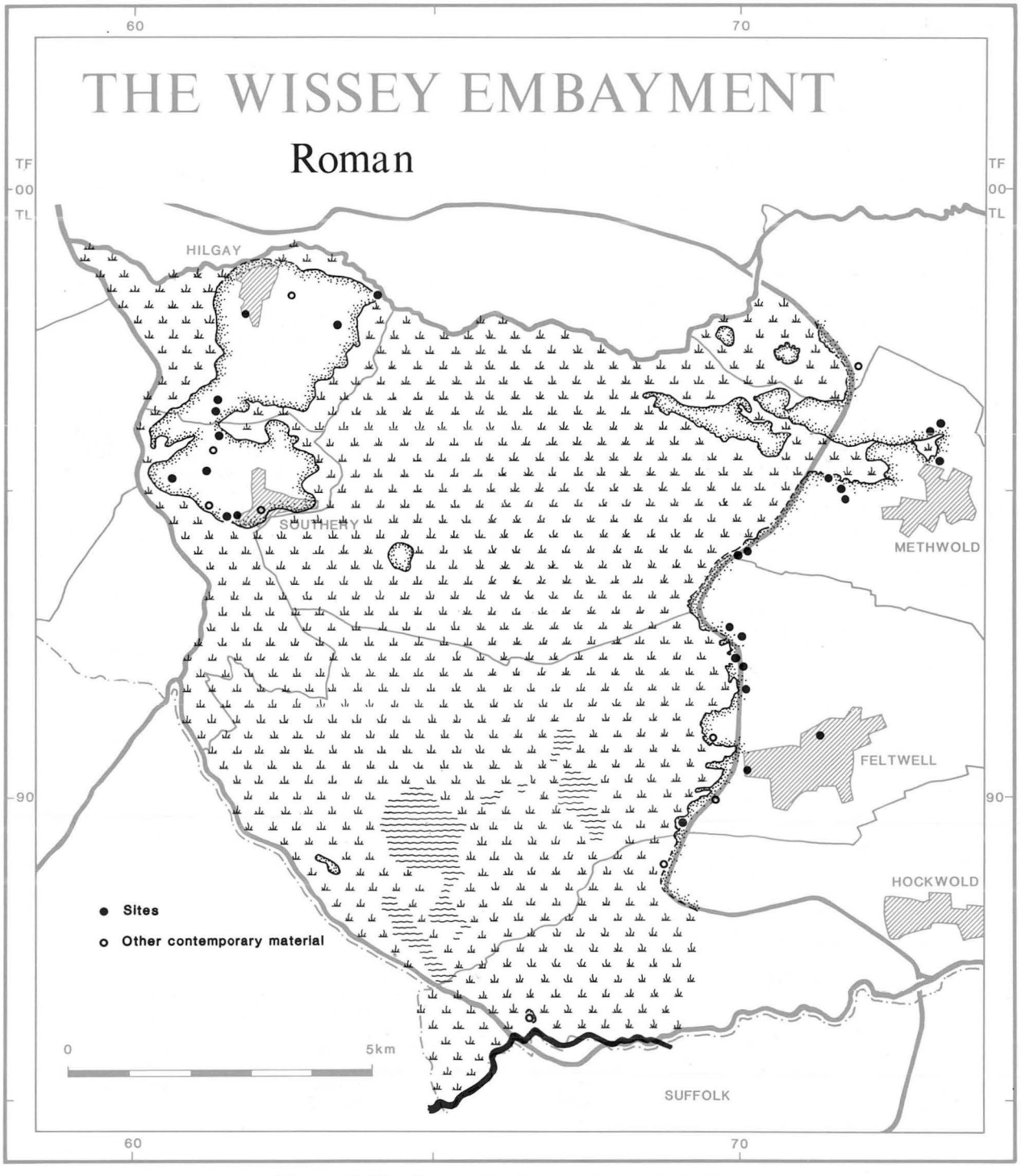

Figure 51 The Roman landscape. Scale *c.*1:100,000

settlement during the later prehistoric period. Whereas the Hythe valley seems to mark the northern limit of the dense distribution of lithic sites (though not 'pot-boiler' spreads) prior to the first millennium BC, it is evident that Iron Age and later sites were not deterred by the different soils of the northern fen edge, a contrast also discernible in the occupation on the island of Hilgay and Southery. Indeed, the fact that settlement throughout the Iron Age and Roman periods favoured the west side of the island might imply that fen resources to the east of the island were largely the preserve of communities working off the greensand and chalk uplands beyond the northern fen edge.

Superficially some variation in settlement size seems to show up, though the contribution of shifting occupation to this phenomenon cannot be assessed from fieldwork. Three sites at the head of the Hythe valley may indicate a loose-knit group of dwellings spaced at 150-200m intervals, and elsewhere in Methwold there are other signs of isolated single house sites. Closer groups of structures are suggested by FWL 184 where two fairly dense spreads of debris are linked by a scatter of artefacts, and even more so on FWL 110 where find densities imply several foci. The same might be posited for the FWL 54/FWL 71 complex on the other side of the Kettle Lane spur.

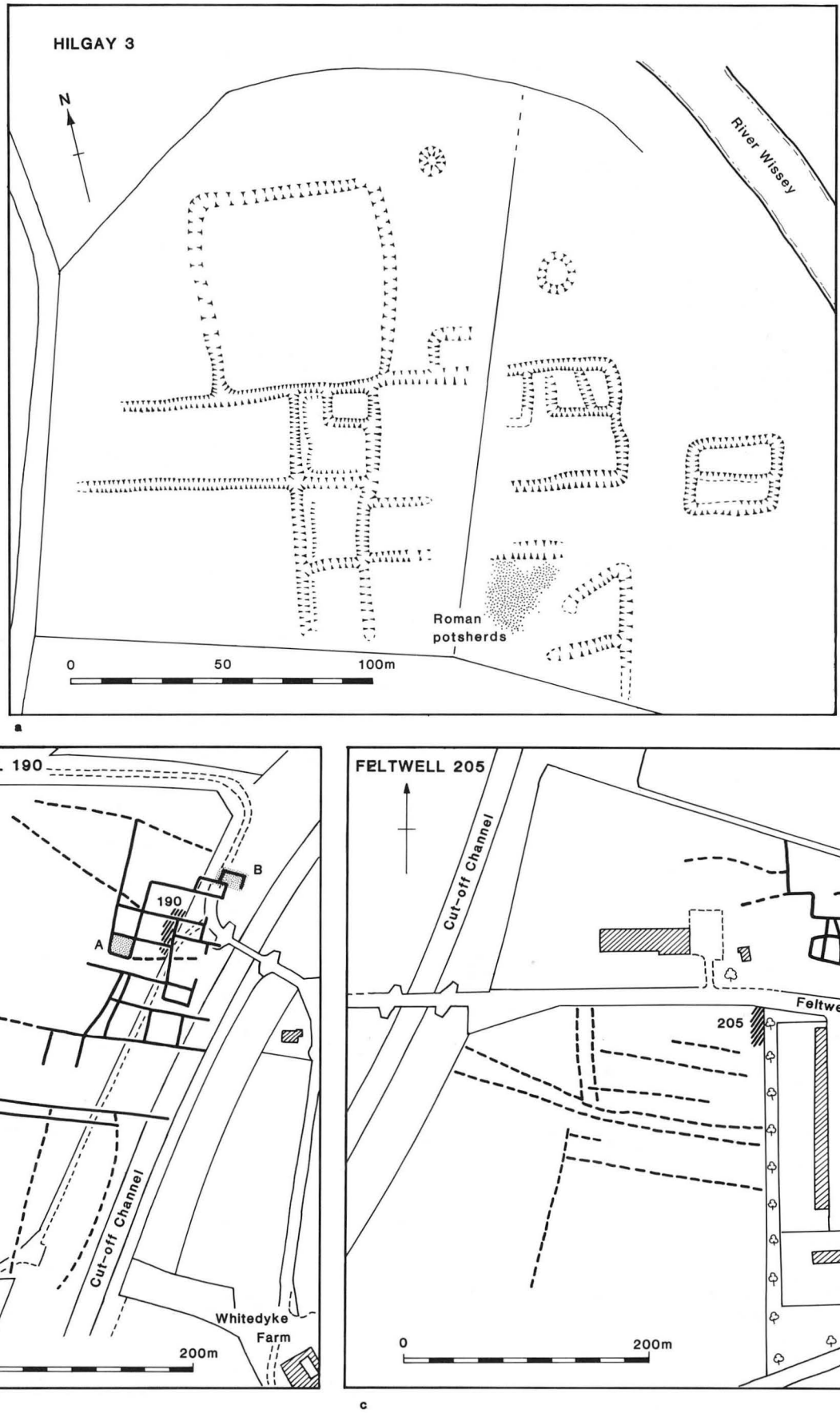

Figure 52 Roman field systems in the Wissey Embayment.
A: Hilgay 3, scale 1:2000; B: Feltwell 190, scale 1:5000; C: Feltwell 205, scale 1:5000

The Roman Period

(Figs 51, 52)

The string of Roman sites along the east side of the Wissey Embayment includes two villas, at Thornham, Methwold and Little Oulsham, Feltwell, and several other places where masonry buildings can be distinguished (*e.g.* FWL 205 and FWL 69). Two sites on Hilgay, (HLG 13 and HLG 14) might fall within this category. Elsewhere, evidence which is predominantly negative in character, implies less Romanised or at least less affluent settlements. Two or three such as FWL 190 and HLG 3 (and probably FWL 205) are associated with field and enclosure systems, the latter being perhaps the most significant Roman site in the embayment because of the degree of preservation signalled by its earthworks (Fig. 52a).

Topographically, interest focused on two types of location: close to but not on the fen edge (*e.g.* HLG 3, FWL 190, FWL U1 and MTW 55); and on the shoulders of hills overlooking the fen (*e.g.* HLG 13, FWL U4 and MTW 115). Both types of location offered immediate access to different sets of resources and, though fieldwork has been sporadic on the Breckland to the east, it appears that in this part of south-west Norfolk, Romano-British farmers showed a strong preference for the slopes leading down to the fen (see Gregory 1982, fig. 2). The position of the Thornham villa on a ridge above what was undoubtedly a large boggy depression fed by a stream is atypical, although there is evidence to suggest that the site of the Little Oulsham villa was sufficiently close to the fen to have been enveloped by peat in the Middle Ages.

A feature noted regularly during fieldwork was the proximity of Iron Age and Roman artefact concentrations. Pottery of these periods was intermixed in some places (*e.g.* MTW 55, FWL 190, SRY 8 and less certainly HLG 21), while elsewhere sites occurred within a few hundred metres of each other (*e.g.* MTW 145 and MTW 144; MTW U5 and MTW 115; FWL 69 and FWL 70/71; FWL 184 and FWL 205). Such is the scale of activity along the fen edge, particularly in Feltwell, that these associations could be claimed as inevitable, yet that argument is not completely sound: in Methwold where an Iron Age spread (MTW 113) is close to several Roman groups (MTW U6, MTW 154 and MTW 139), there are considerable stretches of fen edge apparently unoccupied during and before the Roman period. It is not possible, on the fragile evidence gathered from fieldwalking, to claim any degree of continuity, not least because local pottery typologies are so imprecise. Gurney (1986, 1) has demonstrated that though both Iron Age and Roman ceramics were found on the Little Oulsham villa site, the phases of activity represented by these sherds may have been separated by four hundred years of desertion. The chronological evidence from the fieldwork sites must also be weighed against the continuity theory. Tentative dates have been provided for about 35% of the thirty-nine sites in the Wissey Embayment (D. Gurney : pers. comm. and Appendix 3). Not a single site has incontrovertible first-century AD material and the likelihood is that most did not emerge until the second century. Excavation should provide a more effective picture, but in the interim any refinement of the general chronological pattern has to be treated with caution.

The Saxon Period

(Fig. 53)

Little useful comment can be made on the Saxon exploitation of the fen, other than the inference that the early post-Roman era marked a watershed in the location of settlement. It would be difficult to justify the contention that a fen edge existence was unattractive to Early Saxon communities, for sites of this period (like those of the Later Bronze Age) are extremely difficult to locate and there is some evidence from Hilgay and Southery for burial and perhaps domestic occupation respectively. Nevertheless, the apparent sparsity of material is echoed in the succeeding phase. Research in other parts of Norfolk has emphasised the links between Middle Saxon occupation and later, medieval villages (Wade-Martins 1980; Silvester 1988a, 158). This also appears to be true at Southery and it is not unreasonable to assume that some of the other villages treated here have Middle Saxon predecessors.

The one scatter of Ipswich-type Ware, MTW U9, stands out as a curiosity, though there can be no doubt of its authenticity. Set on a peninsula of dry land edged by fen, it might suggest a parallel to the exploitation of Norfolk Marshland at this time, a pioneering occupation and exploitation of resources on the margin (Silvester 1988a, 158).

The Medieval period

(Fig. 53)

The medieval component of this report is relatively small as the environs of several of the villages have not been examined. Only on the fringes of Hilgay and Methwold Hythe were concentrations of medieval debris recognised, although the traditional pattern of nucleated villages with their surrounding sub-divided fields, a pattern not really evinced in Norfolk Marshland, emerges clearly in these fen edge parishes.

The frequent involvement of monastic houses in the Fen is demonstrated by two priory cells at Slevesholm, Methwold and Modney, Hilgay, though these are hardly on a scale comparable with the Nar Valley in Norfolk (Silvester 1988a, 172), let alone the great establishments in Cambridgeshire and Lincolnshire: Ely, Thorney, Ramsey, Crowland and others.

The increasing importance of water traffic in the Middle Ages can be detected in the ridges of silt identified as canals. Two of them link villages, perhaps with otherwise unidentified hithes, to nearby rivers; the third creates a 'short cut' from one river to another.

There is a further aspect of the waterway system that demands consideration. It has long been recognised that the rivers that bound the study area on the west and south, the Great Ouse and Little Ouse, are modifications of the original drainage pattern. The Great Ouse as seen today, passing west of Southery and Hilgay on its journey to King's Lynn, is the successor of the Wellstream which had its outfall at Wisbech. Running across Burnt Fen in Cambridgeshire, several kilometres south of the Little Ouse is the roddon of its predecessor. From Clouds Drove in Hockwold to its junction with the Great Ouse, the present course of the Little Ouse is as artificial as the Great Ouse downstream from Ely. What has been debated is when these new courses came into existence. Astbury (1970, 139), and Salway (1970, 12) with perhaps a little less conviction, followed Fowler in crediting Roman enterprise with the new courses. Darby, on the other hand, assumed a medieval date (1983, 32).

One of the most convincing factors in favour of a Roman origin was the amount of contemporary pottery

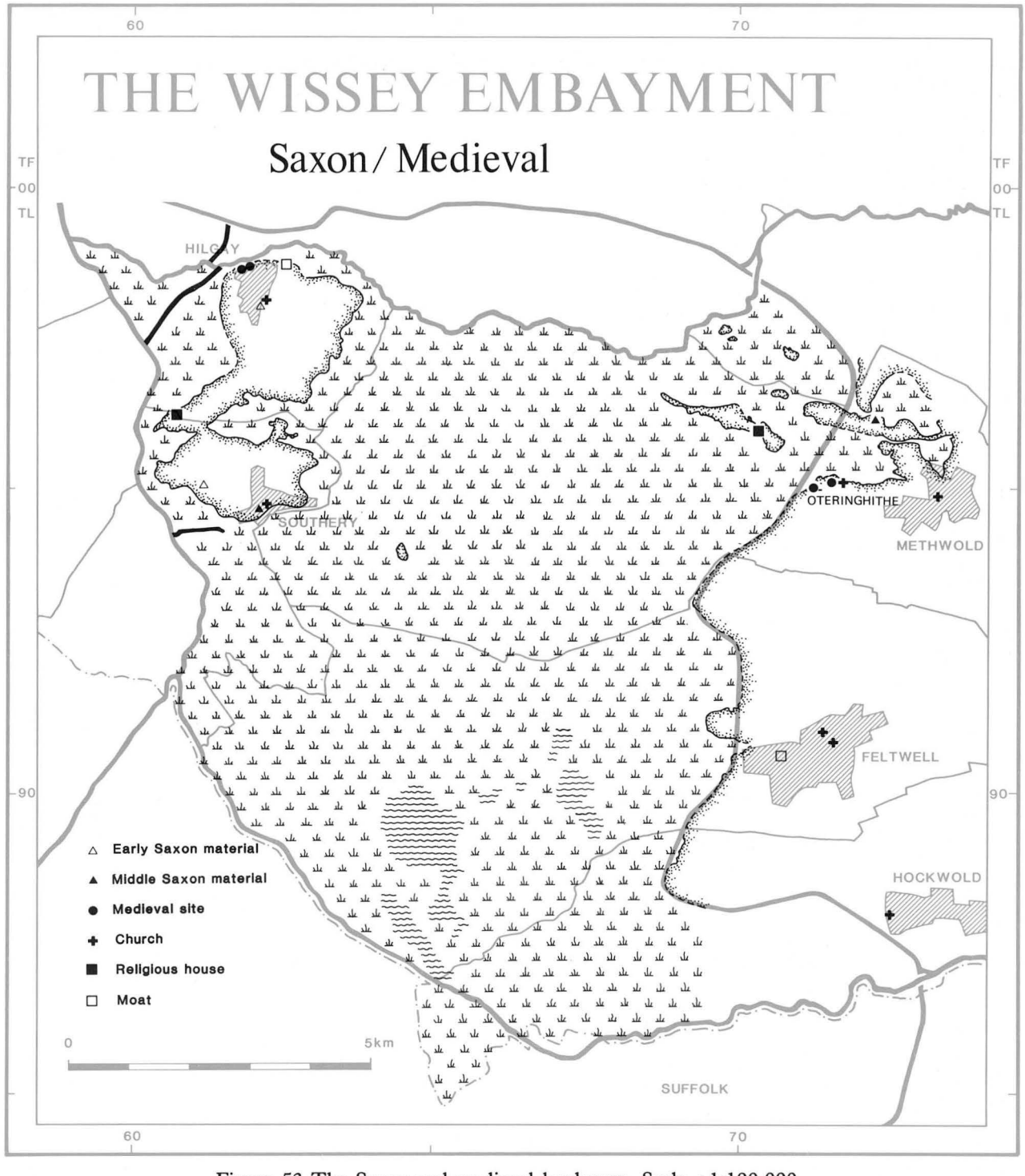

Figure 53 The Saxon and medieval landscape. Scale *c.*1:100,000

dredged fom the river and recorded by Gordon Fowler. What is remarkable is that in the space of a couple of years, and over relatively short lengths of the two rivers, Roman pottery should have been noted so frequently. Salway (in Phillips 1970, 240) cited records of pottery from five locations in 1930-31, and Astbury (1970, 199) referred to the recovery of over five hundred sherds in two years. These sherds cannot have been derived from adjacent Roman settlements, for there are none, so the pottery must have been lost overboard or jettisoned with ballast from Roman vessels. It is remarkable that there do not appear to have been any subsequent discoveries. We cannot doubt Fowler's integrity but we know nothing of the workers who passed this material to him, and the records should be treated with caution.

Putting aside the archaeological evidence, the first point to consider is the relationship between the two rivers. Contrary to what seems to be a general assumption, the section of the combined river running from Brandon Creek past Hilgay and Southery is an extension of the Little Ouse and not the Great Ouse, the former river following a shallow arc northwards to bypass the island. The obviously artificial section of the Great Ouse from Littleport to Brandon Creek must be considered as a secondary adaption taking the Great Ouse waters into the Little Ouse, for the sinuous line of the combined river north of Brandon Creek is comparable more with the Little Ouse than with the Littleport section of the Great

Ouse. Had the Great Ouse been the primary waterway, the constructors would certainly have taken a course further west (perhaps on the line adopted by the modern railway from Littleport to Lynn) in order to avoid the loop around the island of Hilgay and Southery.

There is good evidence to indicate that the Ely/Littleport section of the Great Ouse was constructed in the twelfth century (D.Hall: pers. comm.) and this provides a *terminus post quem* for the downstream length of that river to Brandon Creek.

A medieval date for the Little Ouse is suggested by the early peregrinations of the county boundary. There is clear evidence in the Wissey Embayment (see Appendix 4), as elsewhere in the black fens, that in the absence of other features watercourses were frequently adopted to define both parish and county. The Little Ouse, west of Clouds Drove, would have been an obvious choice yet only in the last hundred years has it fulfilled this role (Pugh 1953, 97). Originally the boundary followed first the roddon of the early river and then a small stream, termed the Crooked Dyke on an estate map of 1825 (Appendix 5), which ran parallel to the present river but about one kilometre to the south. This has disappeared completely from the modern landscape, but it shows clearly on the first edition of the Ordnance Survey map (1824). Beyond the Great Ouse, the Crooked Dyke still runs westwards towards the Old Croft River where it is again picked up by the Cambridgeshire/Norfolk boundary, a further pointer to the medieval date of the Great Ouse, which cut across what was certainly an active natural stream.

It seems highly unlikely that an important boundary between two counties would follow a minor stream when a major river followed a parallel course nearby, and it must be assumed that when the boundary was determined, presumably in the Late Saxon period or soon after, the Little Ouse as seen today did not exist. The original Little Ouse (now the roddon) ran too far to the south; at some time a length of it marked the boundary between the parishes of Littleport and Ely.

Thus there are reasonable grounds for asserting that the Little Ouse and the neighbouring parts of the Great Ouse are medieval in origin (see also Silvester 1991), but precise dates may be impossible to determine.

The fen offered exploitable if distant resources for the medieval communities of the Breckland edge. Each village had its own fens, often intercommoned with neighbouring villages, as the medieval documents cited by Blomefield indicate. The value of these common grounds were considerable and it is worth recalling the resources available, utilising documentary references from more recent times. These uses of the fen undoubtedly had a similar appeal to groups in earlier historic and prehistoric times.

Grazing land

In summer the fen edge areas with fen carr would have been grazed; and further out fen meadows would have been improved every year by winter flooding. That these extensive tracts of pasture were an attraction to villages well beyond the fen edge is suggested by a reference in 1358 to wethers (castrated rams) from Terrington (in Marshland) being driven to *Suytheryefeon* (Cal. Inq. Misc. III (1912), 123).

Allied to this was the production of hay. The abbot of Bury St Edmunds complained in 1307 that people had entered his meadows, marshes and several pastures at *Suthreye by Helegeye*, mowed his grass and carried it away (Cal. Patent Rolls Edward I, Vol. IV (1898), 549). Darby (1974, 61) has highlighted the importance of hay crops in the Middle Ages and this can also be recognised in the medieval designation of specific areas of the commons as Mow Fens. These appear in the early seventeenth century in Hockwold, Feltwell, Methwold and Southery (see Appendix 4).

Sedge, reeds and rushes

The use of sedge in Cambridgeshire since the seventeenth century has been detailed by Rowell (1986). It appears from this that sedge and reed were used primarily in thatching, and that the former also provided kindling for a variety of heating purposes. Rushes could be used as a floor covering. The frequency with which these fen products occur in medieval account rolls (Darby 1974, 33) emphasises their importance in the local economy.

Willow

Though willow trees occurred naturally in the fen, such was their importance that in the nineteenth century and probably before, deliberately cultivated osier beds were a feature of the black fen parishes. For instance, the relevant tithe maps show that Methwold and Southery both had several plantations. Osiers (or withies) were the supple young branches of willow that could be used for a variety of purposes: hurdles, basketry and fish-traps are amongst the most obvious (for illustrations see Sutherland and Nicholson 1986, 26, 109-110). A more unusual use of osiers as the foundation for a windpump is recorded by Barrett (1963, 116).

Turf cutting

Turves (peat) used as fuel were a major resource offered by the fen. Medieval documents place digging second only to grazing in the list of activities in the common fens, and it seems to have been generally accepted practice for a village to intercommon its animals with, but not to dig turf on, a neighbouring village's common fen (see for instance the restrictions on Methwold's use of Feltwell North Fen (Blomefield 1805, ii, 189)). Turves may have had other uses. In one of the fen tales, it is claimed that 'Southery folk, then, were a wild, rough crowd, living in turf-walled, reed-thatched huts and earning their living by catching eels and fish and robbing the boats sailing to Ely and Cambridge' (Barrett 1963, 136). Even allowing for the storyteller's exaggeration, it appears that turf was the building material of the poor.

Fish

For some of the black fen parishes the only topic appearing consistently in the public records of the Middle Ages were the fisheries. Rents were paid in eels to the point where they were almost a local currency (Darby 1974, 31). Not only did the main rivers have fisheries, but so did the smaller watercourses such as *Braunslode* which separated Hockwold from Feltwell (Blomefield 1805, ii, 189). The meres too would also have provided fish. One of the curiosities of the present survey was the discovery of a fragmentary jaw bone of a pike in a patch of shell marl just to the west of Southery.

Birds

Not only wildfowl but also their eggs formed part of the fenland resource. The great age of wildfowling came with the duck decoys in the eighteenth and nineteenth centuries (see Day 1970, 116; also this volume, Appendix 4). However, rather earlier in the reign of Henry VIII an act was passed restricting the taking of wildfowl and their eggs (Darby 1983, 44), and it is evident that the catching of birds in the fen was a well-established pastime (see Darby 1974, 36).

Overall it would be quite misleading to understate the value of the fen to the people who lived around it. Though William Barrett's tales emphasise the hardships of those living by and in the fen during the nineteenth century, it is absolutely clear that a substantial number of people were completely dependent on it for their livelihood. Going further back in time we must suspect a similar dependence: communities exploited the fen fully and adapted their ways as the fen changed. Prior to the great drainage of the seventeenth century the fen offered a self-perpetuating resource which complemented and, perhaps at times, supplanted the farming regime of the uplands. The works of Cornelius Vermuyden and the Earl of Bedford were the first steps in the termination of a way of life that had existed for several thousand years.

The Parish Essays: The Fen Causeway

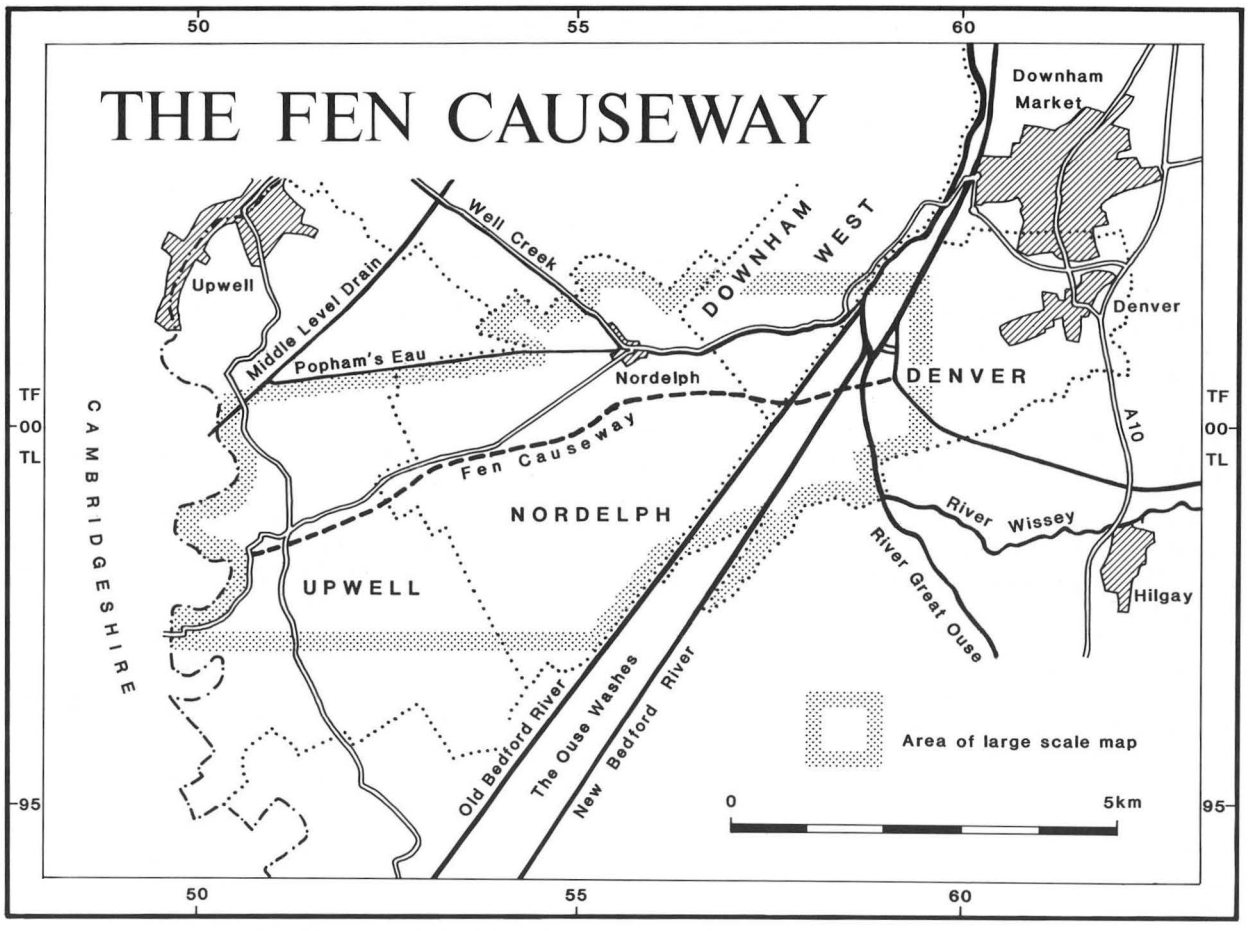

Figure 54 The Fen Causeway parishes. Scale 1:100,000

9. The Fen Causeway

I. Introduction

This section details fieldwork on the line of the Roman road from Denver to Upwell, but omits certain topics that have already been discussed in the General Introduction (p.1), namely an overview of the Fens, the history of the study of the Flandrian deposits, and the field survey and its methods. The general area of peat fen through which the Roman road passes was not examined during the present survey because of limitations on time. It was felt, however, that the road itself should be surveyed, in part because it would be valuable to see whether the Fenland Project's methods of survey could provide new information on a feature that had for long been a focus of attention for fenland archaeologists. A further reason was to complete the study of the road's course through the Fens, for the western section through Thorney, Whittlesey and March had already appeared (Hall 1987) and the remaining length in Upwell will be published by Hall in a forthcoming volume.

The road runs from Caistor St Edmund near Norwich due west to Denver on the fen margin, where it is met by a second road which has also traversed the county, perhaps starting at the coastal town of Caister-on-Sea (Robinson and Gregory 1987, 56). Traversing the fen as the Fen Causeway, it links with two north-south routes, Ermine Street, the great thoroughfare from London to Lincoln and the Humber estuary, and the lesser road to Ancaster known as King Street (Margary 1973, 230).

The original gravelled course of the Fen Causeway in Norfolk and eastern Cambridgeshire can be detected over considerable distances, unlike the upland roads. Despite the destructive effects of cultivation and the deliberate removal of gravel, a rare commodity in the Fens, the road has not been disguised by later tracks.

The Fen Causeway cannot be studied in isolation. Around it are the remnants of Roman settlement, farming and industrial activity that resulted from its construction and use. This Roman landscape, in turn, merges with the contemporary occupation that spreads out across the flood silts emanating from the Wellstream (later termed the Old Croft River, it divides Cambridgeshire from Norfolk: Darby 1983, fig. 25). The settlement on this tongue of silt running inland from the Wisbech estuary was studied during the post-war survey of the Roman fenland (Phillips 1970, map sheet K) and since then aerial photography has revealed considerably more detail on the Norfolk side of the river. Unfortunately, it was not possible to extend the field survey northwards towards Wisbech and southwards to Welney to complete the study of what was clearly one of the most densely occupied areas of eastern England in the Roman period.

II. The Geography of the Fen Causeway
(Figs 54 and 55)

Passing through four parishes, the Fen Causeway accompanies a band of silt that is, indirectly, a result of the road's presence. The silt divorces a relatively small area of former peat fen (Stow Bardolph and Downham Fens), from the much greater tract of peat that extends as far south as the Cambridgeshire upland.

The line of the road at its eastern end is successively crossed by the Cut-off Channel, the Great Ouse and the New and Old Bedford Rivers, all converging on Denver Sluice and Salter's Lode only a few hundred metres to the north. Emerging from beneath the Old Bedford River, the silt band is clearly visible, with a pronounced roddon at its core. Small rectilinear fields which are part of the Norfolk County Council's tenancies centred on Birchfield Farm, give way to larger fields that are privately owned. A feature of this section is the frequency with which the main farm buildings are constructed on, or very close to, the roddon.

West of Nordelph, the B1094 to March follows a seventeenth-century drain known as London Lode. Together these gradually converge on the Fen Causeway and subsequently follow parallel courses almost as far as the county boundary. Three kilometres beyond Nordelph, the roddon and the silt band accompanying it merge with the flood silt spreading out from the Wellstream. Here the landscape takes on an appearance typical of the siltlands: generally flat with the location of farms and cottages dictated by the presence of roads and droves. The absence of trees creates a feeling of infinity as marked as in the Wissey Embayment.

III. Historical Background

The presence of a gravel road crossing the Fens has been known to outsiders since at least the seventeenth century and, to local fen inhabitants, perhaps long before that. William Dugdale, in a regularly quoted passage whose measurements have occasioned considerable scepticism, stated:

> 'Neither is that long causey made of gravel, of about three feet in thickness and sixty feet broad (now covered with the moor, in some places three, and in some others five feet thick), which extendeth itself from Denver in Norfolke (near Salters Lode) over the Great Wash to Charke; thence to March, Plantwater and Eldernell and so to Peterborough, in length about xxiv miles, likely to be any other than a Roman work' (Dugdale 1772, 174).

Dugdale, with his not infrequent attribution of major engineering works to the Romans, was for once correct (*cf.* Marshland: Silvester 1988a, 160).

The road seems to have attracted little attention over the following two hundred years. Miller and Skertchly (1878, 40) refer to it, in passing, as the 'Fen Road', a name which, incidentally, does not seem to have been superseded by the term 'Fen Causeway' until well after the Second World War. At the end of the nineteenth century, a King's Lynn solicitor, E.M. Beloe read a paper on the subject of the road to the Cambridge Antiquarian Society. Drawn sections were included and, although there was

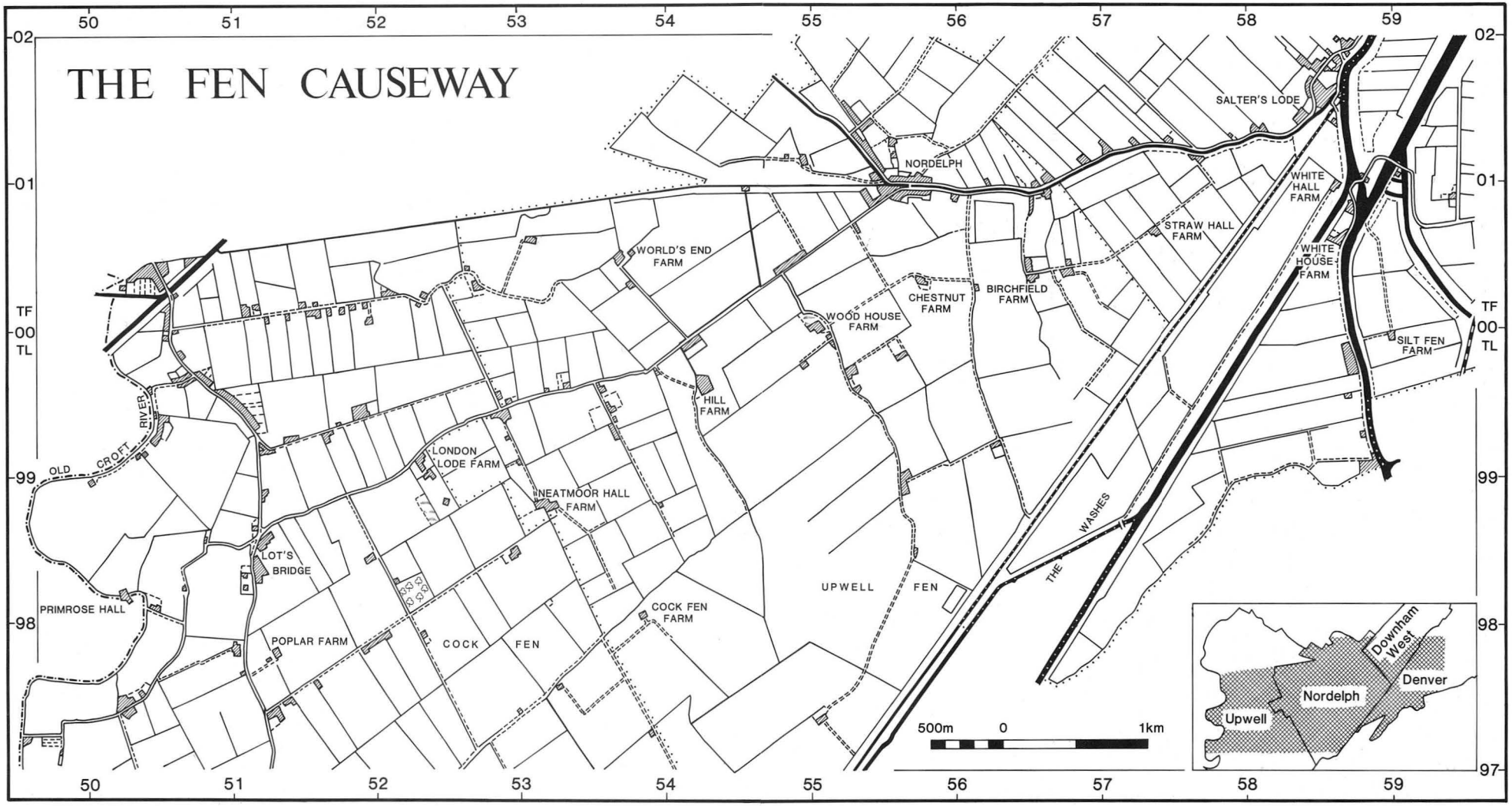

Figure 55 The modern landscape. Scale 1:40,000

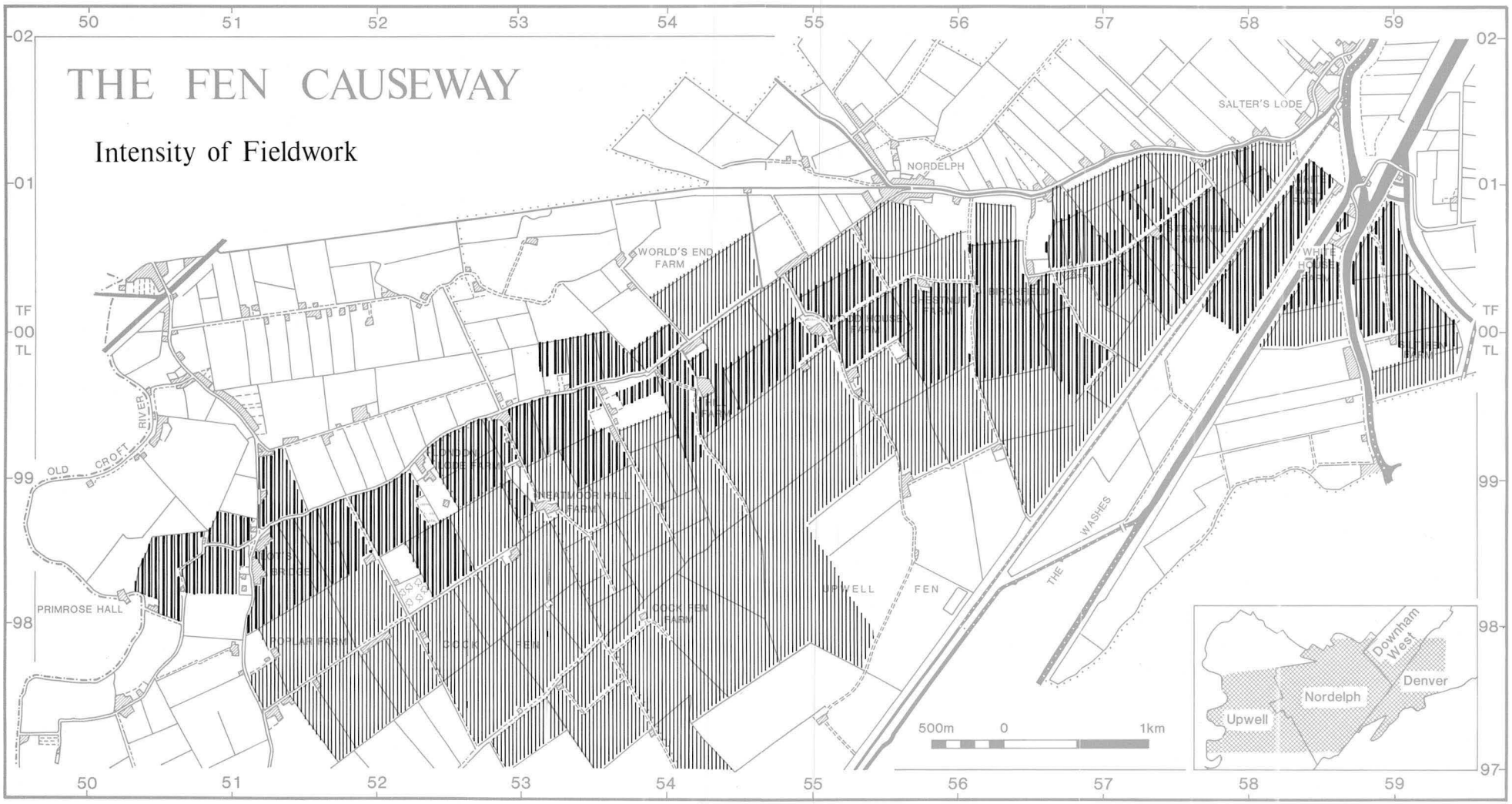

Figure 56 Fieldwork intensity

Figure 57 Flandrian deposits in the vicinity of the Fen Causeway

much typically Victorian speculation on its origins and significance as well as its upland continuation, the report appears to be the earliest record of fieldwork on the road (Beloe 1893). Certainly the report does not deserve the scorn heaped upon it by Kenny forty years later (Kenny 1933, 435).

When the Fenland Research Committee was founded in 1932, the study of the road picked up again. Articles by Fowler (1932) and Kenny (1933) offered a new perspective on the road and further fieldwork by Fowler and later by Rainbird Clarke (Norfolk SMR) continued to add detail to the overall picture. This culminated in the publication of '*The Fenland in Roman Times*' (Phillips 1970) which brought together, for the first time, the disparate evidence from field survey and aerial photography.

Further survey and considerably more aerial photography since then have supplemented the record, although the only published reports cover the road in Cambridgeshire (Potter 1981).

IV. The Sedimentary Sequence

(Fig. 57)

Almost all of the major sedimentary phases that have been recognised in the southern fens, are represented in the comparatively small strip of fenland traversed by the Fen Causeway.

Roddons of fen clay and even the general level of the clay itself are becoming visible on both sides of the band of silt, although the fen clay is normally intermixed with residual peat. Over Upwell and Cock Fens as far south as the Old Bedford River, no true peat survives: wastage activated by drainage and cultivation has left only sporadic traces (Burton and Hodgson 1987, fig. 7). Spot heights in Upwell Fen indicate the modern ground surface is as low as −0.7m OD; and a similar situation exists on the northern side of the Roman road.

Barroway Drove, the place adopted by the British Geological Survey as the 'type site' for its classification of fen clay, lies two miles beyond Nordelph (Gallois 1988, 77). Aerial photography of that locality shows intricate systems of roddons and monochrome tones reminiscent of fen clay surfaces elsewhere.

The fen clay was later submerged beneath freshwater peat, known variously as the 'upper peat', or 'Nordelph peat' in the British Geological Survey terminology (Gallois 1988, 77). Peat formation, dependent on the height of the local ground-watertable, continued sporadically until the reclamation schemes of the seventeenth century, but growth is likely to have been more significant in the prehistoric period than later. The flood silts (see below) give a reasonable guide to the level of the peat in the Roman period.

Slightly clayey, grey-brown silt spreads out widely from the line of the Wellstream at the west end of the study area, and shows a markedly irregular outline. Estimates of its height fall between 1.3-1.8m OD, suggesting that it should be equated with the marine sediments laid down in Marshland at the end of the Iron Age (Silvester 1988a, 151). There is no archaeological evidence to upset this hypothesis and it is worth noting that the silt surface below the second/third century occupation at Welney was calculated at 1.5-2.1m OD (Churchill 1970, 137). Networks of creeks drained the silt, although many of the roddons that developed subsequently are disguised by later flood silt and their depiction on Fig. 57 is not exact. This silt fades out to the east of Hill Farm, Nordelph.

Silt deposited in the Washes between the Bedford Rivers is also accompanied by roddons, and these deposits extend a little way into the lands around Straw Hall Farm. Ostensibly the silt is of similar date to that at the western end in Upwell, and can only have spread out from a river down the east side of the fen close to the Norfolk upland. Its course is unknown but must lie beyond the Cut-off and Relief Channels where the ground has not been surveyed. Spot heights of over 2.0m OD along the farm road from Whitehall Farm probably reflect silting peculiar to the Ouse Washes.

A further phase of flooding deposited distinctive silt, both coarser and lighter in colour than the earlier sediments. Close to the Old Croft River, it forms a continuous mantle across the landscape, at a height of about 2.0m OD. Its coverage is much more patchy, south of the Fen Causeway towards Nordelph, infilling natural channels and human features and spilling over from both. No roddons formed after the flood silts were laid down, implying an abrupt phase of sedimentation. The creeks that did function show as dark sinuous lines on aerial photographs but are not readily visible on the ground. The appearance of the silt in peat cuttings both to the south and north of the Roman road has a dual significance. It demonstrates that the silting occurred during the Roman era, for there are further traces of Roman activity set on top of the flood deposits; and it has helped to preserve the form of Roman features which would otherwise have been lost as peat regenerated.

Flood silt of this phase can be recognised as far east as the Ouse Washes, although their later history complicates the interpretation. Possibly further sediment was deposited after the Roman period. Beloe consistently refers to the road being covered by up to two feet of silt (Beloe 1893, 120) and this appears to be echoed by Kenny's excavation (1933, fig. 2). A recently exposed section of the road at London Lode Farm also reveals a layer of silt above the gravel surface (M. Mathews: pers. comm.).

Silt, rather similar in colour and texture to the Roman flood silt, edges the Great Ouse. Its origin, however, is likely to relate to periodic flooding of the river in the Middle Ages; and a similar explanation should be applied to silt beside the Well Creek which runs close to the Roman enclosure systems, north of Straw Hall Farm.

V. Sources

Appreciation of this complex landscape depends heavily on aerial photography. Fortunately, because of the Fen Causeway's long history of study and its reputation for good cropmarks and soilmarks, there are sizeable collections of oblique photographs in addition to the general runs of vertical photography.

Two complete sets of vertical photographs have been used in the research. The earlier series taken by Hunting Surveys Ltd for the Soil Survey of England and Wales in April 1969, and used extensively in the Marshland survey (Silvester 1988a, 9), extends over all of the causeway and its hinterland, except for the ground west of London Lode Farm. Vertical photography taken by

the Cambridge University Committee for Aerial Photography in March 1982, covers the whole study area. These sources have been supplemented by incomplete runs of photographs taken in July 1946 by the R.A.F. and by a few 1933 verticals in the Crawford Collection housed by RCHM(E).

Three sources of oblique photography have been tapped: the Cambridge University Collection, the National Monument Record photography, now RCHM(E), and the archive of the Norfolk Archaeological Unit.

The most important of the written records is the gazetteer (and accompanying maps) in the Royal Geographical Society's Report (Phillips 1970). Individual papers by Fowler (1950), Kenny (1933) and others also provide useful data. Finally, unpublished fieldwork information has been gleaned from the Norfolk Sites and Monuments Record.

VI. Organisation of the Report

The format of parish essays has been eschewed for this review of the Fen Causeway. The road passes through four parishes (Denver, Downham West, Nordelph and Upwell), but as only a single-period assessment is involved, there are considerable advantages in studying the road and its hinterland as a single unit.

The text that follows consists of a description of the elements that make up the discernible Roman landscape around the Fen Causeway and a discussion of various aspects arising from the survey assessment. The Fen Causeway constitutes only one small part of a vast fenland landscape populated and farmed during the Roman era, and assessed twenty years ago (Phillips 1970). The discussion here can only touch on elements that really merit much more detailed consideration. The synthesis volume which will complete the Fenland Project series (Coles and Hall: in preparation) will offer an up to date overview.

The interpretative maps at a scale of 1:40000, the gazetteer on microfiche and the use of 'U' and 'A' numbers are all standard features of the Fenland volumes and are described above (p.11).

10. The Road and its Hinterland: Description

I. The Roddon
(Fig. 57)

The road for almost its entire course through the Norfolk Fens exploits the higher ground of a roddon, not on the crest, but invariably on its southern slope. The profile is reasonably typical of silted watercourses, with a depression sandwiched between a high southern levee and a less pronounced northern one. At its eastern end near Straw Hall Farm, there is a substantial drop of 2.0m from the southern levee to the peat below. The width is less easy to gauge as the northern levee tends to merge imperceptibly with the adjacent flood silts, but 50-65m is standard.

Westwards, the roddon gradually becomes less imposing. It can be detected as a low ridge in the smallholdings around Neatmoor Farm, but in the vicinity of Lot's Bridge is completely enveloped by flood silt, and only the gravel of the road reveals where it may once have run.

The sinuous course of the roddon, from the Cut-off Channel in Denver to the south of Straw Hall Farm at TF 574 004, indicates a substantial natural watercourse which was still active in the earlier part of the Roman period. Confirmation comes from the Roman bridge abutment and ford, constructed across a still-active tributary (or just possibly the main watercourse curving back on itself), which were excavated in 1933 (Kenny 1933).

It is impossible to detect any further roddons which might have fed into the main watercourse, west of the bridge site, and the Iron Age silt that was drained by this network of creeks also fades out (Fig. 57). On these grounds alone, a natural origin for the westwards extension of the roddon cannot be justified. That a canal preceded the Fen Causeway in Cambridgeshire on both sides of March island, has already been recorded by Hall (1987, 66), and it must be assumed that the road in Norfolk also follows an artificial channel which subsequently silted up to form a roddon. The ridge, however, does not adopt the direct course that might have been anticipated for an artificial cut through a waterlogged landscape. Clearly, other considerations affected its line. Further west, these may have included creeks feeding into the Wellstream, tongues of Iron Age silt which would have been more stable than the peat, and perhaps other pre-existing features (see below). For these reasons, the canal shows as a series of straight stretches interrupted by slight changes in direction. All in all, it is too straight to have been a natural watercourse.

An accurate impression of the shape and size of the canal is difficult to obtain, and to dig a section across it would be a major undertaking. Hall has suggested that the Rodham Farm Canal which carries the Fen Causeway from Upwell to March was originally about 15-20m wide (Hall 1987, 41). Our canal was undoubtedly narrower than the silt ridge visible today, and its depiction on Fig. 59 is intended to provide no more than a general impression.

II. The Fen Causeway
(Figs 58 and 59; Pl. IX)

The line of the road through the Norfolk Fens has been a source of confusion in the past. Modern Ordnance Survey maps depict a southern route which follows the course of the roddon. The Royal Geographical Society's Report (Phillips 1970, map 14) prefers a route further to the north which traverses both peat and silt. Earlier Ordnance Survey maps (*e.g.* the Second Edition of the 25″ map, sheets 68.10 and 68.11; 1905) offer a mixture of the two, exchanging the northern route for the southern route in the vicinity of Hill Farm, Nordelph. Both depictions are in fact correct, for there are two roads across Nordelph and Upwell, referred to here as the northern and southern roads.

The northern road is discernible for the first time at TF 564 004, both on the ground and from the air. On aerial photographs, there are equivocal traces of this road in the Birchfield Farm smallholdings to the east, but the picture is obscured by buildings and variations in land use. We must assume that from the Cut-off Channel as far as Birchfield Farm this road occupied the same roddon levee as the southern road and that they diverged at about TF 5708 0044.

The northern road is clearly defined on aerial photos (Pl. IX), from Birchfield to just beyond the Nordelph/Upwell boundary. It adopts a series of straight alignments before disappearing beneath flood silts in Upwell, and shows on the ground as a diffuse spread of gravel, much less compact and of a less distinctive colour than the southern road. A low *agger* (a characteristic Roman road embankment) 0.4m high is visible north of Hill Farm and further west, to the north of Neatmoor, side ditches appear from the air as soilmarks. The overall width is difficult to gauge because of plough dispersion: 6-7m of gravel appears to be average.

The southern road follows the roddon, though not all of its course is visible, for ploughing, levelling (in the Nordelph section) and perhaps the deliberate removal of gravel have created gaps. Where it survives, the road shows as a compact reddish-brown gravel spread, although ploughing has dispersed stones over a width of 20m. A linear spread of silty-clay sometimes appears adjacent to the gravel, notably at Neatmoor Farm and again west of Lot's Bridge[1].

The sinuous course of the southern road is in contrast to the straight alignments of its northern counterpart. Slight deviations in the levee that it follows could account for some of these, but there are places, just to the east of Nordelph Farm and particularly west of London Lode Farm (at TL 5160 9868) where the road deliberately swings away from the main roddon to pick up a converging silt ridge.

The main roddon is lost to sight near Lot's Bridge, but the road can still be distinguished as a continuous band of gravel, a good indication that it may have been relaid after the flooding in Roman times.

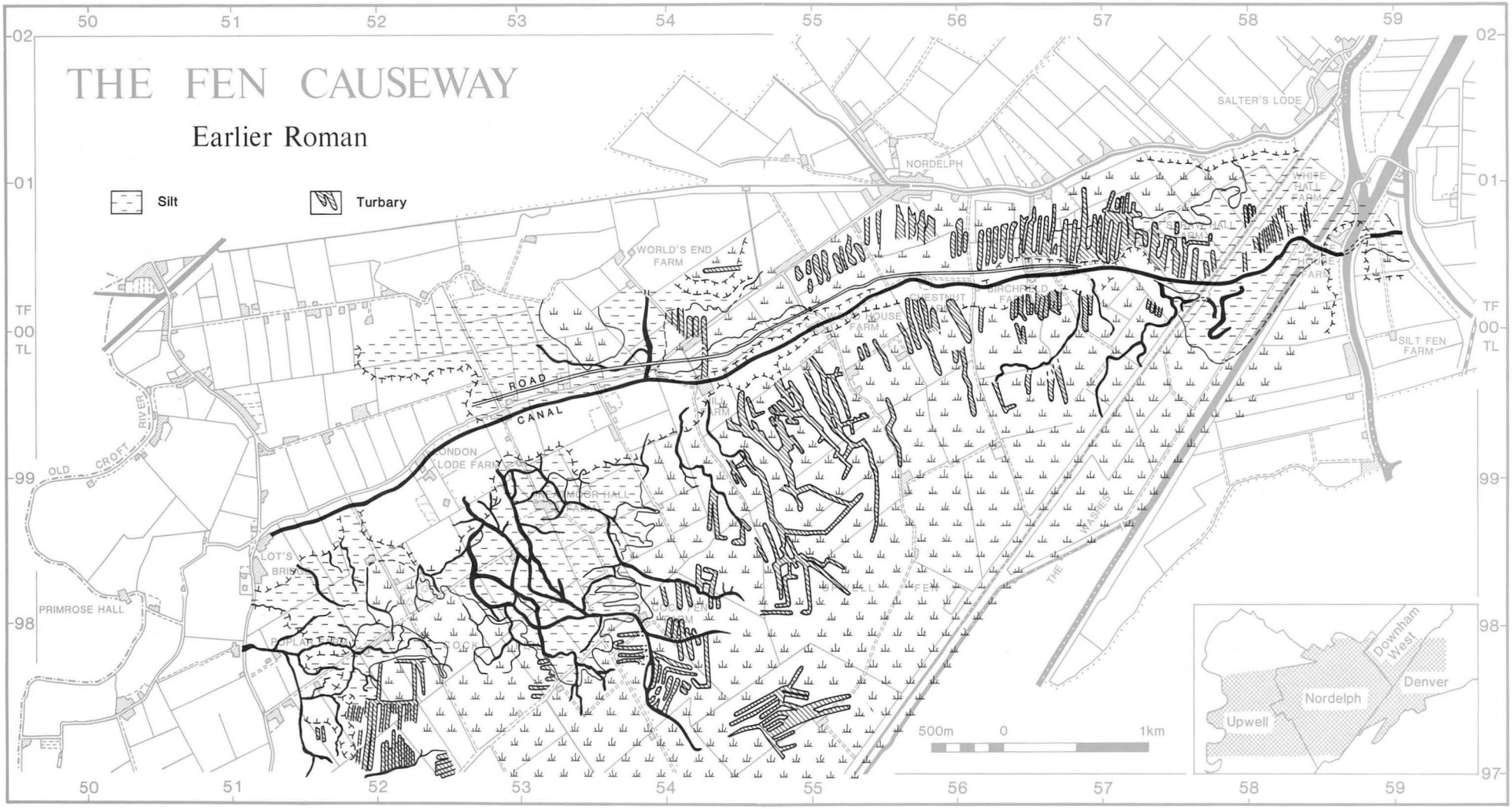

Figure 58 The earlier phase of Roman activity

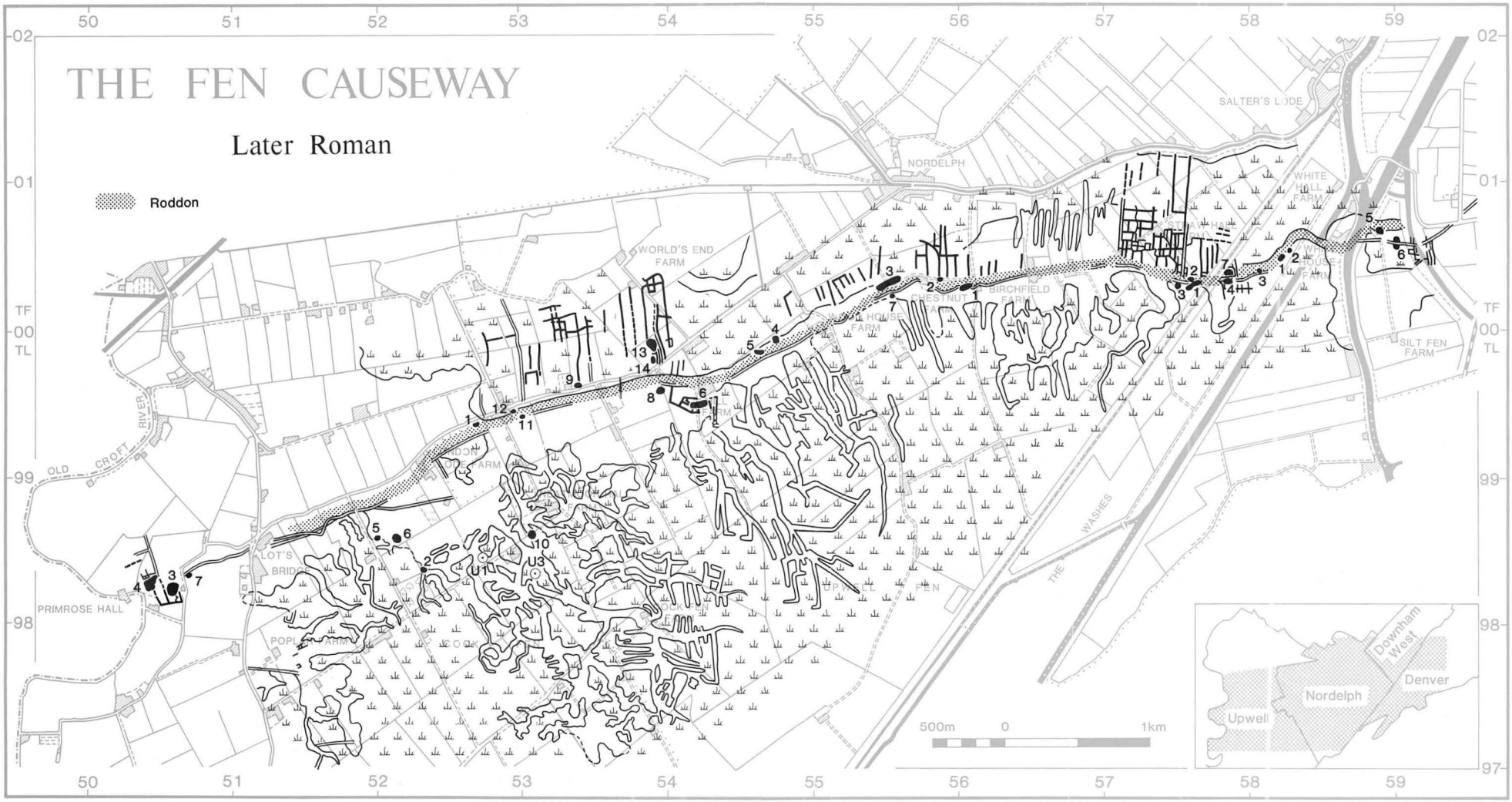

Figure 59 The later phase of Roman activity

Figure 60 Enclosure systems along the Fen Causeway

III. Other Roads
(Figs 59 and 60)

Aerial photographs reveal other ditched tracks running away from the main roddon at right-angles. None of these appears to have been gravelled. Some are integral parts of field systems, as on the north side of Neatmoor (Fig. 60a); others may have linked industrial sites to the Fen Causeway. A track defined by side ditches near London Lode Farm runs south in the direction of the saltern site, VPW U1. Another travels westwards across the paddock of London Lode Farm and an adjacent arable field to meet the southern road at a tangent. Side ditches are clearly visible from the air and, perhaps significantly, double ditches are also visible diverging from the gravel spread of the road in fields to the east of Lot's Bridge. The implication is that a more complicated sequence of roads exists than might be assumed from groundwork alone.

IV. Turbaries
(Fig. 58; Pl. X)

Beresford and St Joseph (1979, 271) argued some years ago that the long ridges of silt photographed at Upwell, on the Cambridgeshire side of the Old Croft River, were turbaries (peat cuttings) of medieval date. That interpretation remains valid, though the features are clearly Roman and not medieval (Hall 1982, 342).

The extent of the turbaries in the Norfolk Fens is remarkable and there can be no doubt as to their origin. They are almost invariably filled with coarse yellow silt of the sort choking the main canal and many of the subsidiary creeks, and it is a reasonable assumption that the cuttings succumbed to the same flooding episode. The most dramatic examples stand as ridges two metres high or more, the peat between the silted cuttings having wasted away. Others are barely visible on the ground, yet are more obvious from the air and it is noticeable that the turbaries to the south of Poplar Farm are better defined on a photograph taken by O.G.S. Crawford in *c.* 1933 than on a comparable Cambridge University print nearly fifty years later.

Soon after the Second World War, an attempt was made to level the high silt ridges around Wood House, one of the largest farms in the region. The levelling was more thorough in some places than in others: south-east of Wood House (*c.* TL 553 998) the continuous spread of coarse silt completely masks any turbaries that existed there, but to the south-west (*c.* TL 548 991) the undulations and differential soil stains can still be picked out, despite bulldozed silt filling the intervening areas (Pl. X).

Plate IX Nordelph: a photograph taken by O.G.S.Crawford in 1933 shows both the earlier and later Roman roads near Hill Farm (in the bottom right corner), soilmarks of contemporary enclosure systems and the distinctive pattern of roddons to the north of the Fen Causeway. (TF 5300/1(CCC 9871)
Royal Commission on Historical Monuments (England), Crown copyright reserved)

Plate X Nordelph: Romano-British peat cuttings to the south of the Fen Causeway, levelled out to improve cultivation, but still visible from the air. (AKT 14 *Cambridge University Collection: copyright reserved*)

Ordered groups of turbaries, showing as little more than soil stains, are visible south of Poplar Farm and there are hints that these were served by tracks leading westwards. Further east irregular patterns of turbaries, running for up to 3.5km into the fen, strike off from former watercourses (*e.g.* south of Hill Farm). There are also solitary cuttings such as the elongated silt ridge running off the large roddon to the south-east of World's End Farm, on the opposite side of the canal.

It is the appearance of these straight cuts with their angular changes in alignment that distinguish the turbaries from the more sinuous roddons. The most remarkable examples in this respect are those on the north side of the Fen Causeway from Wood House Farm to Straw Hall Farm. They are spaced at regular intervals and intially were identified as silted field ditches, particularly in view of subsequent Roman land use. However, around Birchfield and Straw Hall Farms the quantity of silt forming ridges up to 2m high is considerably greater than the fill of a normal enclosure ditch. Those to the west of Birchfield are very much lower.

All the turbaries must relate to an early phase of Roman activity, pre-dating the flooding episode. Yet there is no reason to assume that Roman settlers did not continue to cut peat in the later period, even if on a reduced scale. The regeneration of peat cuttings over the following twelve centuries or more, coupled with recent peat wastage, has wiped all traces from the modern landscape.

V. Settlements and Salterns

(Figs 58, 59 and 60; Pl. XI; Table 2)

The distinction between occupation sites and saltern sites can be blurred on the evidence provided by fieldwork alone. Every spread of debris on the side of the canal roddon has to be considered as a potential saltern site, with the canal tidal from its Wellstream terminal, and some of the natural creeks that fed into it also flushed with salt water (as the location of saltern sites VPW 5 and VPW 6 reveal). Indeed, farming and salt manufacture were presumably integral parts of the local economy. A high density of salterns has been identified on the western side of the Wellstream (Hall 1982, 342), and, at Denver, excavations in 1960 on the line of the Cut-off Channel pointed to salt production as the main activity (Gurney 1986, 93). Sites located during the present survey, such as NDH 3, may well indicate a settlement with an adjacent saltern.

Nevertheless, there are some spreads of debris such as NDH 6 that ostensibly represent no more than domestic activity, in this case reinforced by a series of small enclosures visible on aerial photographs. The debris usually consists of large quantities of pottery with both samian and Nene Valley colour-coat ware much in evidence. Fired clay fragments, bone and, occasionally, tile are represented, and the soil matrix normally exhibits a darker stain than the surrounding silt.

The few specialist saltern sites display numerous fragments of poorly fired yellow or red briquetage which are the remnants of crude salt pans, ash and often fuel ash slag from the spillage of boiling brine onto silt. All of these sites, however, have suffered from persistent ploughing over many years and the abraded briquetage fragments give no clue as to the nature of the containers or supports from which they were derived (*cf.* Denver: Gurney 1986, 138). The residues can give a distinctive reddish tinge to the silt as at VPW 5 where the site was visible from thirty metres away because of the discoloration. Cropmarks on NDH 10 suggest small enclosures and perhaps artificial cuts to channel off salt water from the natural creeks. Hall (1982, 342) has recorded such features on the other side of the Wellstream in Upwell. All of these specialist salterns lie at least a couple of hundred metres away from the main roddon in areas which do not seem to have been used for ordinary domestic settlement.

Spreads of material coincide in some places with cropmarks or soilmarks (Table 2), favouring a domestic function for some of the smaller enclosures visible from the air. Between the Bedford Rivers, DVR 7 overlies two small linked enclosures, and on the opposite slope of the ancient watercourse, DVR 4 just overlaps a second pair. There is no obvious evidence of enclosures associated with DMW 1 and 2, but small enclosures can be recognised on the northern levee, just a short distance away.

The eastern half of NDH 6 coincides with the small conjoined enclosures at Hill Farm, Nordelph, though the extension of this spread westwards would appear to overlie a track and a larger enclosure which is unlikely to have had a domestic function (Pl. XI). Finally, near the Wellstream, VPW 4 lies close to what appear as linear cropmarks on the available oblique aerial photography, though earlier R.A.F. photographs examined for the Royal Geographical Society's gazetteer hint at small enclosures in the vicinity (Phillips 1970, map 14).

Project no.	*Grid Ref.*	*Pot.*	*Briq.*	*Cmk/Smk*	*Date range*
DVR 1	TF 582004	●	•		C2-C3
DVR 2	TF 582005	●	•		C2-C3
DVR 3	TF 580003	●			C2-C3
DVR 4	TF 578003	●	•	×	C3-C4
DVR 5	TF 588006	●			C2-C3
DVR 6	TF 590005	●	•		C3-C4
DVR 7	TF 578003	●	•	×	C2-C3
DMW 1	TF 576003	●	•	×	C2-C3
DMW 2	TF 575003	●	●	×	C2-C3
DMW 3	TF 574002	●	●	×	C2-C4
NDH 1	TF 560002	●			C2-C3
NDH 2	TF 558003	●	•	×	C2-C3
NDH 3	TF 554003	●	●		C2-C3
NDH 4	TL 547999	●	●		C2-C4
NDH 5	TL 546998	●			C2-C4
NDH 6	TL 542995	●		×	C3-C4
NDH 7	TF 555002	●	●		*c.*C3
NDH 8	TL 539996	●	●	×	C3-C4
NDH 9	TL 533996	●		×	C3-C4
NDH 10	TL 530986	•	●	×	C2-C4
NDH 11	TL 529994	●	•		C2-C4
NDH 12	TL 529994	●			
NDH 13	TL 538999	●	•	×	C2-C4
NDH 14	TL 538998	●	•	×	C2-C3
VPW 1	TL 526993	●	•		
VPW 2	TL 523983	•	●		
VPW 3	TL 505982	●		×	
VPW 4	TL 504983	●		×	C3-C4
VPW 5	TL 519986	•	●		?C2
VPW 6	TL 521986	•	●		C3
VPW 7	TL 506983	●			C3-C4

Note: ● = frequent; • = sparse; × signifies presence.
The dates in the final column should be treated with caution. Rarely is the quantity of pottery collected through fieldwork sufficient to provide an unequivocal date range for a particular site.

Table 2. Fen Causeway: List of Sites

Plate XI Nordelph: Romano-British enclosures and ditched circles at Hill Farm (NDH 6).
(0035 EW *Cambridge University Collection: copyright reserved*)

Nothing of obvious first-century date has been recovered during fieldwork, but otherwise occupation spans the complete Roman period. This is in line with the picture of settlement development that emerged from the earlier assessment (Salway 1970, 9). Not surprisingly, there are an increasing number of third to fourth-century sites as the road runs westwards. Early sites along the western section of the road are more likely to be enveloped by flood silts emanating from the Wellstream, and it is no coincidence that the most westerly spreads, VPW 4 and VPW 7, are late in date. Buried occupation levels might also explain why VPW 1, NDH 11 and NDH 12 yielded so little material: possibly the plough is only just disturbing them.

Some sites are likely to have been missed within the search area. Small saltern sites on roddons running out into the fen may have been overlooked: VPW U1 is a good example. Beyond the limits of the survey, further sites that on the evidence of their tracks were clearly dependent on the Fen Causeway remain to be located.

VI. Field and Enclosure Systems

(Figs 59 and 60; Pl. XII)

Aerial photographs reveal extensive, if localised, enclosure systems which, from their axes and location, obviously focused on the Fen Causeway and the major roddon that supported it. The system around Straw Hall Farm is one of the most frequently pictured Roman landscapes in Norfolk (*e.g.* Dymond 1985, pl. 4; Wade-Martins 1987, pl. 26). Set on silted turbaries and showing as cropmarks from the air, and on the ground as faint soil discolorations, the enclosure ditches have a north/south orientation and enclose areas ranging from less than one-tenth of a hectare to nearly one hectare (Fig. 60d). In places, meandering creeks, which were relics of the major flooding episode, were utilised as boundaries. Entrances to individual enclosures can be recognised and double ditched tracks lead northwards and edge the main block of enclosures on both west and east. A further, smaller block on the east is bisected by the Old Bedford River, and

Plate XII Downham West: Romano-British field system, the Fen Causeway roddon and post medieval pit networks at Straw Hall Farm, with the Ouse Washes in the background. (TF5700/H/AFX1, taken 8.7.76.
Norfolk Archaeological Unit, copyright reserved)

beyond, in the Ouse Washes, there are ephemeral traces of further silt ridges, though whether the relics of ditches or turbaries, it is impossible to determine. The main spreads of occupation debris are sited opposite the smaller block of enclosures (Pl. XII).

Several ditches run northwards across the peat in the form of low, narrow ridges of silt. Curiously, not all of the lines are continuous, for some fade before picking up again close to the Well Creek. Unlikely as it may appear, the logical explanation is that the Roman ditches remained partially open for many centuries and were filled ultimately with silt spilling over from the medieval Well Creek.

A succession of silt bands run off at right-angles from the causeway roddon in the vicinity of Birchfield and Woodhouse Farms in Nordelph. Difficult to discern at ground level, they are very clear from the air and define a series of elongated fields or enclosures, though cross ditches are rare. As these soilmarks fade out, they are replaced further north by much broader shallow silt spreads not dissimilar to turbaries elsewhere along the causeway (Fig. 60c). A precise alignment of ditch and silt spread is not invariable: a few are staggered and in places one or other element is absent. Consequently, two rather different phenomena may be present, later ditches adopting the line of earlier siltings, although not so clearly as at Straw Hall Farm.

The extensive system of enclosures and droves, north of Neatmoor (Figs 59, 60a), has not been investigated. It appears to be sited largely on Iron Age silt but runs on to the peat. Natural watercourses have been

incorporated in the layout, though less obviously so than around Straw Hall Farm. The western limit of the system coincides with the eastern extremity of the Roman silt: there is, however, nothing to suggest that the enclosures run beneath the silt, so their chronology remains uncertain. Aerial photos provide only ambivalent evidence of the enclosure system's relationship to the north road.

Two other recurrent features ostensibly associated with Roman land use, need to be considered. Groups of pits in linear arrangements are visible from the air in several places (Fig. 60). The individual pits appear to be little more than *c.*3-4m in diameter but linear groups of such pits can be up to 150m long. Elsewhere, but often in the same general localities, photography reveals cropmarks that are best described as network patterns, intersecting narrow lines invariably showing as darker marks with lighter patches in between. The visual effect, however, is misleading for the darker lines could equally well be the interstices between features (R. Palmer: pers. comm.). The lighter areas should thus represent the same phenomenon as the pits and their size, too, is similar. Individual groups show consistently on different aerial photographs as either pits or networks, except in two places in the Straw Hall Farm complex where different photos reveal a chameleon-like change from one form of mark to the other.

Networks and pits occur largely on the Iron Age silt around Straw Hall Farm (Fig. 60d; Pl. XII); a little to the west of Birchfield Farm and in much greater profusion, networks are visible on peaty soils (Fig. 60c); north of Hill Farm irregular batches of pits show on Iron Age silt and in places follow the curve of a roddon (Fig. 60c); and a similar situation occurs 500m to the east of Neatmoor Farm where pits arc round a peaty hollow.

Only at the last site are these features remote from Roman activity, and frequently the pits and networks appear to adopt the same axes and in some instances be associated with Roman enclosures. Yet this association is almost certainly illusory and it is probable that all are post-medieval in date (see below).

A second set of features are narrow-ditched circles, showing as both cropmarks and soilmarks, which for many years have been reported along the Old Croft River, south of Wisbech (Riley 1945, 1946; Wilson 1978). Such is their size — 10m on average though some are considerably smaller — that individual circles and groups require ideal conditions and reappear only rarely. Thus, it is likely that more of these ephemeral features remain to be detected.

Close associations with Roman settlement are frequent along the Old Croft River, but on the Fen Causeway this happens only once: several circles are set close to the ditched enclosures at Hill Farm (NDH 6: Pl. XI). Such circles are more commonly found away from settlements, sometimes singularly or in small groups, but occasionally in larger numbers (*e.g.* at Neatmoor, Fig.60a). Generally they seem to be set on the higher silts, with greater numbers towards the western end of the Norfolk road. Despite repeated photography of the Straw Hall Farm complex not a single circle has been recognised there. Indeed, only one is known to the east of Hill Farm, although a small penannular gully excavated at Denver appears to be of similar type (Gurney 1986, fig. 85).

These circles cannot be accurately represented on Fig. 59, because of their small size. Some of the more significant examples appear on the larger-scale plans (Fig. 60).

11. Discussion

Evidence of two distinct Roman landscapes emerges from this survey of the Fen Causeway corridor through the Norfolk Fens. A flooding episode that cannot be precisely dated acts as a divide, fossilising earlier Roman features. Fieldwork and aerial photography also demonstrate that there are two Roman roads, the more southerly having at least one re-surfacing on the basis of sections recorded at Neatmoor (Fowler 1950; M. Mathews: pers.comm.). It is now necessary to examine the sequence of development along this corridor and see how much of its history can be elucidated from the field evidence.

The northern road runs in straight lengths, it lies on peat soil that is now fast disappearing, it appears to have very little settlement directly associated with it and, north of London Lode Farm, it disappears beneath flood silt of Roman date. A close spatial relationship between the northern road and the canal to the south of it is also obvious. The southern road, however, occupies a levee of the canal and must therefore post-date the waterway.

The construction of the northern road on a bed of peat is the key to the sequence for, if an alternative had been available to such an unstable foundation, it would surely have been adopted. Now running close to sea-level in places, the road was certainly built at a higher level. Peat wastage has lowered its surface and to some extent dispersed the surface gravel, but it is remarkable that from the air it still emerges as a well-defined strip (Pl. IX).

Essentially the northern road represents a short-term solution for a communications link across the Fenland Basin, one that was always going to be threatened by waterlogging and continued peat growth. For as far as was practicable, it must have followed the levee of the natural watercourse that ran westwards into the fen from near the upland at Denver; then, in a series of straight lengths interrupted by slight changes in alignment, it headed for a tongue of Iron Age silt which projected eastwards from the flood plain of the Wellstream.

This northern road cannot be anything other than the first road across the Fen. Excavations on the road in Cambridgeshire point to a first-century AD origin, and a recent assessment of a roadside occupation site near Denver favours a development in the Neronian period (Gurney 1986, 135). There is a belief, still requiring confirmation, that it was constructed in the wake of the Boudiccan revolt in 60/61 AD to facilitate the movement of troops in the event of further unrest (Potter 1981, 131).

Westwards from London Lode Farm, there are no visible traces of the road's course, for it is completely enveloped by later silt. It cannot be assumed that the Wellstream was bridged at the same place as the southern road, and even in Upwell and March in Cambridgeshire, there is a possibility that the early road ran further north than the Roman road which is visible today.

The close spatial relationship between the canal and the northern road is of some significance. There can be no doubt of the deliberate construction of the channel from Birchfield Farm at least as far as Lots Bridge, and the fact that its alignment changes in parallel with the northern road is a tangible sign that it was planned while the road was still in use. The distance between them varies between 50m and 150m over a distance of more than 3km.

The date of the canal's construction cannot be ascertained accurately, although the frequent occurrence of second-century material on both the northern and southern levees (see Table 2) implies a relatively early origin. Whether it was designed as an integral part of a unitary system that integrated the canals to the east and west of March (Phillips 1970, map sheet K; Hall 1987, 41) is open to debate. These canals are perhaps likely to be individual elements in a regional design to link the upland margins by water as well as by road, rather than *ad hoc* waterways: in the case of the Norfolk canal connecting the upland to the Wellstream.

The active life-span of the canal is also a subject for further research. Assuming that the Wellstream — and perhaps the natural watercourse at the eastern end of the canal — was still tidal, silting would have been a problem as soon as it came into use. Ultimately, the canal filled up with the coarse silts deposited by the major phase of flooding, but this natural disaster could have occurred some time after its abandonment as an artery of transport.

It is a reasonable deduction that the gravel road that followed the southern levee of the canal replaced the northern road when the latter became too waterlogged to maintain. How soon after the construction of the canal this occurred, would probably have depended on the rate of sedimentation. The spoil from the excavation of the canal (peat and almost certainly some fen clay) must have been banked up on one or possibly both sides of the cut. Relevant to this argument is that later, over much of the central section from Birchfield Farm to London Lode Farm, flood silt spread out on the south side of the canal but rarely to the north. A northern bank would have prevented flooding but would have accelerated the formation of a levee on the opposite side. Where the artificial channel gave way to the natural watercourse further eastwards, the absence of a protective barrier on the north side allowed extensive flooding, but the southern levee was probably already well developed there in the early Roman period and was utilised by the first road. The build up of silt on each side of the canal, both deliberately through the construction of a retaining bank and naturally through levee formation, goes much of the way to explaining the present width of the roddon.

From the demonstration of the southern road's refurbishment at Neatmoor (Fowler 1950), it is tempting to see the interleaved silt there as a product of the major flooding episode, although there is no scientific evidence to support this belief. However, it is difficult to avoid the conclusion that the road was resurfaced after the flood, for the distinctive gravel spread near the Wellstream is a clear indicator of continued maintenance[3].

This last road may have been constructed with rather less care than its predecessors. Aerial photography reveals that both the northern road where it crosses the Iron Age silt and the initial phase of the southern road (to the west of London Lode Farm) had side ditches. The refurbishment, in contrast, shows as no more than a band of gravel, sometimes following a curiously sinuous course. In Nordelph, the gravel road also appears to bisect a spread

of debris (NDH 1), although the effects of twentieth-century bulldozing have to be taken into account here.

There is still much to be learnt about settlement along the road. Some sites may have continued in use for two to three hundred years, with perhaps only a temporary hiatus during the flooding. The spreads of surface debris fall into place with cropmark or soilmark traces of farms and their enclosures, particularly towards the eastern end of the causeway and again near the Wellstream. Elsewhere, though generally towards the west, spreads of material appear more in isolation (*e.g.* NDH 11 and NDH 12) and the concept of buried Roman habitations becomes attractive.

No uniformity of settlement type can be recognised. The small rectilinear compounds, complete with their settlement debris and attached to the enclosure system at Straw Hall Farm, are very different from NDH 6 at Hill Farm where the archaeological evidence of an occupation site is accompanied by only a sparse pattern of irregular ditches. Differences in function can only be conjectural. It is now argued that many of the fenland farms concentrated on stock rearing rather than cereal cultivation (Salway 1970, 13; Hall 1982, 344), and the demonstrable enclosure of peat soils near World's End Farm and also north of Straw Hall Farm gives credence to this view. Yet an arable element in the farming regime is not implausible. It may take some years after the deposition of silt for its salinity to diminish to a level that can be tolerated by cereal crops (see Silvester 1988a, 156), but after that there is no inherent reason why limited cultivation could not have been practised. The best indications of cultivation come from the fen edge rather than on the silt itself (*e.g.* Hockwold, Norfolk, and Wimblington, Cambs: Phillips 1970, 219, 247), but Salway (1970, 13) noted that Gordon Fowler found evidence of wheat on every site he examined; this, of course, does not mean that cereals were grown at these places. Further environmental data from controlled excavations are required if progress is to be made on the agricultural component of the fenland economy.

The pastoral element is perhaps emphasised by the narrow-ditched circles which have been discussed on several occasions over the years and have recently been reconsidered by the writer in the light of two circular earthworks at Rose Hill, Hilgay (Fig.52a; Silvester 1988b). The argument that many, though not necessarily all, are stands for haystacks need not be rehearsed here. Alternative uses, such as ditched platforms for drying peat, should not be overlooked. What is in no doubt in the context of the Fen Causeway is their Roman date.

Aerial photographs of Neatmoor reveal a large number of circles together (Fig. 60a), but no other recognisable Roman features and only sparse Roman occupation in the vicinity. Was this an area of extensive grazing devoid of specific boundaries or perhaps an area of meadow land set aside by a neighbouring settlement? There is a marked contrast with the solitary circles, some of which appear time and again on aerial photographs.

The groups of pits that lie within or close to settlements of Roman date can usefully be considered here. These appear not to be of Roman date, but the remnants of a recent agricultural practice known as 'claying' which was widespread in the Fens (Seale 1975, 52; Silvester, in preparation). 'Claying' was advocated in agricultural treatises and practiced widely from the second quarter of the nineteenth century until the early twentieth century. Sediments beneath the peat were dug from pits or trenches and then mixed with the surface peat to give more body to the soil and generally enhance fertility and water retention.

Rarely do the pits observed on aerial photos appear on the Roman flood silts: north-east of Woodhouse Farm the extensive series are on peat and fen clay; east of Hill Farm they are on peat and on spurs and roddons of Iron Age silt; and, significantly, on the lows between the higher ridges of flood silt at Straw Hall Farm. It is at this last site that the apparent association between the Roman enclosure system and various pit groups requires an explanation.

When the area was flooded in the Roman period, silt was deposited in features such as the turbaries to a level that produced a fairly even post-flood surface: the evidence for this lies in the meandering courses of the creeks that drained the post-flood silts: at Straw Hall Farm one such creek is integrated in the enclosure system (Fig. 60d). The creeks run across both the flood silt bands and the interstitial areas, and this pattern could only have occurred on a level plane, not if depressions had existed. Peat may have spread over the high Roman silts in later periods, but if so its growth was balanced by subsequent wastage, for during new reclamations in the eighteenth or nineteenth century, the main roddon was a visible feature as it provided a firm foundation for a string of farmhouses. Roman flood silt deposits in the vicinity of Straw Hall Farm are at much the same level as the roddon, so it is a reasonable assumption that the textural and colour differences between the flood silt bands and the peat would have been noted as soon as the land was cultivated.

Even today the fields in the vicinity of Straw Hall Farm, with their variable soils, create farming problems, so the adoption of 'claying' in the nineteenth century to improve the peat between the coarse silts of the ridges seems likely. This would explain the pits that show on the surface of the Iron Age silt and fen clay, and the similarity of their alignment to the enclosure ditches and the turbaries beneath. The alternative, to remove coarse silt from the top of the silt bands and use this to mix with the peat, would only have created further problems by exposing raw, infertile silt. The apparent association between the Roman enclosure system and the pits is thus misleading.

No dating problems attend the turbaries, which are in some ways perhaps the most dramatic features of this Roman landscape. In a region of muted topography the sheer scale of the ridges is extraordinary, not least because in a sense these are negative features inverted by natural processes. Many of the ridges are now two metres high and this provides some indication of the original depth of the cuttings. Others, such as those to the south of Cock Fen Farm (at TL 540 997) are no more than slight silt undulations on the ground surface, even though they are readily visible from the air. The reason for this variation in appearance may lie not in the amount of peat removed, but in the subsequent growth of peat which allowed old cuttings to regenerate gradually. It can therefore be argued that the oldest cuttings are those where the silt is most shallow, the later turbaries accumulating more silt at the time of the flood.

South of the Fen Causeway, many cuttings run directly off roddons, suggesting that the roddons were still active streams and that peat was transported by water to

both settlements and salterns. Silted roddons would have offered a relatively firm surface for wheeled transport, and it is conceivable that the sinuous courses of roddons were also used as trackways into the fen. That this may have occurred is suggested by the regular set of turbaries, south of Poplar Farm, which appear to have long parallel cropmarks in attendance (Figs 58 and 59). None of them has been subjected to close scrutiny, but they are best interpreted as a series of double-ditched trackways linking the settlements near the Wellstream to the turbaries that they exploited.

The most enigmatic group of turbaries lie to the north of the Fen Causeway. As already noted, many of the silt ridges appear to be too substantial to be the silted courses of enclosure ditches. Yet they have a regularity of layout that sets them apart from the parallel systems of peat cuttings in Upwell. Furthermore, the wide gaps between the silt ridges are difficult to reconcile with methods of peat removal evidenced elsewhere in the area. Their size alone forces the conclusion that they are turbaries.

The presumption throughout this report has been that the flood silt is of marine origin. There are no scientific analyses to back this up, but there is nothing in its appearance and its obvious derivation from the Wellstream to suggest that the silt was laid down by freshwater flooding. Unfortunately, fieldwork cannot provide the refinement that might help to date this major phase of flooding. It is tempting, however, to link it with the freshwater flooding in the southern Fens which has been dated to the first half of the third century AD (Churchill 1970, 139; Salway 1970, 14; Potter 1981, 132). A phase of increased marine activity could, indeed, have led to the backing up of fresh water and consequent flooding. But there is no substantive evidence to equate the two floods and only the excavation of sealed sites can clarify the time-scale of this important event along the Fen Causeway.

Endnotes

1. There is some evidence of an artificial clay foundation for the road at Flaggrass, Cambridgeshire (see Potter 1981, 118) and perhaps at Neatmoor where Fowler (1950, 10) recorded a bed of clay 45cm thick beneath the metalling of the earlier road.

2. In the article on the circles in the silt fen (Silvester 1988b, 197), the writer referred to an observation by a local farmer of circles in the field to the north-east of Woodhouse Farm during the dry summer of 1976. This should now be judged in the light of photos taken by the NMR which suggest that these were pits rather than narrow-ditched circles.

3. The writer has not attempted to resolve the confused picture of the road and adjacent settlement at Straw Hall Farm presented by Churchill (1970, 138, following Kenny 1933). The claim that the road (and the roddon channel) were buried by silt after the Roman period is not borne out by the present surface evidence, but may demonstrate that in the less plough-disturbed conditions prior to the Second World War, it was possible to define a late or post-Roman flooding episode. However, this cannot relate to the major Roman flood referred to elsewhere in this chapter, and it is curious that its effect on later Roman sites with their obvious cropmarks and sherd scatters (*e.g.* NDH 6) was insignificant.

The suggestion that the ditches of the Straw Hall enclosure system were dug through silt that was 'clearly pre-2nd century' (Churchill 1970, 138) is at odds with the interpretation presented here.

Churchill's arguments hinge on the stratified pottery from Kenny's excavation of the Roman bridge abutment. However, the pottery seems to be confined to a single Nene Valley sherd (Kenny 1933, 6) which was located at a depth of 1.8m below ground level, but suspiciously close to a bush drain (Kenny 1933, fig. 2).

Appendix 1.
Lithics and Pre-Iron Age Pottery

by Frances Healy

I. Introduction

The south-eastern edge of the Fens, of which the survey area forms a part, has been known since the last century as an exceptionally rich collecting ground for flint, stone and copper alloy artefacts. The work of Fox (1923) spelt out its importance as a focus of prehistoric settlement; and the material accumulated by generations of collectors and excavators has contributed substantially to studies of Neolithic and Bronze Age material culture. Some impression of the almost unmanageably abundant harvest of contemporary artefacts from the survey area is given by Rowlands (1976), Bamford (1982), Cleal (1984) and Healy (forthcoming a).

The substantial body of pre-Iron Age material recovered from the area in the course of the Fenland Project merits further study, not for its bulk alone, but because it complements as well as reinforces the picture built up from earlier collections. The main reasons for this lie in the rapidity of peat wastage and in the distinction between objective fieldwalking and selective collection.

II. Lithics

(Figs 61 and 62)

Terms used in describing lithic material are defined and illustrated pieces are catalogued at the end of this section.

Limitations and Potential

Condition ranges from fresh to severely plough-damaged, so that overall analysis is confined to the more robust aspects of morphology. A visual, rather than metrical, distinction between flakes and blades, for example, was adopted partly as a time-saver, but primarily because it accommodated the high proportion of broken material. Artefacts whose modified edges are readily damaged or obscured are bound to be under-represented in the totals. Serrated pieces, for instance, must originally have been even more frequent than they appear in Fig. 67.

Topography concentrates accessible artefacts in a narrow north-south band (Fig. 61), within which most material was recovered from 'sites', on each of which several successive episodes may be represented. 'Non-site' material accounts for less than 30% of the total collection, the result of a deliberate policy on the part of the Fenland Field Officer not to recover all the 'background scatter' material. The tight concentration of material makes it difficult to examine the incidence across the landscape of the successive stages of the reduction sequence, elsewhere an effective means of interpreting field survey material, as in the East Hampshire Survey (Gardiner and Shennan 1985). Such variations as there are in overall composition or in size (indicated by mean weight) show little pattern (Fig. 62).

The extent and rate of local landscape change during the Flandrian means that any attempt at interpretation must allow for time depth. The wooded Mesolithic landscape of Fig. 45, and the activities performed within it, would have appeared alien to the Early Bronze Age inhabitants of the fen edge in the landscape of Fig. 47. Marine transgression and peat growth would, furthermore, have reduced the range of accessible flint sources (see Flint Use below). The nature and approximate chronology of landscape change within the survey area are known, as is the broad pattern of technological and typological change in contemporary lithic assemblages. Combining the two poses problems. The collecting methods of extensive survey mean that 'site' collections are ungridded and small, with a mean size of only thirty pieces[1]. Most are undiagnostic and many are multi-period. Nonetheless, more than a hundred of the larger ones, amounting to almost half the total collected, can, on the criteria set out in the section below, be assigned a broad date. It must be emphasised that most of these are *predominantly*, not exclusively, single-period collections, as the few Early Bronze Age implements from 'Mesolithic' sites make clear (Fig.67). They provide, however, a basis on which to assess changing activity over time and a framework into which the remainder of the collection may be fitted.

Predominantly Single-Period Collections

(Figs 63 and 64)

These have been defined on the following criteria, drawn from, among others, Cleal (1984, 151), Ford *et al.* (1984), Green (1980), Healey and Robertson-Mackay (1983), Healy (1988, 45), Pitts (1978), Saville (1981), Whittle (1977, ch. 4).

Mesolithic

(*e.g.* HCW 30, L1-L4): regular, often bipolar, blade cores; high frequency of blades, many of them soft-hammer struck, often with punctiform and other thin butts; narrow range of retouched forms including microliths, truncated pieces, and burins.

Earlier Neolithic

(*e.g.* HCW 21, L6-L8): wider range of core forms; blade production less frequent but still substantial, soft-hammer flaking less frequent; restricted range of retouched forms dominated by scrapers and serrated blades and including leaf arrowheads; Neolithic Bowl pottery (in four cases).

Mesolithic and/or Earlier Neolithic

substantial blade production with fairly frequent soft-hammer flaking; few chronologically distinctive retouched forms.

Later Neolithic

(*e.g.* FWL 36, L9-L13): frequent Levallois-like and other discoidal cores; flakes predominantly broad and squat, with faceted butts more common than in other groups and hard hammer flaking on the increase; chisel and oblique arrowheads and serrated blades among retouched forms.

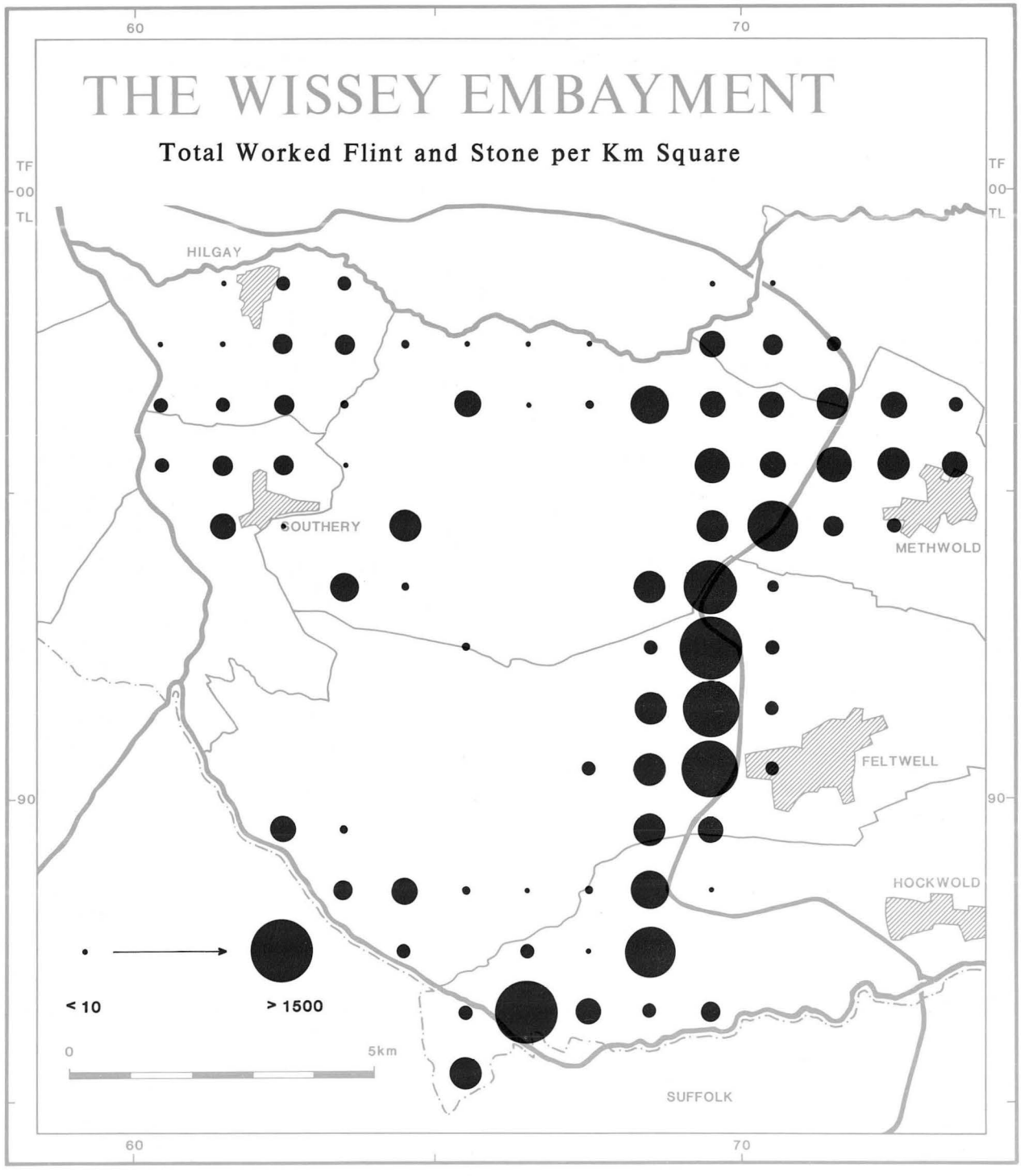

Figure 61 Total worked flint and stone summarised by 1km square. Scale 1:100,000

Beaker

(*e.g.* HCW 107, L15-L18): wide range of core types; flakes predominantly broad, squat and hard hammer-struck; barbed and tanged arrowheads, 'thumbnail' scrapers, scale-flaked knives and a flint dagger among retouched forms, with scale-flaking more frequent than in other groups; Beaker pottery (in one case).

Bronze Age

(*e.g.* HCW 2, L21-L23): cores roughly and often incompletely worked; flaking almost exclusively hard hammer, with frequent unresolved bulbs of percussion on cores and flakes; flakes broad, squat and thick, with cortical butts more common than in other groups, and virtually no blades; retouched forms include denticulates and thick, steep, often step-flaked scrapers retouched by the removal of large flakes.

Indeterminate Later Neolithic or Early Bronze Age

various core types; flakes predominantly broad and squat, range of retouched forms including those present in the previous three groups; Later Neolithic/Early Bronze Age pottery (in seven cases).

Characteristics of these groups and of the mixed or undated site collections and non-site material are summarised in Figs 65-68 and Tables A-E (microfiche).

The first three groups must date from before the local maximum of the fen clay transgression, *c.*2875-2140 CAL. BC (Waller 1988, 337-8). The Later Neolithic group may have been roughly contemporary with the maximum,

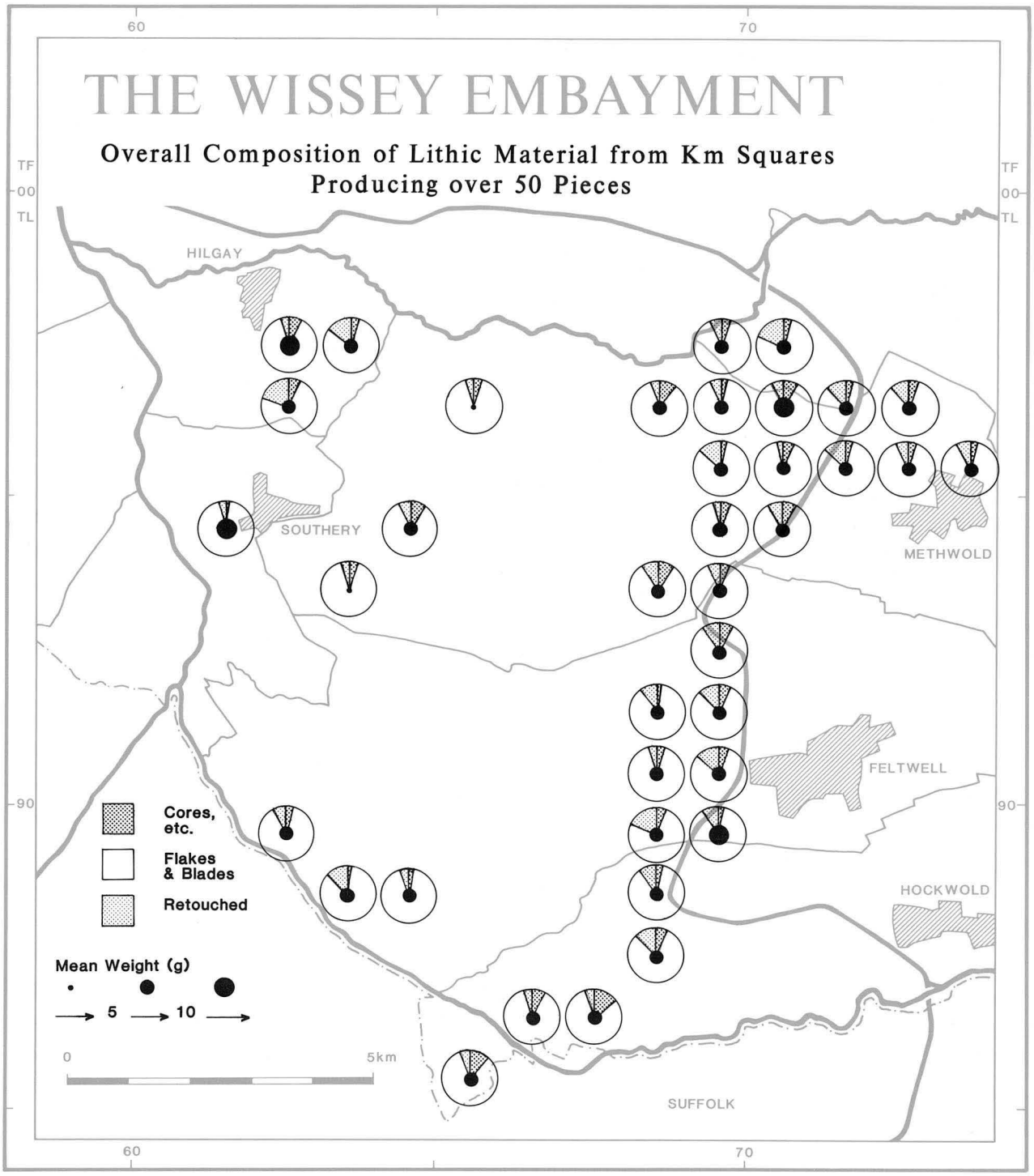

Figure 62 Total worked flint and stone broken down into (1) cores, irregular waste and core trimming flakes, (2) unretouched flakes and blades, (3) retouched forms, in 1km squares from which there are more than fifty pieces. Scale 1:100,000

while the Beaker and Bronze Age groups would have post-dated it. These last are marked by a substantial increase in the frequency of scrapers, which rise to over 60% of retouched pieces. Most of the indeterminate Later Neolithic or Early Bronze Age group is likely to align with them: it shares their high frequency of scrapers and lacks the distinctive features of the Later Neolithic group; while Later Neolithic pottery remains many times scarcer on the fen edge than Beaker and Early Bronze Age styles (Table 5).

Mixed or Undated and Non-Site Collections
(Figs 65-68)

While these must represent the accumulation of material throughout the Flandrian, their bulk seems to post-date the fen clay transgression, since they align with the later collections in their low frequencies of blades and of orange flint, their high frequency of scrapers, and their range of retouched forms (Figs 65-68). Scrapers in them include 'thumbnail' and possibly Bronze Age forms comparable with L22.

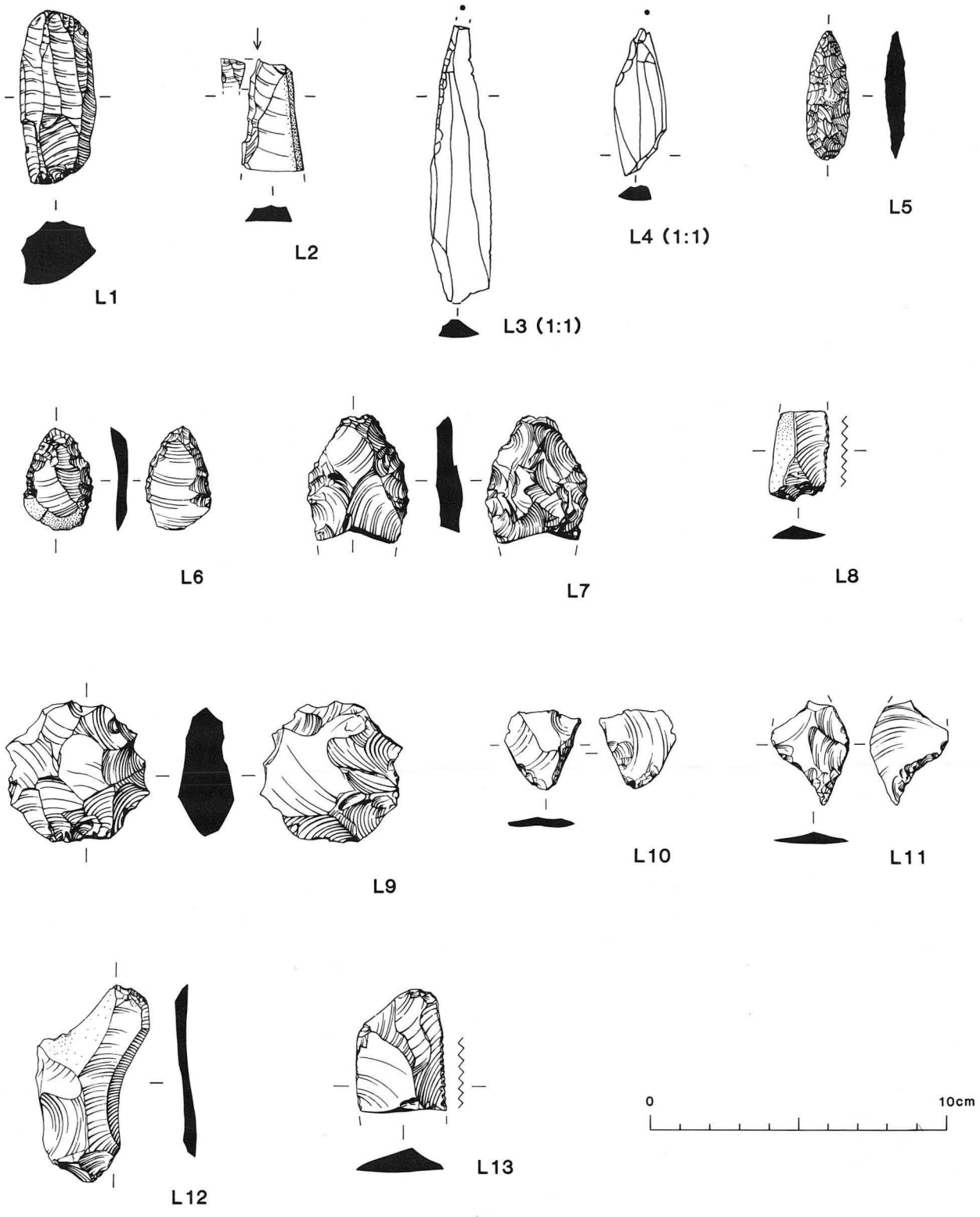

Figure 63 Lithic material from HCW 30 (L1-L4), HCW 22 (L5), HCW 21 (L6-L8), FWL 36 (L9-L13). Particulars in section III. Scale 1:1 for L3-L3, 1:2 for remainder

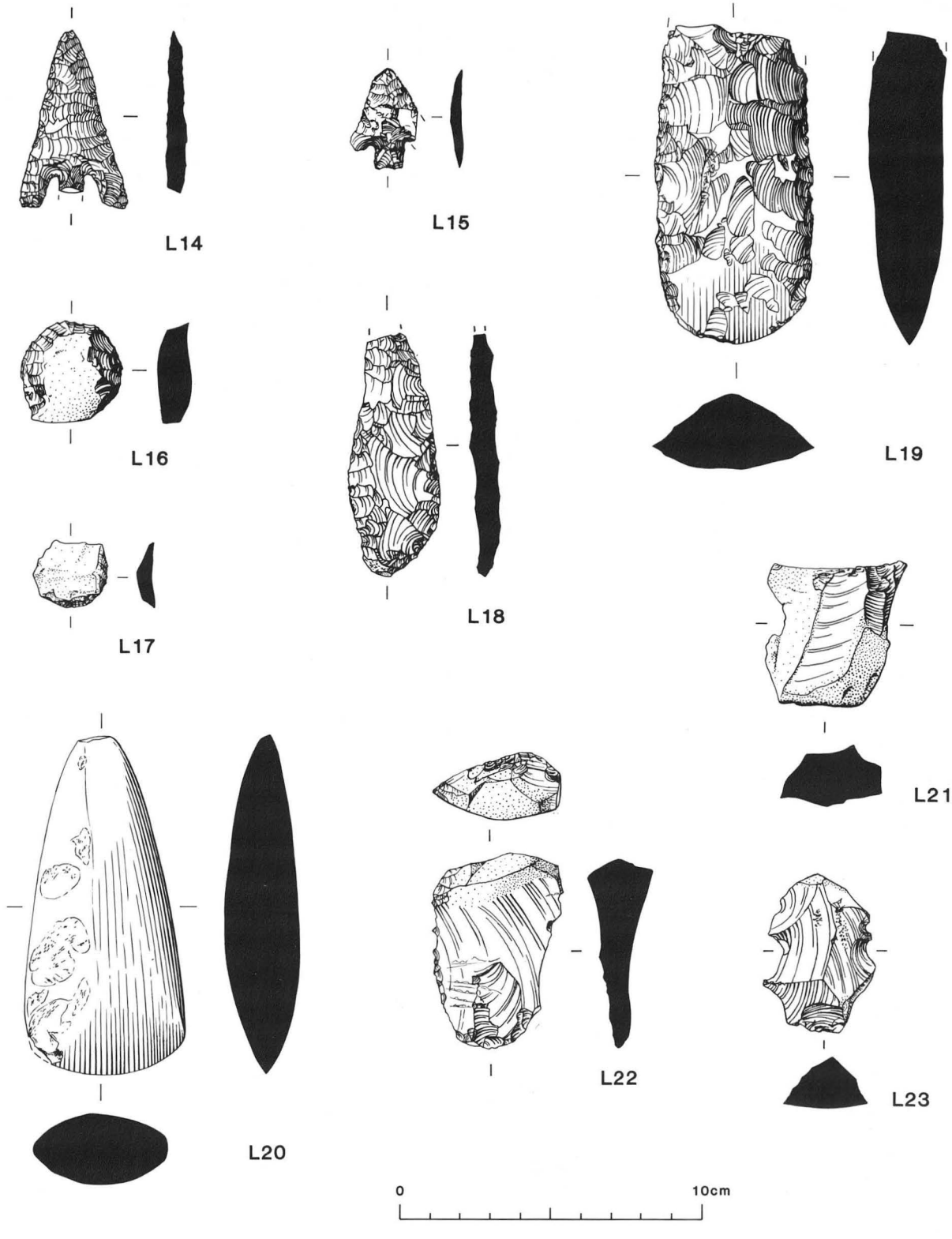

Figure 64 Lithic material from FWL DX (L14), HCW 107 (L15-L19), FWL AM (L20), HCW 2 (L21-L23). Particulars in section III. Scale 1:2

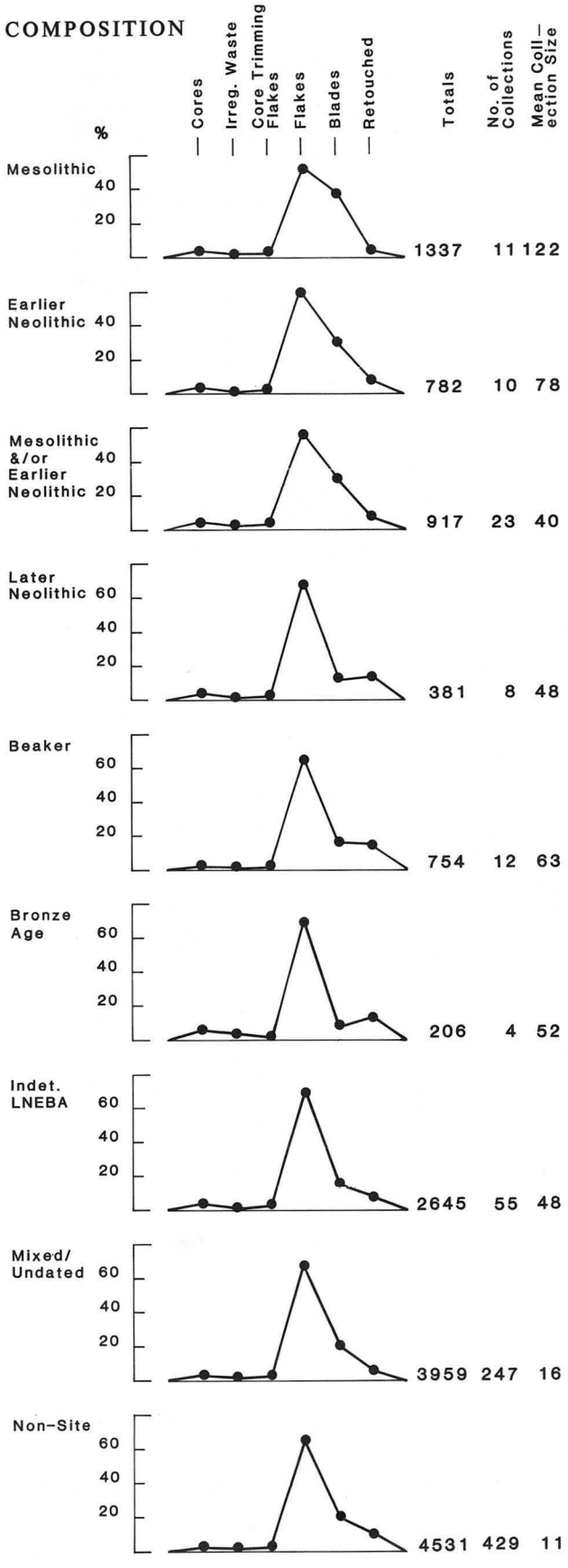

Figure 65 Overall composition of predominantly single-period, mixed or undated, and non-site collections. Figures in Table A (microfiche)

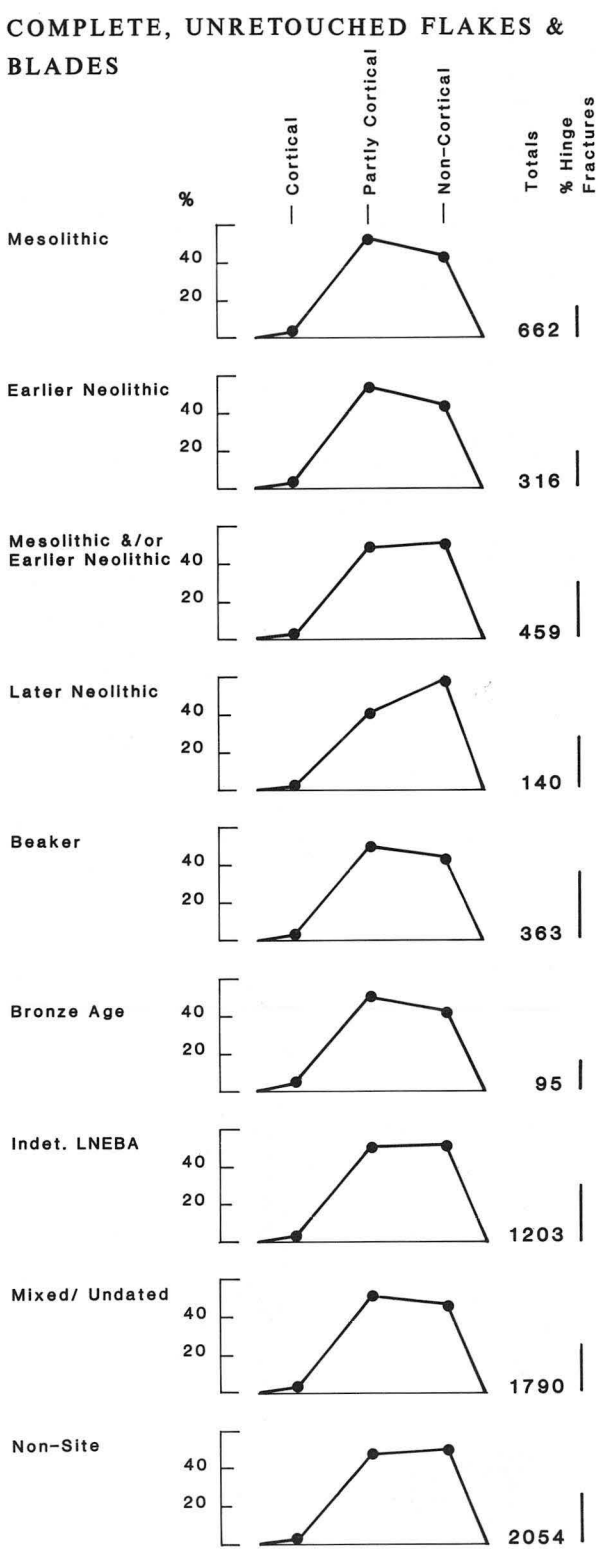

Figure 66 Incidence of cortical, partly cortical and non-cortical flakes and of hinge fractures in predominantly single-period, mixed or undated, and non-site collections. Figures in Table C (microfiche)

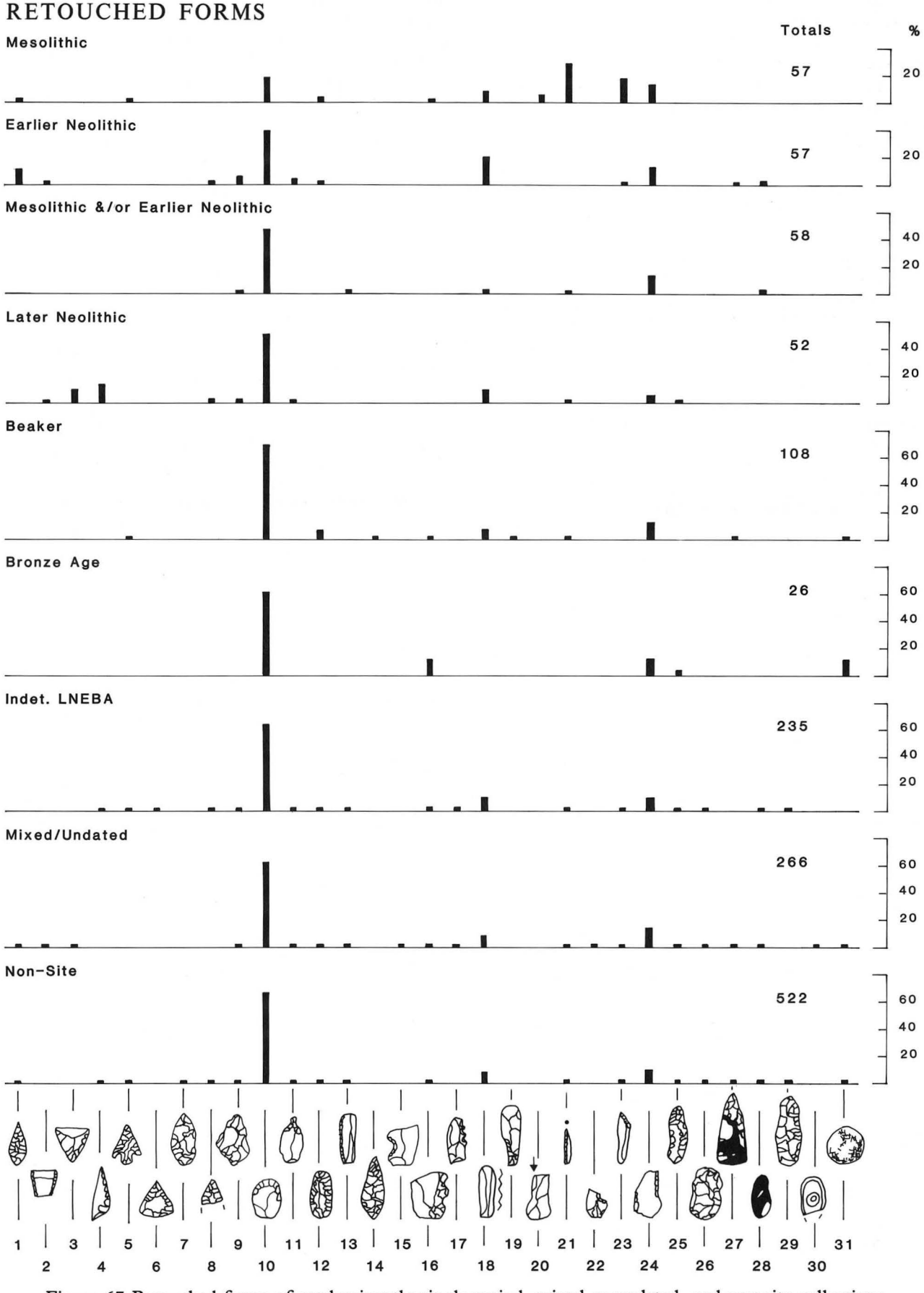

Figure 67 Retouched forms of predominantly single-period, mixed or undated, and non-site collections. Categories defined in section III. Figures in Table E (microfiche) Outlines not to scale

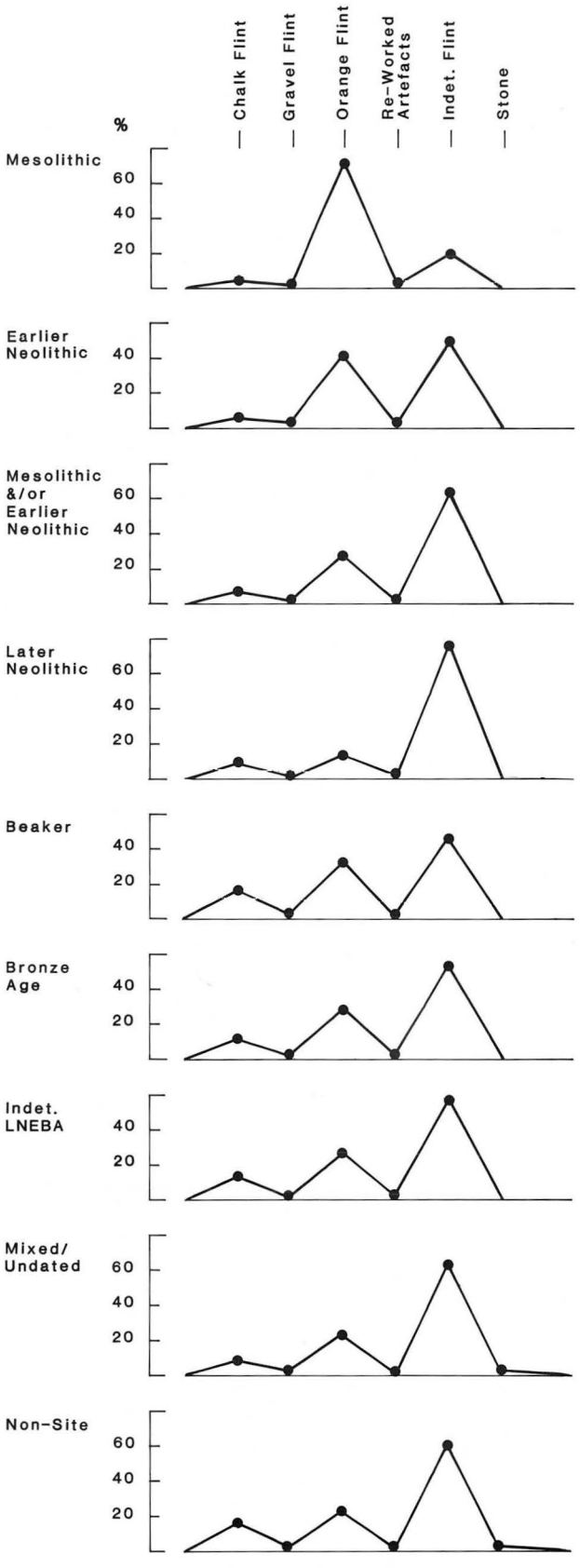

Figure 68 Raw materials of predominantly single-period, mixed or undated, and non-site collections. Figures in Table G (microfiche)

Specific artefact types
(Tables 3 and 4)

Arrowheads

Oblique and chisel arrowheads account for over 40% of the total. They seem to have been made at FWL 192 and MTW 48, the collections from which each include two exceptionally thick and rough examples, with, in the case of MTW 48, a fragment of a third. The manufacture of pointed arrowheads such as leaf and barbed and tanged forms is almost certainly represented by rough, thick bifaces such as L7, sixteen of which are present in the collections from the survey area.

Flint and Stone Axes

Five of the six flint axes (FWL 93, FWL 180, FWL DO[2], HCW 107, MTW 1, MTW DK) are fragmentary. All are at least partly ground. Three axes and, where cortication permits inspection, most of the twelve flakes from ground flint implements, are of orange flint, often with matt, granular inclusions which give the ground surface a tortoiseshell-like appearance. Two of the remaining axes, including L19, and two flakes are of other heavily-mottled flints. The remaining axe is unassignably corticated.

No petrological identifications have yet been made. Two of the three stone axes (FWL 47, and L20 from FWL A1) appear to be of Group VI (Great Langdale tuff), as does a single flake from a ground stone implement (FWL 180). The third stone axe (MTW AY) is of a fine-grained, grey, white-veined micaceous rock.

Other stone artefacts

These are confined to a small fragment of an unreconstructable shaft-hole implement (FWL 13), a sandstone disc approximately 45mm in diameter (HCW 35) and a struck flake of hard chalk (MTW AJ).

Querns

Stone querns are represented by two sandstone fragments with ground surfaces from FWL 110, an Iron Age site that also produced some struck flint; a stray find of half

Class	*Subdivisons*	*Totals*	
Leaf	Kite-shaped: 2	19 34%	
Petit tranchet		4 7%	
Chisel	B: 1 C: — D: 4	6 11%	43%
Oblique	E: 2 F: — G: 2 H: 8	18 32%	
Barbed & tanged	Green Low: 1 Conygar: 2 Ballyclare: 1	8 14%	
Triangular		1 2%	
Total		56	

Table 3. Classifiable arrowheads

Site	*Date (associated pottery)*	*Main Raw Material*	*Cores*	*Irregular Waste*	*Flakes & Blades*	*Retouched*	*Scrapers as % of retouched*	*Source*
Broome Heath, Ditchingham (Site 10602),		Gravel flint						Wainwright 1972, 48, 67
1. Pits & post-holes	Earlier Neolithic (Grimston Ware; *c.* 3300 Cal. BC)		2%		95%	3%	46%	
2. Layer 4	Earlier Neolithic (Grimston Ware; *c.* 2800 Cal. BC)		1%		94%	5%	80%	
Padholme Road, Fengate, Cambridgeshire	Earlier Neolithic (Grimston Ware)	Gravel flint		14%	81%	5%	46%	Pryor 1978, 8
Spong Hill, North Elmham (Site 1012)	Earlier Neolithic (Mildenhall Ware)	Gravel flint	2%	2%	91%	6%	30%	Healy 1988, 32
Storey's Bar Road, Fengate, Cambridgeshire	Later Neolithic (Grooved Ware)	Gravel flint	1%	11%	82%	6%	76%	Pryor 1978, 137
Middle Harling (Site 6033)	Later Neolithic (Fengate Ware, Grooved Ware)	Chalk flint	3%	5%	90%	2%	31%	Healy forthcoming c
Hunstanton (Site 1396)	Later Neolithic (Grooved Ware)	Beach flint	6%	2%	86%	6%	55%	Healy, Cleal and Kinnes forthcoming
Weasenham occupation scatters (Site 3660)	Beaker (Middle)	Gravel flint	1%	1%	86%	12%	43%	Petersen and Healy 1986, 82
Newark Road, Fengate, Cambridgeshire	Early-Middle Bronze Age	Gravel flint	3%	19%	70%	8%	48%	Pryor 1980, 117
Grime's Graves, post-mining occupation (Site 5640)	Middle Bronze Age	Chalk flint	1%		94%	5%	19%	Saville 1981, 19

Notes: Not all sources give separate figures for irregular waste. Utilized flakes from all three Fengate sites are included with flakes and baldes rather than with retouched pieces, as are bulbar segments and utilized blades from the post-mining occupation of Grime's Graves.

Table 4. Composition of assemblages from East Anglian sites located on or near flint sources

of what may have been an exceptionally small sandstone saddle quern (HLG A1), and a fragment of a sandstone rotary quern from a site producing Romano-British pottery (MTW 115). The reworking of flint saddle querns is most clearly seen in the predominantly Bronze Age collection from FWL 56, where at least four flakes retain areas, in two cases substantial, of dressed and worn quern surface. Further flakes in the collection are of closely similar flint and may have been struck from the same quern. Single flakes from saddle querns occur in another predominantly Bronze Age collection (FWL 54), a possibly Later Neolithic collection (MTW 122), and two non-site collections (FWL DU, MTW FB).

Raw materials

Local flint sources, described elsewhere (Healy forthcoming a, ch. 5.II.1), may be summarised as follows. In the Mesolithic and Earlier Neolithic, some flint would have been accessible on the floor of the Fenland Basin, in the form of discontinuous till and gravel deposits (Gallois 1988, fig. 25). The sand and gravel ridges in the south of the survey area contain a little poor quality flint. The chalky hillocks and ridges of the central and northern parts of the area are flintless, although flint occurs on the surface and flanks of the upland of Methwold and the island of Hilgay and Southery, some of it relatively fresh and some of it till- or gravel-derived. The Lower Chalk of the immediate upland has little *in situ* flint, which begins to occur consistently and in quantity only in the *Terebratulina lata* zone of the Middle Chalk, the western edge of which lies some 3km from the fen edge and some 2.5km from the eastern edge of the survey area (Peake and Hancock 1970, pl. 1).

In addition to *in situ* flint, the topsoil of the Breckland abounds in flint derived from underlying deposits, including some gravel and till as well as chalk. This characteristically occurs as weathered nodules and fragments with frequent thermal fractures and corticated surfaces. This surface flint becomes sparser, smaller, more degraded and more heterogeneous as one moves westward toward the fen edge. The macroscopic sourcing of flint is necessarily tentative and approximate. The collections clearly include flint from a variety of sources, among which three very broad classes have been identified:

Chalk flint

Generally dark grey to black with light-coloured cortex, retaining surface irregularities of parent nodule. Sometimes fresh; more often weathered and abraded, with relatively thin cortex and areas of corticated thermal fracture, in other words the surface flint of the Breckland. Only recognisable with confidence where sufficent cortex remains. Most of the mass of indeterminate flint is probably chalk flint, in that it is dark, unmottled and relatively sound.

Gravel flint

Smooth, rounded pebbles with thin, abraded, sometimes discoloured cortex.

Orange flint

Of a distinctly orange colour throughout, sometimes with lighter matt, granular inclusions. Flint of this colour does not occur in the local chalk, but is found among surface material. Where cortex survives, it is generally comparable with that of weathered chalk flint rather than with that of gravel flint. This suggests a till source.

Flint Use

Changes in Raw Material Frequency Over Time

The problems of identifying flint from different sources are exacerbated by the fact that material from the chalky hillocks of the northern and central parts of the survey area is often heavily corticated, so that the frequency of indeterminate flint rises from south to north (Tables F-G (microfiche)). When identified flint alone is considered, the balance between chalk flint and orange flint does not seem to vary across the area in any of the broad groupings represented in Fig. 68. There is, however, a distinct chronological trend from substantial use of orange flint in predominantly pre-fen clay collections to increased use of chalk flint and indeterminate flint, most of it probably also chalk flint, in predominantly post-fen clay collections. This is evident even within the single site of the Decoy Farm sandhill where gridded collection, over a ridge occupied intermittently from the Mesolithic onwards, showed that chalk flint was more frequent in an area of Beaker and Bronze Age activity than it was overall (Appendix 2). This suggests that some sources of orange flint lay on the floor of the Fenland Basin and that, as they and other immediate sources became progressively inaccessible, more and more flint was brought from the upland.

Flint Availability and Transport after the Fen Clay Transgression

Most flint was transported in an unworked state over distances of up to 5km and knapped on the hillocks and ridge of the fen edge. This is reflected in the representation of all stages of the reduction sequence in predominantly post-fen clay collections, both in their overall composition (Fig. 65) and in the incidence within them of cortical, partly cortical and non-cortical flakes (Fig. 66). They differ little in either respect from predominantly pre-fen clay collections or from assemblages from upland sites (Healy forthcoming b, fig. 4.2). Gross composition does not seem to vary with distance from the upland, islands or rivers among pre- or post-fen clay material. The generalised picture of Figure 62 obtained throughout. A few small unworked nodules of chalk flint were found at the Decoy Farm sandhill (Appendix 2), where the Little Ouse may have been the means of transportation.

There are two indications that some flint may have been transported at more advanced stages of the reduction sequence:

1. Predominantly Later Neolithic collections are distinguished by a marked excess of non-cortical flakes over partly cortical ones (Fig. 66). This may reflect the import of prepared cores, the use of exceptionally large masses of raw material, or both.
2. The frequency of retouched pieces in these same Later Neolithic collections is double that of the predominantly pre-fen clay material, a feature shared with the predominantly post-fen clay collections (Fig. 67). This may reflect the import of finished implements, blanks or preforms, the more so as it is difficult to match in assemblages from sites on or close to flint sources on either side of the Fens (Table 4), within which percentages of retouched pieces rarely approach the mean of 10% for the predominantly post-fen clay collections from the survey area.

Increased frequency of retouched forms in predominantly Later Neolithic collections coincides with the emergence of a range of elaborate flint and stone implements which have been termed prestige goods, on the evidence both of their workmanship and of their inclusion in burials and other formal deposits (Bradley 1984, 48). These include finely made arrowheads, discoidal knives, plano-convex knives, flint and stone axes, stone maceheads and jet ornaments, all of which are exceptionally numerous in the haphazard tally of finds made over the years on the south-eastern fen edge, as are many of the grave goods of the Early Bronze Age, such as flint daggers, battle axes, stone bracers and beads of jet and amber (Healy forthcoming a, ch. 5.II.4). The sustained increase in retouched pieces may reflect the concurrent import of fine flint implements from a variety of sources.

The Output of Grime's Graves

One possible source lies in the flint mines of Grime's Graves, Weeting with Broomhill (SMR no.5640)[3], some 12km east of the fen edge up the Little Ouse valley. The excavated fraction of the mined and quarried area was

worked mainly in the Later Neolithic, by users of Grooved Ware. Radiocarbon determinations correspondingly place the sinking of deep, galleried shafts between *c.*2600-2200 CAL. BC[4], but also indicate that shallower pits continued to be dug down to *c.*2000 CAL. BC (Burleigh *et al.* 1979, 46). This suggests that flint *may* have been extracted at Grime's Graves throughout the post-fen clay occupation of the survey area, a conclusion which finds some support in the presence on the site of small quantities of Early Bronze Age pottery, although none of this was from mining contexts (Longworth, Ellison and Rigby 1988, 23). Estimates of annual output differ but agree that it was substantial: Mercer's assumed efficiency level of 15-20% (1981, 112) applied to Sieveking's estimated output of 45 tonnes of floorstone from a deep galleried shaft (1979, 35) suggests a *removed* output of 7 to 9 tonnes. In these circumstances, one might expect to find Grime's Graves floorstone among flint brought from the upland into the survey area.

Floorstone, the seam to which the pits and shafts were sunk, was used by Later Neolithic knappers on the site in preference to flint from higher seams (Saville 1981, 1). It is a semi-tabular flint of exceptional quality, generally clear and black and characterised by an often thick, fresh, creamy cortex. This cortex is sufficiently distinctive to permit tentative macroscopic identification away from the site, although similar cortex also occurs occasionally on the surface flint of the Breckland. Nor is this the only problem: the same seam was mined in recent times to provide raw material for gunflints. The workshop-based aspect of this industry, centred in Brandon, Suffolk, is well documented, notably by Skertchly (1879). Collections of characteristic debitage from the survey area make it clear that some mined floorstone was transported several kilometres from source before being made into gunflints. Concentrations of such material are unmistakable, stray pieces not always so. This makes it impossible to be sure whether the odd core, flake or blade of apparent floorstone was discarded recently or in antiquity.

Such artefacts have been accepted here as prehistoric only if they are in similar condition (*i.e.* in a comparable state of cortication or abrasion) to the bulk of the collections in which they occur, if they have technological features alien to the Brandon industry (*e.g.* platform preparation or soft-hammer flaking), or if they are finished implements of prehistoric form. The seventy-two pieces which meet these criteria, most of them from predominantly post-fen clay collections, comprise two cores, one fragment of irregular waste, forty-five flakes, five blades, fourteen scrapers (including L22), two borers, two scale-flaked knives and one miscellaneous retouched piece. They amount to only 4% of the confidently identified chalk flint, and to 0.5% of all the worked flint and stone. The post-fen clay collections echo Clark's description of the Bronze Age industry from Mildenhall Fen: 'There is no indication that mined flint was employed. A study of the debris of flint-chipping on the site suggests that surface nodules were used.' (1936, 44). Recognisable floorstone is, in other words, as scarce in the post-fen clay collections of the fen edge as it is in contemporary assemblages from the upland (Healy forthcoming b).

This suggests that most of that output left the site in non-cortical form. It has already been suggested that the heightened frequency of non-cortical flakes in predominantly Later Neolithic collections from the survey area (Fig. 66) would be compatible with the working of exceptionally large masses of raw material or with the import of prepared cores. It may be relevant that the proportion of cores recovered from a Later Neolithic knapping floor at Grime's Graves was exceptionally low (Saville 1981, 69).

Floorstone is also likely to have been transported in the form of blanks, preforms and finished implements. It is difficult to reconcile the cost of extracting floorstone to its use for *ad hoc* flake tools which were generally, and apparently satisfactorily, made on surface flint. While it is possible to see the excavation of a small open-cast pit by two to three people in one or two days (Sieveking 1979, 38) as geared to the winning of good quality flint for everyday use, it is more difficult to see the excavation of a deep galleried shaft by twenty people in two (Mercer 1981, 32), or even four months (Sieveking 1979, 33), in the same terms. The manufacture of *ad hoc* tools and the flakes on which they were made may have been incidental to that of other products.

Most, probably all, of the flint axes from the survey are of other than Grime's Graves flint (see Specific Artefact Types above), and none are flake axes of the characteristic triangular-outlined, plano-convex form produced there (Saville 1981, figs. 43-45). It is suggested elsewhere that the site's products may have included the prestige goods of the Later Neolithic and the grave goods of the Early Bronze Age (Healy forthcoming a, ch. 5.II.4). Raw material won at considerable cost from a restricted source might have enhanced the significance of elaborately-worked objects. Such artefacts are generally non-cortical, which makes the macroscopic identification of their raw material uncertain. The presence among the non-site material of two scale-flaked knives of dark flint with floorstone-like cortex (HCW AK and MTW AS) suggests, however, that floorstone may be present in some contemporary non-cortical implements. It may be noted that in the collection from MTW 1, an axe fragment from which is of mottled orange flint, another fragmentary ground implement, probably a chisel, is of dark flint which may be floorstone. Grime's Graves is only *one* possible source for the fine implements of the area. Some are obviously of other flints, including the orange flint of L14 and L18; some, most obviously arrowheads, were made, or at least finished, on the fen edge (see above).

Terms used in describing lithic material

Debitage

Cores: Classified according to Clark and Higgs (1960, 216) with the addition of discoidal and Levallois:

Single-platform
- A1. Flakes removed all around
- A2. Flakes removed part of way around (*e.g.* L21)

Multi-platform
- B1. Two parallel platforms (*e.g.* L1)
- B2. Two platforms, one at an oblique angle
- B3. Two platforms at right-angles
- C. Three or more platforms

Keeled
- D. Flakes struck from either side of a ridge
- E. As D, but with one additional platform *or*
- Discoidal. As D, but struck all around the circumference of the core (*e.g.* L9)
- Levallois. Discoidal keeled core prepared for the detachment of flakes of predetermined shape

Unclassifiable or fragmentary

Irregular waste: Fragment produced during the breaking-up of a nodule or pebble.

Core trimming flake: Removal made to prepare a core platform for further flaking.

Flake: Generally used to denote any removal from a core. Sometimes subdivided visually, for example in Fig. 65 and Table A (microfiche), into:

Blade (*e.g.* the blanks of L8 and L13). A proportionately narrow, parallel-sided flake, often with parallel arrises on the dorsal face.

Flake. Any other removal.

In Fig.66 and Table C (microfiche) complete flakes are divided into

Cortical (*e.g.* the blank of L16 or L17);
Partly cortical (*e.g.* the blank of L6 or L12);
Non-cortical.

Also recorded here are

Hinge fractures: flakes or blades in which the fracture plane turns abruptly up at the distal end, leaving a smoothly rounded tip.

In Table D (microfiche) flake butts (or striking platforms) are divided into:

Punctiform, slender and of restricted area, likely to have been by a soft hammer or punch-struck blow;
Faceted, with a series of negative bulbs along the dorsal edge, forming part of the flake scars truncated at the ventral edge by the detachment of the flake (Saville 1981, 6);
Cortical, completely cortex-covered.

Retouched forms

Numbers are those used in Fig. 67 and Table E (microfiche)

Arrowheads

1. *Leaf arrowhead* (*e.g.* L5, L6). A bifacially-flaked point ranging in outline from pointed oval to piriform, and including kite-shaped and ogival forms, as defined by Green (1980, 22). Retouch may completely cover both faces, be confined to tips and edges, or occupy any intermediate extent, the bulb almost always being reduced.
2. *Petit tranchet arrowhead* (*e.g.* Green 1980, fig. 37: a-c). Transverse arrowhead of trapezoid outline, made, generally on a blade segment, by bilateral abrupt retouch.
3. *Chisel arrowhead* (*e.g.* L10). Roughly symmetrical arrowhead of quadrangular or triangular outline, generally formed by bifacial retouch and retaining one unworked primary flake edge. Equivalent to forms E-I of Clark's (1934) *petit tranchet* derivative arrowhead classification (adapted from Green 1980, 30).
4. *Oblique arrowhead* (*e.g.* L11). Asymmetrical arrowhead of sub-triangular outline, formed by bifacial retouch along one long edge and often around an asymmetrically hollowed base, with the remaining primary flake edge generally unworked, but sometimes also retouched, especially towards the tip. Equivalent to forms E-I of Clark's (1934) *petit tranchet* derivative arrowhead classification (adapted from Green 1980, 30).
5. *Barbed and tanged arrowhead.* Bifacially flaked point of triangular or sub-triangular outline with two basal notches forming a central tang and lateral barbs. Subdivided into:
   Green Low (*e.g.* Healy forthcoming a, L38). Barbs oblique-ended, with obtuse angle next to tang and acute angle at lowest point of barb. Tang squared, subsquare, rounded, or, if longer than barbs, pointed or triangular (Green 1980, 51).
   Conygar Hill (*e.g.* Healy forthcoming a, L3). Barbs and tang both squared (Green 1980, 51).
   Ballyclare (*e.g.* L14). Length (mm) × breadth (mm) = > 1400 (Green 1980, 50).
   Other (*e.g.* L15).
6. *Triangular arrowhead* (*e.g.* Healy forthcoming a, L39). Bifacially-flaked point of triangular or subtriangular outline.
7. *Laurel leaf.* (*e.g.* Clark and Higgs 1960, fig. 14: F39-F42). Bifacially-flaked point with similar range of outlines to leaf arrowheads but markedly larger, reaching up to 9 or 10cm in length. Grades into:
8. *Other, indeterminate or fragmentary arrowhead.*
9. *?Unfinished arrowhead* (*e.g.* L7). Large, relatively thin and flat biface more likely to have been an arrowhead blank than a finished implement.
10. **Scraper** (*e.g.* L12, L16, L17, L22). Implement part of the edge of which is bevelled by unifacial blunting retouch, forming an angle of approximately 20-90° with the flat underside of the blank, the modified edge being usually convex (Saville 1981, 8-9). Small, sometimes scale-flaked scrapers (*e.g.* L17) are traditionally referred to as 'thumbnail' forms.
11. **Borer**. Implement with a narrow retouched projection, apparently used for perforation. Subdivided into:
    Awl. (*e.g.* Healy forthcoming a, L14, L52, L87). Borer with point formed by retouch from more than one direction (Clark and Higgs 1960, 223).
    Piercer (*e.g.* Healy forthcoming a, L99). Borer with point formed by retouch from only one direction (Clark and Higgs 1960, 223).
    Spurred piece (*e.g.* Healy forthcoming a, L53). Borer with point formed on scraper-like edge or by the working of two closely-spaced notches (Smith 1965, 105).
12. **Plano-convex or scale-flaked knife**. Sharp-edged implement of elongated outline with varying degrees of invasive, scale-flaked dorsal retouch. Subdivided into:
    Plano-convex knife (*e.g.* Healy forthcoming a, L12, L45). Sharp-edged implement of thin, plano-convex section with sharp edges and generally of ovoid outline, scale-flaked over all, or almost all, of its dorsal face (Clark 1932). Grades into the less extensively retouched
    Scale-flaked knife (*e.g.* Healy forthcoming a, L56, L88, L107). A parallel-sided or triangular-outlined blank, with regular, scale-flaked retouch along one or two lateral edges.
13. **Backed knife**. (*e.g.* Clark and Higgs 1960, fig. 15: F51). A generally parallel-sided blank, one lateral edge of which is blunted by abrupt retouch, the opposite edge being either unretouched, although often worn, or modified by uni- or bilateral retouch.
14. **Flint dagger**. (*e.g.* L18). Bifacially flaked replica of a copper alloy dagger, of foliate outline, sometimes two-pointed, sometimes with a blunt, elongated tang, sometimes with lateral notches to facilitate hafting (Grimes 1931).
15. **Notch** (*e.g.* Ozanne and Ozanne 1960, fig. 9:22-24). Piece in the edge of which one or more indentations have been worked by abrupt or semi-abrupt retouch.
16. **Denticulate** (*e.g.* L23). Piece in the edge of which coarse teeth have been formed, sometimes by the working of contiguous notches, sometimes by the detachment of single flakes. Includes the more restricted classes of '(keeled) denticulated flakes' (Wainwright and Longworth 1971, 176) and 'denticulate scrapers' (Saville 1981, 9).
17. **Saw** (*e.g.* Healy 1988, L100, L101). Coarsely-serrated piece, its teeth often formed by the removal of two or more small flakes on either side.
18. **Serrated piece** (*e.g.* L8, L13). Straight-sided blank, generally a blade, with one or occasionally both lateral edges finely serrated by the removal of a single chip on either side of each tooth (Smith 1965, 108). This effect may be obtained by striking downwards onto the edge of the flake to be serrated with the edge of another flake held at right-angles to it.
19. **Tanged or shouldered blade** (*e.g.* Pryor 1978, fig. 48:3, 4). A blade-like blank with a tang worked bi- or unilaterally at the bulbar end, often with wear traces, retouch or both towards distal end.
20. **Burin** (*e.g.* L2). Implement with a chisel-like edge formed by the intersecting angle between the bulbar end of a negative flake scar (or scars) and its platform (Saville 1981, 8).
21. **Microlith**. (*e.g.* L3, L4). Small blade or flake fragment, its bulb normally removed, modified to a regular form by abrupt retouch. Examples other than obliquely-blunted points are, where possible, classified according to Jacobi (1978, fig. 6).
22. **Microburin**. (*e.g.* Wymer 1977, fig. 2: 7—8). By-product of microlith manufacture, formed by working a notch in the edge of a blade over the edge of an anvil across which the proximal or distal end eventually breaks off, becoming a microburin. Characterised by truncated dorsal notch forming an acute angle with a ventral fracture facet (Tixier 1974, 15-19).
23. **Truncated piece** (*e.g.* Bamford 1982, fig. 31:b). Flake or blade the distal end of which is truncated, generally obliquely, by abrupt retouch.
24. **Miscellaneous retouched piece.**
25. **'Fabricator'** or rod (*e.g.* Healy forthcoming a, L18, L19). Uni- or bifacially-flaked, blunt-ended, parallel-sided implement, of

thick plano-convex or biconvex section, sometimes relatively thin and edge-retouched only, sometimes heavily-worn. Includes all but the unilaterally-retouched forms among 'rods', as defined by Saville (1981a, 10).

26. **Miscellaneous heavy implement**: Includes indeterminate, fragmentary core tools as well as
    Tribrach or Y-shaped tool (*e.g.* Piggott 1954, fig. 44:7; Gardiner 1987, fig. 5.1:2). Bifacially-flaked implement with two approximately equal arms and one longer one.
    Waisted tool (*e.g.* Healy forthcoming a, L65). Implement bifacially-flaked into a waisted shape by the formation of two opposed lateral notches, either central to the long axis or displaced to one end. Ends blunt or sharp.
    Chisel (*e.g.* Manby 1974, fig. 3:17, fig. 31:1). Parallel-sided rod of biconvex section, with an often-ground double-bevelled cutting edge.
27. **Axe or adze** (*e.g.* L19, L20). Relatively heavy cutting tool with transverse cutting edge, sometimes wholly or partly ground.
28. **Flake from ground implement**
29. **Tranchet axe or axe-sharpening flake**:
    Tranchet axe (*e.g.* Wymer 1977, fig. 2:1). Relatively heavy cutting tool of sub-rectangular outline, often with slightly convex sides, flaked over both faces with cutting edge formed by removal of one transverse flake.
    Axe-sharpening flake (*e.g.* Wymer 1977, fig. 2:3). Flake removed from the cutting edge of a tranchet axe in the course of re-sharpening it.
30. **Shaft-hole implement**: Heavy, perforated stone implement. Includes the following forms, all as defined and illustrated by Roe (1979): Macehead; Battle-axe; Axe-hammer; Shaft-hole adze; Pebble hammer.
31. **Hammerstone** (*e.g.* Healy forthcoming a, L33). Flint or stone, whether or not otherwise modified, battered from use as hammer, generally in flint-working.

Catalogue of Illustrated Lithic Material

Illustrated pieces are grouped by site. Catalogue entries are ordered as follows: category, raw material, descriptive or other comment.

HCW 30

L1 **Bipolar (B1) blade core**. Dark grey flint with some lighter mottling. Weathered, ?slightly rolled, cortex on unillustrated face.
L2 **Burin**. ?Chalk flint. Fresh condition.
L3 **Obliquely-blunted point**. Indeterminate flint. Heavily corticated.
L4 **Geometric microlith**. Orange flint. Slightly corticated.

HCW 22

L5 **Leaf arrowhead**. Mottled orange-grey flint. Green's (1980) form 3C.

HCW 21

L6 **Leaf arrowhead**. Orange flint. Edge-retouched; Green's (1980) form 3A.
L7 **?Unfinished arrowhead**. Orange flint with opaque inclusions.
L8 **Serrated blade**. ?Chalk flint.

FWL 36

L9 **Discoidal core on flake**. Indeterminate flint. Heavily corticated.
L10 **Chisel arrowhead**. Orange flint. Slightly corticated.
L11 **Oblique arrowhead**. Indeterminate flint. Heavily corticated.
L12 **End scraper**. Indeterminate non-gravel flint. Heavily corticated.
L13 **Serrated blade**. Indeterminate flint. Heavily corticated.

FWL DX (SMR no. 5162/c1), TL 6909 9052

L14 **Barbed and tanged arrowhead**. Orange flint. Green's (1980) Ballyclare form.

HCW 107

L15 **Barbed and tanged arrowhead**. ?Chalk flint.
L16 **Scraper**. Chalk flint. Scale-flaked.
L17 **Scraper**. Orange flint. 'Thumbnail'; made on bulbar end of flake; burnt.
L18 **Dagger**. Orange flint with opaque inclusions. Slightly fire-cracked. ?Unfinished: retouch is finer on one edge (left on illustrated face) and tip is blunt and retains a small patch of cortex.
L19 **Axe**. Mottled dark to light grey flint. Partly ground.

FWL A1 (SMR no. 20042/c2), TL 6441 8864

L20 **Axe**. Fine-grained, mottled dark green stone, apparently Group VI (Great Langdale tuff). Ground.

HCW 2

L21 **Single-platform (A2) core**. Chalk flint.
L22 **Scraper**. Chalk flint. Thick, floorstone-like cortex.
L23 **Denticulate**. Chalk flint.

III. Pre-Iron Age pottery

(Fig. 69, Tables 5 and 6)

Pottery is tabulated site-by-site in Table H (microfiche) and its overall composition and incidence are summarised in Tables 5 and 6. Illustrated sherds are catalogued at the end of this section.

Description

Fabrics The main fillers used in individual styles follow a pattern already observed within the immediate area (Healy forthcoming a, fig. 61) and beyond (Healy 1988, 64, 70, figs. 54, 78). Neolithic Bowl and Peterborough Ware are flint- or flint- and sand-tempered; the one sherd of Grooved Ware (P7) is grogged; Beaker and Rusticated Beaker have a variety of fillers, sometimes employing varying combinations of flint, sand and grog; Early Bronze Age Wares are almost invariably grogged. Given that grog temper is absent from local Neolithic Bowl, frequent in local Grooved Ware and near-ubiquitous in Early Bronze Age Wares, both locally and over much of southern England (Tomalin 1983, 6), otherwise indeterminate grogged sherds are taken to be of Later Neolithic or Early Bronze Age date. Indeterminate flint- and/or sand-tempered sherds are less confidently attributable.

Condition A mean sherd weight of 5g (Table 5) reflects the general small size and abraded state of pottery collected from the ploughsoil. There are, however, instances of good preservation. An exceptionally large total of 116 sherds from FWL 136 includes many fresh, well-preserved fragments such as P2, P3, P8 and P10, on which vulnerable features, such as the burnish on the neck of P3, survive intact.

Individual Traditions

Neolithic Bowl (170 sherds) out-numbers Later Neolithic and Early Bronze Age pottery (101 sherds). Bowl was found alone in five cases and out-numbers later styles in four of the seven collections where both are present. Grimston Ware (P1), as defined by Manby (1970, 16) and Smith (1974a, note 24; 1974b, 31), occurs only once and in isolation, at MTW 67. Mildenhall Ware (P2), as defined by Smith (1954, 224) and Longworth (1960, 228) occurs on two sites within 350m of each other, FWL 107 and FWL 136, in both cases accompanied by plain Bowl. The remainder of the Bowl, whether found with Mildenhall Ware, like P3, or alone, like P4, is comparable in form with the plain wares of excavated Mildenhall assemblages, such as those from Hurst Fen, Mildenhall, Suffolk (Longworth 1960) Orsett, Essex (Kinnes 1978) or Spong Hill, North Elmham (SMR no. 1012; Healy 1988, 61).

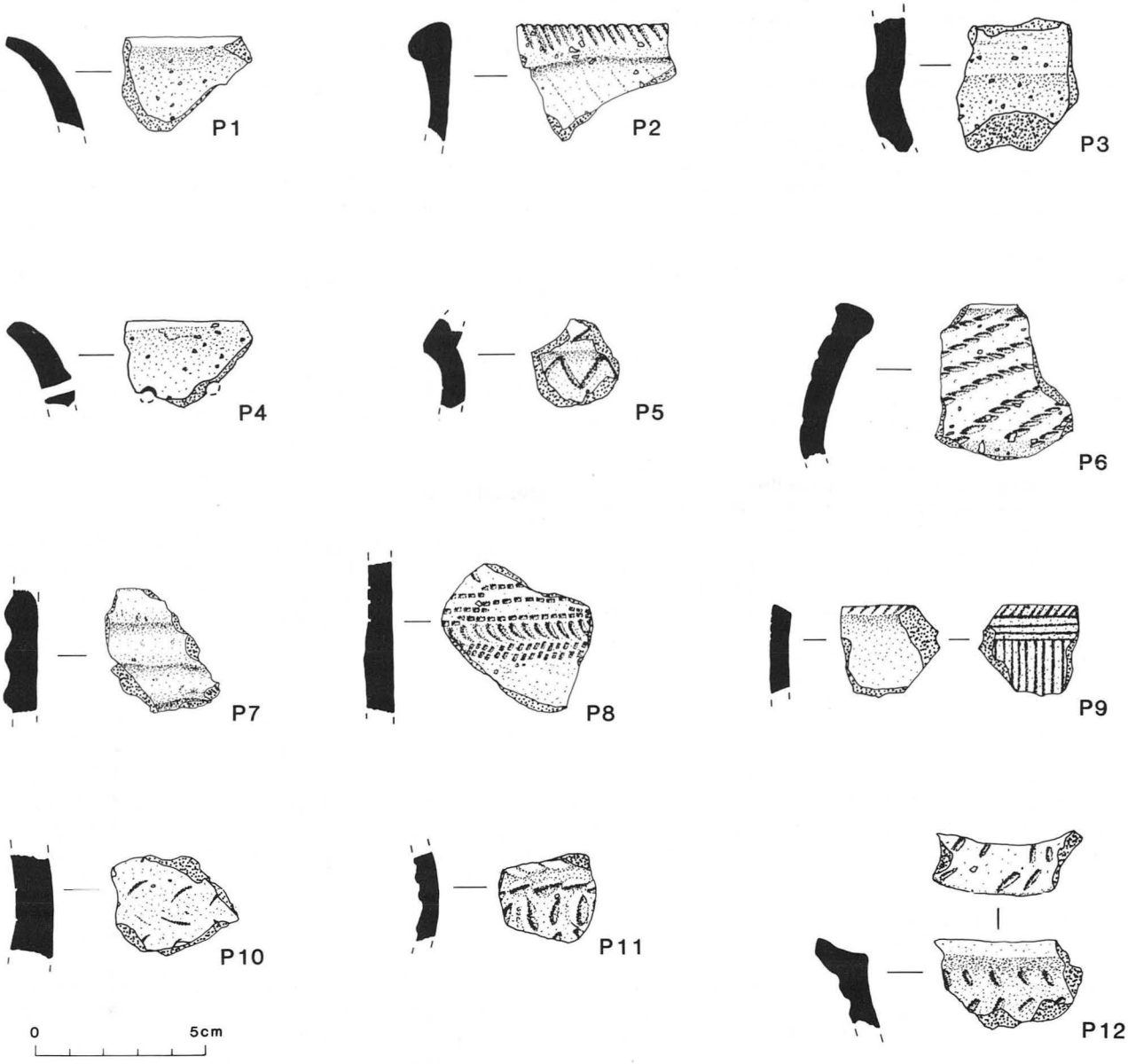

Figure 69 Pottery from MTW 67 (P1), FWL 136 (P2, P3, P8, P10), MTW 69 (P4), MTW 6 (P5), MTW 39 (P6), HCW 18 (P7), FWL 83 (P9), HCW 96 (P11), and HCW 33 (P12). Particulars in Section IV. Scale 1:2

Peterborough Ware Ebbsfleet or Mortlake Ware, as defined by Smith (1956, ch. III), is represented by P5, found with plain Bowl at MTW 6, and perhaps by a further flint- and sand-tempered rim fragment from MTW FO (SMR no. 24469, TL 6465 9467), the in-turned form of which is more frequent in Peterborough Ware than in local Bowl. Fengate Ware, as defined by Smith (1956, ch. III), is represented only by P6, from MTW 39, where it was found without other pottery.

Beaker Beaker, both fine and rusticated, was more often found alone or with indeterminate sherds than with other styles. Most Beaker sherds, including P8, are comb-impressed. One, from MTW CV (SMR no. 23228/c2, TL 6989 9411) has 'barbed wire' decoration. Ten, including P9, can be attributed to Case's (1977, 72) Late style on the evidence of incised decoration, used in at least two cases to execute reserve motifs of Clarke's (1970, 427) Southern tradition. Plastic rustication, like that of P11, is twice as frequent as non-plastic, like that of P10.

Early Bronze Age Wares These were found in small quantities in a highly fragmented and abraded state. Food Vessel or Food Vessel Urn (P12) is the most readily recognisable style and is best represented at HCW 33 and HCW 34. It is the only prehistoric pottery from the latter site, where four or five fragmentary vessels are represented, while P12 comes from the former. There is a further well-preserved rim fragment from MTW 49. The only hint of the presence of other Urn traditions is a single flint-tempered sherd with round-toothed comb impression from HCW 18.

	Sherds	*Weight (g)*	*Mean Weight (g)*
Grimston Ware	1	10	10
Mildenhall Ware	3	34	11
Other/Indet. Bowl	166	899	5
Peterborough Ware	7	36	6
Grooved Ware	1	10	10
Beaker	33	94	3
Rusticated Beaker	12	49	4
Early Bronze Age	17	119	7
Indet. grogged	31	115	4
Indet. flint- &/or sand-tempered	119	433	4
Totals	390	1799	5
Fired Clay	26	88	3

Table 5. Composition of pre-Iron Age pottery

Discussion

Dating and Regional Context

Neolithic Bowl Radiocarbon determinations relating to Grimston Ware indicate establishment by the beginning of the fourth millennium Cal. BC and a long but uncertain continuation, at least to the beginning of the third millennium (Wainwright 1972, 73; Smith 1974b, 32; Green and Sofranoff 1985, 27). The style is most notably the ceramic of repeated occupations at Broome Heath, Ditchingham, in the course of the fourth millennium Cal. BC (SMR no. 10602; Wainwright 1972, 22, 70), of the fourth millennium Cal. BC structure at Padholm Road, Fengate, Peterborough (Pryor 1974), of the Etton Woodgate enclosure, Maxey, Cambridgeshire (Pryor, French and Taylor 1985) and of the early fourth millennium Cal. BC occupation of Peacock's Farm, Shippea Hill, Cambridgeshire (Clark and Godwin 1962, 15, 19).

Mildenhall Ware, the decorated Bowl style of eastern England, was well established by the early fourth millennium Cal. BC and flourished into its third quarter (Healy 1988, 71). Its type-site is the settlement of Hurst Fen, Mildenhall, Suffolk, a few kilometres south of the survey area (Longworth 1960). It has been found in the Haddenham long barrow, Cambridgeshire (Hodder and Shand 1988, 352), as well as in primary contexts in the causewayed enclosures of Orsett, Essex (Kinnes 1978), Great Wilbraham (Kinnes 1979, 123) and Etton (Kinnes 1985), the last two both in Cambridgeshire.

Peterborough Ware This is still primarily dated by its associations. Smith (1974a, 111) sees the progressive differentiation of Ebbsfleet Ware from decorated Bowl styles, culminating in the emergence of the Mortlake style in the early to mid-third millennium Cal. BC, with Fengate Ware developing from the late third millennium Cal. BC. All three substyles are scarce on the eastern fen margin (Cleal 1984, figs. 9.1—9.3), although Ebbsfleet and Mortlake Ware have been found in late recuts of some ditch segments of the Haddenham causewayed enclosure (Evans 1988, 136).

Grooved Ware Radiocarbon determinations suggest that the southern sub-styles of Grooved Ware flourished from the mid-third to the early second millennium Cal. BC, with some indication of earlier origins and later continuation (Healy, Cleal and Kinnes forthcoming). Although Grooved Ware is the ceramic of the Storey's Bar Road system of ditched enclosures on the western edge of the Fens at Fengate, Cambridgeshire (Pryor 1978, 69- 103), it is almost as scarce as Peterborough Ware on the south-eastern fen margin (Cleal 1984, fig. 9.4). Here, finds amount to no more than a handful of sherds, all in collections where Beaker and Early Bronze Age wares predominate. The recovery of P7 from the Decoy Farm sandhill beside the Little Ouse roddon (Appendix 2) echoes the presence of three Grooved Ware sherds in the large collection of Beaker and Early Bronze Age pottery from Plantation Farm, Shippea Hill, Cambridgeshire (Wainwright and Longworth 1971, 272), a comparable ridge on the other side of the roddon, some 2km to the south-west (Clark 1933, fig. 1).

The scarcity of Grooved Ware on the fen edge contrasts with a regional concentration of the style immediately to the east, in the Breckland of south-west Norfolk and north-west Suffolk (Healy, Cleal and Kinnes forthcoming fig. 2). Entire Grooved Ware assemblages from the Breckland include those from Honington, Suffolk (Fell 1951) and the flint mines of Grime's Graves, Weeting with Broomhill (SMR no. 5640; Longworth, Ellison and Rigby 1988, 12).

Beaker Beaker pottery seems to have been introduced into Britain *c.*2400 Cal. BC, stylistically late forms, such as P9, becoming current by *c.*2200 Cal BC, and the tradition continuing, with diminishing frequency, to *c.* 1700 Cal. BC (Gibson 1982, figs 1 and 2). A later floruit than that of Grooved Ware is suggested by the general pattern of associations and radiocarbon determinations and is particularly likely in East Anglia, in view of the coincident distributions of the two styles (Cleal 1984, 152). The south-eastern fen margin, between the rivers Wissey and Lark, has long been known for its dense concentration of Beaker pottery, characteristically occurring in deposits of occupation debris and dominated by stylistically late forms of Clarke's (1970) Southern tradition (Bamford 1982, 33; Cleal 1984, figs. 9.6–9.7).

Early Bronze Age Wares Burgess places Food Vessels and Food Vessel Urns in the period *c.*2200–1700 Cal. BC (1986, 349). They are normally considered as funerary ceramics and have been found with burials in East Anglia as elsewhere (Lawson, Martin and Priddy 1981, 40, 70, 97, 115). In eastern England however, both, especially Food Vessel Urn, also occur in domestic contexts, sometimes in the same deposits as Late Beaker. Published instances include Risby Warren, South Humberside (Riley 1957, 44, fig.3:9), Plantation Farm, Shippea Hill (Clark 1933, 269, pl. XLV), the Newark Road ditch system at Fengate, Cambridgeshire (Pryor 1980, 103, fig. 56), and sites investigated in Hockwold cum Wilton in

the 1960s (Bamford 1982, fig. 28; Healy forthcoming a, figs 72, 81, 90-93).

Survival and Recognition

The relatively robust fabrics of Neolithic Bowl, Beaker and some Peterborough Ware are likely to survive longer in the ploughsoil than the friable fabrics of Grooved Ware and Early Bronze Age pottery, and are thus more likely to be collected. Colour introduces further complications. The dark fabrics of Bowl and some Peterborough Ware, or other ceramics which have become peat-stained, are difficult to recognise against peat or peat-stained mineral soil, while the predominantly buff-coloured sherds of the less robust wares are difficult to see on sandy surfaces. Ceramics in the initial Fenland Project collection from the Decoy Farm sandhill (HCW 18) consist of one fairly hard, indeterminate flint- and sand-tempered sherd and three pieces of fired clay. Coarse, friable, buff-coloured grogged sherds, including Grooved Ware (P7) and Early Bronze Age wares, some of them leached and disintegrating, were found only in the course of a subsequent, more thorough, gridded collection (Appendix 2).

After collection there is the further bias of differential recognisability, heightened by small sherd size. Neolithic Bowl, largely undecorated, is identified mainly by form and fabric. Because of some overlap between local Bowl, Peterborough Ware and Beaker fabrics, many small, featureless flint- or flint-and sand-tempered body sherds which may be of Bowl have been classified as indeterminate, especially when they occur in collections without diagnostic Bowl sherds or in collections also including other styles. Beaker, on the other hand, is readily identified by its characteristic decoration, even on the smallest of body sherds, hence its particularly low mean sherd weight (Table 5) and the large number of sites from which it has been identified (Table 6). The fact that Food Vessel or Food Vessel Urn is the only confidently identified style among the Early Bronze Age pottery, is likely to reflect the fact that it is perhaps the most heavily, frequently and characteristically decorated of contemporary styles. The others are more likely to be represented by plain grogged sherds.

Catalogue of Illustrated Pottery

Descriptions are ordered as follows: style, filler(s), texture, hardness, colour, decorative technique, site, comment.

P1 **Grimston Ware**. Flint with some sand. Fine. Hard. Brown with some orange mottling throughout. Slight external burnish. MTW 67. Also small body sherd of very similar fabric, perhaps from same pot.

P2 **Mildenhall Ware**. Flint with some sand. Medium. Hard. *Ext.* and *core* dark grey, *int.* grey-buff. Deep channeling on rim, very faint channeling on neck. FWL 136. Diameter approx. 18cm; second unillustrated, more weathered rim sherd, almost certainly from same pot.

	Grimston Ware	Mildenhall Ware	Other/ Indet. Bowl	P'boro' Ware	Grooved Ware	Beaker	Rust. Beaker	EBA	Indet. grogged	Indet. flint &/or sand-temp.	Fired clay
Grimston Ware	**1**									1	
Mildenhall Ware		**2**	2			1	2	1	2	1	
Other/ Indet. Bowl		2	**11**	1		4	3	1	3	5	1
P'boro' Ware			1	**2**							
Grooved Ware					**1**	1	1	1	1	1	1
Beaker		1	4		1	**16**	3	3	7	10	3
Rust. Beaker		2	3		1	3	**9**	2	4	5	
EBA		1	1		1	3	2	**6**	3	4	1
Indet. grogged		2	3		1	7	4	3	**19**	11	2
Indet. flint- &/or sand-temp.	1	1	5		1	10	5	4	11	**59**	2
Fired Clay			1		1	3	1	1	2	2	**3**

Note: Each occurrence of a class is counted as 1

Table 6. Incidence of pre-Iron Age pottery.

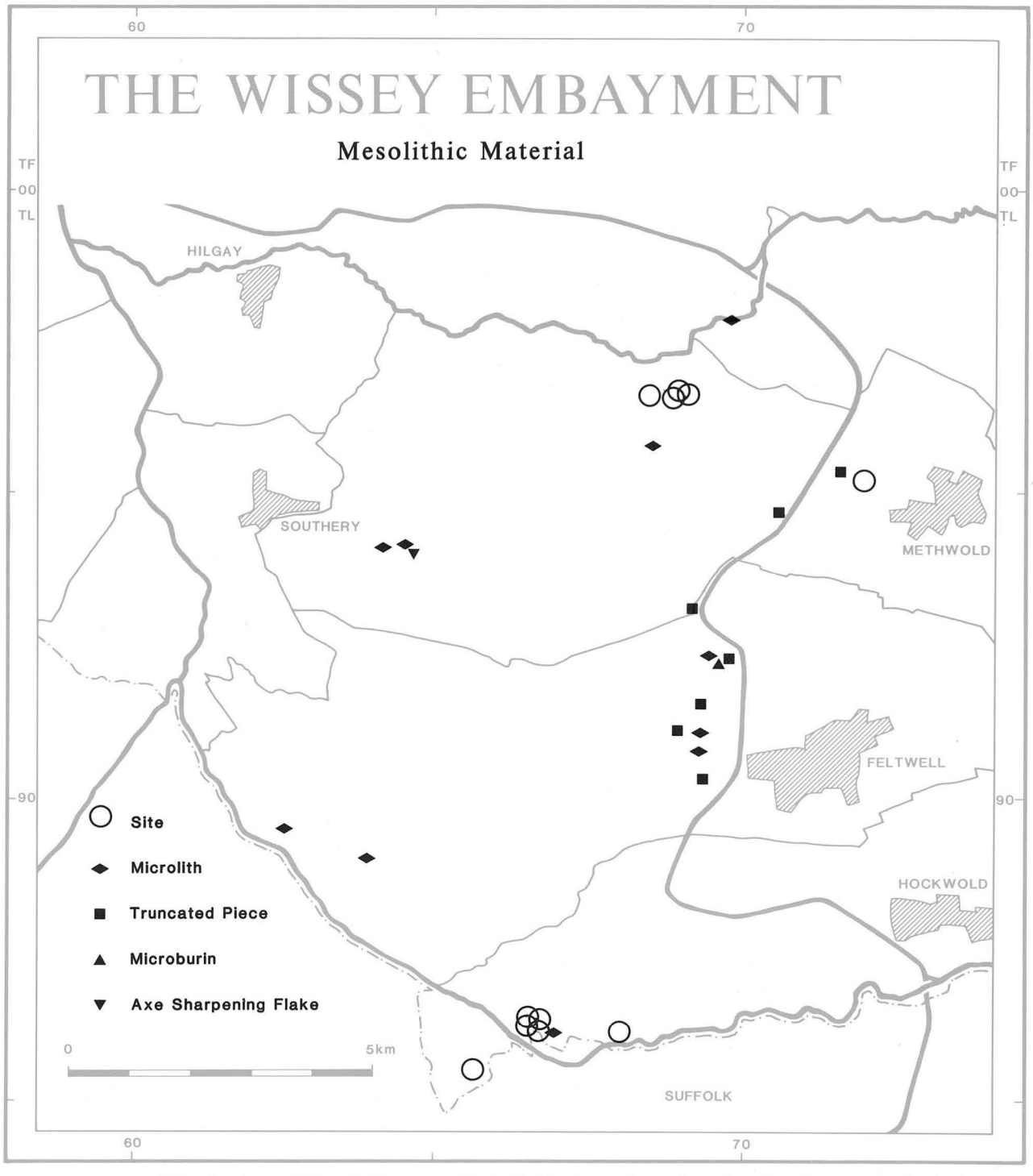

Figure 70 Distribution of Mesolithic material. Individual artefacts plotted only when part of other than predominantly Mesolithic collections. Scale 1:100,000

P3 **Bowl**. Flint and sand. Medium. Hard. *Ext*. and *int*. dark grey to black, *core* dark grey. Burnish on neck. FWL 136. Exceptionally fresh condition.

P4 **Bowl**. Flint with some sand. Medium. Hard. *Ext*. mottled buff/grey, *core* and *int*. grey. Perforations made from exterior before firing. MTW 69. Very weathered.

P5 **Peterborough Ware (Ebbsfleet or Mortlake)**. Flint with some sand. Medium. Hard. *Ext*. buff-grey, *int*. and *core* dark grey. Incision on rim and neck. MTW 6. Rim very weathered, neck quite well-preserved.

P6 **Peterborough Ware (Fengate)**. Flint with some sand. Coarse. Hard. *Ext*. buff-grey, *core* and *int*. dark grey. Twisted cord impression. MTW 39. Pitch approximate.

P7 **Grooved Ware**. Grog. Coarse. Friable. *Ext*. Orange-grey, *core* grey, *int*. buff-grey. Grooving. HCW 18.

P8 **Beaker**. Grog with some sand and some flint Medium. Medium. *Ext*. mottled orange/buff, *core* grey, *int*. buff. Comb- and fingernail-impression. FWL 136. Diameter approx. 10cm.

P9 **Beaker**. Sand with some flint Fine. Hard. *Ext*. buff, *core* and *int*. dark grey. Incision. FWL 83.

P10 **Rusticated Beaker**. Flint with some grog and some sand. Coarse. Hard. *Ext*. orange, *core* and *int*. dark grey. Fingernail-impression. FWL 136.

P11 **Rusticated Beaker**. Grog with some flint Medium. Medium. *Ext*. buff, *core* dark grey, *int*. buff-grey. Finger-pinching. HCW 96.

P12 **Food Vessel or Food Vessel Urn**. Grog. Coarse. Medium. *Ext*. buff, *core* dark grey, *int*. grey-buff. Impression. HCW 33.

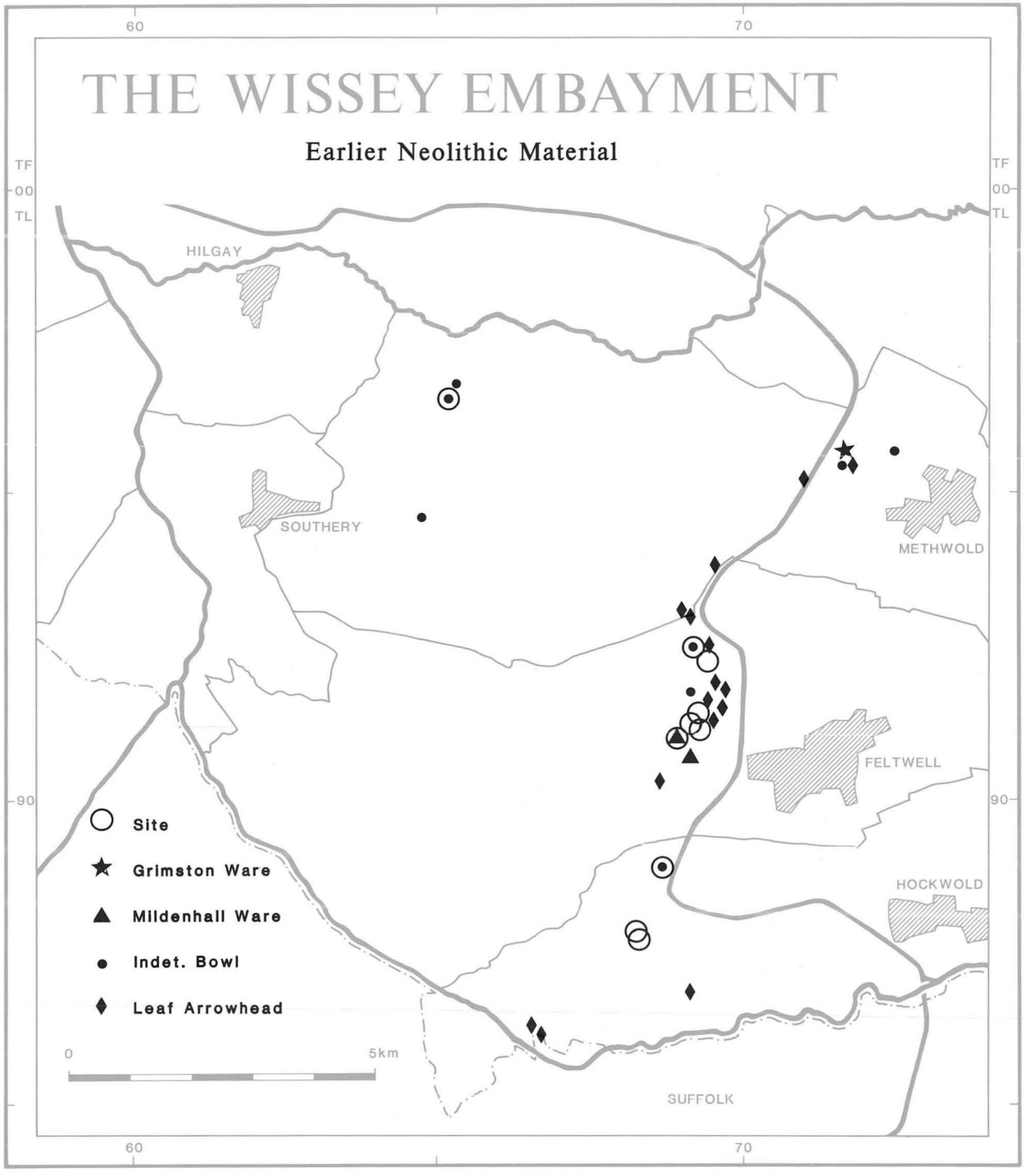

Figure 71 Distribution of Earlier Neolithic material. Individual lithic artefacts plotted only when part of other than predominantly Earlier Neolithic collections. Scale 1:100,000

IV. Synthesis

(Figs 70-73)

Chronological Overview

Additional, artefact-specific, distribution plots are included in this section, in order to permit comparison with distributions of material collected prior to the Fenland Project (Healy forthcoming a).

Mesolithic

The substantial Mesolithic collections from along the Little Ouse roddon (Fig. 70) are all broadly comparable with the material from Peacock's Farm, Shippea Hill, Cambridgeshire (Clark 1955), in that they are 'narrow blade' industries, most of the microliths of which are small obliquely-blunted points, although the occasional geometric form is present. The bulk of each collection seems to date from after the technological changes which marked the begining of the Later Mesolithic, *c.*8500 BP. The largest collection, from HCW 30, comprises 623 pieces, some of them in fresh condition as if only recently exposed. To the north, the smaller collections from along the former course of the Wissey are less readily characterised. A single microlith of Jacobi's form 6c (1978,

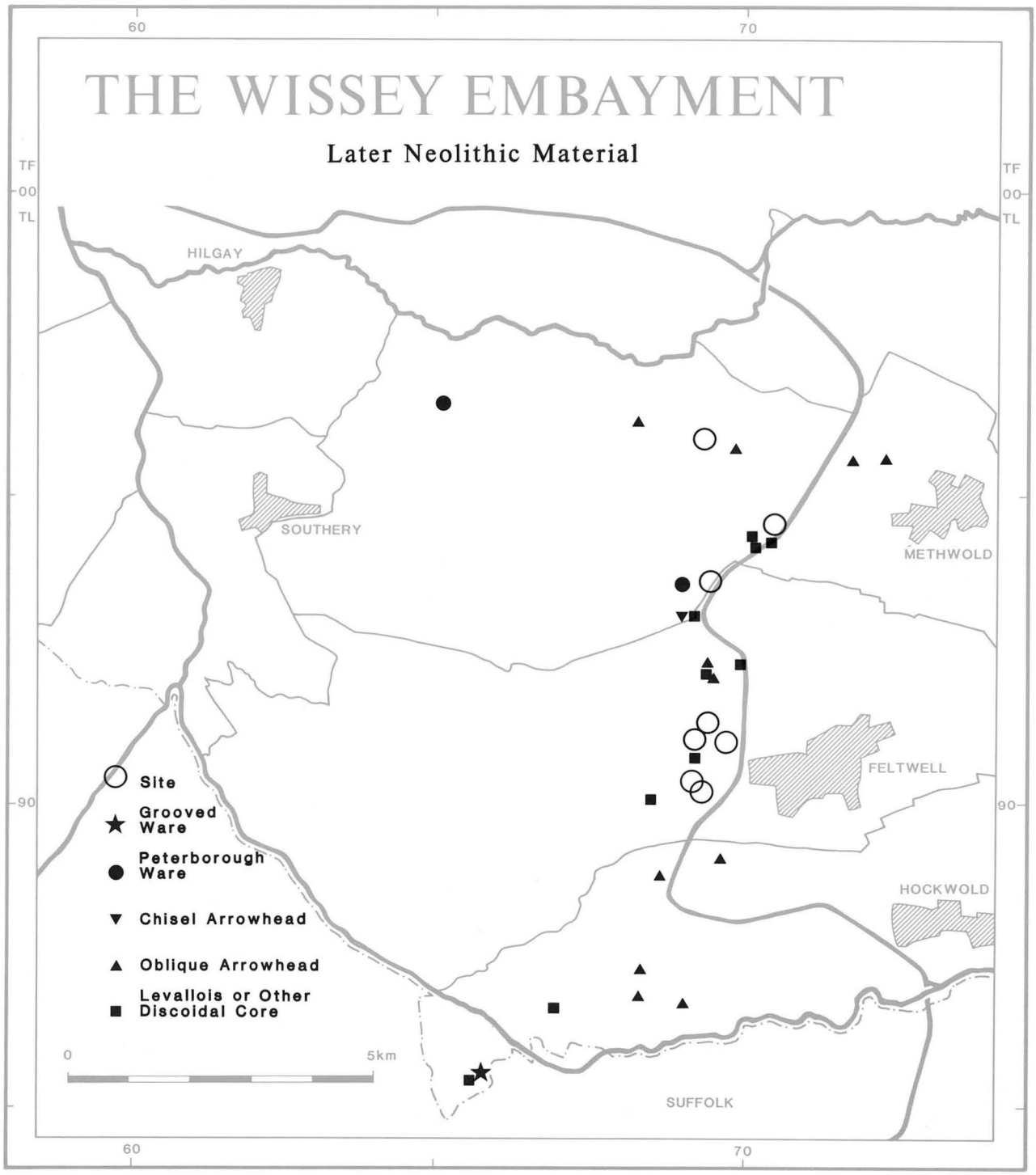

Figure 72 Distribution of Later Neolithic material. Individual lithic artefacts plotted when part of other than predominantly Later Neolithic collections. Scale 1:100,000

fig. 6), from MTW 129 may suggest broad contemporaneity with the sites along the Little Ouse.

Beyond these two groups of sites, distinctive Mesolithic artefacts, whether as stray finds or in predominantly later collections, are concentrated on the fen margin in Feltwell, between northings 9000 and 9300 (Fig. 70). Probably or possibly Mesolithic debitage is most frequent in the same area, in the form of small, regularly-worked blade cores and blades, the latter often punch- or soft-hammer struck, and both often more heavily corticated than the bulk of the collections in which they occur. Mesolithic industries may be present here, although obscured by the mass of subsequently discarded material. Technological continuity between Later Mesolithic and Earlier Neolithic industries (Pitts 1978, 186) often makes it difficult to ascribe the debris of blade production to either period, especially when only small quantites are present. Such material is concentrated in the same area of the Feltwell fen edge.

Earlier Neolithic

Distinctively Earlier Neolithic collections, comparable with the assemblage from Hurst Fen, Mildenhall, Suffolk (Clark 1960), are clustered, together with leaf-shaped

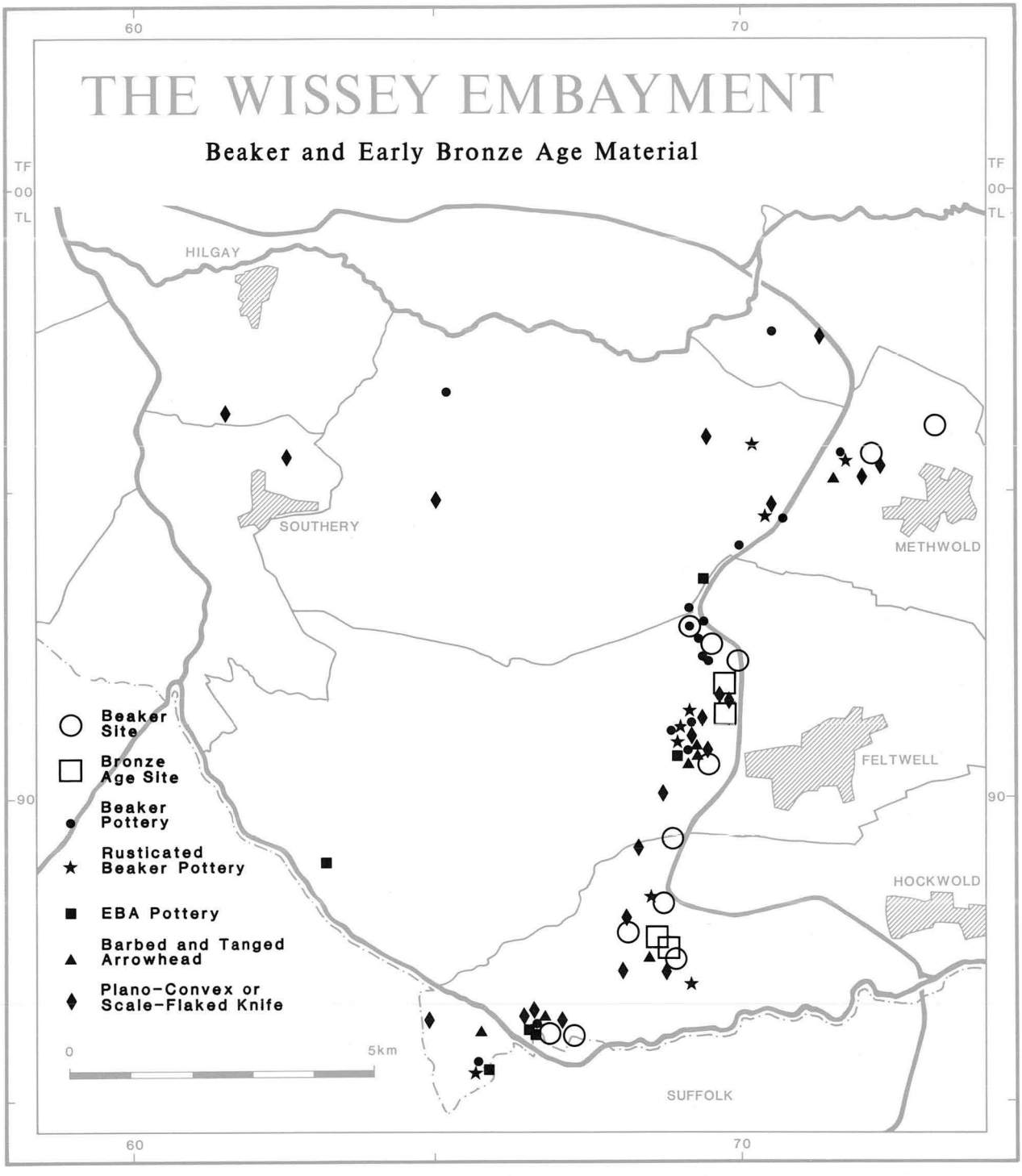

Figure 73 Distribution of Beaker and Bronze Age material. Individual lithic artefacts plotted only when part of other than predominantly Beaker or Bronze Age collections. Scale 1:100,000

arrowheads, in the same area of the Feltwell fen edge as Mesolithic material (Fig. 71). Some are substantial and well preserved, notably that from FWL 136, which includes 182 pieces of struck flint and 100 Bowl sherds, including P2 and P3, as well as a small amount of later material.

Later Neolithic

The relatively few predominantly Later Neolithic collections may be compared with the industry of Storey's Bar Road, Fengate, Cambridgeshire (Pryor 1978, 104). They and contemporary material show a similar distribution, with an extension north into Methwold, where both finds of Peterborough Ware (P5, P6) were made (Fig. 72).

Beaker and Early Bronze Age

Collections classed as predominantly Beaker are comparable with those excavated from sites with Beaker pottery in Hockwold cum Wilton in the 1960s (Bamford 1982, 26; Healy forthcoming a, Ch. 5.II.2), except that they include a far higher proportion of debitage, due to non-selective collection. Those classed as predominantly Bronze Age may be compared with the industry of Newark Road Fengate, Cambridgeshire (Pryor 1980,

106). Both, together with contemporary pottery and implement forms, show a more even distribution than earlier material, extending along the fen edge from the southern part of Methwold parish to the Little Ouse (Fig. 73).

Relation of the Survey Material to the Previous Record

Correspondence to previously known sites

A block of four fields in Hockwold cum Wilton investigated intensively by Frank Curtis in the 1960s (Bamford 1982, text fig. 2; Healy forthcoming a, fig. 5) lies outside the survey area to the east, and is now largely under grass. Within the survey area, some fields which had been prolific collecting grounds in Frank Curtis's day have continued to be so, notably his Field 120 (SMR no. 5245) in Methwold. Here, material collected by him, Mr R. J. Fletcher, Mr J.D. Wortley and others includes barbed and tanged arrowheads, flint axes, a stone axe and axe-hammer, a probable Bronze Age sherd, and a copper alloy flat axe and dagger (Healy forthcoming a, gazetteer: MTW OS 561-3, 567, 629-30, 648[5]). The Fenland Project has correspondingly recovered five substantial Later Neolithic/Early Bronze Age collections (MTW 43, 44, 46, 49, 52), one of them (MTW 49) including a sherd probably of Food Vessel. Earlier activity, not previously evidenced, is represented by a possibly Earlier Neolithic collection (MTW 51) and a Later Neolithic collection (MTW 48).

Similarly, in Frank Curtis's Field 57 (SMR no. 5321) in Hockwold cum Wilton, finds of Bronze Age (probably Biconical Urn) pottery made by him on two adjacent hillocks in 1965 (Healy forthcoming a, P373-P375) correspond to one of the four predominantly Bronze Age collections made during the Survey (HCW 28), while preceding activity is now indicated by a possibly Earlier Neolithic collection (HCW 24).

Some fields, on the other hand, give little indication of their previous productiveness. In the 1960s Frank Curtis's Field 47, the 'Corner Ground' (SMR no. 5317), also in Hockwold cum Wilton, saw the excavation of two occupation sites yielding Beaker pottery, lithics and animal bone, while surface finds included sherds of Neolithic Bowl, Beaker and Food Vessel (Healy forthcoming a, P376-P381), leaf, chisel and barbed and tanged arrowheads, flint saddle querns and a socketed copper alloy axe (Healy forthcoming a, gazetteer: HCW OS 644). In the 1980s, although the one collection (HCW 80) is predominantly Beaker and may equate with a previously investigated site, finds are sparse compared with those from adjoining fields.

Frank Curtis's Field 21 (SMR no. 22311) in Feltwell has in the past produced an abundance of artefacts, including Mesolithic material, leaf, chisel, oblique and barbed and tanged arrowheads, plano-convex and scale-flaked knives, a flint dagger, stone and flint axes and a flint saddle quern (Healy forthcoming a, gazetteer: FWL OS 729, 730, 762A). The Fenland Survey, however, records four 'pot-boiler' sites (FWL 160-164) and a handful of diffuse struck flint.

Farther north in Feltwell, substantial collections were made in the 1970s, mainly by Mr M. J. Younge, from a block of fields centred at TL 6940 9205 (SMR nos. 5159 and 17193). Finds from the fields include sherds of Neolithic Bowl and Beaker, Mesolithic material, leaf, chisel, oblique and barbed and tanged arrowheads, plano-convex and scale-flaked knives, a flint dagger, flint and stone axes, a stone saddle quern, and a copper alloy flat axe; while a chalk hillock (SMR no. 5159/c2) produced Beaker pottery and struck flint (Healy forthcoming a, gazetteer: FWL OS 321, 322, 498). The Fenland Project material is by contrast unspectacular, consisting primarily of two Later Neolithic/Early Bronze Age collections (FWL 196, 198), one indeterminate collection (FWL 195), and a 'pot-boiler' site (FWL 197), with a diffuse spread of flint, including some Mesolithic material, over the fields. SMR no. 5159/c2 was not re-identified.

In Methwold, Mr J.D. Wortley has for many years collected from a field (SMR no. 2531) some of the Neolithic, Beaker and Bronze Age pottery from which is illustrated by Gibson (1982, figs. MET. 1-3). The collection includes leaf, oblique and barbed and tanged arrowheads as well as a jet bead (Healy forthcoming a, gazetteer: MTW OS 242). Yet the Fenland Project has recorded only two 'pot-boiler' sites (MTW 134,135) and a diffuse scatter of struck flint.

Many apparent differences between the past and present records are likely to stem from the distinction between the repeated searching of a collector and the single visit, not necesarily in optimal collecting conditions, of the fieldwalker. Others may be due to changes in farming practice. Others again may be more real. Lack of pottery in fields where it was formerly found may mean that sherds previously ploughed up have now disintegrated, while the lithics remain. Invisibility of previously recorded concentrations of material suggests that they may have been spread by the ploughing-down of the hillocks on which they were found. Collection of pre-fen clay material from fields from which it was not known before indicates that lower, previously inaccessible hillocks have become exposed. These features emerge as recurrent ones when the past and present records for the survey area are considered at a more general level (Table 7).

Implications

Peat Wastage

Progressive exposure of earlier and earlier deposits is seen in the successive prevalence of Bronze Age, Beaker and Neolithic Bowl pottery between the early 1960s and the mid 1980s, as well as in the emergence of predominantly Earlier Neolithic and Mesolithic sites. The implicit rate of erosion is of the order of centuries of occupation *per annum*.

Variation across the Survey Area

Some features are common to the haphazard and systematic records, despite the differing characters of the two. The northern part of Methwold, with its more varied topography than further south in Feltwell, must always have offered a different, wider, range of habitats. It contains the only previously known finds of Grimston Ware, Peterborough Ware and Grooved Ware from the fen edge in the survey area, and is also distinguished by an exceptional number of chance finds of human remains, some of them of certain or probable Bronze Age date (Healy forthcoming a, fig. 18). Grimston and Peterborough Wares remain confined to the parish (Figs 71-72). No further human remains have been found, but two possible round barrows, identified for the first time in the course of the survey, are in Methwold and the adjoining part of Northwold (MTW U8, NWD 4).

Pre-Fenland Survey	Fenland Survey
Late Upper Palaeolithic or Early Mesolithic sites discovered under peat.	No contemporary material identified in Survey collections. Sites perhaps still peat-covered.
Mesolithic material in predominantly later collections, especially on fen margin in Feltwell between northings 8900 and 9300.	Predominantly Mesolithic collections along former courses of rivers Little Ouse and Wissey. Mesolithic material still found in predominantly later collections, especially on fen margin in Feltwell between northings 9000 and 9300.
Small amounts of Earlier Neolithic pottery and lithics in predominantly later collections.	Several substantial predominantly Earlier Neolithic collections. Contemporary material also in later collections, especially on fen margin in Feltwell between northings 9000 and 9300.
Neolithic Bowl far out-numbered by Beaker and Early Bronze Age Wares.	Neolithic Bowl most numerous pottery style.
Most Bowl Mildenhall style or indeterminate. Grimston Ware rare and confined to Methwold.	Most Bowl Mildenhall style or indeterminate. Grimston Ware rare and confined to Methwold.
Leaf arrowheads concentrated on fen margin in Feltwell between northings 9000 and 9300.	Leaf arrowheads concentrated on fen margin in Feltwell between northings 9000 and 9300.
Peterborough Ware and Grooved Ware very rare on fen margin. Both confined to Methwold.	Peterborough Ware and Grooved Ware very rare on fen margin. Peterborough Ware confined to Methwold; Grooved ware to a sand ridge by the Little Ouse roddon.
No Later Neolithic sites on fen margin.	A few predominantly Later Neolithic collections, all from the fen margin in Feltwell and Methwold, between northings 8900 and 9000.
Chisel and oblique arrowheads concentrated on fen margin in Feltwell and Methwold, between northings 9100 and 9300.	Chisel and oblique arrowheads concentrated in same area as predominantly Later Neolithic collections, together with Levallois and other discoidal cores.
Main arrowhead forms in order of frequency: barbed and tanged, leaf, chisel, oblique.	Main arrowhead forms in order of frequency: leaf, oblique, barbed and tanged, chisel.
Middle Beaker relatively rare.	Middle Beaker remains relatively rare.
Frequent, well-preserved finds of Beaker pottery, often Late and sometimes accompanied by smaller quantities of Food Vessel or Food Vessel Urn, especially in mid 1960s.	Beaker still often Late. Many finds consist of single, small sherds. Food Vessel very scarce and badly-preserved.
Collared Urn very scarce in relation to Food Vessel.	No Collared Urn.
Barbed and tanged arrowheads evenly distributed along fen edge between northings 8700 and 9400.	Beaker pottery, predominantly Beaker collections, and other contemporary material, including barbed and tanged arrowheads, evenly distributed along fen edge between northings 8600 and 9600.
Plano-convex knives, scale-flaked knives and flint daggers evenly distributed along fen edge between northings 8700 and 9300.	Plano-convex and scale-flaked knives evenly distributed along fen edge between northings 8600 and 9600.
Scrapers form exceptionally high proportions of retouched forms in post-fen clay assemblages.	Scrapers form exceptionally high proportion of retouched forms in post-fen clay collections.
Large, well-preserved collections of Bronze Age pottery, mainly Biconical Urn, recovered in Hockwold cum Wilton in early 1960s.	No definitely identifiable Bronze Age pottery apart from a few finds of Food Vessel. Only four predominantly Bronze Age lithic collections.
Axes 62% flint, 38% stone. Flint mainly ground; stone mainly Group VI.	Numbers small, but axes 67% flint, 33% stone. Flint all at least partly ground; stone mainly Group VI.
High frequency (for region) of stone axes matched by concentration of other stone artefacts and if elaborate flint implements.	Few other stone artefacts, but fine flint implements (e.g. 'fancy' barbed and tanged arrowheads, plano-convex and scale-flaked knives) distinctly present.
Stone and flint saddle querns frequent along fen edge. Re-working of flint examples apparently confined to Bronze Age contexts.	Stone saddle querns represented only by fragments from a collection of uncertain date and a stray find of a small example. Flakes from flint saddle querns in 1 ?Later Neolithic collection, 2 predominantly Bronze Age collections, 2 non-site collections.
Lithics, like pottery, overwhelmingly post-fen clay.	Lithics remain overwhelmingly post-fen clay, although pottery no longer so.
Substantial part of post-fen clay assemblages made of Breckland surface flint.	Orange flint common in pre-fen clay clay collections, less so in post-fen clay ones, a substantial part of which is made of Breckland surface flint.
Macroscopically identifiable Grime's Graves floorstone elusive.	Macroscopically identifiable Grime's Graves floorstone devilishly elusive.
Unclear how far post-fen clay assemblages produced on fen edge, how far implements brought there in finished or semi-finished state.	Post-fen clay collections largely produced on fen edge from raw material imported in unworked state. Some finished or semi-finished implements probably also imported.
Little settlement or artefactual evidence even possibly contemporary with quantity of Middle and Late Bronze Age metalwork retrieved from fen over last 150 years.	Little or no settlement or artefactual evidence contemporary with Middle and Late Bronze Age metalwork.

Table 7. Past and present records for the survey area

Mesolithic and Earlier Neolithic material of all kinds is more frequent on the fen margin in Feltwell than farther south (Figs. 70-71; Healy forthcoming a, figs. 34-35). It may be that, in the landscape of Figs 45-46, before peat growth became extensive, soils formed on the chalky hillocks and ridges of the area were more attractive than those formed on the sandhills of Hockwold cum Wilton. Traces of pre-fen clay activity emerging in this area suggest that contemporary settlement may extend westward, its remains still peat-covered.

Later Neolithic material, while it has a similar focus (Fig.72; Healy forthcoming a, figs 36-37, 68), remains relatively rare. Peterborough and Grooved Wares show none of the upsurge in frequency of Neolithic Bowl; there are few predominantly Later Neolithic collections; and the increased frequency of oblique arrowheads, not always readily recognised in the field, may result from non-selective collection. Beaker of Case's (1977, 72) Middle style, some of which would have been contemporary with Grooved Ware and Peterborough Ware, also remains relatively rare in comparison with Late Beaker. It is surely no coincidence that the currencies of Peterborough Ware, Grooved Ware and to some extent Middle Beaker correspond to the local span of the fen clay transgression, *c.*2875-2140 Cal. BC at Feltwell (Waller 1988, 337-338). Although the fen margin lay well to the landward of the limits of the fen clay itself, the wetter conditions which would have prevailed may have made it less attractive than in the pre- and post-fen clay periods. The two situations in which Later Neolithic pottery has been found, on the levees of the Little Ouse roddon and amidst the dissected topography of Methwold (Fig. 72) are both atypical of the zone of skirtland so intensively occupied before and after the transgression.

Even distributions along the fen edge, from Hockwold cum Wilton, through Feltwell to the south of Methwold, are a post-fen clay phenomenon (Fig. 73; Healy forthcoming a, figs 38, 39). It may be that, in the landscape of Fig. 47, extensive peat cover made the nature of the underlying terrain irrelevant, and became itself an important resource on which settlement was focussed. Settlement still seems to have been at its densest and richest in this phase. The overwhelming mass of the lithics from the survey are post-fen clay (Section II), as are most of the elaborate flint and stone artefacts collected from the area over the years and to some extent represented in the survey collections. It was now, too, that a major concentration of Bronze Age metalwork began to accumulate in the south-eastern fens (Lawson 1984, 155).

The Nature of Fen-Edge Occupation

Two aspects of the post-fen clay collections may reflect the nature of this settlement:

1. Extensive peat cover meant that flint had to be brought from the upland to the fen edge over distances of perhaps 5-10km. Once there, it was worked and used as if freely available. This conveys a strong impresssion of embedded procurement: of flint obtained at little or no marginal cost in the course of frequent traffic between upland and fen edge. This would be compatible with complementary use of the two areas by those living at their boundary, perhaps combining upland or skirtland cultivation with other, fen-centred activities.
2. Scrapers are markedly more frequent among the retouched forms of post- than of pre-fen clay collections, rising from levels close to 40% to exceed 60% (Fig. 67). High scraper frequency is a recurrent feature of Beaker and Early Bronze Age industries from the area, seen in assemblages such as those of Fifty Farm, Mildenhall, Cambridgeshire (Leaf 1934), Plantation Farm, Shippea Hill, Cambridgeshire (Clark 1933), and sites excavated in Hockwold cum Wilton in the 1960s (Bamford 1982, 26; Healy forthcoming a, table 6). High scraper frequencies for Beaker-associated industries in East Anglia as a whole presented by Cleal (1984, fig. 9.8), reflect the fact that the assemblages available for study include a high proportion from fen-edge sites.

The coincidence of high-scraper industries with fen-edge locations recalls Bradley's suggestion that the regularity with which such industries occur on floodplain and marsh-edge sites, with faunas, dominated, where they survive, by cattle bone, reflects the use of such areas for seasonal pasture, with a concomittant emphasis on butchery, skin- and bone-working (1978, 56). The correlation cannot be quite so simple. Microwear studies increasingly show that scrapers, while often used for skin-processing, were also multi-purpose tools. The model might be applicable where scrapers were indeed used primarily for skin-working and where this was a sufficiently important activity for its debris to remain uneclipsed in the final mass of lithics discarded on a site.

Not surprisingly, even on the limited evidence of the industries summarised in Table 4, it seems to work in some cases but not in others. At Broome Heath, as Bradley points out, a near-doubling of scraper frequency coincides with a change of local land use from arable to pasture (Dimbleby and Evans 1972, 90). The high scraper industry of Storey's Bar Road, Fengate, comes from a system of paddocks and droves interpreted in terms of stock-rearing and the exploitation of the summer pasture of the western fen edge (Pryor 1978, 161). But the near-identical economy of Newark Road, Fengate (Pryor 1980, 180) is not reflected in a high-scraper industry; nor is the dairying which played an important part in the economy of post-mining Grime's Graves (Legge 1981, 79).

Do consistently high frequencies of scrapers in post-fen clay contexts along the south-eastern fen edge have any functional significance? The answer is probably yes. Fauna, where they have been studied, consist overwhelmingly of domestic cattle, with low representation of wetland species (Clark 1933, 269; Jackson 1936; Calvocoressi 1967; Bamford 1982, 29; Healy forthcoming a, ch. 6.III). It is true that these and other faunal collections so far published from the area are small and were retrieved by less than optimal methods, so that the slighter, more fragile remains of non-bovines may be under-represented. But the substantial, recently excavated fauna of West Row seems to be similarly composed (Martin and Murphy 1988, 356).

It has become customary to regard the use of fenland pasture as the *raison d'être* of fen-edge sites, largely by analogy with the historical period. The significance of this aspect of the economy may have been over-stated, as Evans suggests (1987). Present evidence suggests that it may have been an important facet of a form of mixed farming combining skirtland and/or upland cultivation and fen pasture. Such a model would accommodate the regular traffic between upland and fen implicit in the ready availability of flint; the coincidence of lithic assemblages possibly geared to skin-working and of cattle-dominated faunas with a zone of occupation marked by its concentration of saddle querns (Healy forthcoming a, fig. 42), some of them demonstrably of Bronze Age or earlier date; the presence of apparently imported grain in Early Bronze Age contexts at West Row (Martin and Murphy 1988, 356); and a sharp drop in the density of contemporary settlement north of the Wissey (Cleal 1984,

figs. 9.6-9.7), where the soils of the Kimmeridge Clay and Greensand on which the fen there abuts may have been less attractive for cultivation.

The Vanishing Bronze Age

The scant evidence for Bronze Age occupation among the survey material, which includes four predominantly Bronze Age collections and six finds of Early Bronze Age pottery, contrasts with both the tally of metalwork finds from the area and the local settlement record as a whole. Dense fen-edge settlement up to *c.*1400 Cal BC is indicated by radiocarbon determinations between *c.*3420 and 3190 BP for the later occupation of West Row, Mildenhall, Suffolk (Martin and Murphy 1988, 355), the main ceramic of which is Collared Urn, by the Biconical Urn assemblage excavated by Clark from a nearby site in Mildenhall Fen (Clark 1936, 36), and by comparable material found in Hockwold cum Wilton in 1959-61, when over 37kg of pottery, most of it Biconical Urn, was recoverd from a block of three fields (Healy forthcoming a, ch. 5.III).

It might be argued that most post-Beaker settlement lay east of the survey area, at slightly higher altitudes. Both Mildenhall sites are very close to the upland and the Hockwold cum Wilton fields lie just outside the survey area (Healy forthcoming a, fig. 4). Yet small quantities of similar pottery were found within the survey area in Hockwold cum Wilton in 1961-65 (SMR nos 5321, 5374, 5375; Healy forthcoming a, P366-368, P370-371, P373-375). Given that Early Bronze Age fabrics are particularly friable, and largely plain vessels are unlikely to be recognisable when reduced to small sherds (section III above), it is probable that Bronze Age pottery formerly ploughed up has disintegrated or is reduced to the indeterminate grogged sherds recorded in Table 6, while little fresh material of the same date is now being exposed.

The dearth of contemporary lithic collections may be more apparent than real. As the debris of centuries accumulated, successive occupations would have become less and less likely to take place on previously unused hillocks and ridges. Much Bronze Age debitage, undistinguished at the best of times, may form part of mixed, undated or indeterminate Later Neolithic/Early Bronze Age collections, in which it would be difficult to recognise. There is the further possibility, that, if most Bronze Age occupation took place on the higher hillocks and ridges, exposed fairly early in the course of peat wastage, then its durable residue may have been more spread by the plough than that of earlier periods and incorporated in the general background spread of lithic material.

Ancient behaviour may also have contributed to low visibility. On the western edge of the fens, in the lower Welland valley, Bronze Age lithics recovered in the course of excavation and intensive survey occurred in thin, diffuse spreads rather than in nucleated scatters. These were interpreted as the result of the spreading of (largely organic) domestic debris on fields (Pryor and French 1985, 305). If the contemporary debris of the south-eastern edge were similarly saved, taken to cultivated plots and spread on them, then its lithic content would be under-represented, since much of it would be among diffuse, non-site material, which was not collected as throughly as nucleated scatters. If the economic model proposed above has any validity, much might even have been spread on skirtland plots beyond the survey area to the east.

End Notes:

1. A more intensive, gridded collection subsequently made from HCW 18 (the Decoy Farm sandhill) is described in Appendix 2. The twenty sherds and thirty fragments of fired clay then recovered are included here for convenience, distinguished by an asterisk in Table H (microfiche). The 1492 pieces of struck flint collected at the same time are dealt with separately in Appendix 2.

2. Fenland Project finds distinguished by a parish code followed by two letters, *e.g.* FWL DX, form part of the general 'background scatter' non-site material. Further information concerning them can be obtained from the project archive.

3. Norfolk sites and finds discovered other than in the course of the Fenland Project are identified by their serial numbers in the county Sites and Monuments Record, *e.g.* SMR no. 5321.

4. Chronology is expressed in uncalibrated radiocarbon years BP and in approximate years Cal. BC, derived from the tables of Pearson *et al.* (1986), employing a confidence range of 68%.

5. Old Ordnance Survey field numbers are abbreviated to, for example, MTW OS 561-563.

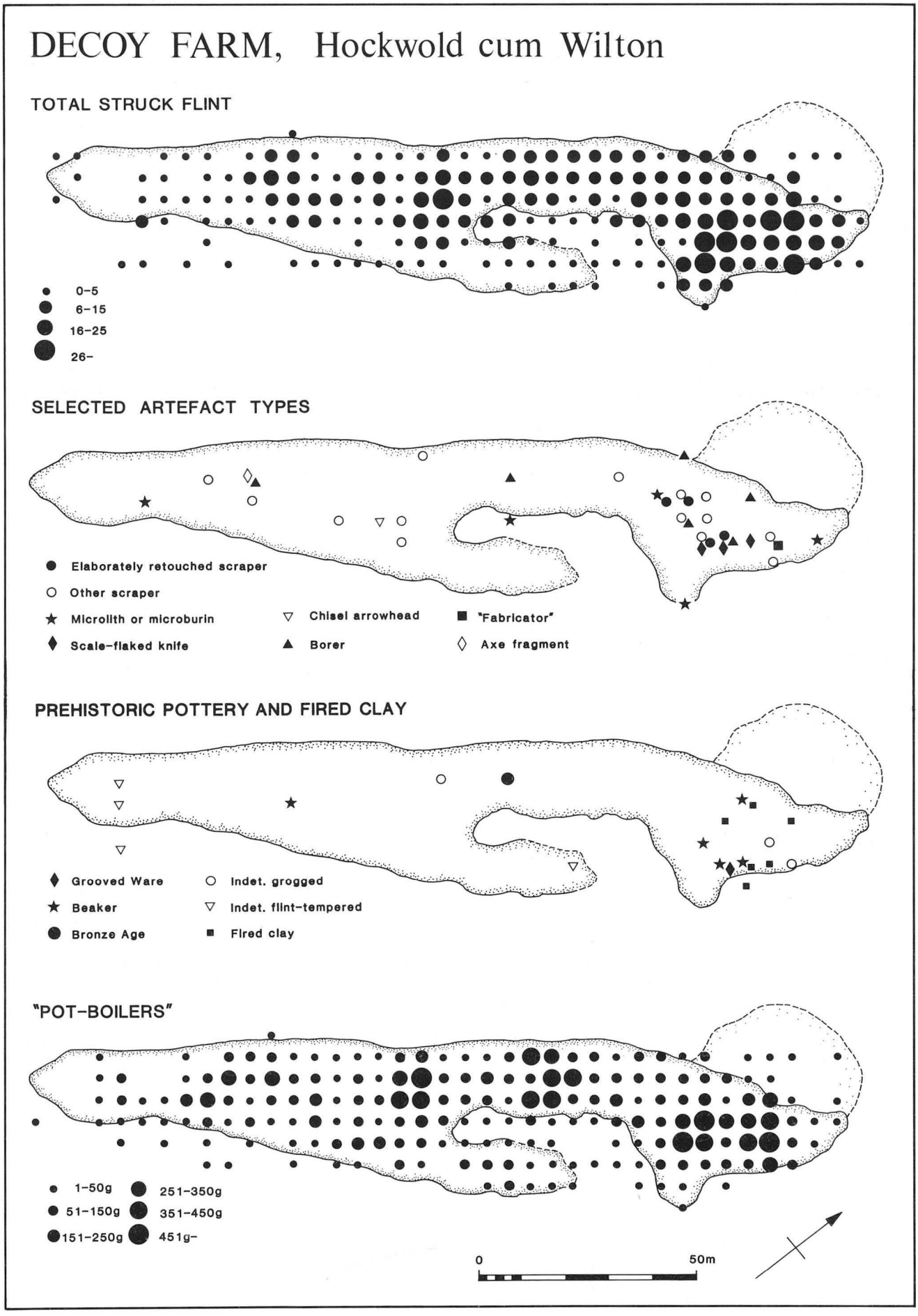

Figure 74 The Decoy Farm sandhill: distribution of finds

Appendix 2: The Decoy Farm Sandhill, Hockwold

by Frances Healy and Bob Silvester

Introduction

The sandhill on the south side of the present Little Ouse (HCW 18; TL 658 855) is as yet the only lithic site in the embayment where the initial survey was followed by a more detailed programme of fieldwork. This assessment of the results was first published in *Fenland Research* 3 (1986), and is reprinted here in amended form, following the analysis of all the lithic material from the embayment survey.

The ridge of sand runs off tangentially from the Little Ouse roddon which here forms the county boundary between Norfolk and Suffolk (Fig. 30). Red Mere and Decoy Fen lie to the east, while Decoy Farm, some 500m to the north, is now represented by grass-covered foundations in the corner of a field. The sandhill was first visited in February 1984 when it showed as a ridge of almost pure sand, rising to little more than 0.5m above the surrounding peat. There was a scatter of struck flint and 'pot-boilers' along its length and, in keeping with the fast methods of ground survey and recording practised by the Fenland Project, the whole ridge was classified as a 'site'. Even so, it was apparent that there was considerable variation in the density of artefactual material and a subjective assessment of this was attempted by dividing the ridge into zones of higher and lower density, which were then recorded by pacing.

In March 1985, a more systematic gridded collection of material on the sandhill was completed. Three aims were envisaged:

1. to provide a more objective assessment of the activity on the ridge and reveal whether there was any spatial and chronological variation.
2. to obtain data that could usefully be compared with results obtained from fieldwalking by Francis Pryor at Peacock's Farm, Littleport.
3. to initiate a methodological exercise to investigate whether the annual removal of material would ultimately deplete the total component in the ploughsoil to a point where this was visible in the collection record.

In two respects the sandhill was ideal for such an exercise in that there were few natural pebbles in the sand to hamper total visibility for collection and there was no record of any previous archaeological work there. However, in addition to the obvious potential distortion posed by variable ploughing depth over a period of years, a major problem would be the gradual desiccation of the peat which, over a period of time, would expose more of the sandhill and release more artefactual material in those places which presently have a thin layer of peat.

In the event it was not possible to return to the sandhill in the winter of 1985/6 and, as the initial survey took considerably longer than was anticipated, it is unlikely that this aspect will be followed up in the foreseeable future.

Another objective emerged after the survey: to compare the detailed results of the gridded survey with those from the initial visit, particularly in terms of the range of artefacts recovered and their spatial and chronological distribution. These comparisons ought to demonstrate how reliable was the original assessment of the sandhill. An overview of the information from both surveys is tabulated below to facilitate the comparison.

The Survey

(Fig. 74, Table 8)

The sandhill is about 190m long with a maximum width of about 35m. At the north end and on the east side the sand is covered by a shallow layer of peat, although ploughing is already turning up artefacts in these areas (defined by dotted lines in Fig. 74). A grid of 5m by 5m squares was laid out using tapes, with parallel baselines on either side of the sandhill put down with the aid of a dumpy level. Altogether 240 squares were walked and all material from each square was collected, including waterworn pebbles which probably occurred naturally. This material has been quantified by number (flint, pottery, etc.) and by weight ('pot-boilers') and the results are shown in Fig. 74.

The work was carried out on two Sundays in March at a time when the ground was bare and well-weathered. Effectively, the fieldwork took eleven person-days to complete.

The Results

(Table 8)

Conclusions

Most distinctions between the two groups of material are attributable to the larger size of the gridded collection in that, up to a point, the larger a collection is the more likely it is to represent what is on the surface. Obviously the gridded survey also allows much finer spatial precision. In addition, the initial collection under-represents items that are less visible, either because of their size (microliths and small blades) or their colour (sherds, fired clay and animal bone). Nevertheless, it is reassuring that the gridded collection confirmed conclusions drawn from the initial survey, and expanded upon rather than revised them.

Initial Collection	Gridded Collection	Initial Collection	Gridded Collection
1 sherd; 3 frags fired clay; 250 pieces struct flint.	20 sherds; 30 frags fired clay; 1492 pieces struck flint	Blades and blade cores more often corticated than rougher material.	Blades and blade cores frequently corticated, as are microliths, simple end or side-end scrapers and serrated blades.
Potsherd: indeterminate flint- and sand-tempered.	Potsherds: 1 Grooved Ware (P7), 5 fine Beaker, 1 rusticated Beaker, 2 *cf.* Food Vessel Urn, 1 *cf.* later Urn styles, 3 indeterminate grogged, 4 indeterminate flint- and sand-tempered.	Blade production unevenly represented across sandhill.	Above forms occur fairly evenly across sandhill. Outnumbered towards NE by generally fresher material of different character.
	Grooved Ware, Beaker and grogged sherds concentrated at NE end of sandhill.		In NE cores tend to carry flake- rather than blade-scars, 2 are keeled, many are single-platform (sometimes pebbles or small nodules from which only one or two removals have been made), and most defy classification. Crude hard-hammer flaking normal.
Fired clay frags present.	Fired clay concentrated with LNEBA pottery at NE end.		
Animal bone present.	Animal bone in considerable quantities.		Uncontrolled flint-working also indicated by higher frequency of irregular waste than elsewhere. Flakes far more frequent than blades. Retouched pieces include forms absent from SE (*e.g.* elaborately-retouched scrapers, borers, scale-flaked knives and a 'fabricator').
Sandstone fragments present, possibly occurring naturally.	Sandstone rubber suggests that some sandstone fragments may be weathered remains of artefacts.		
'Pot-boilers' unevenly distributed.	Concentrations of 'pot-boilers' defined. One coincides with LNEBA pot and fired clay at NE end.		
Non-artefactual flint present; possibly occurs naturally. Consists of rolled pebbles and does not seem to have been worked.	Relatively even distribution of non-artefactual flint suggests that most is naturally present. A few small, unworked nodules of chalk flint with fresh cortex may be imported raw material.	Mesolithic presence indicated by fragmentary tranchet axe and often corticated blades and blade-cores.	Mesolithic presence indicated by some of debitage, use of microburin technique, microliths, truncated piece.
Struck flint unevenly distributed over sandhill.	Concentrations defined; one coincides with LNEBA pot, fired clay and 'pot-boilers' in NE.		Early/Middle Neolithic present possibly indicated by flint-tempered sherds and by some of debitage from lower SE end, where later pottery and lithic material rare.
Low proportion of finished implements to waste suggests flint brought to sandhill and worked there (overall: 6% cores, 2% irregular waste, 88% flakes, 4% retouched).	Overall composition similar (4% cores, 3% irregular waste, 88% flakes, 5% retouched). On-site working indicated by apparent import of raw material and presence of core rejuvenation flakes.	Later Neolithic/Early Bronze Age activity indicated by some of debitage including a Levallois-like core, and by a few retouched forms (*e.g.* denticulate, 2 elaborately-retouched scrapers).	Later Neolithic presence indicated by Grooved Ware sherd and chisel arrowhead.
Condition of struck flint from fresh to heavily corticated. Small area of uncorticated black flint in SSE.	Condition variable. Area of uncorticated black flint in SSE not identified. Fresh material more frequent towards NE.		Beaker/Early Bronze Age presence represented by concentration of sherds in NE, by some of accompanying debitage and by retouched forms such as scale flaked knives.
Raw material heterogeneous: a few pieces of sound black flint with thick fresh cortex, *cf.* Grime's Graves floorstone; more from smaller nodules of black flint with thinner, often more weathered, cortex; gravel flint also used.	Raw material mixed. Some matches nodules apparently brought to site. Chalk flint of both kinds more frequent towards NE.		Activity into mid 2nd millennium Cal. BC indicated by ?Urn sherd, by extreme crudeness of some of debitage from NE and by retouched forms such as large, thick, steep, coarse scrapers and massive borers.
Technology varied: ranges from skilled, controlled blade-production to the roughest of hard-hammer flaking.	Blade cores often have two platforms; blades include extremely small examples absent from initial collection. Microlith manufacture attested by 1 microburin.	Successive episodes, from Mesolithic to late 3rd millennium Cal. BC.	Successive episodes, from Mesolithic to mid 2nd millennium Cal. BC. 2nd millennium activity virtually confined to higher, NE end.

Table 8. Decoy Farm

Appendix 3: The Roman Pottery

by David Gurney

Introduction

Approximately 36.6kg of Roman pottery were examined, from 70 sites in the nine parishes of Denver, Downham West, Feltwell, Hilgay, Hockwold cum Wilton, Methwold, Nordelph, Southery and Upwell. This area can be divided into two groups of parishes/sites, those along the Fen Causeway (Denver, Downham West, Nordelph, Upwell) and those along the fen edge (Feltwell, Hilgay, Hockwold, Methwold, Southery). For comparison, there are excavated published groups of pottery from the Fen Causeway at Denver, and fen edge sites at Feltwell and Hockwold (Gurney 1986).

The following report follows a similar format to those for the Fenland Project Cambridgeshire volumes (Cameron 1987, Gurney forthcoming).

Analysis of the pottery was minimal, with rapid sherd counts by fabric, leaving aside any possible but doubtful Roman sherds. Statistics and notes compiled during the analysis enable a brief assessment of the Roman pottery from this survey area to be made.

Wares

(Table 9)

The pottery was classified as follows:

samian: decorated sherds and mortaria were noted
NVCC: Nene Valley Colour-Coated Wares (see Howe *et al.* 1980)
NVGW: Nene Valley Grey Wares (see Howe *et al.* 1980)
Oxford: Oxford Red Colour-Coated Wares (Young 1977) *and* imitation Oxford wares (see Gurney 1986, 40-41)
Hadham: Hadham Red Ware (Gurney 1986, 28)
mortaria: sources other than the Nene Valley were noted
amphorae: all types
Nar Valley: see Gurney 1986, 28
shell-tempered: including storage jars
misc. grey: predominantly moderately fine grey-ware fabrics, with some coarser reduced non-Nar Valley wares. The former are generally visibly micaceous
flagon fabric: all flagons
misc. oxidised: all oxidised wares apart from flagons and mortaria
briquetage: material which could be associated with salt-production with reasonable certainty (*cf.* Gurney 1987)
others: all other wares, of no particular note

Table 9 shows the number of sites with each ware by parish.

Ware	*Denver*	*Downham W.*	*Feltwell*	*Hilgay*	*Hockwold*	*Methwold*	*Nordelph*	*Southery*	*Upwell*	*Total*
samian	7	3	6	2	0	3	11	4	4	40
NVCC	4	3	2	3	0	5	11	3	4	35
NVGW	4	3	1	2	0	1	14	1	6	32
Oxford	0	0	1	0	0	1	0	0	0	2
Hadham	0	0	0	0	0	1	0	0	0	1
mortaria	1	1	1	0	0	2	6	1	1	13
amphorae	1	1	0	0	0	0	0	0	0	2
Nar Valley	7	3	7	5	2	5	13	3	6	51
shell-tempered	6	3	5	3	0	7	11	1	4	40
misc.grey	7	3	14	5	2	10	13	5	7	66
flagon fabric	1	2	0	1	0	0	2	0	2	8
misc.oxidised	5	2	6	2	0	7	9	4	5	40
briquetage	5	3	0	0	0	0	9	0	5	22
others	2	2	4	3	1	0	7	0	4	23
No. of sites	7	3	15	5	3	10	14	6	7	70
Sample (kg)	4.6	4.9	3.5	2.3	0.1	5.8	8.2	3.7	3.5	36.6

Table 9. Romano-British pottery; number of sites with each ware, by parish

Ware	*Whole area (70 sites)*	*Fen Causeway (31 sites)*	*Fen-edge (39 sites)*
samian	57.1	80.6	38.5
NVCC	50.0	71.0	33.3
NVGW	45.7	87.1	12.8
Oxford	2.9	0.0	5.1
Hadham	1.4	0.0	2.6
mortaria	18.6	29.0	10.3
amphorae	2.9	6.5	0.0
Nar Valley	72.9	93.5	61.5
shell-tempered	57.1	77.4	43.6
misc.grey	94.3	96.8	97.4
flagon fabric	11.4	22.6	2.6
misc.oxidised	57.1	67.8	51.3
briquetage	31.4	71.0	0.0
others	32.9	48.4	20.5

Column 1 gives percentages for all 70 sites, Column 2 percentages of sites along the Fen Causeway (Denver, Downham West, Nordelph, Upwell) and Column 3 percentages of sites along the Fen-edge (Feltwell, Hilgay, Hockwold, Methwold, Southery)

Table 10. Percentages of sites with a given pottery type.

Parish	*No. of sherds*	*No.decorated*	*% decorated*
Denver	39	7	18
Downham West	27	4	15
Feltwell	15	1	7
Hilgay	3	0	0
Hockwold	0	0	0
Methwold	8	0	0
Nordelph	68	6	9
Southery	12	1	8
Upwell	18	4	22
Totals	190	23	

Group summaries: Fen Causeway (31 sites) (152 sherds) 14% decorated
Fen-edge (39 sites) (38 sherds) 5% decorated

Table 11. Romano-British pottery.
Details of samian sherds by parish, showing the percentage of decorated sherds

Discussion

(Tables 10-12)

The pottery collected by survey in the parishes of Feltwell, Denver and Hockwold has been compared with excavated assemblages from those parishes (Gurney 1986, 28-29, 38-41, 74-83, 110-127), to assess whether or not the survey material is representative of the range of wares present. At Feltwell and Denver, the survey and excavated collections are virtually identical, the only wares found in excavation and not represented among the survey pottery being Hadham Ware and Rhenish Ware.The Hockwold survey material does not compare well with the excavated assemblage, but the excavated site at Leyland's Farm may not be typical (a large settlement and temple) and the survey sample is very small. Generally, the survey material does seem to be representative when compared to the excavated assemblages.

Table 10 shows the percentages of sites with each pottery type. Not surprisingly, grey wares are virtually ubiquitous (94.3%) and other local reduced (Nar Valley), oxidised and shell-tempered wares occur on more than 50% of the sites. Samian was found on 57.1%, and from the Nene Valley, NVCC on 50.0% and NVGW 45.7%. Seven of the thirteen mortaria sherds were also from the Nene Valley. Oxford Wares, Hadham Wares, amphorae and flagons were all relatively scarce.

Table 10 also shows a breakdown of the survey area into a Fen Causeway group and a fen-edge group of parishes. This reveals several points of contrast. Samian, amphorae and flagons are far more common along the Fen Causeway than along the fen edge, suggesting perhaps greater prosperity in this area, while significantly higher percentages of NVCC and NVGW point to closer trading links with the Nene Valley potteries. It is reasonable to assume that one trade route for Nene Valley Wares was east into Norfolk along the Fen Causeway. Briquetage was found only on the Fen Causeway sites, and it is clear from this and other evidence that the sites on the skirtlands fringing Methwold Fen, Southery Fen and Feltwell Anchor were in an area where salt-production was not possible.

A further distinction between the two survey areas is that the fen-edge sites produce two wares not represented on the Fen Causeway sites; these are Oxford Ware (and imitations) and Hadham Ware. Neither ware is particularly common, and they are likely to be of fourth-century date rather than earlier. The excavated Feltwell pottery includes a number of imitation Oxford Ware vessels (Gurney 1986, fig.27, nos 8-15), and Hadham Ware is present, albeit in very small amounts, at Denver (Gurney 1986, 117). It should also be noted that of the thirteen mortaria sherds, seven Nene Valley sherds came from Denver, Methwold, Nordelph and Southery, while the three Oxford mortaria were from Feltwell and Methwold. Nordelph also produced three sherds from grey mortaria. These vessels are East Anglian oddities, about which little is known at present. The only large group to date in Norfolk is from Caister-on-Sea, and local sources are suspected for most of these vessels. The distribution of grey mortaria seems mainly to be to the north and west of Norwich, and grey mortaria have been found on kiln sites at Hevingham and Brampton (Darling with Gurney forthcoming). Too little evidence is currently available to draw any firm conclusions from these observations.

Ware	*Cambs (Peterborough-March) (Cameron 1987)*	*Cambs (South-west) (Gurney forthcoming)*	*Norfolk (this volume)*
samian	48.5	41.0	57.1
NVCC	62.8	56.4	50.0
NVGW	85.7	53.8	45.7
mortaria	31.4	28.2	18.6
amphorae	0.0	5.1	2.9
shell-tempered	74.3	69.2	57.1
misc.grey	97.1	94.9	94.3
flagon fabric	5.7	2.6	11.4
misc.oxidised	62.8	46.2	57.1

Table 12. Romano-British pottery: percentage of sites with wares common to three of the Fenland Survey areas examined to date

Table 11 gives details of the samian sherds by parish, and this shows that not only is samian far more common on the Fen Causeway sites than on the fen edge sites (152 sherds from 31 sites, compared with 38 sherds from 39 sites), but also that the percentage of decorated sherds from the Fen Causeway is nearly three times that of the fen edge sites. Of the three excavated sites (Gurney 1986), Denver on the Fen Causeway produced far more samian than the other two sites (Gurney 1986, 111-114), although the late fourth-century date of the Feltwell pottery accounts for the virtual absence of samian there.

Table 12 shows the percentages of sites with wares common to three Fenland Project areas examined to date, namely the area between Peterborough and March in Cambridgeshire (Cameron 1987), the Cambridgeshire south-west fens (Gurney forthcoming) and Norfolk (this volume). Not surprisingly, all three Nene Valley Wares, NVCC, NVGW and mortaria, are less common in Norfolk than in Cambridgeshire and amphorae and flagons remain relatively scarce. In common with Cambridgeshire, grey wares, shell-tempered wares and miscellaneous oxidised wares are the fabrics most frequently encountered on the Norfolk sites.

As noted above (see Wares), the miscellaneous grey wares are dominated by moderately fine greyware fabrics which are generally visibly micaceous. Micaceous grey wares were also found on the excavated sites (Gurney 1986, 28, 76-77, 117), accounting for 3% of the minimum vessel population at Denver, 4% at Feltwell and 36% at Hockwold (Gurney 1986, fig. 41). Sources in the Waveney Valley, Wattisfield and Homersfield (Suffolk) may be suspected (see Gurney 1986, 76 for references), and the micaceous clays appears to have been used over a long period of time; an early date is suggested by imitation Gallo-Belgic forms, and micaceous bead and flange bowls demonstrate the late use of the clay source (Darling with Gurney forthcoming).

Wares found in Cambridgeshire which are not as yet represented in Norfolk are Horningsea Wares (Walker 1912) and London-type Wares (Perrin 1980). Yet again, the cheese-press, held to be a common form on Fenland sites (Hartley and Hartley 1970, 168) has not been found among the Norfolk survey material, and its absence here, as in Cambridgeshire (Gurney forthcoming) should be noted.

In conclusion, this group of Fenland field-survey sites reflects the general assessment of Fenland pottery by Hartley and Hartley (1970). The only import of significance is samian, there is a scarcity or absence of flagons, amphorae and other imported wares, and there is little evidence of far-reaching trade. In Norfolk, the predominance of the Nene Valley potteries is not as great as in areas of the Fenland nearer to the source (Cambridgeshire), but the Nene Valley was nonetheless an important supplier of grey wares, colour-coated wares and mortaria.

Appendix 4: The Wissey Embayment in the Seventeenth Century

The siltland landscape which forms the northern portion of the Norfolk Fens reflects, to an extent not immediately obvious to the casual observer, the efforts of generations of medieval farmers. Many, though by no means all, of the elements — settlements, fields, roads and banks — that make up the patterns of Marshland have their origins centuries earlier (Silvester 1988a, 169). Ostensibly, the metamorphosis of the black fen happened at a rather later date. In some fenland districts great monasteries left a lasting impression on the landscape, usually in the form of isolated drainage works (Darby 1983, 43), but in general medieval communities did not have the will or the technology to tame the fen. Only with the ambitious drainage schemes of the seventeenth century did the Norfolk fenland as we see it today begin to take shape, and even now its development continues, the creation of the Cut-off Channel, opened in 1964, marking another significant stage in its evolution. The study of this formative period is peripheral to the main aims of the Fenland Project whose interests do not extend beyond the end of the Middle Ages. Nevertheless, there are features in this landscape which pre-date the drainage phase, providing a link with the Middle Ages, and it is felt that a brief incursion into the Wissey Embayment of the seventeenth century would form a suitable epilogue to this survey.

The post-medieval draining of the Fens has attracted considerable attention both in the distant past (Dugdale 1772; Wells 1830) and more recently (Darby 1956, 1983; Summers 1976). Historical events in the area have received their fair share of attention (Lindley 1982), but the physical effects on the landscape have been little studied.

The Historical Background

Attempts at draining selected areas of fen occurred on a piecemeal basis in the decades prior to 1600. Some are better documented than others, although their effect on the landscape generally does not appear to have been profound. As Darby puts it: 'The quickening interest in the possibilities of draining the peatland formed part of the larger awakening of agricultural effort in the sixteenth and seventeenth centuries' (Darby 1983, 55).

Despite various bills introduced in Parliament in the early seventeenth century and the enthusiasm of James I and his son, Charles, a combination of factors that included opposition from within the Fens, prevented any concerted action. But in 1630 the Earl of Bedford was approached to reclaim the southern fenland (subsequently to be termed the Bedford Level). With thirteen co-adventurers, the Earl undertook to drain the region in exchange for 95,000 acres, though in practice the adventurers would benefit from only 43,000 acres, 12,000 going to the king and the rents and profits on a further 40,000 acres being earmarked to maintain the drainage works (Wells 1830, ii, 103, 109, 125). Each adventurer, by the 'Indenture of Fourteen Parts' (1631), took one or more shares, depending on the financial input, from an allocation of twenty shares each of 4000 acres (Wells 1830, ii, 111). Cornelius Vermuyden was employed to plan and conduct the operations which involved cutting new straight watercourses to remove the upland waters more quickly. By 1637 it was adjudged that the fen had been drained satisfactorily and at a session of sewers at St Ives, a schedule (known as the St Ives Law) was drawn up of the location and extent of the acres to be granted to the adventurers in various parts of the region (Wells 1830, ii, 236). This decision was overturned in the following year on the grounds that the southern fens were still subject to flooding, but the adventurers were assigned 40,000 acres in recognition of what they had drained.

With the intrusion of the Civil War, it was not until 1649 that further significant drainage operations were undertaken. The new Earl of Bedford, in company with some of the original adventurers and other newcomers, agreed to make 'winter grounds' (that is land free from flooding during the winter) in the southern fens. The work, again under the direction of Vermuyden, was completed by 1653, with the construction of further channels, sluices and embankments.

The Bedford Level Corporation was established under the General Drainage Act of 1663; all but the king's 12,000 acres were vested in the Corporation and it had the power to levy taxes on all the Adventurers' lands. In 1668 the 83,000 acres were partitioned into twenty lots by Act of Parliament (Wells 1830, ii, 486). It is not clear from the sources consulted whether the original adventurers or indeed those party to the 1649 agreement, operated and benefitted from their shares prior to 1668.

The Sources

To provide some detail of the development of the Wissey Embayment during the seventeenth century, it is necessary to turn to the primary sources. These are considerable and for this brief overview only a few of the more easily accessible have been used.

William Haiwarde's great map of the Fens was drawn in 1604; the original is presumed lost, but two early eighteenth-century copies exist and Lynam argued forcefully that an anonymous and undated manuscript map in the British Libary was a near contemporary copy, perhaps by Haiwarde himself (Lynam 1934, 421). The original map accompanied a written survey, reprinted by Dugdale, which was titled 'The true content or number of acres in the Fens described in the General Plot, lying without the Fen-dikes, as it was delivered by William Hayward Gent. Surveyor, upon his oath at Wisbeche, 13 July 1605' (Dugdale 1772, 382).

Several large-scale manuscript maps in the Public Record Office depict the southern part of the Wissey Embayment, the PRO index dating them to the time of Charles I. They have been divorced from the written records which they originally accompanied and the writer has not consulted the latter, but it is a reasonable assumption that these relate to the drainage scheme of the 1630s.

A third cartographic source is Sir Jonas Moore's large-scale map of the Fens, the copy consulted in Wisbech Musem being that produced by Christopher Brown in *c.*1706. This depicts the intakes of common fen and several fen (privately held land) resulting from the allocation of 1668, and the 'lotts' as shown can be tied in with the written records (see below).

The earliest and most puzzling written record is a manuscript of 1604 reprinted by Bryant (1904, 144). The source is unclear, despite Bryant's listed references, and it seems no more than a coincidence that it is contemporary with Haiwarde's map and survey, with which it has little in common. This source is useful for

the record of fen names in Hilgay, Southery and Feltwell and for the picture that emerges of the pre-drainage organisation of the western half of the embayment.

William Haiwarde produced another written survey of the whole fenland on behalf of the Commissioners of Sewers in 1635-36, as part of the drainage operations (Darby 1983, 67). This is reproduced *in toto* by Wells (1830, ii, 141), and is a detailed assessment of all the severals and the fens with their acreages and locations: it offers a precise record of the first importance, undertaken at a time which can now be seen as a watershed in fenland history.

Wells's voluminous study provides additional information, notably his copy of the St Ives Law of Sewers of 1637 (1830, ii, 236) which lists the lands to be given to the adventurers who underwrote the drainage of the 1630s. These lands can be tied in with what is shown on Moore's map referred to above.

Finally there are references in Dugdale (1772) that help to fill out the picture of this critical period. Faden's map of Norfolk (1797) and the earliest edition of the one-inch Ordnance Survey map (1824) are also useful.

The Pre-Drainage Landscape

(Fig. 75)

Modern large-scale maps of the area reveal that though the fen is sub-divided by numerous straight partitions, almost invariably dykes, there are places where more irregular boundaries can be discerned. The patterns are more complete on earlier published maps. Some of the alignments, particularly around Hilgay and Southery, can be attributed to the form of the upland: the curvilinear boundaries between Southery and Modney, close to the Great Ouse, are surviving examples. East of Brandon Creek, where the Little Ouse flows into the Great Ouse, and along the course of the Little Ouse itself, other irregularities betray rather different features of the early fens.

Stake Lode, which on Moore's map was a prominent feature as far as the Feltwell upland, runs south-eastwards from Southery village and separates Southery parish from Methwold and Feltwell. In the seventeenth century and back into the Middle Ages this was an important natural watercourse taking the upland waters of the Feltwell valley across to the Great Ouse, although its point of debouchment into the river is now lost. Stake Lode appears by name in 1438 (Dugdale 1772, 295) and, as one of the few obvious features in this part of the fen, it was adopted as a parish boundary though only for a short distance. It was reported to a session of sewers in 1608 that 'the common sewer in Southery called Stake Lode was in great decay' (Dugdale 1772, 388). Other natural streams were similarly utilised. Directly east of Brandon Creek, the Southery/Feltwell boundary follows a sinuous course and ultimately joins with Stake Lode. The Feltwell/Hockwold parish boundary now wanders across the fen, ignored completely by the regular systems of dyked fields. This is a modern development. Earlier maps show Brown's Lode here, running from the upland to the Little Ouse. It was cited as a significant boundary in the 1604 manuscript; and more than three hundrd years earlier it was referred to as 'the fishery of *Bruneslode*' in an extent of the Bishop of Ely's manor taken in 1277 (Blomefield 1805, ii, 189).

Another group of irregular features of the landscape can now be recognised only by examining earlier maps. Abutting the Little Ouse were a number of small D-shaped 'enclosures', only one of which — between Feltwell Anchor and Cross Bank — can still be distinguished today. These were severals, taken from the fen and encompassed with a ditch by enterprising individuals, before the general draining of the fen. How far back they go is unclear. The early sources refer to them by the name of their then owners. Thus Mr Perseley (or Parsley) of Feltwell had a several at the river end of Feltwell Mow Fen which was termed *Norland*; a moiety of 25 acres of marsh called *Norlands* was granted by Edward VI in 1553 (Blomefield 1805, ii, 193). John Hayward and Richard Tirrell had the Feltwell Anchor several mentioned above, and at the junction of the two Ouse rivers was Mr Guibon's (or Gibbon's) several. The significant aspect is the fact that all of them were adjacent to the river: the Little Ouse was the main artery of transport and a communications link with the upland — without it these severals would not have existed. There was one small several out in the fen just to the east of Clouds Drove: two irregular fields still function today, although their boundaries have been rationalised. This was Mr (Osbert) Pratt's several in Haiwarde's survey and on the PRO maps, the family of this name holding a Hockwold manor in the sixteenth and seventeenth centuries (Blomefield 1805, ii, 183).

None of these severals can unequivocally be taken back beyond the middle of the sixteenth century and it is significant that, in the text which accompanied Moore's map, it was claimed that most of the 95,000 acres were taken from commons that in the recent past had been divided up as severals. There is, however, one tantalising reference. Blomefield (1805, ii, 371) notes that in the reign of Henry III (*i.e.* around the middle of the thirteenth century), the abbot of West Dereham was granted a cottage and a fishery by two donors in the parish of Hilgay. In the middle of the sixteenth century, soon after the dissolution of the monasteries this was given to Thomas Guybon and William Mynn. It is tempting to equate this with the several at the junction of the two Ouse rivers. There were detached portions of Hilgay parish on either side of the Little Ouse prior to reorganisation in 1895 (Pugh 1953, 97) and Hilgay Fen House is shown on Faden's map of 1797 at *c.* TL 624 890. As far as can be ascertained, there are no references to other lands held by Guibon in the region.

There were, in addition to these erratic intakes, a number of larger and more regular severals in Feltwell belonging to Christ Church College, Cambridge, Sir Thomas Woodhouse and Sir Edmund Moundford, and presumably leased to farmers such as a Mr Ward who had the College land according to Haiwarde (Wells 1830, ii, 148). All three landlords owned manors based on the Feltwell upland (Blomefield 1805, ii, 192). These regular blocks of fen ran from Stake Lode to the Little Ouse and were separated by dykes which still form the main axial components of the modern landscape. Eastwards, in Hockwold, was a several known to Haiwarde as Poolings with a tenement called the Brewhouse on it. The Tithe Map (1838) shows Brewhouse Farm on the river at TL 658 866. This area, significantly, was termed Tinkers Fen in the 1604 manuscript survey, implying that the several was a relatively new intake. Beyond was Scales several which must have belonged to the Hockwold manor of that name (Blomefield 1805, ii, 180) and part of Hockwold Common called 'ye Cloud' on Moore's map, hence

Figure 75 The Wissey Embayment in the seventeenth century

Clouds Farm. The salient south of the Little Ouse also appears to have constituted a several, on Moore's map belonging to Mr Henningham who held the Scales several on the opposite side of the river.

Between the Little Ouse and the Crooked Dyke, but further westwards, were a number of severals that were not transferred from Norfolk to Cambridgeshire until the late nineteenth century. They were referenced with the Cambridgeshire entries for Littleport in the 1635/36 survey and again in the St Ives Law exemplification (Wells 1830, ii, 161, 281). Their inclusion in Cambridgeshire seems to have occurred as a result of Wells introducing marginal sub-headings into the schedules, coupled wih Haiwarde's original error of placing these severals with the contiguous fens of Littleport.

The rest of the Hockwold and Feltwell fens were common. Hockwold Common Fen lay in the area to the west of Blackdyke, while east of Pratt's several were Horse Fen, Seasfen (also known as the Mow Fen) and Cowles Fen, still recalled in Cowles Drove. Feltwell also had a

Mow Fen and this was separated from Feltwell South Fen by a division that is reflected in the modern Shrub Drove. To the north of Stake Lode was Feltwell North Fen.

The fens of Methwold were defined differently than those to the south. In the absence of a convenient stream, Methwold's boundary with Feltwell was represented on the earliest map (that in the PRO) by a straight line as far as the Stake Lode. What form this boundary took on the ground is unclear. Because it separated tracts of featureless fen, physical manifestations of the division may have been minimal, although Haiwarde reported that a lode existed in its more easterly section, the equivalent of the modern Methwold Hythe Lode.

Methwold's commons consisted of two parts. South More was defined by the Feltwell boundary and Short Lode on its south and north sides respectively. Its eastern end was known as Twene Lodes or variations on this name, for obvious reasons. At the opposite end, South More ran right to the edge of Southery island; a triangular patch of some 225 acres appears to have been intercommoned by Southery and Methwold at one time, but by the time that the PRO maps were drawn up the common had been ceded to Southery. The second part was Broad Fen, another sizeable tract with Broad Fen Lode on the west and the upland on the east. Methwold Mow Fen lay in its north-west corner against the River Wissey and, further east, the two elliptical areas that stand out even on modern maps are referred to as Thornham and Slisham Closes by William Haiwarde in 1635/36. The anonymous map of 1604 shows several hills in this area: Cotsham (Catsholm), Slisham (Slevesholm), Harringhill? (Herringay), and How Hill, the last two in Northwold Fen, are all recognisable, but Armishill, north of Slisham is not. The fragmentation of the peninsula into a series of 'islands' could be little more than a cartographic convention, although the depiction of a causeway linking Slisham with the upland implies that the present road had a centuries-old predecessor.

West of Broad Fen were the King's severals, over three thousand acres of fen owned by the Duchy of Lancaster from 1348 (Blomefield 1805, ii, 202). This area appears, in the early sixteenth century, to have been subdivided by north-south dykes, the Twelve Foot Drain and the Halffendike being recorded by Haiwarde. Both are fossilised in the modern landscape, as are the more sinuous courses of the Broad Fen Lode to the east and the King's Ditch on the west, the latter forming the boundary with Hilgay and probably following the course of a stream that emptied into the Wissey. Situated close to Broad Fen Lode was 'The house in the severals', shown on a map in the British Library dated to *c.*1566, and appearing on maps right up to the present, although only a barn now marks its place. Presumably the house had a role in the administration of Duchy lands and its location out in the fen was sufficiently unusual to warrant inclusion on maps.

A series of small fens surrounded Hilgay and Southery, each with its own appelation. The thin strip of fen between Hilgay and the Wissey was known as Puttock Fen, a name only encountered in the 1604 manuscript source. West Fen separated Hilgay and the Great Ouse, the modern Steel's Drove seemingly preceded by Gold Dyke as shown on Moore's map. Between the lobes of the island, Ashfen, Ragmore Fen and Campsey Fen, all referred to in 1604, find reflection in present day names, but by 1635/6 Sir Henry Willoughby, who owned Woodhall manor, had acquired his own ground here. West of Modney against the Great Ouse, his meadows were recorded as being wet grounds. Hilgay island is shown as having several closes belonging to Woodhall, perhaps the same as those shown on the 1566 map and already referred to earlier; Southery is depicted on Moore's map as having only one close. Both villages had their 'feilds' suggesting that commonfield agriculture was normal at this time.

Southery Ferry, shown on the anonymous 1604 map and all subsequent maps, lay south of the island at a bend in the Great Ouse. It was linked to the island by Ferry Bank and Dike (recorded by Haiwarde in 1635/6) which was probably a raised causeway. East of this was another area of fen, common to Southery, and known as the Great Wanch in 1604. Sir Henry Willougby was active here too, for by 1635/6 one of his severals with a tenement on it had been carved out of Wanch Middle.

Various souces refer to Rebbeck where the Little Ouse joined the Great Ouse. A little house by Rebbeck is mentioned in 1604 (Bryant 1904, 144), it is recorded as a place name again in 1618 (Dugdale 1772) and the Little Ouse is termed the Rebbeck River as early as 1438 when it was said to extend from Redmercote (? the cottage by Redmere) to 'the great river of Ouse' (Dugdale 1772, 295). On the west side of the river, partly in Cambridgeshire were several riverside dwellings known as Preisthouses, again featuring on all early maps and reinforcing the impression that the rivers were the main highways through the peat fens.

The Post-Drainage Situation

The only element of Vermuyden's early work that affected the Wissey Embayment was the construction of a drain, twenty feet wide and six miles long, which ran on a south-east/north-west alignment, taking the waters from the Feltwell valley to the Great Ouse, and cutting through the isthmus of dry land that linked Hilgay and Southery. Referred to by Haiwarde in 1635/36 as the New River and on the PRO maps as the Feltwell River, it is known to posterity as Sam's Cut, after William Sames, Doctor of Law and one of the original Adventurers (Wells 1830, ii, 111), and appears to have been constructed as early as 1631 (Darby 1983, fig. 36).

The Commissioners of Sewers allocated 5833 acres in the embayment towards the 83,000 acres of Adventurers' lands, a mixture of common land and severals as shown on Moore's map. This shows tracts of fen divided into the twenty shares or 'lotts' and identifiable from the schedules within the St Ives Law of Sewers and the 1668 Act. The lots were usually rectilinear blocks that frequently ignored existing landmarks. Thus several lots spanned both Feltwell North Fen and Methwold Southmore. More significantly they cut across Sam's Cut. Had no documentary records survived, fieldwork alone would have suggested that the new drain was the later feature!

There is every indication that the Commissioners who designed the allocation tried to be fair to all who used the fen, both several holders and commoners. Of the 2318 acres of Feltwell South Fen, 777 acres were taken, that is 33.5%. From two of the large severals in Feltwell abutting the Little Ouse, 34.3% and 34.6% were allocated. Thomas Tirrell, on the other hand, lost 36.5% of his small several of 36 acres, while Osbert Pratt lost only 20.8% of his 48 acres. Feltwell Mow Fen was

reduced by 26.8%. Common fen and several fen appears to have been treated equally and areas as small as four acres (in Denver Fen) were allocated. The only area not touched was the king's severals in Methwold.

Every opportunity appears to have been taken, at least in this part of the Fens, to restrict the effects of land loss on those who used the commons. Almost invariably it was land furthest away from the parent settlement that was allocated. Thus Hilgay and Southery's fens on the east side of the Great Ouse were left untouched and fen on the far side of the river was taken. The fens along the Little Ouse valley in Hockwold remained common and it was land at the extreme west end of the parish against Browns Lode that was divided up.

The Adventurers were enjoined to

> 'divide and sever their lands one from another by such sufficient partitions, dikes and fences, as shall be necessary to convey or carry away the rain water towards the great drains, and that such partitions and fence dikes, if any such should be made, shall be made by them in such an uniform manner, as may best conduce to the perfecting of the whole work . . .' (Wells 1830, ii, 104).

Some of the divisions are still traceable in the modern landscape, notably in Feltwell North Fen and Methwold Southmore. Elsewhere, as in Hockwold Fen, later modifications have obliterated these early divisions.

There are two other aspects which warrant our attention though strictly speaking they fall outside the ambit of this appendix. The difference in land levels of either side of Sam's Cut has already been mentioned, together with the consequent invisibility of fen-clay roddons on the north-east side. This is the tangible result of differential land use and drainage. Much of the Methwold fens were drained by gravity into Sam's Cut from 1631 until the late nineteenth century and it was not until 1883 that a pumping engine was installed (Seale 1975, 51; Darby 1983, 182). During most of this time the land was ill-drained and peat loss was not so great as further south. Burton (in Burton and Hodgson 1987, 106) has pointed out that much of the area was down to pasture until the Second World War.

The second aspect are the duck decoys, four of which once existed in the embayment (Fig. 75). Methwold Decoy survives as an eleven-sided wood, though it is likely that the pipes have long since become filled with peat. It was built in 1806 and was worked for fifteen years until the fen became too flooded for it to be profitable. A new tenant hired it from the Duchy of Lancaster in 1824 and it was finally abandoned in 1872, two years after the last decoyman fell into a dyke one night and did not re-emerge (Payne-Gallwey 1886, 140). Hilgay decoy was known originally as Woodhall Decoy, but was given up about 1860 and according to Payne-Gallwey (1886, 140) all traces of it had been obliterated late in the nineteenth century. Decoy Plantation, however, survived until recently, but reclamation of the fens on the east side of the island has now removed it. The site of Hockwold Decoy has long been lost. It was in Redmere Fen and was operative in the early nineteenth century but was given up about 1838 because of its proximity to the Lakenheath Decoy (Payne-Gallwey 1886, 141). Of the Feltwell Decoy little is known. It is shown on Faden's map of Norfolk (1797), but not on the Ordnance Survey map of 1824. Baker (1985, 3) records that it was constructed in 1728 and was still active in 1790.

The seventeenth century saw remarkable changes in the Fens and the effects on the inhabitants were undoubtedly traumatic. One of the more evocative comments comes in a contemporary song known as the 'Powte's Complaint', a powte being a sea lamprey. It is recorded in a British Library manuscript and has been partly reprinted by Darby (1956, 55). Following Dugdale (1772, 391), it is quoted in full here as a postcript to the changes that occurred in the seventeenth century.

Powte's Complaint

Come, Brethren of the water, and let us all assemble,
To treat upon this matter, which makes us quake and tremble;
For we shall rue it, if 't be true, that Fens be undertaken,
And where we feed in Fen and Reed, they'll feed both Beef and Bacon.

They'll sow both beans and oats, where never man yet thought it
Where men did row in boats, ere undertakers bought it:
But, Ceres, thou, behold us now, let wild oats be their venture,
Oh let the frogs and miry bogs destroy where they do enter.

Behold the great design, which they do now determine,
Will make our bodies pine, a prey to crows and vermine:
For they do mean all Fens to drain, and waters overmaster,
All will be dry, and we must die, 'cause Essex calves want pasture.

Away with boats and rudder, farewell both boots and skatches,
No need of one nor th'other, men now make better matches;
Stilt-makers all and tanners, shall complain of this disaster,
For they will make each muddy lake for Essex calves a pasture.

The feather'd fowls have wings, to fly to other nations;
But we have no such things, to help our transportations;
We must give place (oh grievous case) to horned beasts and cattle,
Except that we can all agree to drive them out by battle.

Wherefore let us intreat our ancient water nurses,
To shew their power so great as t'help to drain their purses;
And send us good old Captain Flood to lead us out to battle,
Then two-penny Jack, with scales on's back, will drive out all the cattle.

This noble Captain yet was never known to fail us,
But did the conquest get of all that did assail us,
His furious rage none could assuage; but, to the world's great wonder,
He bears down banks, and breaks their cranks and whirlygigs asunder.

God Eolus, we do they pray, that thou will not be wanting,
Thou never said'st us nay, now listen to our canting
Do thou deride their hope and pride, that purpose our confusion,
And send a blast, that they in haste may work no good conclusion.

Great Neptune (God of seas), this work must needs provoke thee;
They mean thèe to disease, and with Fen Water choke thee:
But, with thy mace, do thou deface, and quite confound this matter;
And send thy sands, to make dry lands, when they shall want fresh water.

And eke we pray thee, Moon, that thou wilt be propitious,
To see that nought be done to prosper the malicious;
Though summer's heat hath wrought a feat, whereby themselves they flatter,
Yet be so good and send a flood, lest Essex calves want water.

Appendix 5: Early Maps of the Wissey Embayment

This appendix lists those early maps that provided useful information during the preparation of this report. It does not claim to be a comprehensive listing of all the available cartography. Repositories visited were the Public Record Office (PRO), the British Library (BL), Wisbech Museum (WM) and the Norfolk Record Office (NRO).

General

*c.*1605	Anonymous map of Fens. ?Contemporary copy of Haiwarde's plot of *c.*1604. BL Cotton Augustus I, Vol. I, 78.
*c.*1706	Map of Bedford Level by Sir Jonas Moore, produced by Christopher Brown in London. WM.
1797	Faden's map of Norfolk.
1824	One inch Ordnance Survey map, 1st edition.

Manuscript maps of Embayment Parishes

*c.*1566	Hilgay, Southery and Methwold Severals PRO: MPC 79.
1607	Hockwold, Feltwell, Methwold *etc.*. Map of Uplands. Unsigned. PRO: MR 98.
mid-17th C.	Four maps of area from Methwold Southmore to Little Ouse. Drawn for drainage purposes and divorced frrom their written surveys. PRO: MPE 1456-1459.
1787	Northwold by T. Dow. NRO: NRS 1911 P153A.
1825	Hilgay (detached): estate of Thomas Gotobed. NRO: PD382/204.
1827	Hilgay, surveyed by Hugh Wandby. NRO: PD382/92.
1838	Hilgay (detached): estate of James Luddington. NRO: DS129 (237).

Tithe Maps

1837	Feltwell. NRO: E11.
1837	Northwold. NRO: E17.
1838	Southery. NRO: E24.
1838	Hockwold. NRO: E14.
1839	Methwold. NRO: E16.
1840	Hilgay. NRO: E13.

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